



**BRITISH VIRGIN ISLANDS DEPARTMENT OF
DISASTER MANAGEMENT (DDM)**

**NATIONAL REPORT AND
INFORMATION ON
DISASTER REDUCTION
(BRITISH VIRGIN ISLANDS)**

**FOR THE
WORLD CONFERENCE ON DISASTER
REDUCTION**

JUNE 30, 2004

**#3 WAILING ROAD
MCNAMARA, TORTOLA
BRITISH VIRGIN ISLANDS**

**INFORMATION ON NATIONAL CONTACT AND PROVIDER OF
INFORMATION:**

National Report and Information on Disaster Reduction (British Virgin Islands)

Name: Leann Hill
Position: Training and Research Officer
Organization: British Virgin Islands Department of Disaster Management
Address: #3 Wailing Road, McNamara
State/Province: British Virgin Islands
Zip/Post Code: NONE
Country: TORTOLA
Phone: (284) 494-4499
Fax: (284) 494-2024
E-mail: bviddm@surfbvi.com
Website: www.bviudp.vg

Was the information provided consulted with other institutions? YES NO

If yes, please list these organizations here below:

- 1. Conservation and Fisheries Department**
Government of the British Virgin Islands
P.O. Box 3138
Road Town, Tortola
British Virgin Islands
Tel: (284) 494-5681; Fax: (284) 494-2670
- 2. Development Planning Unit**
Government of the British Virgin Islands
Central Administration Building
Road Town, Tortola
British Virgin Islands
Tel: (284) 468-0378; Fax: (284) 494-3947
- 3. Tortola Marine Management Ltd.**
P.O. Box 3042
Road Town, Tortola
British Virgin Islands
Tel: (284) 494-2751; Fax: (284) 494-5166
- 4. National Parks Trust**
P.O. Box 860

National Report and Information on Disaster Reduction (British Virgin Islands)

Road Town, Tortola
British Virgin Islands
Tel: (284) 494-2069; Fax: (284) 494-7364

COMPONENT 1 POLITICAL COMMITMENT AND INSTITUTIONAL ASPECTS

- 1.1 **Are there national policy, strategy and legislation addressing disaster risk reduction?** If yes, please describe to what extent current national efforts and main priority areas of the policy, and mechanisms to enforce the implementation of the policy and legislation are applied (and/or attach any relevant documentation)

Yes, there are national policy, strategy and legislation addressing disaster risk reduction in the British Virgin Islands. They are as follows:

- a. The British Virgin Islands' Department of Disaster Management (DDM) Strategic Management Plan 2004-2008: A copy of this plan is attached as **Reference A.**
- b. The Virgin Islands Disaster Management Act, 2003: A copy of this Act is attached as **Reference B.**
- c. Disaster Management Policy Framework: A copy of this Framework is attached as **Reference C.**

- 1.2 **Is there a national body for multi-sectoral coordination and collaboration in disaster risk reduction, which includes ministries in charge of water resource management, agriculture/land use and planning, health, environment, education, development planning and finance?** If yes, please give detailed information (name, structure and functions). Attach any relevant documentation or indicate source of information.

Yes. The British Virgin Islands' National Disaster Management Council (NDMC) comprises many and varied committees, governmental and voluntary organisations, agencies, interest groups, donors, religious bodies and individuals, all of which must be coordinated to function as one organisation in times of crisis and disorder. Each entity is allocated certain tasks, which they perform in response to a disaster, while taking direction and control from a designated central focal point.

A detailed copy of the Terms of Reference (TOR) for the Council is attached as **Reference D.**

- 1.3 **Are there sectoral plans or initiatives that incorporate risk reduction concepts into each respective development area (such as water resource management, poverty alleviation, climate change adaptation, education and development planning)?** If yes, please indicate some examples and challenges/limitations encountered. If no, does your government have any plans for integrating disaster risk reduction into development sectors? If no, please also specify the major difficulties.

As outlined in the “Virgin Islands Disaster Management Act, 2003, Part VI – Obligations of Public Officers and Other Persons”, every Permanent Secretary, Head of a Department of Government and statutory board shall:

- a) As required by the Governor, cause a disaster management plan for his Ministry, Department or Board to be prepared or reviewed from time to time and then submitted to the Director of the Department of Disaster Management.

Because of this legislation, works have taken place within the respective Ministries/Departments/Boards to develop internal disaster plans that incorporates risk reduction concepts into the respective development areas.

Mitigation Development Planning Framework and Mitigation Policy:

The Mitigation and Development Planning Framework covers a ten (10) year period - 2002–2011 and aims to provide a comprehensive mechanism that seeks to:

- Establish a commitment to mitigation goals, objectives, strategies, policies and programmes;
- Inform the public of the need for mitigation activities;
- And, provide the framework for the administration and implementation of mitigation activities.

The goals of the Policy include:

- The reduction of vulnerability of the BVI to hazards
- The enhancement of the 'culture' of disaster mitigation in the BVI

Limitations Encountered:

There are approximately sixty-six (66) Ministries, departments and boards in the British Virgin Islands. It has been quite a challenge to ensure that all

National Report and Information on Disaster Reduction (British Virgin Islands)

these organizations are equipped with internal disaster plans. Unfortunately, to date, not all sixty-six are equipped with functional disaster plans, but the Department of Disaster Management (DDM) is providing assistance to those organizations that do not have plans. It is hoped that by late 2005, most or all of these entities have disaster plans in place.

Other challenges include:

- i. Funding
- ii. Prioritization
- iii. Unavailability of technical consultants

1.4 **Is disaster risk reduction incorporated into your national plan for the implementation of the UN Millennium Development Goals (MDGs), Poverty Reduction Strategy Paper (PRSP), National Adaptation Plans of Action, National Environmental Action Plans and WSSD (World Summit on Sustainable Development) Johannesburg Plan of Implementation? If yes to any of these, who are the main contacts for these initiatives.**

Yes, disaster risk reduction is incorporated into the national plan for the following:

a. BVI Conservation and Fisheries Department

National Environmental Action Plan (NEAP) - The NEAP provides the framework within which the Territory of the Virgin Islands' environment can be managed in a responsible and sustainable manner. Embedded in this framework is the recognition of the cross-agency nature of the environmental challenges facing the Virgin Islands. It also identifies the relationship, which exists between the environment and key sectors within the overall economic development framework of the Territory. It also emphasizes the need for active and lasting community involvement and participation in environmental protection and natural resource management. The objectives of NEAP are as follows:

- Identify, prioritize and quantify (where possible) environmental problems
- Provide a state-of-knowledge overview of the environmental conditions in the Territory
- Propose solutions to immediate environmental problems in the form of programmes and projects, studies, issues and actions, strategies

National Report and Information on Disaster Reduction (British Virgin Islands)

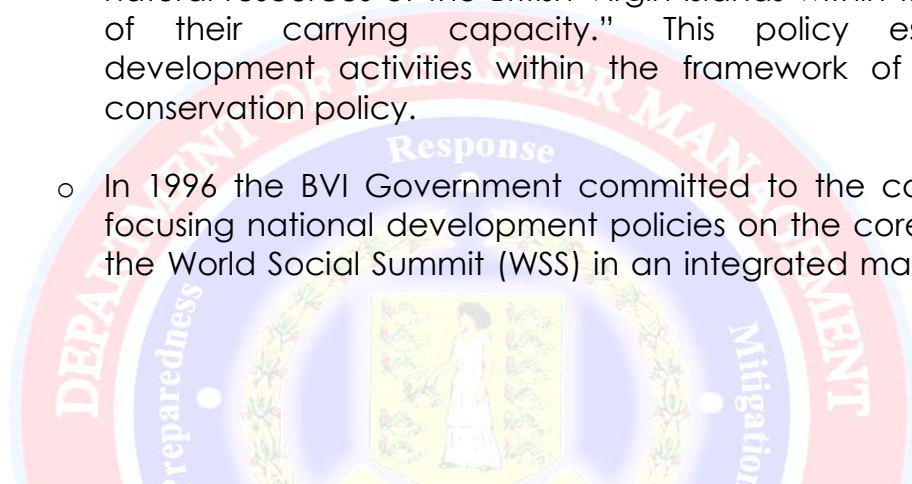
- and activities, institutional and legislative reform, funding requirements and human resources capacity building needs
- Establish a clear indication of government's priority areas with respect to the environment so as to guide and give proper orientation to donor intervention in this field
 - Establish a framework for environmental information management and dissemination
 - Provide a framework for continuous development and environmental policy dialogue within the Territory and with donor partners
 - Establish a framework which provides coherent directions for the process of environmental management, monitoring, action planning in the future
 - Identify HR needs and resources for the effective review and efficient implementation and management of the Plan

The Conservation and Fisheries Department (CFD), under the Ministry of Natural Resources and Labour, facilitated the National Environmental Action Plan. The main contact for this initiative is the Chief Conservation and Fisheries Officer, in the BVI Conservation and Fisheries Department.

b. Development Planning Unit

Additionally, in recent years, the governments of the British Virgin Islands have advanced these commitments by developing and implementing national mechanisms to strengthen democratic institutions and achieve sustainable development through increased public participation. The commitments upon which these advances are based are the following:

- Government policy concerning environmental management was comprehensively formalized in the National Report for the United Nations Conference on Environment and Development UNCED. The policy elaborated that "the overall goal is to use, manage, conserve and enhance the natural resources of the British Virgin Islands within the limited of their carrying capacity." This policy established development activities within the framework of a sound conservation policy.
- In 1996 the BVI Government committed to the concept of focusing national development policies on the core issues of the World Social Summit (WSS) in an integrated manner. The



endorsement committed Government to the development of policies to enhance social integration, the reduction of poverty and the expansion of productive employment in a simultaneous manner.

- The 1996 the Government commitment to a process of public participation and consultation for the formulation of a National Integrated Development Strategy (NIDS) to guide the long term visioning process and development integrated strategies aim at ensuring Sustainable Development. (Further information can be found at the Development Planning Unit's website:
<http://dpu.gov.vg/Policies/thebroadpolicyframework.htm>)

1.5 **Does your country have building codes of practice and standards in place, which takes into account seismic risk?** If yes, since when. Which are the main difficulties in keeping with the compliances of the codes.

There are building codes of practice and standards in place, which takes into account seismic risk. Section 19 of the 1955 Building Ordinance (Cap. 234) provides a mechanism for the making of detailed regulations to regulate building standards in the Territory. The Ordinance also provides an enforcement mechanism to ensure adherence to any regulations made there under. The making of such regulations is particularly relevant considering the natural hazards such as (hurricanes, earthquakes, volcanic eruptions) that affect countries in the Eastern Caribbean region, including the British Virgin Islands. The Building Regulations, 1999, therefore places emphasis on the development of building standards, which would prevent or mitigate damage arising from natural hazards.

The Regulations, in effect, provide administrative and enforcement mechanisms relating to building practices and the use of acceptable materials and building systems. They also provide for the approval of any system or material, which can be demonstratively proven to be resistant to natural hazards. Furthermore, the Regulations address in extenso issues pertaining to public health and safety in the construction of buildings, precautions to be adopted during building construction, provision of water supply services, and the regulation of sewage and waste disposal, plumbing, solid waste disposal, electrical and mechanical installations, dead and live loads, excavations and foundations, timber construction, concrete masonry, plain and reinforced concrete, structural steel construction and the construction of small buildings.

There have been instances where persons in the BVI have not been complying with the Codes. This prompted the Department of Disaster Management (DDM) in its “Mitigation and Development Planning Framework”, Section Five (Mitigation Initiatives—An Action Plan), Item 5.4.1 “Building Regulations and Land & Infrastructure Development Guidelines”, to call for:

- a. The revision of the Building Regulations within the framework of the Commonwealth Caribbean, and
- b. The development and establishment of a mechanism for enforcing the building regulations
- c. Review of the Development and Building Review Process of the British Virgin Islands

1.6 **Do you have an annual budget for disaster risk reduction?** If yes, is this commitment represented as part of the national budget or project based? Through which institution(s)? If no, what other financing mechanisms for risk reduction initiatives are available?

Yes, the British Virgin Islands’ national budget caters for disaster risk reduction. Money is allocated to the Department of Disaster Management annually in its budget under such programmes areas as:

- i. **Mitigation and Planning**
- ii. **Community Preparedness and Supply Management**
- iii. **Public Information and Education**
- iv. **Training and Research**
- v. **Emergency Response and Operations**

1.7 **Are the private sector, civil society, NGOs, academia and media participating in disaster risk reduction efforts?** If yes, how? Indicate existing coordination or joint programming between government and civil society efforts in disaster risk reduction, or major difficulties or constraints for this to be effective.

Yes, private sector, civil society, NGOs, academia and media participate in disaster reduction efforts in the British Virgin Islands.

Private Sector, Civil Society, NGOs, Media

National Report and Information on Disaster Reduction (British Virgin Islands)

- Representatives from these sectors sit on various sub-committees of the National Disaster Management Council, as outlined in the BVI National Disaster Management Plan
- Representatives partake in training, and simulation exercises organized by the BVI Department of Disaster Management
- Monetary donations are given to the Department of Disaster Management (DDM), as needed, to support activities addressing disaster risk reduction
- Compliance with the Virgin Islands Disaster Management Act, 2003
- Department of Disaster Management (DDM) provides donations to Voluntary Organizations (VO)
- The development of a Caribbean Based Disaster Preparedness (CBDP) Project for the British Virgin Islands Red Cross in conjunction with the Department of Disaster Management (DDM)

Academia

- Development of Associate's Degree Programme in Disaster Management (see Number 3.2 for more information)
- Public library and educational institutions throughout the BVI are equipped with disaster-related information (i.e. booklets, posters, etc)
- Incorporation of Disaster Management into Curriculum at Primary and Secondary level
- Production of Disaster Management educational manual for all levels of the educational sector
- Training for teachers and media in Disaster Management offered

COMPONENT 2 RISK IDENTIFICATION

2.1 **Has your country carried out hazard mapping/assessment?** If yes, please describe for which hazards, when they were updated and for what geographical scale they exist. Do they include characteristics, impacts, historical data, and multi-hazards approach? Which institutions are using the results of the hazard assessment? To whom are they available? (Attach any relevant documentation)

Yes, the British Virgin Islands have carried out hazard mapping/assessments. As part of the British Virgin Islands' 1995-1997 Hazard and Risk Assessment Project (HRAP), a vulnerability assessment was conducted with an aim to prioritize the hazards that affect the BVI. These hazards include:

- The effects of tropical systems and related weather systems including land borne flooding, wind damage and coastal flooding
- Earthquakes
- Landslides (minor threat)

The most significant technological hazards identified were:

- Exposure of the environment to hazardous chemicals
- Large explosions
- Accidents related to mass transportation (air and sea)

Of the various hazards, which were identified as a threat to the BVI, hurricanes and earthquakes were noted as the two most serious hazards that posed the greatest threat.

The purpose of the assessment was to estimate the degree of damage that could result from these hazardous events of a given severity. The scope of the assessment focused on the effects of high velocity winds produced by hurricanes and ground shaking generated by earthquakes, on structural elements such as buildings, utility poles, transmission towers, and boats. Further information on this is attached as **Reference E**.

In addition, the British Virgin Islands started a Quantitative Risk Assessment Project (QRAP), which is in its second and final stage and should be completed by the first quarter of 2005. This project shall set up a Geographic Information System (GIS) model that will provide outputs such as placing a dollar value on losses that could be expected from a given hazard scenario. Local training and involvement is also paramount to this project, as the QRA will be set up to run by request. In this way, local GIS trained personnel will be needed to run the QRA. Moreover, systematic

National Report and Information on Disaster Reduction (British Virgin Islands)

updates will be an integral part of the QRAP, as the most up-to-date information is needed to produce the most realistic results.

The objectives of the QRAP include:

- a. To provide probabilistic risk maps for all hazards/sub-hazards and building vulnerability assessments
- b. To streamline existing hazard information into a consistent digital format that is GIS friendly
- c. To create economic impact models and provide cost benefit analysis for mitigation strategies
- d. To characterize critical infrastructure
- e. To map and characterize alluvium and “made-ground”
- f. To map landslide occurrence and potential
- g. To provide tsunami modeling
- h. To provide an assessment of the impact of natural hazards
- i. To provide involvement and on-the-job training for the GIS-based Quantitative Risk Assessment Process
- j. To satisfy the applicable requirements in the approved Mitigation Planning Framework

Institutions using the results of the hazard assessment include key Government agencies including the Department of Disaster Management, Town and Country Planning Department, Survey Department and Public Works Department. This information is also made available to overseas agencies such as the Caribbean Disaster Emergency Response Agency (CDERA), the Office of Foreign Disaster Assistance (OFDA) and the Pan American Health Organization (PAHO).

2.2 **Has your country carried out vulnerability and capacity assessments?** If yes, please describe the methods used and major social, economic, physical, environmental, political and cultural factors considered in the assessment(s). Who are the main contacts for these assessments (or attach any relevant documentation or contact information)

Yes, the British Virgin Islands have carried out vulnerability and capacity assessments.

- i. **Hazard and Risk Assessment Project (vulnerability assessment)**
Contact: Department of Disaster Management (DDM), telephone (284) 494-4499; fax (284) 494-2024; email: bviddm@surfbvi.com
- ii. **MANUAL: “Capability Assessment for Readiness: An Analysis of the Disaster Management Programme of the British Virgin Islands”**

National Report and Information on Disaster Reduction (British Virgin Islands)

Contact: **HIRED CONSULTANT:** Mr. Jeffery A. Hartle, CFPS, MIFireE. Telephone: (660) 429-2971; email: firesafety@hotmail.com. Areas covered include:

- i. **Laws and Authority, Hazard Identification and Risk Assessment, Hazard Management, Resource Management, Planning, Direction, Control and Coordination, Communications and Warning, Operations and Procedures, Logistics and Facilities, Training, Exercises, Public Education and Information, Finance and Administration**
- iii. **Human Vulnerability Study:** To include the identification of vulnerable persons within the Territory—elderly, physically and financially challenged individuals, a database of vulnerable persons, and improved planning for response and relief for vulnerable population

Contact: Department of Disaster Management (DDM), telephone (284) 494-4499; fax (284) 494-2024; email: bviddm@surfbvi.com

- iv. **A Capability Assessment of the Virgin Islands Fire and Rescue Service**

Contact: **HIRED CONSULTANT:** Mr. Jeffery A. Hartle, CFPS, MIFireE. telephone: (660) 429-2971; email: firesafety@hotmail.com. Areas covered include:

- ii. **Brigade Overview, Management Review, Fire Safety, Standards of Fire Cover, Operations, Personnel, Health and Safety, Training and Development, Mobilizing and Communications, Appliances and Operational Equipment, Premises**
- vi. **Environmental Health Capability Assessment Report**
- vii. **Poverty Assessment Study**
- viii. **Assessment of Status and Needs for Scientific Monitoring of Natural Hazards in the British Virgin Islands**

Contact: **HIRED CONSULTANT:** Mr. Simon Young, telephone: (246) 228-7876; email: (SY@caribsurf.com). Areas covered include:

- i. **Existing Monitoring Networks and Data Collection, An Idealized Model of Sustainable Monitoring Operations, Options for Monitoring Network Development, Training, Research and Data Management Issues**

- ix. **GIS based Natural Hazards Risk Assessment for Critical Facilities in the British Virgin Islands – Preliminary Visit**
Contact: **HIRED CONSULTANT:** Mr. Simon Young, telephone: (246) 228-7876; email: (SY@caribsurf.com). Areas covered include:
 - i. **Previous Work and Existing Datasets, Outline of Risk Assessment/Economic Impact Methodology**
- x. **Review of the Development and Building Review Process of the British Virgin Islands**
Contact: **HIRED CONSULTANT:** Mr. Tony Gibbs (in association with Alwyn T. Watson), telephone: (246) 426-5930; email: tmgibbs@caribsurf.com
 - i. **Evaluation of the Operations and Functions of the Government Agencies, Commentary on Construction Practices in the BVI**
- xi. **Human Vulnerability Study**
Contact: Department of Disaster Management (DDM), telephone (284) 494-4499; fax (284) 494-2024; email: bviddm@surfbvi.com

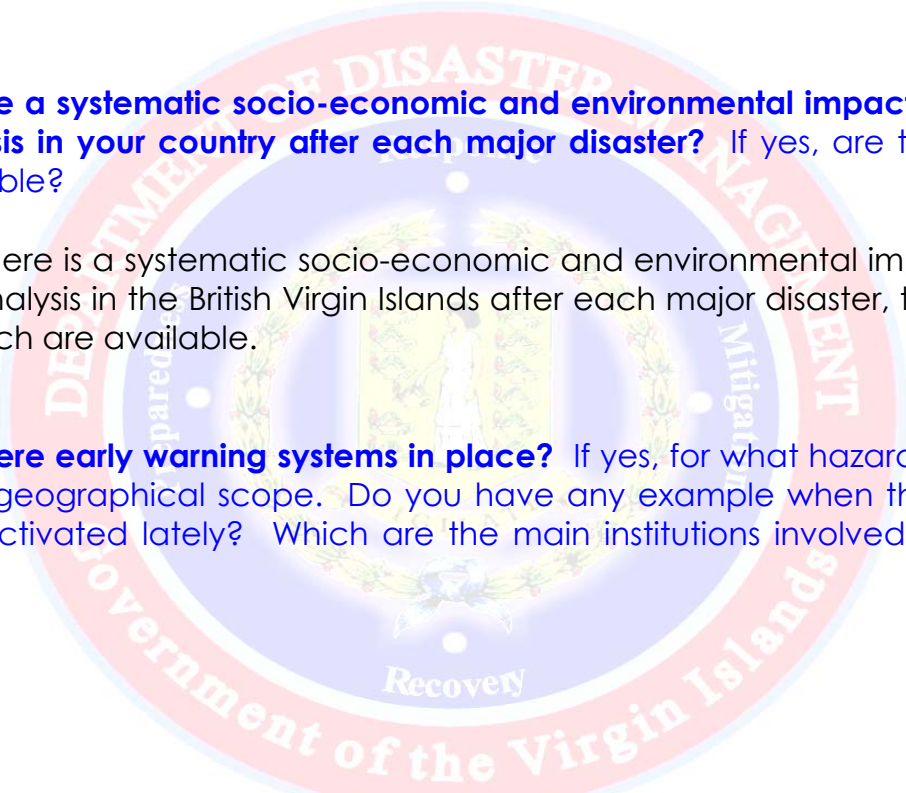
2.3 Does your country have any mechanisms for risk monitoring and risk mapping? If yes, who is responsible?

Yes, currently the British Virgin Islands have mechanisms for risk monitoring and risk mapping. The responsible departments are the **Town and Country Planning Department** and the **Department of Disaster Management, Conservation and Fisheries Department**, and the **Development Planning Unit**.

2.4 Is there a systematic socio-economic and environmental impact and loss analysis in your country after each major disaster? If yes, are the results available?

Yes, there is a systematic socio-economic and environmental impact and loss analysis in the British Virgin Islands after each major disaster, the results of which are available.

2.5 Are there early warning systems in place? If yes, for what hazards and for what geographical scope. Do you have any example when the system was activated lately? Which are the main institutions involved? Please



National Report and Information on Disaster Reduction (British Virgin Islands)

indicate any relevant lessons learnt from the use and public reaction to early warnings issued.

Yes, there is an early warning system in place at the Department of Disaster Management to address the hazards that can impact the British Virgin Islands. These include hurricanes, earthquakes, floods, etc. Included under this system are:

- i. Installation, commissioning and testing of the Emergency Broadcast System – This was completed in late 2003 and has expanded the Department of Disaster Management's capability of reaching the public on both AM & FM frequencies. This system is linked to all radio and television stations.
- ii. Installation of outdoor warning siren – Installation work on this was completed in April 2004. The most recent check was done in May 2004. Local activation of the unit from the site was successful and preliminary checks identified the coverage areas. The general public was very cooperative and no difficulties were encountered. The Department of Disaster Management has recently completed the remote radio activation aspects of the system.
- iii. Emergency Telecommunications Network – Includes VHF, UHF, SSB, Satellite Phones and HF (Amateur)

Lessons Learnt

- i. Need for upgrading systems with new technologies
- iii. Must accompany a comprehensive Public Education Programme
- iv. Need to establish Memorandums of Understanding (MOUs) with Media
- v. Need for development of detailed procedures for use and continuous testing is necessary
- vi. Redundancy in Systems
- vii. Attention should be paid to all areas of the population (i.e. physically and mentally challenged, non-English speaking persons, etc)



COMPONENT 3 KNOWLEDGE MANAGEMENT

- 3.1 **Does your country have disaster risk information management systems (governmental and/or non-governmental)?** If yes, what kind of information on disaster reduction is available, how is it collected, how is the information disseminated and who are the main users? (Indicate relevant sources of information, if applicable)

Yes, the British Virgin Islands have disaster risk information management systems in place. The Department of Disaster Management (DDM) has been using Geographical Information Systems (GIS) extensively since 1995 when the Hazard and Risk Assessment Project (HRAP) '95-'97 which identified the at-risk areas in the BVI in a GIS format was done. The datasets include areas at risk to:

- Storm surge
- High winds
- Landslide occurrences

DDM also uses GIS to keep a geo-database of all the Critical Facilities including the 34 designated Emergency Shelters. Recently, the DDM acquired a Geology dataset, which shows the geological makeup of the four major islands in the BVI and is currently available in the Complete Resource Information System (CRIS).

DDM is a coordinating agency with an overall goal that is similar to that of the first objective of the National Integrated Development Strategy (NIDS)—to reduce the overall vulnerability of the BVI. In this way, we use GIS to access datasets in the CRIS in order to perform day-to-day operations such as planning, public information, making recommendations and sharing data.

Information is collected mainly through the use of forms, surveys, or from meetings arranged where key personnel are present who submit information as needed. Information is disseminated via mail, electronic media, or at meetings. Main users include Government agencies, Private Sector Groups, researchers, students and overseas donor agencies.

- 3.2 **Are the academic and research communities in the country linked to national or local institutions dealing with disaster reduction?** If yes, please describe the mechanisms for information sharing and indicate any example of usefulness and effectiveness. Which are the main research and academic institutions dealing with disaster reduction related issues

(please list, if available, and indicate how their research work is related to the country's disaster risk reduction needs).

There currently exists an associate's degree programme in disaster management at the British Virgin Islands local community college (H. Lavity Stoutt Community College) that commenced in September 2001. (Further information on this programme is attached as **Reference F**. Students enrolled in this course comprise of key response agencies, which include the Fire and Rescue Service, Town and Country Planning Department, Environmental Health Department, Royal Virgin Islands Police Force, Department of Agriculture, Department of Disaster Management, the Disaster Auxiliary Corps, and the Conservation and Fisheries Department. The programme is also being offered to the general public. Advantages include:

- i. Greater level of disaster awareness among key sectors, where disaster management is slowly being institutionalized
- ii. Trained personnel who can provide continuity to the British Virgin Islands' Disaster Management Programme
- iii. Community college is being recognized as the leading regional institution for disaster management, education and training
- iv. Draft Memorandum of Understanding between the Pan American Health Organization (PAHO) and the Community College for a partnership framework to offer training for Health Sector Personnel from across the region
- v. Collaboration between the Caribbean Disaster Emergency Response Agency (CDERA) and the Community College for offering courses at the college in Safe Building Design and Construction

3.3 Are there educational programmes related to disaster risk reduction in your public school system? If yes, for what age range? Do you have any indication on how these courses have been useful to change any practices at local or national scale?

Currently there are components included in courses such as Social Studies at the Primary level related to disaster risk reduction in our public school system. Discussions have taken place with personnel from the BVI Department of Disaster Management and the BVI Ministry of Education on the formal institutionalization of disaster management into the school curriculum. Work on this is currently ongoing. In addition, a children's handbook entitled "What Every Primary School Child in the BVI should know about Disasters" was developed by the Department of Disaster

Management and distributed to the various primary schools throughout the BVI. The handbook focuses on hazards such as hurricanes, earthquakes, fires, lightning, drought, volcanoes, landslides, oil spills, hazardous materials, and floods.

- 3.4 **Are there any training programmes available?** If yes, please list (if available indicate scope and target audiences of the courses). Do you have any indication on how these courses have been useful to change any practices at local or national scale?

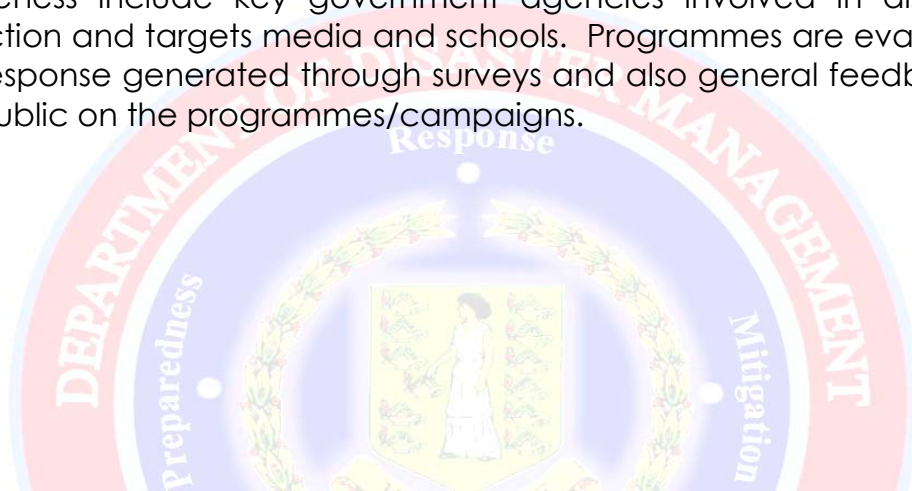
Please refer to number 3.2 above. In addition, the Department of Disaster Management offers workshops and seminars annually. Change in practices has been noted in the way in which projects are executed and plans approved (e.g. call for detailed Environmental Impact Assessments addressing Human Vulnerability Assessments).

- 3.5 **What kind of traditional indigenous knowledge and wisdom is used in disaster-related practices or training programmes on disaster risk reduction in your country?**

Attempts have been made to capture and document historic data from the elderly in the community and persons serving a number of years in the Public Service.

- 3.6 **Do you have any national public awareness programmes or campaigns on disaster risk reduction?** If available, who are the main players for raising public awareness? How are the mass media and schools involved? Who are the targeted groups and how do you evaluate the programmes?

The National Public Awareness Programmes/Campaigns covers all areas of disaster risk reduction. The main players involved in raising public awareness include key government agencies involved in disaster risk reduction and targets media and schools. Programmes are evaluated by the response generated through surveys and also general feedback from the public on the programmes/campaigns.



National Report and Information on Disaster Reduction (British Virgin Islands)

COMPONENT 4 RISK MANAGEMENT APPLICATIONS/INSTRUMENTS

- 4.1 **Are there any good examples of linking environmental management and risk reduction practices in your country?** (Key areas of environmental management may include coastal zone, wetland and watershed management, reforestation and agricultural practices, amongst others). If yes, please indicate in what areas. (Attach any relevant documentation or references)

The Conservation and Fisheries Department has been mandated to oversee and manage all aspects related to the environment. It is their mission to ensure that the environment, the BVI Fishing Industry and the resource base on which they depend is managed in a sustainable manner.

In this regard, they have established routine environmental assessments and monitoring programmes. These include:

- Coastal Resource Inventory: includes mapping through GIS, their natural resources (seagrass, mangroves, coral reefs, beaches, etc)
- Turtle monitoring of the Hawksbill, Green and Leatherback Turtles: In 2003, two leatherbacks were harnessed with state of the art satellite tracking systems. Officers from the BVI Conservation and Fisheries Department and volunteers perform daily checks of beaches for signs of turtle nesting and hatching
- The Red Hind Spawning and Aggregation Project
- Monitoring of the fisheries: includes identifying species and measuring of size and amount. Lobster is also monitored
- Water quality is undertaken generally to ensure good quality for swimming
- Seabird Monitoring
- Surveillance and Enforcement in the case of compliance guidelines for development as well as to investigate environmental nuisances
- Beach cleanup of trash and other debris
- Oil spill cleanups

- 4.2 **Are financial instruments utilized in your country as a measure to reduce the impact of disasters** (e.g. insurance/reinsurance, calamity funds,

National Report and Information on Disaster Reduction (British Virgin Islands)

catastrophe bonds, micro-credit finance, community funds, etc)? If yes, please describe what these instruments are and when they were established, who manages them and who are eligible to them.

Yes, financial instruments are utilized in the British Virgin Islands as a measure to reduce the impact of disasters. Included within the BVI Customs Act, under Caption 104, are provisions for the exemption of customs duty on selected imported items purchased that aids in the reduction of the impact of disasters (e.g. hurricane shutters).

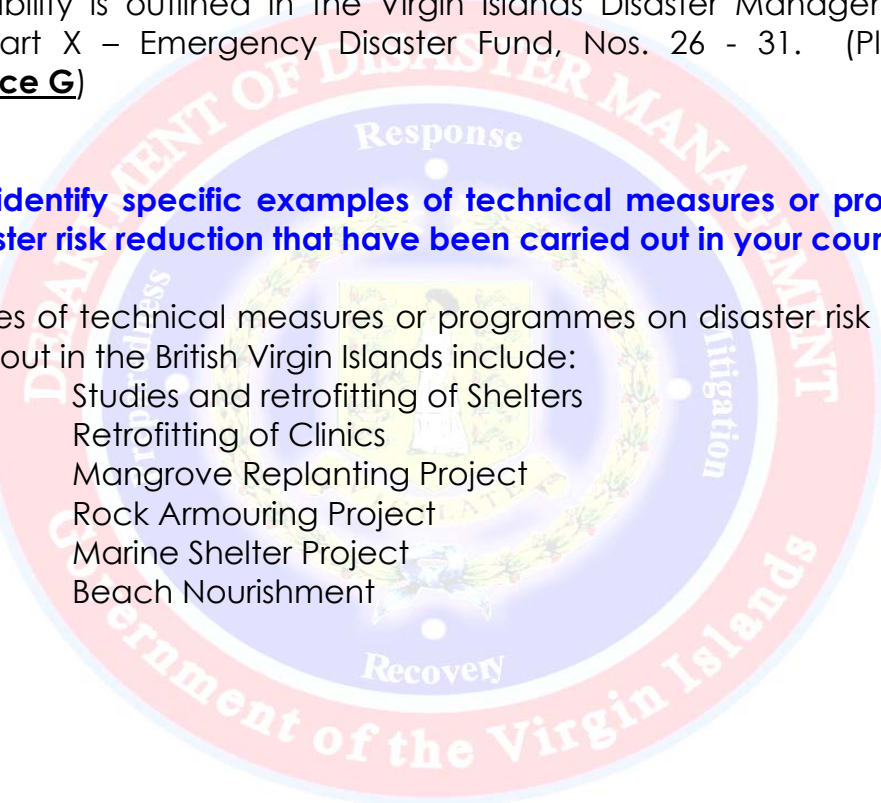
Local insurance companies also offer incentives to homeowners and businesses that have implemented risk reduction measures in their property development. The will include premium reduction.

In addition, outlined in the British Virgin Islands' National Disaster Plan, is an Administration and Finance Committee (Fund Committee) whose responsibility is outlined in the Virgin Islands Disaster Management Act, 2003, Part X – Emergency Disaster Fund, Nos. 26 - 31. (Please see **Reference G**)

4.3 **Please identify specific examples of technical measures or programmes on disaster risk reduction that have been carried out in your country.**

Examples of technical measures or programmes on disaster risk reduction carried out in the British Virgin Islands include:

- Studies and retrofitting of Shelters
- Retrofitting of Clinics
- Mangrove Replanting Project
- Rock Armouring Project
- Marine Shelter Project
- Beach Nourishment



COMPONENT 5 PREPAREDNESS AND CONTINGENCY PLANNING

- 5.1 **Do you have disaster contingency plans in place? Are they prepared for both national and community levels?** If yes, please describe their main components, who is responsible for activating the plan(s)? Are the plan(s) updated on an annual basis? Have you ever used the contingency plan(s) that was or were developed? If yes, what was the result?

Yes, there are disaster contingency plans in place for both national and community levels. Main components include areas that address preparedness, mitigation, response and recovery that reflect Comprehensive Disaster Management.

Disaster Plans are updated as needed, and are tested through annual Simulation Exercises. Recommendations coming out of these simulation exercises are used to update the plans.

- 5.2 **Has your government established emergency funds for disaster response and are there national or community storage facilities for emergency relief items—mainly food, medicine, and tents/shelters?** If yes, please provide some details.

Yes, the British Virgin Islands Government has established emergency funds for disaster response. **See item 4.2 above.** In addition, there are community storage facilities established for emergency relief items.

a. **Food:**

- Food commodities would be stocked by the three largest food suppliers in the Territory; namely, (Road Town Wholesale, Supa Value and K-Marks)
- Each of these suppliers will be responsible for stocking commodities according to the food group (i.e. One week for target numbers in the hurricane season)

Road Town Wholesale	Supa Value	K-Marks
Staple food items, canned meats, fish, disposable cutlery & crockery & cups	Bottled fruit juices, canned vegetables & peas, sanitizing items, condiments, canned soups	Liquid milk, cocoa, tea, coffee, fresh & canned fruit, dried peas, ***perishable vegetables, cold

National Report and Information on Disaster Reduction (British Virgin Islands)

		storage items, cooking fuel & accessories, spreads
Port Purcell Market – food items for the vulnerable groups		

Note: ***These items cannot be stored for long periods therefore the quantity available at the time of the disaster will be used primarily for the vulnerable groups

- Quantities to be stored will be based on the total zonal shelter population and number of meals for a two-week period.

ZONE	TOTAL POPULATION	NO. OF MEALS/FORTNIGHT
1	330	13,860
2	70	2,940
3	140	5,880
4	220	9,240
5	130	5,460
6	340	14,280
7	30	1,260
8	70	2,940
9	130	5,460
10	90	3,780
TOTAL	1550	65,100

- At the time of the disaster “warning period” the food items will be transported from the main supplier (via delegated transport as arranged by the command post) to the zonal storage areas. The Shelter Managers will then receive supplies every three days within the fortnight period. This is to allow for safe storage within each shelter.
- b. **Medicine:** Medical supplies are stored at the local hospital (Peebles Hospital), Road Town clinic and the Medical storeroom at the Government’s Central Administration Building. Works are ongoing to have supplies decentralized so that medical supplies are securely stored and located at all clinics throughout the British Virgin Islands. In addition, the Health Department is currently in the process of computerizing its list of medical supplies through the use of Supplies Management (SUMA) software.

National Report and Information on Disaster Reduction (British Virgin Islands)

- c. **Tents/Shelters:** There are approximately thirty-four (34) emergency shelters located throughout the Territory, four (4) of which are equipped with emergency shelter kits. (See **Reference H** for more information on the BVI Shelter Management Programme).
- d. **Emergency Warehouse Facility:** The Department of Disaster Management (DDM) has a warehouse facility in which they store a variety of items including:
 - i. Water and Sanitation: Repellent, Portable Chemical Toilets, Cleaning Products, etc
 - ii. Shelter, Housing, Electrical: Safety Hats, Shovels, Chain saws, Tarpaulin, Tool kits, etc
 - iii. Logistics, Management: Radios, Mega-Phones, Gas Containers, etc
 - iv. Personal Needs: Sleeping Bags, Cots, Respirators, Propane Stoves
 - v. Unclassified: Fire Extinguishers, Boomers, HAZMAT Container (Bio-Hazard), Life Vests/Jackets, etc

5.3 Who is responsible for the coordination of disaster response preparedness and is the coordination body equipped with enough human and financial resources for the job? Please comment on the effectiveness of the coordination work done so far?

The BVI National Emergency Organisation (NEO), through the BVI Department of Disaster Management (DDM), monitors and supervises any activity, which may have direct or indirect effect on the level of preparedness, prevention and safety in the society. These functions will be conducted in association with other departments (e.g. BVI Fire and Rescue Service, the Royal Virgin Islands Police Force, the Public Works Department and the Ministry of Health).

The National Emergency Organisation is equipped with enough human and financial resources to carry out its duties effectively. This organisation comprises:

- a) The Executive Council
- b) The National Disaster Management Council (NDMC) and its sub-committees
- c) The Department of Disaster Management (DDM)
- d) Zonal Committees
- e) Government Organisations (GO's)
- f) Non-Government Organisations (NGO's)



National Report and Information on Disaster Reduction (British Virgin Islands)

In order to carry out their duties effectively the above-mentioned committees, organisations, departments, etc are guided by the BVI National Disaster Management Plan, which comprises the statement of the contingency arrangements under the coordination of the Director of the Department of Disaster Management for responding to the threat or event and aftermath of a disaster in the Territory, whether or not the threat or disaster is such as to prompt the declaration of a disaster emergency. Further information on the BVI National Disaster Management Plan is attached as **Reference I.**

COMPONENT 6 CALL FOR GOOD PRACTICES IN DISASTER RISK MANAGEMENT

Based on the above analysis and information provided, please provide at least two examples of any successful implementation of disaster reduction activities in your country (could be of local, national or regional scale); any project or community based experience, national policy, interaction between sectors, etc., would be welcomed. Provide maximum one page on each example, indicating area of work, institutions and actors involved, duration, impact of the activities, lessons-learnt if the example have been replicated. You may also kindly direct us to relevant web-based information/organization.

1. **Marine Shelter Project**

In keeping with the Virgin Islands Disaster Management Act of 2003, a marine shelter project was developed in 1990 geared towards the safe housing of vessels before the onset of a hurricane. This project was a joint effort between such agencies as the BVI Conservation and Fisheries Department, the BVI Ports Authority, and the BVI Marine Services. In recent years, the area has been developed and, to date, can safely house approximately 317 vessels.

2. **Mangrove Replanting Project**

In 1964 the National Parks Trust instigated a reforestation programme to replant native trees, following the declaration of the BVI's first National Park at Sage Mountain. The success of this programme is evident today in the mature forest that now exists and serves as a valuable educational resource for visitors, residents and students to create awareness on the importance of habitat conservation and reforestation.

The reforestation programme has focused on two main areas: direct planting of indigenous seedlings at National Parks and the celebration of Arbour Day each November. Until 1999 the Trust's reforestation programme predominantly targeted the terrestrial environment, however, as an increasing number of development projects threaten the coastal environment, this programme was expanded to include mangrove replanting. Sites have now been established on Tortola, using the **Riley Encasement Method** to ensure seedling survival.

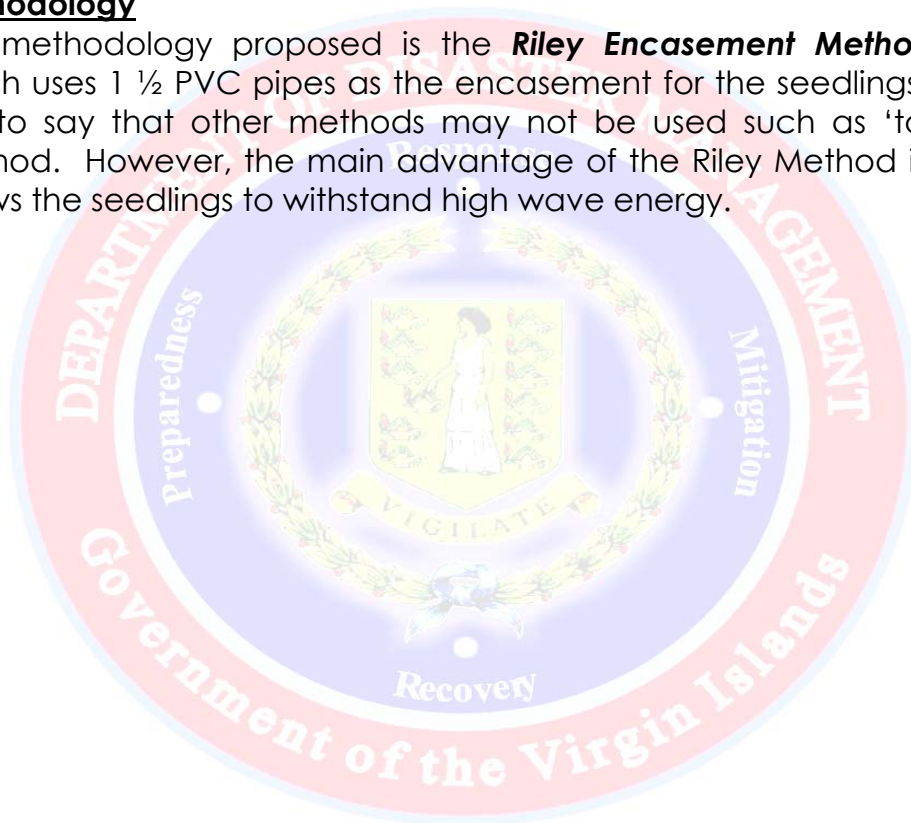
National Report and Information on Disaster Reduction (British Virgin Islands)

The National Parks Trust and its governmental partner, the Conservation and Fisheries Department identified this problem as one of the most important factors in the decline of fisheries and overall health of adjacent coastal ecosystems. The mangrove replanting project aims to reestablish populations of mangroves where they were previously found through the sourcing of material from areas with healthy stands of mangrove forests.

Initial project funding was derived from the OECS Natural Resources Management Unit (NRMU) and the first areas (Road Reef and Hodge's Creek) were planted in July 1999 utilizing students from the joint National Parks Trust/Conservation and Fisheries Department Summer Programme. The initial project has generated interest in mangrove replanting and the Trust collaborates annually with a number of partners, including the Rotary Club of Tortola, the Lions Club, Sail Caribbean and LifeWorks/Action Quest. Over one thousand red mangroves have been replanted to date, with four additional sessions planned for the summer of 2004.

Methodology

The methodology proposed is the **Riley Encasement Methodology**, which uses 1 ½ PVC pipes as the encasement for the seedlings. This is not to say that other methods may not be used such as 'torpedo' method. However, the main advantage of the Riley Method is that it allows the seedlings to withstand high wave energy.



COMPONENT 7 PRIORITIES YOU WANT ADDRESSED AT WORLD CONFERENCE ON DISASTER REDUCTION

What do you think are the priority topics to be agreed upon at the World Conference to enhance and strengthen national policy and practice to reduce risk and vulnerability to natural and technological hazards? Please list any other thematic areas or specific topics of discussions that you consider of importance to increase the effectiveness of disaster risk reduction for your country.

Please also indicate any particular experience or project that your country would like to exhibit or present at the Conference.

Priority topics to be agreed upon at the World Conference to enhance and strengthen national policy and practice to reduce risk and vulnerability to natural and technological hazards include:

- i. Reduction of vulnerability of Health facilities, specifically clinics
- ii. Incorporating Disaster Management/RR into School Curriculum at all levels
- iii. Institutionalization of DM/RR into the Development Planning Process



(REFERENCE A)



The Department of Disaster Management
Office of the Deputy Governor

**STRATEGIC
MANAGEMENT
PLAN
2004 – 2008**

*“It is better to prepare
and prevent, rather than
repair and repent.”
S. Thomas 1856*

January 2004

National Report and Information on Disaster Reduction (British Virgin Islands)

3 Wailing Rd., McNamara

CONTENTS

Message from the Director	3
Summary of Major Plan Elements	
4	
Introduction	7
<i>Planning and Institutional Context</i>	7
<i>Resourcing the Plan</i>	7
<i>Critical Assumptions</i>	8
<i>Functions of the Department of Disaster Management</i>	8
<i>Organisational Arrangements</i>	9
<i>Disaster Management Programme Components</i>	10
Challenges to Implementation	11
Summary of Programme Activities	12
<i>Mitigation and Planning</i>	13
<i>Community Preparedness and Supply Management</i>	16
<i>Public Information, Education, Training and Research</i>	18
<i>Emergency Operations</i>	23
<i>Administration and Finance</i>	25
<i>Recovery Coordination</i>	27
Appendices	
<i>Proposed revision to Disaster Management Organization</i>	
<i>5 year proposed Organizational Structure for DDM</i>	

MESSAGE FROM THE DIRECTOR

One of the main priorities for the DDM is to continuously assess our work and to determine the best ways for us to accomplish our mission. I am therefore

National Report and Information on Disaster Reduction (British Virgin Islands)

pleased to present the Department of Disaster Management (DDM) Strategic Plan for the next five years – a change from the one-year work plans.

This strategic plan was produced with a team effort. All members of staff contributed ideas and suggestions. I am especially grateful to Ms. Joyce Thomas, for sharing her knowledge and in facilitating the development of this plan. The Deputy Governor Mr. Elton Georges provided much needed advice and guidance.

The Comprehensive Disaster Management approach is one, which we strive to achieve with our many partners. The Territory's disaster management system must address all hazards and all phases of the disaster management cycle. The need for this became more evident after the November Floods of 2003, when resources were required to be deployed Territory-wide to respond to the unexpected heavy rains.

Over the past years we have conducted a number of hazard and capability studies. One, in particular, was a Capability Assessment Readiness study of the Territory's Disaster Management Programme that has identified loopholes in our system. Those areas are being addressed in this strategic plan.

This Plan is intended to guide the DDM in the implementation of its activities planned for the next five years in order to achieve the overall goal of the territory's Disaster Management programme of reinforcing the development potential of the BVI by reducing risks from all hazards. It must be emphasized that the plan is guided by the following:

1. The National Integrated Development Strategy (NIDS),
2. The Government's six broad focus areas
3. The National Disaster Plan
4. The Public Sector Development Programme (PSDP),
5. The Mitigation and Development Planning Framework,
6. The Disaster Management Policy
7. The Disaster Management Act of 2003.

The Government has outlined six broad focus areas, which has guided the development of this Plan. These focus areas relate significantly to the work of the DDM in that in order for us to achieve the goal of the Territory's disaster management programme we must focus on building a resilient economy to the effects of natural and man-made hazards and encourage efforts to improve our health care system which will in turn lead to a more effective response. Improving our social services and education systems provides not only for the welfare of our residents but also allows persons to be more knowledgeable of

National Report and Information on Disaster Reduction (British Virgin Islands)

the risks posed to the BVI from hazards and provides them with information necessary for them to protect themselves and their property from the effects of hazards likely to affect the BVI. The support for the Disaster Management Programme at HLSCC and the incorporation of disaster management into the primary and secondary curriculum are significant ways in which our education system has been improved to meet the disaster management goal.

The government has outlined accountability and transparency as one of its broad focus areas. These areas are crucial in the disaster management process in that they ensure that residents are made aware of how their money is being invested and demonstrates the meaningful ways in which government is investing in order to ensure sustainability of our environs - sustaining our natural resources is key to reducing vulnerability. The government as a main focus area outlines the need for improvements in our communications and infrastructure - this undoubtedly will lead to a more effective and efficient response and recovery.

Everyone has a responsibility to be informed of the risks we face and to make decisions to keep ourselves prepared and to act responsibly when disasters occur. The DDM is committed to working with its stakeholders and the people of the BVI in ensuring that we are ready to face the impact of any natural or man made event.

Sharleen S. DaBreo
Director

SUMMARY OF MAJOR PLAN ELEMENTS

VISION

The Government of the BVI envisages a Territory in which the negative effects and impacts of hazards will be reduced to a minimum through the implementation of sound policies, practices and programmes aimed at reducing risk and vulnerability.

MISSION

The DDM will seek to reduce loss of life and property within the Territory of the BVI attributable to disasters by ensuring that adequate preparedness and mitigation measures, and response and recovery mechanisms are established to counteract the impact of natural and technological hazards.

VALUES

- a. The main function of the Department of Disaster Management is to promote preservation of human life in times of crisis.
- b. Effective Disaster Management depends upon the consistent coordination and integration of the work of many agencies, organizations and individuals.
- c. A community that is well prepared for hazards of all kinds will survive and recover quickly from disasters.
- d. Excellent service must be provided to the community before, during and after a disaster or emergency.

National Report and Information on Disaster Reduction (British Virgin Islands)

- e. Flexibility and adaptability of approach must be the basis of the delivery of disaster management services.
- f. Staff commitment, capacity, teamwork and motivation will be the primary contributors to the organization's success

GOAL

REINFORCE DEVELOPMENT POTENTIAL OF THE BVI BY REDUCING RISKS FROM ALL HAZARDS.

OBJECTIVE 1: REDUCE ECONOMIC LOSS FROM HAZARD IMPACTS

Strategies:

- a. Accelerate efforts to develop risk and hazard identification products
- b. Use appropriate technologies and scientific research to improve planning, preparedness, mitigation, response, recovery and communication techniques.
- c. Facilitate assessment of disaster management plans
- d. Lead development of specific plans for catastrophic hazards and for risks to national infrastructure or resource targets.
- e. Ensure that appropriate Continuity of Government, Continuity of Operations and Contingency programmes are in place
- f.** Encourage and assist communities in the development of all hazard plans to reduce the impact of, enhance response to and ensure recovery from emergencies or disasters.
- g. Assess or support assessment of DDM partners' capabilities to deal with hazards
- h. Enhance partners' capabilities by building on existing relationships, partnerships, incentives and mutual aid programmes.
- i. In coordination with partners, develop an integrated training, exercise and evaluation programme to develop DDM and its partner's capabilities
- j. Organise, manage and support exercises that target specific high priority response and recovery operations
- k. Develop a single, uniform, after action reporting process to capture lessons learned
- l. Concentrate DDM's resources in the areas most vulnerable to hazards
- m. Engage the private sector to contribute to disaster preparedness and mitigation
- n. Educate about the use of insurance as a mechanism by which public and private property owners can reduce their risk of economic loss.

National Report and Information on Disaster Reduction (British Virgin Islands)

- o. Promote the adoption and implementation of sound risk management plans throughout all sectors.
- p. Promote development of laws, regulations, codes and standards.
- q. Assess needs to determine curriculum development priorities
- r. Develop and deliver training courses targeting all sectors
- s. Evaluate the effectiveness of training
- t. Offer technical assistance on building and development techniques
- u. Promote maintenance of structures as a mitigation measure.

Performance Indicators

- a. Mitigation tools including hazard assessments incorporated into development planning decisions
- b. Enhanced institutional capacity to implement CDM
- c. Improved constructions standards for major infrastructure, critical facility and housing stock
- d. Recovery period from disaster impact shortened

OBJECTIVE 2: MINIMIZE HUMAN SUFFERING FROM NATURAL AND MAN MADE HAZARDS

Strategies:

- a. Establish DDM's capability to operate 24 hours a day, seven days a week.
- b. Monitor potential emergencies and disasters and be prepared to deploy assets to ensure quick response
- c. Develop, acquire and coordinate a national operational capability and the resources and assets to simultaneously respond to incidents, including hazards that occur with no warning time, anywhere in the Territory.
- d. Lead the development and implementation of all hazard response plans
- e. Develop effective organizational relationships to ensure a coordinated response and recovery effort.
- f. Lead the collaborative establishment of a national emergency communications and early warning systems network
- g. Lead the development and implementation of a Recovery Plan with incident specific annexes and recovery guidelines
- h. In coordination with partners, develop a comprehensive public information and education programme to inform and educate all sectors
- i. Assist in the coordination of recovery efforts

Performance Indicators:

- a. Increase citizen awareness and action
- b. Disaster management capacity strengthened

- c. Improved efficiency of disaster response and relief efforts

**OBJECTIVE 3: CHALLENGING AND MOTIVATING WORK ENVIRONMENT
CREATED FOR EMPLOYEES**

Strategies:

- a. Recruit, train and retain a diverse staff
- b. Develop employment categories and functional skill requirements for DDM employees that are understandable and designed to support DDM's mission
- c. Define career development paths to support individual growth and choice ways that are consistent with DDM's workforce needs
- d. Encourage employees to undertake training to develop management skills
- e. Ensure the development of Performance Agreements and carry out evaluations to measure performance
- f. Hold people accountable for performance and take corrective action where necessary to improve low or unacceptable performance
- g. Promote an environment that supports responsible risk taking
- h. Improve management's ability to lead, communicate, motivate and supervise DDM Staff
- i. Evaluate organizational and operations performance in ways that can be used to hold managers accountable
- j. Design appropriate rewards that recognize success in achieving DDM's mission and performance targets
- k. Identify and publicize clear delegations of authority
- l. Provide a safe and secure work environment that ensure that facilities accommodate mission and program requirements
- m. Help employees balance work and family requirements during both disaster and non disaster times
- n. Develop and implement support programmes to counter the negative effects emergency assignments can have on employees and their families

Performance Indicators:

- a. Highly trained, motivated and responsible staff
- b. Comfortable and safe work environment
- c. Good communication and team effort between employees
- d. Opportunities for upward mobility and personal development
- e. Opportunities for staff to implement creative ideas

INTRODUCTION

This document is intended to guide the staff of the DDM in fulfilling its mission and major policy decisions over the next five years. The primary purpose of the document is to outline the strategies for achieving Comprehensive Disaster Management.

PLANNING AND INSTITUTIONAL CONTEXT:

The Government of the B.V.I has been in the forefront of strategic planning in Disaster Management in the Caribbean. To date, the DDM has conducted a number of scientific, vulnerability and capability studies.

Despite these impressive strides, there is a need to continue to have Disaster Management institutionalised in all sectors and integrated into the Development Planning Process. The process of institutionalisation has already begun in the area of health and education. The disaster management associate degree programme at HLSCC, which began in 2001, is on stream and a health disaster coordinator was appointed in 2003.

The DDM recognizes, that in order to implement this plan, it needs the consistent support of a wide range of organizations. This can be achieved through effective networking and good interpersonal relations.

Disaster Management organizations are expected to be flexible and immediately responsive to its stakeholders' while complying with standardized regulations and procedures. *In order for the DDM to remain effective, much of its work must be done outside normal working hours, and with as little "red tape" as possible. That reality places enormous demands upon DDM staff since they may be required to make great sacrifices in their domestic and/or family arrangements and take on additional responsibilities in times of emergencies or disasters.*

RESOURCING THE PLAN: FINANCIAL RESOURCES

Recurrent Costs:

The administrative costs for running the office over the next five year would not need substantial increases in the annual recurrent allocation; however, staff costs are likely to increase if the positions of Community Relations Officer, Technical Planning Officer, Senior Executive Officer, and Emergency Telecommunications Officer are authorized as outlined in the proposed organizational chart at Appendix II.

Capital Costs:

The implementation of this plan will require a substantial increase in capital costs. The Mitigation Planning and Development Framework will probably develop a suite of projects and programs costing at least \$500,000 per year. However, much of this would probably come from funds earmarked for specific discrete projects in different departments.

The most costly DDM project is likely to be the Expansion of EOC facilities with a preliminary estimate of \$1.5 million. Other projects such as Retrofitting of Emergency Shelters and Government Buildings, Early Warning Systems Improvements, Quantitative Risk Assessment and Monitoring and Mitigation Development will be estimated at a total cost of approximately \$850,000. The DDM will seek to gain resources for some of these projects through regional projects such as CHAMP aimed at CDERA participating states.

It is impractical at this stage for the DDM to provide more detailed estimates. What is being proposed upon approval of the overall strategy embodied in the Plan is that the DDM will seek the necessary technical assistance to ensure that the detailed costs of each year's programme and project activities are submitted as part of the annual budget process. Allocations would then be provided each year on the basis of agreed national and DDM priorities. It may thus become necessary, to reschedule or re-prioritise some activities on the basis of national resource allocations.

CRITICAL ASSUMPTIONS:

1. Government will continue to see Disaster Management as priority for sustainable development in the Territory of the British Virgin Islands
2. Government will allocate necessary resources for disaster management.
3. Capability will be maintained within the British Virgin Islands to manage and operate a Comprehensive Disaster Management Programme
4. The BVI Government is committed to reducing vulnerability in order to decrease the risk posed to the Territory from natural and man-made hazards.
5. The necessary cooperation will be received from the private and public sector
6. Current funding arrangements will require changes to enable disaster management to become a truly multi-sector, multi-agency activity
7. Heads of all agencies will display the necessary leadership team building skills to promote effective disaster management.

FUNCTIONS OF THE DEPARTMENT OF DISASTER MANAGEMENT:

National Report and Information on Disaster Reduction (British Virgin Islands)

1. Laws and Authorities - ensure that revision of laws and regulations that establish the legal authority for the development and implementation of the disaster management programme and define emergency powers, authorities and responsibilities.
2. Hazard Identification and Risk Assessment – identification of hazards and the assessment of risk to persons, public and private property, environment and structures.
3. Hazard Management – ensure appropriate mitigation measures are being implemented and promote the use of hazard information and recommendations contained in studies conducted by the DDM to lessen the effects of disasters to the population, communities, businesses, industries and government.
4. Resource Management – develop methodologies for the prompt and effective identification, acquisition, distributing, accounting and use of personnel, facilities and major items of equipment for essential emergency functions.
5. Planning – develop national, sectoral and community plans that focus on the areas of mitigation, preparedness, response and recovery.
6. Direction, Control and Coordination – analyze emergency and disaster situations and provide direction and coordination support to ensure a quick and effective response and effective and efficient use of available resources.
7. Communications and Warning Technology – establish, use, maintain, augment and provide back up for all types of communications devices required for emergency and response operations.
8. Operations and Procedures – develop, coordinate and implement operational plans and procedures that are fundamental to effective disaster response and recovery.
9. Logistics and Facilities – identify, locate, acquire, distribute and account for services, resources, material, facilities required to adequately support disaster management activities.
10. Training – assess, develop and implement training/educational programmes for public/private officials and emergency response personnel
11. Exercises – establish a programme of regularly scheduled exercises, designed for assessment and evaluation of emergency response plans and capabilities.
12. Public Information and Education – provide the general public with education on the nature of hazards, protective measures, and an awareness of the responsibilities of government and citizens in an emergency/disaster. Provide accurate, timely and useful information

National Report and Information on Disaster Reduction (British Virgin Islands)

- and instructions to people at risk in the community during an emergency period
13. Finance and Administration – adhere to fiscal and administrative procedures.
 14. Recovery Coordination – assist in the re-establishment of a stable social, physical and economic basis to a community affected by a disaster.

ORGANIZATIONAL ARRANGEMENTS:

- a. The staff positions are as shown below:
 - Director, Disaster Management
 - Senior Technical Planning Manager
 - Community Preparedness Manager
 - Emergency Telecommunications Manager
 - Information Training Manager
 - Emergency Telecommunications Technician
 - Training and Research Officer
 - Administrative Officer
 - Secretary 1
 - Executive Officer (Temporary)
 - Telecommunications Advisor (Temporary)
 - Handyman (non-established)
 - Cleaner (non-established)

- b. In functional terms, the DDM is currently divided into 6 programme areas.
 - Mitigation and Planning
 - Community Preparedness and Supply Management
 - Public Information, Education, Training and Research
 - Emergency Operations
 - Administration and Finance
 - Recovery Coordination

DISASTER MANAGEMENT PROGRAMME COMPONENTS:

a. Mitigation and Planning

This involves the assessment of various hazards likely to affect the B.V.I. This information provides the public sector with the ability to develop appropriate hazard mitigation strategies and measures in order to prevent, or reduce the occurrence of a disaster within the Territory. Public sector agencies and individuals within the community are also responsible for the implementation of hazard mitigation activities in order to protect life and property.

b. Community Preparedness and Supply Management:

This area deals with preparing the community for disaster/emergency situations. This is done using community involvement in disaster management, where each individual in the Territory has the opportunity to contribute to plans and decision-making. Also working closely with other government departments, non-governmental organisations, churches, businesses and agencies to ensure plans are put in place for the shelter and welfare of persons in the territory during a disaster.

c. Public Information, Education, Training and Research:

This component seeks to reduce disaster vulnerability, by increasing the public's awareness, understanding and ability to anticipate and cope with hazards and their disastrous effects. This is achieved mainly through training and public education programmes, and the dissemination of information to the public. The training and research component provides training for members of the National Disaster Organisation in order to build capacity to provide effective response. The area of research aims to examine the overall disaster management programme to identify areas that require further attention.

d. Emergency Operations:

The National Communications Control Centre (NCCC) is located in the Department of Disaster Management building in MacNamara. The NCCC provides the National Emergency Operations Centre (NEOC) with emergency telecommunications facilities and early warning systems required for necessary information transfer before, during and after a disaster. When necessary the DDM prepares and conducts training courses/exercises for emergency radio operators.

e. Administration and Finance:

The Administration and Finance programme promotes compliance with all relevant public service regulations and follows office practices that stimulate efficiency in the use of financial allocations.

g. Recovery Coordination:

Recovery encompasses all those measures necessary to re-establish a stable social, physical and economic basis to a community affected by a disaster. This function requires the DDM to provide support for Government's coordination, where possible.

CHALLENGES TO IMPLEMENTATION

A number of circumstances combine to make the Disaster Management Environment extremely challenging in the BVI:

Increased Risk

The Territory's population continues to expand with development on many of the coastal and hillside areas, which are exposed to a number of hazards. Commercial and residential development has progressed rapidly and this poses new risks such as flooding and erosion. The BVI Disaster Management Organisation must also be cognizant of the increased risk posed by acts of terrorism and "new" health hazards that might create significant challenges for small island states with limited resources.

Workforce Management

The DDM continues to face challenges in maintaining and increasing its workforce. The scope of work and the limited staff available within the department must be addressed over the next five years. The DDM must focus on recruiting, training and retaining a skilled, competent, experienced, dedicated and educated workforce in order to ensure sustainability of the Territory Disaster Management Programme.

Limited Resources

No single agency possesses all the resources necessary to establish and maintain an effective Comprehensive Disaster Management Programme. There is, therefore, the constant need to ensure inter-agency coordination and collaboration in pursuit of reducing the risk from hazards that can affect the BVI and its communities. However the DDM must ensure that persuasive cases are made for additional funding and allocation of resources to ensure that adequate resources are available for an effective and efficient response.

Technology

DDM must ensure that it is able to provide the necessary information to its stakeholders in the event of an emergency or disasters. DDM must focus on using up to date technology as an agent of change to consolidate functions, eliminate duplication, and improve workflows and agency wide information sharing.

Change Management

To meet the challenges ahead and to support the Public Sector Development Programme initiatives DDM must be willing to change and grow. This will require new approaches and new ways of doing business with our stakeholders. At the same time growth and change must not be allowed to interfere with the DDM's ability to carry out its mission on a daily basis. The DDM has been able to perform

with great success for many years and enjoys high public confidence. Overcoming the natural tendency to resist change and rest on the agency's past successes may be a great challenge for the DDM in the future.

Opportunities

1. The DDM already enjoys a reputation for consistently high performance. DDM can utilize this reputation to continue to acquire strong political and administrative support for the implementation of the Strategic Plan.
2. The DDM has a tradition of documenting major events and activities and this can be used as a basis for further development of the Territory's Disaster Management Programme and this Strategic Plan.
3. The current fiscal environment indicates that there will be continued financing of the Territory's Disaster Management Programme and the DDM.
4. The DDM could expect continued support from the Disaster Auxiliary Corps (DAC) in disaster response.
5. There is a high level of awareness in the community with regard to hurricanes; this can be used as the basis for heightening awareness of other hazards.
6. The B.V.I is widely regarded for the foresight, which has been used in developing the Disaster Management Program. This gives the DDM the opportunity to influence strategic planning in disaster management in the region.
7. The Disaster Management Programme at H. Lavity Stoutt Community College will provide awareness, training and resources for institutionalizing disaster management locally and will also provide training opportunities for the region.

THE STRATEGIC PLAN

The Strategic Plan sets a course of action for the DDM over a five-year period and establishes the major programmatic, policy and management goals of the Department. It also provides a framework for the Department's Annual Report. As required by the Disaster Management Act, 2003, DDM is required to prepare an annual report each fiscal year within three months after the end of every year. The report is to be transmitted to the Governor who shall present it to the Executive Council for approval and then copies are to be laid before the Legislative Council. The Report is to include a Disaster Management Policy review relating to the mitigation of, preparedness for, response to and recovery from, emergencies and disasters in the Territory.

National Report and Information on Disaster Reduction (British Virgin Islands)

DDM's Strategic Plan sets forth a vision and a comprehensive mission statement that provides the Department with a clear path into the future. In addition the plan identifies values that embody how the Department's people, individually and collectively, will carry out the Department's mission.

In the following pages the DDM outlines its programme activities, which have been set out to achieve the Department's goal and objectives.

MITIGATION AND PLANNING	
Activities	Output
ADMINISTRATION & CAPACITY BUILDING <i>Objective: To improve knowledge and skills base, while maintaining the international profile of the BVI Disaster Management System and also to facilitate the smooth running of the Mitigation and Planning Programme</i>	
Participation in local/regional/international training events and meetings	<ul style="list-style-type: none"> ▪ Increased knowledge and skills ▪ Prompt completion of reports ▪ Increased profile of Territory's Disaster Management System ▪ Improved relations with partners ▪ Technical advice and support provided to Mitigation Task Force
Routine administrative activities: performance agreements; annual report; budget; strategic plan	<ul style="list-style-type: none"> ▪ Structured/timely reporting of activities ▪ Thorough and timely submission of reports and other documents
HAZARD IDENTIFICATION AND RISK ASSESSMENT <i>Objective: To identify hazard prone areas and to determine measures to be implemented to reduce the risk of loss of life and damage to property from the effects of hazards.</i>	
Data Acquisition and Information Management	<ul style="list-style-type: none"> ▪ Public and critical infrastructure and facilities at risk identified ▪ A survey of existing hazard areas completed ▪ Scientific data analysed and interpreted
GIS Upkeep and Data Analysis	<ul style="list-style-type: none"> ▪ Up-to-date GIS database ▪ QRAP maps integrated into NGIS

National Report and Information on Disaster Reduction (British Virgin Islands)

<p><i>Surveys, assessments and scientific studies</i></p>	<ul style="list-style-type: none"> ▪ Vulnerability assessments and capability studies completed for critical systems and facilities
<p>Quantitative Risk Assessment Project (QRAP)</p>	<ul style="list-style-type: none"> ▪ GIS probabilistic hazard maps prepared ▪ Existing data sources digitised and rationalized ▪ Damage estimates for BVI critical facilities and infrastructure constructed ▪ Critical Infrastructure characterized ▪ Mapped and characterized alluvial and “reclaimed” land ▪ Landslide occurrence and potential mapped ▪ Tsunami modelling completed ▪ Quantitative Risk Assessment completed ▪ GIS Modelling capability established at DDM
<p align="center">PUBLIC OUTREACH AND TECHNICAL TRAINING <i>Objective: To promote safer building and development practices</i></p>	
<p>Safer Building Design and Training</p>	<ul style="list-style-type: none"> ▪ Guidelines for trained and certified professionals developed ▪ Trained and Certified Builders ▪ Training programme established at HLSCC ▪ Building Code revised ▪ Trained and Certified Architects, Engineers and Surveyors ▪ Handbook for architects, builders and contractors ▪ Handbook for homeowners ▪ Hazard Assessment included in the EIA process
<p>Caribbean Hazard Mitigation Project (CHAMP) – BVI Pilot State</p>	<ul style="list-style-type: none"> ▪ National Hazard Mitigation Policy and Framework implemented fully

National Report and Information on Disaster Reduction (British Virgin Islands)

Development and Building Application Review Process	<ul style="list-style-type: none">▪ Regulatory bodies merged▪ Trained Development Control Officers▪ Recommendations from VIFRS capability study implemented▪ Fire Code addressing all aspects of fire safety design▪ Applications for building permits for large or important buildings reviewed and updated
--	--

National Report and Information on Disaster Reduction (British Virgin Islands)

RISK REDUCTION	
<i>Objective: To ensure up to date legislation and policies for hazard mitigation</i>	
Revision of Legislation and Policies	<ul style="list-style-type: none"> ▪ DM Act 2003 enforced ▪ Mitigation incorporated in LDCA decision making process as a primary means of reducing the vulnerability of the territory
Development and Revision of Development Plans and Proposals	<ul style="list-style-type: none"> ▪ BVI Hazard Mitigation and Development Planning Framework reviewed ▪ BVI development Plan developed to include Hazard Mitigation ▪ Local Area plans completed and revised to include Hazard Mitigation ▪ Risk Reduction measures incorporated into feasibility studies
Follow up on activities outlined in November Floods Report	<ul style="list-style-type: none"> ▪ Mitigation best practices incorporated in roadway design and construction ▪ Mitigation best practices incorporated in building design and construction ▪ Natural flow of Ghuts, Ponds and other water related entities and areas protected by a water policy ▪ Relocation from vulnerable areas and a housing standard policy developed ▪ Public Education plan on flooding is prepared and implemented ▪ Recommendations from vulnerability assessment of clinics implemented
Development of Vulnerability Index	<ul style="list-style-type: none"> ▪ A Vulnerability Index developed to inform and prioritise Mitigation and Development Planning

National Report and Information on Disaster Reduction (British Virgin Islands)

COMMUNITY PREPAREDNESS & SUPPLY MANAGEMENT	
Activities	Output
<p>ADMINISTRATION & CAPACITY BUILDING</p> <p><i>Objective: To improve knowledge and skills base, while maintaining the international profile of the BVI Disaster Management System and also to facilitate the smooth running of the Community Preparedness and Supply Management Programme</i></p>	
Participation in local/regional/international training events and meetings	<ul style="list-style-type: none"> ▪ Increased knowledge and skills ▪ Prompt completion of reports ▪ Increased profile of Territory's Disaster Management System ▪ Improved relations with Partners
Routine administrative activities: performance agreements; annual report; budget; strategic plan	<ul style="list-style-type: none"> ▪ Structured/timely reporting of activities ▪ Thorough and timely submission of reports and other documents
<p>RISK REDUCTION</p> <p><i>Objective: To reduce the risk of loss of life and personal injury from the effects of natural or man-made hazards within the communities</i></p>	
Human Vulnerability Study	<ul style="list-style-type: none"> ▪ Identification of vulnerable persons within the territory - elderly, physically and financially challenged individuals ▪ A database of vulnerable persons ▪ Improved planning for response and relief for vulnerable population
Fire Safety Programme	<ul style="list-style-type: none"> ▪ Installation of fire extinguishers in all Gov't buildings and emergency shelters ▪ Trained persons in the use of fire extinguishers ▪ Well informed sectors in fire safety and evacuation procedures

National Report and Information on Disaster Reduction (British Virgin Islands)

Emergency Shelter Retrofit/Maintenance & Inspections	<ul style="list-style-type: none"> ▪ Retrofitted, well maintained and adequate number of emergency shelters ▪ Annual structural and public health inspections ▪ Signed MOUs with all shelter owners/operators
Generator Installations & Maintenance	<ul style="list-style-type: none"> ▪ Well maintained and operational emergency generators ▪ Installation of adequate generator plants at shelters
<p>COMMUNITY PREPAREDNESS</p> <p><i>Objective: To provide direction, training and resources to ensure that the BVI communities are adequately prepared for disasters which may affect the BVI Territory</i></p>	
Business Sector/Private Sector Plans	<ul style="list-style-type: none"> ▪ Comprehensive disaster management plans established for all hazards affecting major business sectors
Zonal Coordination	<ul style="list-style-type: none"> ▪ Fully functioning zonal structure ▪ Increased cooperation and coordination between zonal committees and Government departments ▪ Adequately trained zonal communities equipped to mitigate, prepare, and effect initial responses to hazard events ▪ Successful completion of pilot project under Community Based Disaster Preparedness Project (BVIRC)
Welfare & Relief Distribution	<ul style="list-style-type: none"> ▪ Well established and functioning Welfare & Relief Distribution Sub-Committee ▪ Up to date and tested Welfare & Relief Distribution Plan, National Shelter Manual, and Tracing Document
Community Preparedness Handbook	<ul style="list-style-type: none"> ▪ Handbook on Community Disaster Preparedness

National Report and Information on Disaster Reduction (British Virgin Islands)

Volunteer Coordination	<ul style="list-style-type: none"> ▪ Well trained and properly managed Disaster Auxiliary Corps ▪ A register of skilled volunteers
<p>SUPPLY MANAGEMENT</p> <p><i>Objective: To provide a team of key resource persons trained in supply management activities as well as the maintenance of adequate stock of emergency supplies</i></p>	
Warehouse & emergency Shelter Inventory Maintenance	<ul style="list-style-type: none"> ▪ Updated and accurate inventory of emergency supplies at the National Warehouse and designated Emergency Shelters ▪ Well kept and maintained warehouse and store rooms for emergency supplies
Supply Management (SUMA) Team Facilitation	<ul style="list-style-type: none"> ▪ A cadre of trained persons in SUMA ▪ A system to facilitate the receipt and distribution of emergency supplies ▪ Transparency and accountability in disaster inventory management

PUBLIC INFORMATION & EDUCATION	
Activities	Output
<p>ADMINISTRATION AND CAPACITY BUILDING</p> <p><i>Objective: To improve knowledge and skills base, while maintaining the international profile of the BVI Disaster Management System and also to facilitate the smooth running of the Public Information and Education Programme</i></p>	

National Report and Information on Disaster Reduction (British Virgin Islands)

<p>Participation in local/regional/international training events and meetings</p>	<ul style="list-style-type: none"> ▪ Increased knowledge and skills ▪ Prompt completion of reports ▪ Increased profile of Territory's Disaster Management System ▪ Improved relations with Partners ▪ Technical advice and support provided to PIE and Training sub-committee
<p>Routine administrative activities: performance agreements; annual report; budget; strategic plan</p>	<ul style="list-style-type: none"> ▪ Structured/timely reporting of activities ▪ Thorough and timely submission of reports and other documents
<p>PUBLIC INFORMATION</p> <p><i>Objective: To reduce vulnerability by increasing public awareness through the use of a variety of media including seasonal campaigns and the use of the mass media</i></p>	
<p>National Public Information Plan</p>	<ul style="list-style-type: none"> ▪ Completed and tested National Plan ▪ Improved media relations
<p>Hurricane Season Activities: <i>Press Conferences; Airing of PSAs; Newspaper Supplements; Website Messages; Production and Distribution of Tracking Maps, posters and brochures; Children Summer Programme; D-Mac Expo</i></p>	<ul style="list-style-type: none"> ▪ A society fully prepared to respond to hurricanes
<p>Earthquake Safety Campaign: <i>Poster production and distribution; Public Service Announcements; Airing of Earthquake Tips Video; School Presentation</i></p>	<ul style="list-style-type: none"> ▪ A society fully prepared to respond to earthquakes
<p>Flood Safety Campaign</p>	<ul style="list-style-type: none"> ▪ A society fully prepared to respond to floods

National Report and Information on Disaster Reduction (British Virgin Islands)

Publication & Newsletters <i>Disaster Digest Magazine; NDMC Newsletters; Children's handbook; Flyers, Posters</i>	<ul style="list-style-type: none"> ▪ Public well informed about the Territory's Disaster Management Programme
Media Production	<ul style="list-style-type: none"> ▪ Television and Radio Programmes ▪ Audio visual production
EDUCATION	
<i>Objective: To provide support to other departments by assisting them by means of publicity and to further address Disaster Management Issues</i>	
IDDR Activities	<ul style="list-style-type: none"> ▪ Campaign to increase awareness of disasters
Interagency Collaboration	<ul style="list-style-type: none"> ▪ Improved relations with public education and information units within government
WEBSITE DEVELOPMENT & UPKEEP	
<i>Objective: To establish a fully functional website to be used as a medium to disseminate crucial information to the public.</i>	
Restructuring of Website Updating of Website	<ul style="list-style-type: none"> ▪ A fully functional interactive website

TRAINING AND RESEARCH	
Activities	Output

National Report and Information on Disaster Reduction (British Virgin Islands)

<p>ADMINISTRATION & CAPACITY BUILDING</p> <p><i>Objective: To improve knowledge and skills base, while maintaining the international profile of the BVI Disaster Management System and also to facilitate the smooth running of the Training and Research Programme</i></p>	
<p>Participation in local/regional/international training events and meetings</p>	<ul style="list-style-type: none"> ▪ Increased knowledge and skills ▪ Prompt completion of reports ▪ Increased profile of Territory's Disaster Management System ▪ Improved relations with partners
<p>Routine administrative activities: performance agreements; annual report; budget; strategic plan</p>	<ul style="list-style-type: none"> ▪ Structured/timely reporting of activities ▪ Thorough and timely submission of reports and other documents
<p>TRAINING</p> <p><i>Objective: To provide training to enhance local capabilities in disaster management.</i></p>	
<p>Oil Spill Response Training & Plan Revision</p>	<ul style="list-style-type: none"> ▪ Trained emergency responders ▪ Updated Oil Spill Plan
<p>Search and Rescue Plan development and training (CDERA/SOUTHCOM/JICASAR Project)</p>	<ul style="list-style-type: none"> ▪ Search and Rescue Plan (completed for land & sea) ▪ Search and Rescue policy implemented ▪ Trained emergency responders in technical areas of SAR

National Report and Information on Disaster Reduction (British Virgin Islands)

Simulation Exercises	<ul style="list-style-type: none"> ▪ Evacuation procedures tested for Peebles Hospital and inter-island medical evacuation ▪ T.B Lettsome Emergency Response Plan tested ▪ Evacuation procedures at schools tested ▪ SAR (land and marine) plans tested ▪ HAZMAT plan tested
Emergency Response & Media Training	<ul style="list-style-type: none"> ▪ Trained police desk officers in dispatching of emergency calls ▪ Trained police inspectors in establishing/managing incident command posts ▪ Trained Media personnel in Crisis Communication ▪ Trained personnel in maritime emergency response
<p>RESEARCH</p> <p><i>Objective: To ensure implementation of recommendation from studies, reports, and plans; to solidify relationships with agencies through MOU formation; to develop various databases within the DM Department</i></p>	
DM Capability Assessment Readiness	<ul style="list-style-type: none"> ▪ Recommendations implemented and monitored
Studies, Reports, Reports & National Plans	<ul style="list-style-type: none"> ▪ Recommendations from reports implemented ▪ Updated National Plans
Database Development & System Catalog for Documentation Centre	<ul style="list-style-type: none"> ▪ Completed DDM databases ▪ Catalogued documentation centre ▪ Completed DM Survey ▪ National Resources Database developed ▪ Documented footage and photographs from disaster events and exercises
Memorandums of Understanding (MOU's)	<ul style="list-style-type: none"> ▪ Finalized MOU: USCG/BVI and PAHO/HLSCC

National Report and Information on Disaster Reduction (British Virgin Islands)

COURSE/CURRICULUM DEVELOPMENT	
<i>Objective: To provide continued support to the development of the Disaster Management Programme at HLSCC and primary and secondary schools</i>	
Educational Development	<ul style="list-style-type: none"> ▪ Completion of curriculum for HLSCC DM Programme ▪ Development of Primary/secondary school curriculum for DM ▪ Trained personnel in DM field ▪ Greater awareness/knowledge of DM among school population ▪ Manual and training developed for teachers and principals

EMERGENCY OPERATIONS	
ADMINISTRATIVE AND CAPACITY BUILDING	
<i>Objective: To improve knowledge and skills base, while maintaining the international profile of the BVI Disaster Management System and also to facilitate the smooth running of the Emergency Operations Programme</i>	
Activities	Output
Participation in local/regional/international training events and meetings	<ul style="list-style-type: none"> ▪ Increased knowledge and skills ▪ Prompt completion of reports ▪ Increased profile of Territory's Disaster Management System ▪ Improved relations with partners ▪ Tech advice and support provided to Transport & Infrastructure Subcommittee
Routine administrative activities: performance agreements; annual report; budget; strategic plan	<ul style="list-style-type: none"> ▪ Structured/timely reporting of activities ▪ Thorough and timely submission of reports and other documents

National Report and Information on Disaster Reduction (British Virgin Islands)

EARLY WARNING SYSTEMS	
Objective: <i>To develop a comprehensive Early Warning System</i>	
Installation, commissioning and testing of Early Warning Systems	<ul style="list-style-type: none"> ▪ Functioning EBS audio and video links between all media stations and the DDM. ▪ Expanded and tested Omnitronix AM transmitter ▪ Outdoor Warning Siren network established ▪ Studio facilities for operation of NEBS. ▪ Development of policies for testing & activating NEBS
TELECOMMUNICATIONS	
Objective: <i>To ensure that trained radio operators are available for deployment at the NEOC; to provide reliable communications.</i>	
Telecommunications training	<ul style="list-style-type: none"> ▪ Trained Radio Operators in both VHF and HF use.
Technical Workshop and Maintenance	<ul style="list-style-type: none"> ▪ Reliable equipment readily available for use ▪ Service and maintenance capability at the DDM
Communication Systems Tests	<ul style="list-style-type: none"> ▪ Reliable communications during emergencies and disasters
METEOROLOGY	
Objective: <i>To ensure the DDM has the ability to disseminate and access reliable climate data</i>	
Installation of Weather Instruments and Data base Development	<ul style="list-style-type: none"> ▪ Availability of reliable data for decision making in emergencies, disasters and general public use ▪ Readily available information for the construction of reports
Development of Proposal for Meteorological Unit	<ul style="list-style-type: none"> ▪ Establishment of a base for proper meteorological service for the British Virgin Islands

National Report and Information on Disaster Reduction (British Virgin Islands)

SEISMIC MONITORING

Objective: To maintain and monitor Seismic equipment in the territory; to enhance partnership with PRSN.

Installation and Maintenance of Seismic Stations	<ul style="list-style-type: none"> ▪ Availability of local seismic data on the BVI.
--	--

ADMINISTRATION AND FINANCE

Activities

Output

ADMINISTRATIVE AND CAPACITY BUILDING

Objective: To improve knowledge and skills base, while maintaining the international profile of the BVI Disaster Management System and also to facilitate the smooth running of the Administration and Finance Programme

Participation in local/regional/international training events and meetings	<ul style="list-style-type: none"> ▪ Increased knowledge and skills ▪ Prompt completion of reports and other documents ▪ Increased profile of Territory's Disaster Management System ▪ Improvement in relations with regional and international agencies ▪ Secretariat services for NDMC provided ▪ Technical advice and support provided to Administration and Finance and Emergency Planning Sub committee. ▪ Update National Disaster Plan
--	--

National Report and Information on Disaster Reduction (British Virgin Islands)

<p>Routine administrative activities: performance agreements; reports; budget; strategic plan, staff supervision and management; organization and preparation of events</p>	<ul style="list-style-type: none"> ▪ Structured/timely reporting of activities ▪ Adherence to the commitments in DDM Service Charter ▪ Upkeep of an efficient filing system ▪ Appropriate actions taken to address staff matters ▪ Successful execution of workshops, conferences, seminars and meetings ▪ Proper supervision of NEOC facilities expansion ▪ Updated job tools ▪ Good supervision of support staff ▪ Accurate preparation of travel requests
<p>PROCUREMENT AND MAINTENANCE <i>Objective: To maintain a cost effective system for procurement and maintenance of supplies and equipment</i></p>	
<p>Inventory upkeep, maintenance and purchase</p>	<ul style="list-style-type: none"> ▪ Maintenance of all inventory records ▪ Pursuit of values for money in all purchases and services ▪ Upkeep and maintenance of supplies, furniture and equipment ▪ Procurement of up to date equipment and supplies ▪ Maintenance of department vehicles ▪ Upkeep of stocks and supplies

National Report and Information on Disaster Reduction (British Virgin Islands)

FINANCE	
<i>Objective: To ensure prudent management of the DDM finances and to keep expenses within allocated budget submissions</i>	
Management of Office finances	<ul style="list-style-type: none"> ▪ Full compliance with relevant procedures and regulations ▪ Financial management of recurrent and capital expenditure ▪ Timely submission of appropriate budget submissions ▪ Well maintained vote book and accurate LPO, Journal and vouchers

RECOVERY COORDINATION	
Activities	Output
PLAN PREPARATION AND COORDINATION	
<i>Objective: To re-establish a stable social, physical and economic basis to a community affected by a disaster by providing support for Government's coordination, where possible</i>	
Plan Upkeep	<ul style="list-style-type: none"> ▪ Updated Recovery Plan ▪ Effective procedures and policies for recovery efforts established ▪ Exercises implemented to test plan and procedures ▪ Procedures and training for assessing economic impact ▪ Training in IDA, DANA and assessing environmental impact ▪ Up to date forms and procedures available for assessing initial needs and damage sustained

National Report and Information on Disaster Reduction (British Virgin Islands)

Recovery coordination and report preparation	<ul style="list-style-type: none">▪ Proper identification and prioritization of recovery activities.▪ Effective, coordinated actions among all agencies involved in the Recovery Process.▪ Efficiency in use of resources.▪ Appropriate accounting and reporting arrangements▪ Prompt dissemination of public information.▪ Proper accountability for disaster relief funds and materials.▪ Thorough and timely preparation of Situation and After Action Reports
--	---

(REFERENCE B)

**VIRGIN ISLANDS
DISASTER MANAGEMENT ACT, 2003**

**PART IV
NATIONAL DISASTER MANAGEMENT COUNCIL,
POLICY REVIEW AND NATIONAL DISASTER MANAGEMENT PLAN**

10. (1) Within three months after the end of every year, the Director shall prepare a report of the activities of his Department for the preceding year, and transmit the report to the Governor who shall present it to the Executive Council for approval and cause copies of the report to be laid before the Legislative Council.
- (2) The report prepared under subsection (1) shall include a Disaster Management Policy Review relating to the mitigation of, preparedness for, response to and recovery from, emergencies and disasters in the Territory.
- (3) When the Policy Review is approved, with or amendment, by the Executive Council, the Director shall, after the report referred to in subsection (1) has been laid before the Legislative Council, cause the Policy Review so approved to be published in the Gazette and a newspaper published and circulating in the Territory.

(REFERENCE C)

DISASTER MANAGEMENT: A POLICY FRAMEWORK

Issued by the Deputy Governor's Office - October 2003

TABLE OF CONTENTS

1. **Definitions**
2. **Background**
3. **Introduction**
4. **Vision**
5. **Purpose of the Policy**
6. **Objectives**
7. **Priorities**
8. **Specific Policy Guidelines**
 - 8.1 **Legislation**



National Report and Information on Disaster Reduction (British Virgin Islands)

Disaster Management: A collective term encompassing all aspects of planning for and responding to emergencies and disasters, including both pre and post event activities. It refers to the management of both the risk and consequences of an event.

Hazard: Natural or man-made occurrences that pose a threat to people, property and the environment and are capable of causing a disaster. Hazards include earthquakes, fire, explosion, chemical spillage, flood, epidemics, hurricanes, landslide, storm surge, tidal wave or volcanic eruption.

Mitigation: Measures taken to reduce both the effect of the hazard itself and the vulnerable conditions to it in order to reduce the scale of a future disaster. Therefore mitigation activities can be focused on the hazard itself or the propensity to be damaged of the elements exposed to the threat.

Preparedness: Measures taken to reduce to the minimum level possible, the loss of human life and damage to property, through the organizing of effective measures which will ensure timely and appropriate responses to a given hazard.

Prevention: Measures taken for the purpose of preventing natural or man-caused phenomena from causing or giving rise to disasters or other emergency situations

National Report and Information on Disaster Reduction (British Virgin Islands)

Recovery: The restoration of basic services and the beginning of the repair of physical, social and economic damages.

Short term rehabilitation and longer term reconstruction measures taken to achieve a rapid and durable recovery that does not reproduce the original vulnerable conditions.

Response: Actions carried out immediately before, during and after a hazard impact, which are aimed at saving lives, reducing economic losses and alleviating suffering.

Risk: A measure of the expected losses due to a hazard event of a particular magnitude occurring in a given area over a specific time period.

Vulnerability: The extent to which a community, structure, service, or geographic area is likely to be damaged or disrupted by the impact of a particular hazard.

SECTION 2. BACKGROUND

The British Virgin Islands are exposed to natural and man-made hazards, which have the potential to cause significant loss of life and property, as well as serious damage to the environment, and the economy.

The natural hazards to which the BVI is exposed consist primarily of earthquakes and the effects of tropical or related weather systems that include wind damage, land borne flooding and coastal flooding. Landslides also pose a minor threat.

Man-made hazards largely relate to the potential accidental exposure to hazardous chemicals, large explosions, and accidents related to mass transportation of people.

Of all hazards, hurricanes and earthquakes, because of their damage potential and high probability of occurrence pose the greatest threat to the BVI. This reality has steadily driven the BVI's progress and emphasis towards strengthening its disaster management capabilities.

When Hurricane Frederick struck the BVI it was the first storm to seriously affect the Territory in 55 years. In the early 1980's, as a result of the lessons learnt from Frederick, the Deputy Governor assumed responsibility for disaster management operations. It was through his efforts that the government began to implement programmes to establish a comprehensive disaster management programme.

Soon after came the establishment of the Pan Caribbean Disaster Preparedness and Prevention Programme funded by the United States Government, which aimed to offer training and resources to countries in the Caribbean to upgrade their institutional capacity to confront disasters.

National Report and Information on Disaster Reduction (British Virgin Islands)

The Office of Disaster Preparedness (now Department of Disaster Management (DDM)) was established in 1983 with a budget commitment of \$3000. The effects of Tropical Storm Klaus in 1984 further reinforced the need for disaster management in the Territory of the BVI. The overall damage estimates were at \$150 million dollars. In 1989 came Hurricane Hugo, which left \$40 million in damage. In 1990 the Government made a significant move by employing a full time National Disaster Coordinator, a major step in the effort to enhance the Territory's Disaster Management Programme. The BVI now possesses a fully established Department of Disaster Management, supported by a budget of nearly \$600,000 and a comprehensive programme addressing the areas of Preparedness, Mitigation, Response and Recovery for all hazards likely to affect or impact the Islands.

This shift to comprehensive disaster management is indicative of changes in the Government's perception that disasters are not primarily rare occurrences managed by emergency rescue services. Instead of merely responding to events, when damage and losses have already occurred, the Government's approach is now to build a common awareness and shared responsibility for pre-emptive risk reduction.

However, because risk factors for disaster occurrences are interconnected and increasingly driven by patterns of developmental vulnerability, where development is threatened by disasters yet brings with it new risks and vulnerabilities, disaster management is becoming increasingly complex. Operations of greatly varying scales and diversity are now required when compared to previously limited responses to natural and man-made events.

Contingency Planning and response to emergency events triggered by both natural and man-made hazards are still required to reduce avoidable losses and hasten recovery. However, the comprehensive approach to disaster

management, addressing all risks yet prioritizing those of most significance, calls for a significantly strengthened capacity to track, collate, monitor and disseminate information on hazard phenomena and to reach an understanding of the short and longer term consequences of hazard impact. The sharing of such information and creating awareness about the issues is critical for the implementation of risk reduction measures. It will enable all role players, including communities, to gain a better understanding of the relationship between human action, natural phenomena, vulnerability and risk.

Awareness is essential to inform and prompt the increased commitments to prevention and mitigation actions required from all to reduce the probability and severity of disaster events. Government, the private sector and civil society all have roles in risk reduction.

SECTION 3. INTRODUCTION

This Disaster Management Policy demonstrates government's commitment to disaster management. Past experiences have shown that disasters can cause extensive damage to life and property and can adversely affect the economic condition of the Territory. In light of this, the Government is committed to taking a pro-active, comprehensive and sustained approach to disaster management that encourages buy-in by all players and that is focused on risk and vulnerability reduction.

Disaster management is shared responsibility between government, the private sector and civil society. Partnerships between government and the private sector is a prerequisite in order for sustainable and effective disaster management to take place. Similarly cooperation between government agencies is equally important due to the crosscutting nature of disaster management.

The approach of fully integrating comprehensive disaster management into sustainable development planning, along with the diversity of actions and responsibilities required, is increasingly being incorporated into the policies, plans

and projects of the BVI government as well as policies and practices of the private sector.

Several of the key elements to maintaining such a system are already in place with the establishment of the Department of Disaster Management, the development of the National Integrated Development strategy, the introduction of the Disaster Management Act of 2003 and the endorsement of the Mitigation & Development Planning Framework, 2002 by Executive Council is significant as it establishes the government's commitment to mitigation and provides a framework for the administration and implementation of mitigation activities.

SECTION 4. VISION

The Government of the BVI envisages a Territory in which the negative effects and impacts of hazards will be reduced to a minimum through the implementation of sound policies, practices and programmes aimed at reducing risk and vulnerability.

SECTION 5. PURPOSE OF THE POLICY

This document sets out the government's disaster management policy for the British Virgin Islands. It involves all government institutions, the private sector and civil society and other players, as well as all activities related to disaster management.

In keeping with the aims and objectives of the National Integrated Development Strategy, the goal of this policy is to reinforce the development potential of the BVI by reducing risks from all hazards.

The fundamental purpose of the policy is to advance an approach to disaster management that focuses on reducing risks - the risk of loss of life, economic disruption and damage to the environment and property, especially to those sections of the population who are most vulnerable due to poverty and a general lack of resources.

The policy document aims to

National Report and Information on Disaster Reduction (British Virgin Islands)

- Inform governmental and non-governmental agencies of these objectives and what they need to do to achieve these objectives.
- Inform the public of the government's disaster management objectives and how the government intends to achieve these objectives.

SECTION 6. OBJECTIVES

To establish necessary systems, structures, programmes, resources, capabilities and guiding principles for reducing disaster risks and preparing for and responding to disasters in order to:

- I. Minimize human suffering from natural and man-made hazards
- II. Reduce economic loss from hazard impacts
- III. Protecting the integrity of the terrestrial and marine environments

SECTION 7. PRIORITIES

1. Timely, coordinated and focused direction of resources towards the disaster management system's effective operation.
2. Maintain institutions that are technically capable of efficiently executing the Territory's comprehensive disaster management programme.
3. Developing local expertise capable of operating and maintaining the disaster management system.
4. Ensuring that the public is well-informed and educated about disasters, their consequences and preventive and mitigation measures.
5. Creating an environment in which the private and non-government sectors contribute meaningfully to the comprehensive disaster management effort.

These priorities give rise to the following strategies:

National Report and Information on Disaster Reduction (British Virgin Islands)

- The urgent integration of risk reduction strategies into development initiatives and all development planning.
- The development and maintenance of a mitigation strategy to reduce the vulnerability of the BVI to disasters.
- The upkeep of a Department of Disaster Management and National Emergency Operations Centre to:
 - Ensure that an effective disaster management strategy is established and implemented.
 - Coordinate disaster management at various levels of government.
 - Promote and assist the implementation and institutionalization of disaster management activities in all sectors of society.
 - Act as a repository and conduit of information pertaining to disaster management.
 - Ensure that the capacity for tracking, monitoring and disseminating information on phenomena and activities that trigger disaster events is established and maintained.
- The introduction of a new disaster management funding system which:
 - Ensures that risk reduction measures are implemented.
 - Builds sufficient capacity to respond to disasters.
 - Provides for adequate post-disaster relief and recovery.
- The implementation of the Disaster Management Act which:

- Brings about a uniform approach to disaster management.
 - Addresses legislative shortcomings
- The establishment of a framework to enable communities to be informed, alert and self-reliant and capable of supporting and cooperating with government in disaster prevention and mitigation
- The establishment of a framework for coordinating and strengthening the current fragmented training and community awareness initiatives.

SECTION 8. SPECIFIC POLICY GUIDELINES

8.1 LEGISLATION

The Disaster Management Act, 2003 clarifies and allocates responsibilities within government for disaster management and provides for more effective organization of the mitigation of, preparedness for, response to and recovery from, emergencies and disasters in the Virgin Islands. Government will provide the resources necessary to ensure compliance with the legislation and where appropriate to take steps to provide more detailed regulations in any subject area, which are consistent with the intentions of the Act.

8.2 INSTITUTIONAL FRAMEWORK

Government recognizes that this policy will require a significantly improved capacity to track, monitor and disseminate information on phenomena and activities that trigger disaster events. This policy envisages a multi-agency effort led by the DDM supported by the heads of all government agencies and representatives and the private and non-governmental sectors. It also implies

an increased commitment to strategies to prevent disasters and mitigate their severity.

In short, the policy aims to:

- Provide an enabling environment for disaster management.
- Promote proactive comprehensive disaster management through risk reduction programmes.
- Improve the BVI's ability to manage emergencies or disasters and their consequences in a coordinated, efficient and effective manner.
- Promote integrated and coordinated disaster management through partnerships between different stakeholders and through cooperative relations between all sectors of government.
- Ensure that adequate financial arrangements are in place.
- Outlining the general terms for sourcing external assistance in times of disaster.
- Promote disaster management training and community awareness.

8.3 MITIGATION

The Hazard Mitigation Policy focuses on sustainable development and implies a commitment to a more broader and more long-term development process. Emphasis will be placed on developing communities, building institutions and capabilities to reduce vulnerability, and expanded information bases, up to date scientific information, local knowledge and expertise as well as the involvements of all level of the society.

Resources will be provided on the basis of a mitigation strategy and programme, which identifies priority areas for investment and action.

8.4 PLANNING

This policy statement involves a shift away from a perception that disasters are rare occurrences managed by emergency rescue and support services. Government will provide the leadership, which will promote a shared awareness of the realization that all agencies, community organizations and individual households must come together to reduced risk and vulnerability. Several time horizons will be used; these include a 10-year mitigation strategy, a five-year CDM Plan and annual work programmes. In addition all national level contingency plans will be revised and or updated at least once every five years.

The expertise of members of the DDM should be drawn on for the preparation and compilation of disaster management plans and strategies.

8.5 RESOURCE ALLOCATION

The implementation of this policy will require the management of human, material and financial resources to achieve the stated goals and objectives.

- Government is committed to ensuring that the DDM retains a full compliment of staff at all times and to providing the where with all for the staff to function at a high level of proficiency. Since the DDM is to function as the node for communication, liaison and advice, it is expected that a significant portion of the budget will be allocated to acquire appropriate technical skills and expertise to staff the Department, as well as dedicated information technology, telecommunications and early warning systems.

National Report and Information on Disaster Reduction (British Virgin Islands)

- Financial resources will be allocated for disaster management from both the capital and recurrent budgets subject to the administrative procedures necessary to ensure the integrity of the budgetary allocation process.
- Government will take all necessary steps to ensure that the heads of public sector agencies receive necessary training and orientation to enable them to execute their disaster management related functions.
- Departments and organizations other than the DDM will be encouraged to dedicate some of their financial resources towards mitigation measures in general and preparedness and response in particular as part of their annual recurrent budget.

There are currently no criteria for disaster prevention, mitigation or preparedness when assessing funding administered by the Government. This means that the government time and time again pays costs of recurring disasters. No, or little, action is taken to reduce the risk of similar disasters in the future. There is little incentive for government agencies to spend money on effective risk reduction programmes and activities. There is no comprehensive monitoring and evaluation of mitigation and surveillance activities and there is little accountability for the success or failure of funded prevention programmes. Government will explore creative ways to provide incentives for public and private sector entities to spend money on effective risk reduction programmes in preference to merely waiting to respond after a hazard impact.

8.5.1 FINANCIAL

- Financial resource management will be guided by the principles shown below:

National Report and Information on Disaster Reduction (British Virgin Islands)

- Encourage all levels of government to take measures to minimize the impact and reduce the likelihood of disasters. Where feasible, incentives should be provided for the taking of such measures.
- Meet clearly stated objectives of any disaster management strategy or plan in a timely and efficient manner that is consistent with the financial policies of government
- Encourage response to disasters at the most localized level of responsibility possible. Government only should only provide additional funding when the capacity and resources have been exhausted or are absent.

Government will maintain The Emergency Disaster Fund to provide relief after the impact of a disaster.

Financial arrangements for disaster management will be put in place to allow for the release of funds in emergency situations from the Emergency Disaster Fund to defray expenditure that is provided for the current budget, and which cannot be postponed until the next budget. These funds will be used to provide immediate relief for affected people or for emergency services when necessary. The decision to release funds should be guided by established criteria and guidelines. To prevent the fund from being used for recurring or foreseeable disasters in the same areas, a post disaster review should automatically be conducted whenever funds are drawn from the fund.

8.5.2 MATERIAL

Disaster Management requires a wide range of tools, equipment and supplies many of which must be held in readiness until required in emergency situations.

Government will ensure that there is an adequate stock of material resources available to mount an initial response to any emergency or disaster situation. The intention will be to provide such resources that would enable the Territory to save lives and reduce suffering until external assistance arrives.

8.5.3 HUMAN

Government recognizes its responsibility to ensure that all persons engaged in disaster management activities have the necessary skills to execute their functions in an effective and timely manner. This means that training in disaster management must be multi agency, multi sector and multi level. It will also vary from the institutional to the informal. The DDM will be supported in its coordinating role to deliver and or obtain training in disaster management not only for its own staff but also for the staff of other agencies and volunteers from the private sector and community based organizations.

8.6 WELFARE ASSISTANCE IN DISASTERS

Government's intention is to provide such immediate assistance as will minimize the suffering and material losses brought about by disasters. In particular, government will undertake to provide and maintain emergency shelters, relief supplies and material assistance to persons most directly affected by a disaster or emergency. In particular, assistance will be provided through the Disaster Emergency Fund to assist those persons who may have lost the capacity to earn income through direct losses sustained in a disaster. Any assistance provided will be executed consistent with all appropriate regulations and within the administrative frameworks established by the National Disaster Management Council.

Specifically government will:

National Report and Information on Disaster Reduction (British Virgin Islands)

1. Ensure that persons rendered homeless by a disaster will be provided with temporary shelter with particular attention given to low-income groups, the elderly, the handicapped and other vulnerable groups.
2. Encourage the cooperation and consultation of the appropriate public, private and non-governmental entities in ensuring the provision of relief assistance.
3. Take action to support programmes that will expedite the rehabilitation of homeless victims of a disaster.
4. Make budgetary provision for the maintenance, stocking and outfitting of emergency shelters.
5. Maintain and retrofit emergency shelters in accordance with expert advice.
6. Enter into memoranda of understanding with the owners or suppliers of critical infrastructure necessary in an emergency.
7. Sustain the cost of returning any privately owned facilities used to their pre-disaster state.

Government assistance in such circumstance should not be perceived as a replacement for insurance.

8.7 DISASTER RECOVERY

Recovery is a vital aspect of disaster management as the affects of disasters continue long after the immediate threats to life and property have diminished. The goal of the recovery effort will be to facilitate the recovery of affected individuals, districts, communities and the social and economic infrastructure as quickly as possible in an effective, efficient and sustainable manner. The following will be the primary strategies:

1. Identify and prioritize recovery activities
2. Promote effective coordinated actions among all agencies.
3. Promote timely decision making and implementation of decision
4. Eliminate duplication of effort and waste of resources
5. Provide appropriate accounting and reporting arrangements
6. Ensure dissemination of public information
7. Reduce vulnerability to hazards in the future
8. Maintain a culture of accountability in the use of disaster relief funds and materials.

8.8 ROLE OF THE PRIVATE SECTOR

Government will maintain a consultative and collaborative approach with the private sector based upon the initiatives shown below:

1. Capacity building options – public-private sector partnerships in the provision of emergency services; development of community support for disaster prevention and management; utilization of disaster management volunteer services to improve capacity and increase public awareness; provide an enabling environment for disaster management.
2. Incentives – provide duty free concessions of particular items to encourage disaster preparedness and mitigation efforts
3. Insurance – Government should explore insurance options for low-income individuals, communities and small-scale farmers.
4. Funding for training and community awareness programmes – funding should be provided to the DDM to undertake needs analysis and identifying priorities for training needs; conducting capability

- assessments, evaluating current disaster management training material, setting of standards and for research and monitoring.
5. Private sector representation on all national level disaster management related committees or decision-making bodies.

8.9 ROLE OF THE NON-GOVERNMENT SECTOR

Comprehensive disaster management requires the active participation of community organizations and representatives of such organization in disaster management activities. Government will support and maintain the necessary administrative arrangements to allow for the full participation of residents in DM activities through their organizations and representatives. Specifically, government will undertake to:

1. Support the disaster management related activities of the BVI Red Cross and all other service organizations.
2. Allocate resources to assist in the further development of the Disaster Auxiliary Corps
3. Pay special attention to the development of community capacity in the sister islands
4. Promoting a spirit of mutual support among residents throughout the Territory.

8.10 WARNING SYSTEMS

An early warning system is a critical ingredient of an effective disaster management system. The backbone of the system in the BVI is the National Emergency Alert System (NEAS). The system has the capacity to deliver audible warnings through all major media outlets. It is bolstered by a siren system, which will ultimately encompass most areas of the territory. Government will ensure

that local capacity exists to maintain and where necessary upgrade the NEAS as technological changes arise. Further government will enable the DDM to function in such a way that audible warnings will be delivered to the public in any threatening situation with a minimum of delay.

Specifically government will ensure that:

1. An effective NEAS management strategy is established and implemented
2. Broadcasting licenses will contain conditions for mandatory participation of stations in the NEAS
3. Coordination of the NEAS at various levels of government

8.11 RESPONSE MECHANISMS

Emergency response requires the coordinated actions of a variety of agencies representing the health, law enforcement, fire & rescue sectors. It is vital that these agencies be provided with the necessary equipment training and supplies to enable them to execute their primary mandate of saving lives in emergency situations. In addition, they must work together in a coordinated fashion such that all efforts are directed at the same end. Government will maintain its policy of providing critical resources for these agencies and support the DDM in sourcing necessary broad based training for all key responders. Increasingly, agencies will be encouraged to regard emergency resources as a single pool available to all agencies to provide the critical response required for any major incident.

8.12 EXERCISES AND DRILLS

Proficiency in any skill is honed and enhanced by practice. It is therefore necessary that all emergency response agencies continue to hone the skills of their staff through participation in regular drills and exercises. There will be at least one major full-scale emergency response exercise per year supported by tabletop exercises and drills all aimed at boosting or maintaining emergency response skills.

8.13 MUTUAL AID ASSISTANCE AND AGREEMENTS

The Territory has a number of mutual assistance agreements in disaster management at the regional and international levels. However it is necessary to ensure that a agreements with the USVI and the British Government in (the context of Disaster Management) are clearly articulated and understood at all times. Further, government will continue its policy of preparing detailed memoranda of understanding with all private and nongovernmental agencies that can contribute significantly to the goal of risk and vulnerability reduction. Such agreements will include Memoranda of Understandings, which are aimed primarily at protecting the terrestrial or marine environments.

The BVI will maintain its policy of providing assistance to any country, which suffers the effects of a disaster. However, such assistance will predicated on the official identification of needs and the observance of the appropriate regional or international protocols.

ANNEX 1

ADMINISTRATIVE CONTEXT

LOCAL CONTEXT

National Report and Information on Disaster Reduction (British Virgin Islands)

The National Emergency Organization (NEO) is the name given to the umbrella network of units and authorities concerned with the various aspects of Disaster Management in the Territory of the British Virgin Islands as specified in the Disaster Management Act 2003 (DMA) and the National Disaster Management Plan (NDMP).

The National Disaster Management Council is the central institution of the NEO as established by the DMA. Its role is to review the national strategy for, and the state of, disaster management ("DM") in the Territory and make recommendations to government. It has several sub-committees, which are required to develop national plans and procedures to deal with the impact of hazards in their areas of responsibility. The Governor is Chairman and the Chief Minister Deputy Chairman of the NDMC.

The main sub-committee of the Council is the National Emergency Executive Committee (NEEC). The NEEC acts for the Council between meetings; it serves as a sounding board on DM issues, reviews the work of other sub-committees and give guidance, and provides technical support to the DDM. The NEEC meets on a quarterly basis or as required in an emergency. The Governor may call the Committee to meet if he thinks fit or is requested so to do by the Chief Minister.

The main executing agency established by the DMA is the DDM. The vision and mission of the DDM are shown below:

Vision

An organisation which perform successfully as a catalyst in mobilizing all sectors of the community, government and non government, to take effective action to significantly reduce vulnerability to hazards of all kinds.

Mission

The DDM will seek to reduce loss of life and property within the Territory of the BVI attributable to disasters by ensuring that adequate preparedness and mitigation measures, and response and recovery mechanisms are established to counteract the impact of natural and technological hazards.

The Administrative Head of the DDM is the Director who reports to the Chairman of the NDMC through the Deputy Governor. The Deputy Governor presently serves as Director or the National Emergency Operations Center, once activated, with the Director of Disaster Management serving as Operations Officer.

National Report and Information on Disaster Reduction (British Virgin Islands)

The DDM was officially designated as the department to plan, coordinate and manage a comprehensive disaster management programme in the BVI. The DDM is expected to work with established services to achieve its mission of reducing the loss of life and property within the Territory of the BVI by ensuring that adequate preparedness and mitigation measures and response recovery mechanisms are established to counteract the impact of natural and man-made hazards. The first responders to emergencies remain the Fire, Police and Health Services. When an incident requires a coordinated multi-agency response the DDM assumes the leadership and coordinating role. If necessary the NEOC is activated.

The DDM will work with Zonal Committees at the community level to coordinate disaster management functions at the local level.

REGIONAL CONTEXT

Caribbean Disaster Emergency Response Agency (CDERA)

The Government of the BVI is a signatory to the Agreement Establishing the Caribbean Disaster Emergency Response Agency (CDERA), September 1989. CDERA is a regional inter- governmental agency established by an Agreement of the Conference of Heads of Government of the Caribbean Community (CARICOM) to be responsible for disaster management. There are presently sixteen (16) Participating States within CDERA's membership.

CDERA's main function is to make an immediate and coordinated response to any disastrous event affecting any Participating State, once the state requests such assistance.

National Report and Information on Disaster Reduction (British Virgin Islands)

The Chief Minister is a Council Member and the Director, Disaster Management is a Board Member of CDERA.

Agreement Between Member States And The Association Of Caribbean States (ACS)

For Regional Cooperation On Natural Disasters.

Signed in Colombia on July 24th, 1994, DDM, as the agency charged with overall coordination responsibility for disaster management, also works to promote the achievement of the objectives of this agreement. This agreement is still to be ratified.

The relevant Articles are included in the annex however the primary objective of this Agreement is to develop a network of legally binding mechanisms that promote co-operation for prevention, mitigation and management of natural disasters, through the collaboration of the contracting parties among themselves and with organizations, which work in the field of natural disasters in the region.

Pan American Health Organisation (PAHO)/CPC

The Disaster Management Program of the PAHO CPC Office seeks to improve the ability of the health sector to prepare, prevent, mitigate and respond to natural and manmade disasters. The program operates in collaboration with countries and regional institutions throughout the Caribbean including the English, Spanish, French and Dutch speaking countries.

A major component of the program is training in various aspects of disaster management in order to ensure that each country has a cadre of adequately trained local personnel.

National Report and Information on Disaster Reduction (British Virgin Islands)

There is a long history of PAHO involvement in the Caribbean as far back as 1951. In 1978 the Office of Caribbean Program Coordination was established in Barbados in recognition of the commonality of health problems in the sub-region. This similarity of health systems originated in the common historical development and the long-standing tradition of collaboration in health among these countries.

The functions and responsibilities of the PAHO CPC Office include the development and execution of bilateral technical cooperation programs with the British Overseas Territories. In addition the Office is tasked with developing and executing multi-country and/or sub-regional programs to address the common needs of and to complement the individual country Technical Cooperation (TC) programs; serving as the focal point for PAHO's cooperation at the sub-regional level with Caribbean regional institution and international development and/or financing institutions; coordinating PAHO's sub-regional and regional resources; and supporting, upon request from other PAHO Caribbean Offices, national programming needs of "non-CPC" countries.

Traditionally, technical cooperation includes interventions by experts from within or outside the region working in close collaboration with nationals to:

- Develop national plans, policies and norms;
- Define, design and implement logistical systems to support the delivery of health services;
- Train health-related professionals and lay persons to support the plans for health and development;
- Promote and or execute basic and applied research;
- Disseminate information to public and health-related sectors;
- Mobilize national and international resources for execution of projects.

Office of Foreign Disaster Assistance (OFDA)

OFDA/LAC is the regional office of the Office of U.S. Foreign Disaster Assistance (OFDA) responsible for Latin America and the Caribbean and the headquarters is located in Costa Rica. OFDA is part of the U.S. Agency for International Development (USAID). OFDA/LAC's principal function is to provide technical assistance, emergency relief supplies, and funding for emergency response programs to countries in the region affected by disasters. Furthermore, OFDA/LAC provides functional and risk management training for the prevention and mitigation of disasters.

The enabling legislation and mandate are stipulated by the 1961 Foreign Assistance Act (Sections 491-493), which reads as follows:

"...the President is authorized to furnish assistance to any foreign country, international organization, or private voluntary organization...for international disaster relief and rehabilitation, including assistance relating to disaster preparedness, and to the prediction of, and contingency planning for natural disasters abroad."

And, "...the President shall insure that the assistance provided by the United States shall, to the greatest extent possible, reach those most in need of relief and rehabilitation as a result of natural and manmade disasters."

OFDA's mission is to save lives, alleviate human suffering and reduce the economic impact of disasters, which can be achieved through disaster prevention, mitigation and response.

In the event of a disaster declaration OFDA could:

National Report and Information on Disaster Reduction (British Virgin Islands)

- Provide \$50,000 (in accordance with OFDA's Disaster Assistance Authority) to the affected country, through the United States Embassy or non-governmental organizations, to alleviate the immediate needs of the disaster victims;
- Provide relief commodities and equipment for the disaster from one of the five OFDA warehouses;
- Deploy regional advisors, an assessment team and/or consultants to the disaster site;
- Send a Disaster Assistance Response Team (DART) to the affected country;
- Fund proposals from non-governmental organizations, private voluntary organizations, international organizations or United Nations agencies for relief assistance activities.
- OFDA's Disaster Response and Mitigation Division (DRM) provide assistance to areas at risk for the prevention, preparedness and/or mitigation of disasters. This type of assistance does not require a disaster declaration

Network of Emergency Managers of Overseas Territories (NEMOT)

The Network of Emergency managers of Overseas Territories created in 2000 succeeded the Association of Disaster Coordinators of the Overseas Territories which had been established in 1994 to facilitate activities among the Overseas Territories and to provide mutual support by way of exchange of information, best practices, training, liaison, expertise and coordinated approaches to relevant organizations. The objectives of NEMOT are:

National Report and Information on Disaster Reduction (British Virgin Islands)

1. To identify common areas of disaster programme design and development;
2. To set targets and promote activities based on the realistic achievement of acceptable levels of comprehensive disaster management;
3. To promote the integration of disaster management into the development planning process of the Overseas Territories;
4. To promote the implementation of adequate measures in the Overseas Territories to prevent, mitigate against, prepare for, respond to and recover from the impacts of major incidents or disasters
5. To utilize the disaster management capability existing within the Overseas Territories;
6. To access support for joint disaster programme development and implementation from the UK Government as well as through bilateral or multilateral agreements with other relevant organizations;
7. To establish and maintain links with regional and international agencies for the purposes of technology transfer and information exchanges;
8. To enhance capacity in the Overseas Territories by building on each other's disaster management related experiences.

INTERNATIONAL CONTEXT

The following international trends in disaster management must be considered.

1. A considerable amount of both indigenous and scientific knowledge exists on natural and technological threats. There has been an increase in the literature on environmental and disaster management. In recent times, there has also been an increased understanding of the important relationship between certain environmental vulnerabilities

National Report and Information on Disaster Reduction (British Virgin Islands)

- and human action. This rapidly expanding body of knowledge can greatly improve local forecasting of natural and technological threats. A prerequisite, however, is adequate investment in information systems and information management.
2. In many countries, improved information dissemination, emergency response services and community action has allowed for a greater sensitivity to and understanding of early warning signals. This offers the opportunity to minimize human economic losses by timely intervention, such as the evacuation of communities at risk in flood areas.
 3. Largely as a result of the United Nations International Decade for Natural Disaster Reduction (UNIDDR), there is increasing pressure for greater investment in prevention and mitigation actions that avert the need for expensive and often repeated assistance.
 4. Funding that could support ongoing development initiatives are being diverted to provide relief for those affected by fires, floods and drought. Similarly, disaster-stricken households are obliged to reallocate their resources and energies to recovery efforts, rather than development activities.
 5. Studies in Latin America and Asia suggest that the devastating effects of human and economic losses of poorer households in small community disasters are often overshadowed by rarer and more sensational disaster events. This issue has particular relevance where the absence of national and local systems for tracking disaster losses makes it impossible to accurately estimate the uninsured costs that are silently borne by the poorest households and communities.
 6. Experts in disaster management are increasingly calling for a broader engagement with civil society as a whole – including the private sector, development practitioners, educators and policy makers – as a

way of forming cooperative partnerships in the struggle to minimize damage caused by disasters.

ANNEX 2

FUNCTIONS OF THE NATIONAL DISASTER MANAGEMENT COUNCIL

The functions of the NDMC are as follows:

- Provide policy directives for the organs comprising the NEO
- Review and monitor the national strategy for dealing with disasters, which addresses the areas of Preparedness, Mitigation, Response and Recovery.
- Assign responsibilities to the NEO
- Make recommendations to government on manpower and physical resources for operations before, during and after a national disaster
- Review and evaluate national plans and procedures
- Review the work of the National Sub-committees
- Monitor and supervise the annual work programme of the DDM
- Advise on the overall coordination and planning of disaster related activities

FUNCTIONS OF THE DEPARTMENT OF DISASTER MANAGEMENT

The primary functions of the department of disaster management are as follows to:

15. Laws and Authorities - Ensure that revision of laws and regulations that establish the legal authority for the development and implementation of the disaster management programme and define emergency powers, authorities and responsibilities.

National Report and Information on Disaster Reduction (British Virgin Islands)

16. Hazard Identification and Risk Assessment – identification of hazards and the assessment of risk to persons, public and private property, environment and structures.
17. Hazard Management – ensure appropriate mitigation measure are being implemented and promote the use of hazard information and recommendations contained in studies conducted by the DDM to lessen the effects of disasters to the population, communities, businesses, industries and government.
18. Resource Management – Development of methodologies for the prompt and effective identification, acquisition, distributing, accounting and use of personnel, facilities and major items of equipment for essential emergency functions.
19. Planning – The development of national, sectoral and community plans that focus on the areas of mitigation, preparedness, response and recovery.
20. Direction, Control and Coordination – analysis of emergency and disaster situations and provide direction and coordination support to ensure a quick and effective response and effective and efficient use of available resources.
21. Communications and Warning Technology – Establishing, using, maintaining, augmenting and providing back up for all types of communications devices required for emergency and response operations.
22. Operations and Procedures – Develop, Coordinate and implement operational plans and procedures that are fundamental to effective disaster response and recovery.

National Report and Information on Disaster Reduction (British Virgin Islands)

23. Logistics and Facilities – Identify, locate, acquire, distribute and account for services, resources, material, facilities required to adequately support disaster management activities.
24. Training – Assess, develop and implement training/educational programmes for public/private official and emergency response personnel
25. Exercises – Establish a programme of regularly scheduled exercises, designed for assessment and evaluation of emergency response plans and capabilities.
26. Public Information and Education – Provide the general public with education on the nature of hazards, protective measures, and an awareness of the responsibilities of government and citizens in an emergency/disaster. Provide accurate, timely and useful information and instructions to people at risk in the community during an emergency period
27. Finance and Administration – Adherence to and development of fiscal and administrative procedures.
28. Recovery Coordination – assist in the re-establishment of a stable social, physical and economic basis to a community affected by a disaster.

FUNCTIONS OF THE CARIBBEAN DISASTER EMERGENCY RESPONSE AGENCY (CDERA)

The main functions of CDERA include:

- Securing, collating and channelling to interested governmental and non-governmental organizations, comprehensive and reliable information on disasters affecting the region.

National Report and Information on Disaster Reduction (British Virgin Islands)

- Mitigating or eliminating as far as possible, the consequences of disasters affecting Participating States.
- Establishing and maintaining on a sustainable basis, adequate disaster response capabilities among Participating States.
- Mobilizing and coordinating disaster relief from governmental and non-governmental organizations for affected Participating States.

There are two Articles, which define the commitment of the Government of the BVI, and these are outlined in Articles 12 and 13 of this agreement.

Article 13 – Undertaking of Participating States of CDERA

Without prejudice to the requirement to discharge any other obligations assumed under or in connection with this Agreement, Participating States undertake:

- a. To establish or maintain, as the case may be, national relief organizations capable of responding swiftly, effectively and in a coordinated manner to disasters in Participating States;
- b. To establish emergency disaster planning groups and define national policies and priorities in the event of disasters;
- c. Provide national relief organizations with adequate support including named emergency coordinators, liaison officers with key Ministries, emergency services and the like;
- d. To task the named agencies (including the emergency services, health and public works) and their coordinators with specific functions and responsibilities to ensure the development of an adequate response capability to support national disaster action;

National Report and Information on Disaster Reduction (British Virgin Islands)

- e. To define the role and functions of key agencies such as Security Services, Health and Public Works in disaster emergency response management and establish a system for regular review of their procedures for coordinated response;
- f. Establish and equip a suitable emergency operations center capable of handling emergency telecommunications and coordinating emergency responses involving many services;
- g. Develop and maintain an emergency telecommunications system based on the most appropriate technology to ensure the coordination of emergency operations involving the emergency services mentioned above as well as voluntary private sector services;
- h. To establish and strengthen procedures for coping with major disaster threats and scenarios and review systems for testing the procedures by drills and simulations;
- i. To review and rationalize legal arrangements for disaster mitigation and emergency action;
- j. To review and catalog past disaster events and list credible future emergency event scenarios and identify and map areas with special problems like flood prone areas;
- k. To establish data bases of key resources, both human and material and a system for keeping them current and to computerize and integrate them into an automated emergency information system;
- l. To develop, in collaboration with competent governmental agencies, an emergency shelter policy and programme involving the full participation of local officials in community based organizations;
- m. To develop and review a system for community participation, local mobilization and counter disaster action in the event of isolation;

National Report and Information on Disaster Reduction (British Virgin Islands)

- n. To develop strategies for loss reduction in the public and private sectors focusing on vital economic activities and life line activities like water supply;
- o. To develop a system and procedures for damage assessment in order to facilitate rapid and effective post impact evaluation;
- p. To develop and implement a comprehensive disaster public awareness, information and education programme involving media houses, schools, voluntary agencies and other institutions in order to ensure public participation and community involvement in the disaster management system;
- q. To develop and implement appropriate training programmes for persons involved in the disaster management system;
- r. To identify and seek participation in bilateral and multilateral technical cooperation programme designed to develop disaster management capabilities;
- s. To identify, maintain in a state of readiness and make available immediately on request by the Coordinator relevant material and human resources in the event of disaster

AGREEMENT BETWEEN MEMBER STATES AND THE ASSOCIATION OF CARIBBEAN STATES (ACS) FOR REGIONAL COOPERATION ON NATURAL DISASTERS.

ARTICLE

Highly Vulnerable Areas

National Report and Information on Disaster Reduction (British Virgin Islands)

The Contracting Parties may, when necessary, declare within their territory, their territories or specific zones, Highly Vulnerable Areas, with a view to developing plans for co-operation in the prevention and management of natural disasters.

In order to establish a Highly Vulnerable Area, the Contracting Parties must take the following procedure into account:

1. The Party that exercises sovereignty, or sovereign rights or jurisdiction over a Highly Vulnerable Area shall submit its nomination for inclusion in the registry of Highly Vulnerable Areas of the Association of Caribbean States, which will be created and updated by the Secretariat, on the basis of the nomination approved by the Special Committee responsible for the subject of Natural Disasters.

2. The nominations shall be presented in accordance with the guidelines and criteria concerning the identification and selection of the Highly Vulnerable Areas, which are determined by the Contracting Parties, on the advice of the Special Committee responsible for the subject of Natural Disasters.

3. Each Party, which submits a nomination, shall make available to the Contracting Parties, through the ACS Secretariat, the following information on their Highly Vulnerable Areas:

- a) name of the area;
- b) bio-geography of the area (limits, physical characteristics, climate, social composition, etc.);
- c) vulnerability of the area;
- d) management programmes and plans;
- e) research programmes;
- f) characteristics of the status of disaster prevention and/or mitigation.

National Report and Information on Disaster Reduction (British Virgin Islands)

In order to develop fully co-operation among the Contracting Parties in the management of Highly Vulnerable Areas and to ensure effective fulfillment of the obligations outlined in this Agreement, it is recommended that each Party adopt and implement measures for planning, management, surveillance and control, which shall include at least the following:

- (i) formulation and adoption of disaster management guidelines suited to the Highly Vulnerable Areas;
- (ii) adoption of a management plan which outlines the legal and institutional framework and the protective measures suitable for the Highly Vulnerable Area or Areas;
- (iii) development of awareness programmes, local organisation for emergencies and education of the population and decision-makers, to reinforce the prevention and/or mitigation measures;
- (iv) active participation of local communities, whenever their direct presence is required, in planning, assistance, and training of the local population;
- (v) adoption of mechanisms for financing the development and effective management of the Highly Vulnerable Areas and the promotion of programmes of mutual assistance;
- (vi) establishment of procedures for regulating or authorizing activities compatible with the common guidelines and criteria established by the Contracting Parties;
- (vii) development of adequate infrastructure and training of interdisciplinary technical staff competent in the management of disasters.

ARTICLE 4

Mutual Co-operation and Assistance

The Contracting Parties shall promote:

National Report and Information on Disaster Reduction (British Virgin Islands)

1. The formulation and implementation of standards and laws, policies and programmes for the management and prevention of natural disasters, in a gradual and progressive manner;
2. Joint actions, with a view to identifying, planning and undertaking programmes for the management of natural disasters, with the assistance of specialized natural disaster organizations operating in the region;
3. Co-operation in the formulation, funding and implementation of aid programmes for those Parties that request them, especially with regard to assistance from regional and international organizations. These programmes shall be oriented towards educating the population in the ways of preventing and coping with natural disasters, training of scientific, technical and administrative staff, as well as the acquisition, use, design and development of suitable equipment;
4. Periodic exchange of information, by diverse means, concerning their best experiences in the reduction of disasters;
5. The adoption of existing standards for the classification and management of humanitarian supplies and donations with the purpose of improved transparency and efficiency in humanitarian assistance.

The mobilization of the necessary resources for responding to natural disasters among the Contracting Parties shall always be done at the request of the affected Party and shall be done in accordance with the principles and norms of international law, and existing co-operation agreements, particularly with respect to sovereignty and self-determination of the affected Party.

National Report and Information on Disaster Reduction (British Virgin Islands)

(REFERENCE D)

TERMS OF REFERENCE FOR NATIONAL DISASTER MANAGEMENT COUNCIL (NDMC)

The National Emergency Organization (NEO) is the name given to the umbrella network of units and authorities concerned with the various aspects of Disaster Management in the Territory of the British Virgin Islands as specified in the Disaster Management Act 2003 (DMA) and the National Disaster Management Plan (NDMP).

The National Disaster Management Council is the central institution of the NEO as established by the DMA. Its role is to review the national strategy for, and the state of, disaster management ("DM") in the Territory and make recommendations to government. It has several sub-committees, which are required to develop national plans and procedures to deal with the impact of hazards in their areas of responsibility. The Governor is Chairman and the Chief Minister Deputy Chairman of the NDMC.

The main sub-committee of the Council is the National Emergency Executive Committee (NEEC). The NEEC acts for the Council between meetings; it serves as a sounding board on DM issues, reviews the work of other sub-committees and give guidance, and provides technical support to the DDM. The NEEC meets on a quarterly basis or as required in an emergency. The Governor may call the Committee to meet if he thinks fit or is requested so to do by the Chief Minister.

The main executing agency established by the DMA is the Department of Disaster Management (DDM). The Administrative Head of the Department of Disaster Management (DDM) is the Director who reports to the Chairman of the NDMC through the Deputy Governor. The Deputy Governor presently serves as Director or the National Emergency Operations Center, once activated, with the Director of Disaster Management serving as Operations Officer.

The terms of reference for the NDMC, which should meet annually, are as follows:

- Provide policy directives for the organs comprising the NEO

National Report and Information on Disaster Reduction (British Virgin Islands)

- Review and monitor the national strategy for dealing with disasters, which addresses the areas of Preparedness, Mitigation, Response and Recovery.
- Assign responsibilities to the NEO
- Make recommendations to government on manpower and physical resources for operations before, during and after a national disaster
- Review and evaluate national plans and procedures
- Review the work of the National Sub-committees
- Monitor and supervise the annual work programme of the DDM
- Advise on the overall coordination and planning of disaster related activities

COMPOSITION OF NATIONAL DISASTER MANAGEMENT COUNCIL

Ex Officio

1. The Governor
2. Chief Minister
3. Financial Secretary
4. Commissioner of Police
5. Chief Fire Officer
6. Director Health Services
7. Director of Planning & Statistics
8. Chief Environmental Health Officer
9. Director Public Works
10. Director of Marine Services

Other Members

11. General Manager, BVI Electricity Corporation
12. Chief Engineer, Water & Sewerage Department
13. Director, BVI Tourist Board
14. Director, BVI Red Cross
15. President, Disaster Auxiliary Corps (DAC)
16. Chief Conservation and Fisheries Officer, Conservation & Fisheries Department
17. Chief Information Officer, Department of Information & Public Relations
18. General Manager, Cable & Wireless W.I. Ltd

National Report and Information on Disaster Reduction (British Virgin Islands)

19. Director, Civil Aviation Department
20. Chief Physical Planning Officer
21. Permanent Secretary, Ministry of Health & Welfare
22. Chief Education Officer, Department of Education & Culture
23. President BVI Christian Council
24. Director, Adventist Disaster Relief Agency (ADRA)
25. Representative, Disaster Management Zonal Committees
26. Representative, Broadcasting Industry
27. Representative, Building Industry/Building Professionals
28. Representative, Financial Services Industry
29. Representative, Insurance Companies
30. Representative, BVI Marine Association
31. BVI Chamber of Commerce and Hotel Association

The Governor may co-opt other persons to attend meetings.

(REFERENCE E)

HAZARD AND RISK ASSESSMENT PROJECT

GENERAL

The British Virgin Islands' (BVI), Hazard and Risk Assessment Project (HRAP), is a major part of the Hazard Mitigation Programme being conducted by the Department of Disaster Management (DDM). The HRAP was conceived by Jennifer Worrell whilst National Disaster Coordinator in 1993 as a means of establishing the nature of hazards both natural and manmade to which the BVI is exposed.

Funding for the management of the Project was provided by the British Government through the Overseas Development Agency (ODA) and the Government of the BVI provided funds for the project activities. The duration of the project was twenty three months from April 1995 TO march 1997 and the total budget was US\$90,000. The project was coordinated by Aedan Earle, a consultant recruited from Jamaica.

The main objective of the project was to characterise the natural and man-made hazards to which the BVI is exposed with an emphasis on natural hazards since they were perceived to be, based on past experience, the greatest threat. The idea then was to systematically determine the nature of the hazardous phenomena that have the potential of affecting the BVI and to evaluate the possible impacts that might result. In this respect the project could be seen to consist of three broad aspects, hazard assessment, impact evaluation and the development of loss reduction recommendations. The project was designed to consist of four main activities;

1. Hazard Mapping
2. Production of an inventory of the elements at risk
3. Vulnerability Analysis and Loss estimation
4. Development of Mitigation or loss reduction strategies

The hazard mapping component included an assessment of the following hazards: Hurricanes, Land-borne flooding, Seismicity, and Landslides.

APPROACH

The HRAP was conducted as a series of sub-projects consisting of the four main activities outlined above. Each sub-project involved scientific studies, which were conducted by experts in that particular area. These activities were coordinated by the project manager who was also responsible for the compilation of the final reports and products of the various studies.

The hazard mapping studies were carried out by local and overseas consultants in collaboration with government agencies. These studies involved fieldwork, utilized existing reports, and baseline data, aerial photographs, topographic and bathymetric maps and existing baseline data and digital databases.

The project manager determined that an appropriate framework for the project was the Geographic Information System (GIS) platform. This system consists of a combination of computer software and hardware capable of capturing, storing, manipulating and presenting spatial information in the digital domain. In this system therefore all information is converted and transformed into digital maps. Once in this digital domain analysis can be carried out by the software, which is designed to establish relationships between layers of digital maps. The system is also capable of producing high quality hard copy maps.

In this respect the adaption of the GIS framework for the project would result in the creation of a digital database of spatial information. The presence of a central GIS in Town and Country Planning Department (TCPD) of the BVI Government, meant that the data produced by the project could be easily used, stored, maintained and updated. The digital data also allowed for ease of electronic transfer via such media as the Internet. Therefore the GIS framework shifted the project toward the production of information as a dynamic database of spatial data in digital format.

The GIS database was developed with the industry standard ArcInfo GIS package. Data was digitized in AutoCad and the final datasets were finished and presented in ArcView. This software is also used by the TCPD. The TCPD GIS, which has been operational for the past four years provided many essential datasets. The HRAP therefore also produced a GIS and a database, which can be utilized for disaster management and long-term development planning by the TCPD.

The ultimate aim of the project was to provide information, which could be used to mitigate the losses, which might result from the occurrence of hazardous events. This report is therefore specifically geared towards supplying the agencies responsible for development planning and disaster management with information that can assist in decision making that will contribute to a reduction of losses from potential hazards. **The overall format and pitch of the report is**

therefore of a technical nature and in some respects may not be a layman's document.

The project was guided by a Technical Advisory Committee (TAC), which consisted of Jennifer Worrell, Jeremy Collymore, Keith Ford and the Project Manager. The previous National Disaster Coordinator of the DDM, Donovan Gentles, served as secretary to the Committee. The TAC met once and was kept up to date through regular telephone contacts and through two interim progress reports, which were produced. Throughout the course of the project a concerted effort was made to involve local agencies. The project benefited from considerable assistance from the Departments of Town and Country Planning, Conservation and Fisheries, Public Works, Water and Sewerage, Agriculture and Survey.

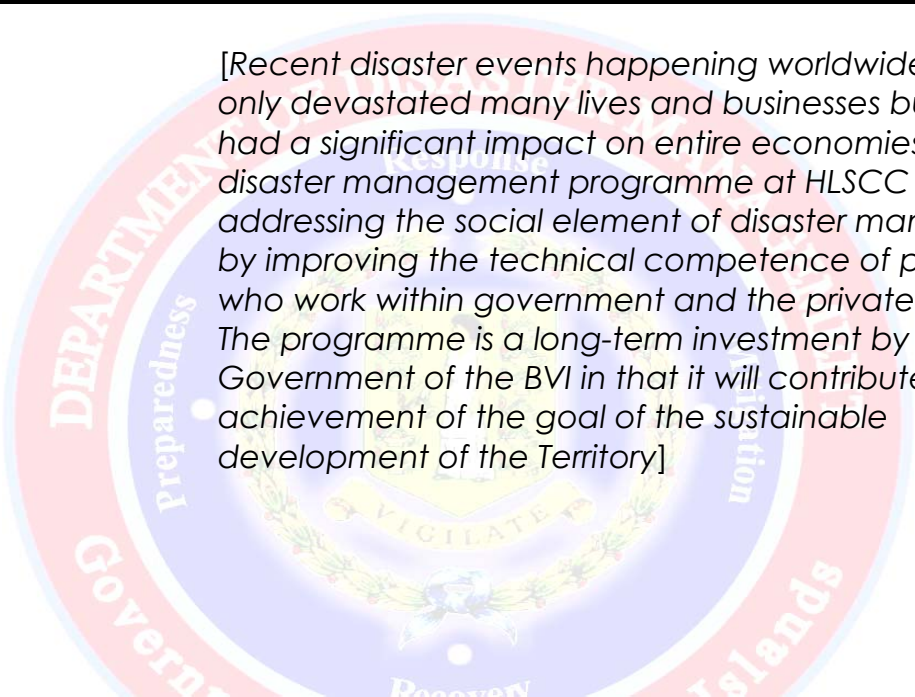
(REFERENCE F)

**Disaster Management Studies
At the H. Lavity Stoutt Community College**

**Michael E. O'Neal, Ph.D.
Vice President and Provost
H. Lavity Stoutt Community College**

**Lloyd Wheatley, M.Sc.
Head of Technical and Vocational Studies
Coordinator, Disaster Management Programme
H. Lavity Stoutt Community College**

[Recent disaster events happening worldwide have not only devastated many lives and businesses but have had a significant impact on entire economies. The disaster management programme at HLSCC aims at addressing the social element of disaster management by improving the technical competence of persons who work within government and the private sector. The programme is a long-term investment by the Government of the BVI in that it will contribute to the achievement of the goal of the sustainable development of the Territory]



Sharleen DaBreo
Director, Disaster Management

The field of disaster management is becoming increasingly as governments and industries seek to ensure that there is minimal damage, rapid response capability and return to normality after natural or man-made disasters. The Government of the Virgin Islands (BVI) decided, therefore, to support the establishment of a programme of studies at the H. Lavity Stoutt Community College (HLSCC), which would provide training in disaster management. The Disaster Management Programme at HLSCC was, accordingly, launched in September 2001.

The curriculum in this programme is designed in a multidisciplinary and integrated fashion to focus on the principles of preparedness, response, mitigation and recovery. Participants in this programme can use the qualification as a starting point in disaster management studies and careers or to augment their expertise in other relevant areas of service.

Two levels of certification are available in this programme: the Certificate of Achievement, comprised of 8 courses totaling 24 credit hours, and the Associate Degree, comprised of 19 courses totaling 64 credit hours. The Associate Degree in Disaster Management is designed to accommodate those students who wish to continue their studies beyond the Certificate of Achievement level. The eight courses comprising the Certificate of Achievement, coupled with an additional five core courses and the College's General Education requirements, constitute the degree programme.

The College's curriculum in disaster management includes the following courses:

- *Introduction to Disaster Management*, which introduces the student to natural, technological, civil and environmental hazards. Various methods of managing disaster events, are examined, including mitigation, preparedness, response, recovery and incident-management. The roles and responsibilities of government, private business and non-governmental organizations are addressed.
- *Community Preparedness* focuses on the design and development of programmes leading to the formation of disaster-resistant communities. Sociological and political perspectives are considered. The course addresses the identification and selection of general public-education modalities, preparedness, and strategies related to the reduction of hazard impact.
- *Emergency Care and Treatment* establishes a sound foundation for the duties and responsibilities relevant to initial response. Topics include scene

assessment, first aid, cardiopulmonary resuscitation (CPR), victim triage, and responder safety.

- *Hazardous Materials* addresses the problems of chemically active and hazardous materials in emergency situations. The identification, transportation, storage, usage and management of these very dangerous and sensitive items constitute the focus of this course
- *Public Infrastructure* examines the technological public life-support systems at risk during a disaster. Topics include water supply, public sanitation, telecommunications, transportation systems and building construction systems.
- Organized communication during any crisis or natural disaster is paramount and the *Public Information and Crisis Communication* course gives a theoretical and practical exposure to crisis communications strategies and public relations. Techniques in individual, group and mass media methods for communicating with selected audiences are developed, along with basic oral and written communication skills.
- *Disaster Planning* presents planning concepts and planning processes. Writing disaster management plans and exercises, development and maintenance of hazard resource management systems, vulnerability analysis and understanding public policy are skills honed by this course.
- *Mitigation* is the long-term structural and non-structural method of preventing or reducing loss from natural and man-made disasters. Mitigation techniques, post-disaster redevelopment, and maintenance comprise the major components of this course.
- *Response and Recovery* covers the basic concepts and operations applicable during and after disaster events. Roles and responsibilities of emergency officials, national government officials, and non-governmental agencies are examined, with emphasis on the problem-solving aspects of post-disaster operations and associated coordination requirements.
- *Mass Casualty Management* deals with mass casualty management issues in small states in circumstances of scarce medical resources.

The Disaster Management Programme at HLSCC began in September 2001 with an initial cohort of seventeen students, seven of whom completed the Certificate of Achievement in June 2003. A second cohort of 31 students began pursuit of the Certificate of Achievement in September 2003. Participants in the programme are primarily from the Government's Fire and Rescue, Royal Virgin Islands Police Force (RVIPF), Health and Environmental Protection, Agriculture, Town and Country Planning and Disaster Management departments, together with individuals from the Auxiliary Disaster Corps. Financial support for the programme has come from the Deputy Governor's Office through the Government's Training Division.

Students have been given full government scholarships covering tuition and books for two years on a part-time basis, with periodic performance reviews at the end of each semester.

The Disaster Management Programme at the H. Lavity Stoutt Community College is reflective of an ongoing collaboration between several agencies—the Department of Disaster Management, PAHO, and the Training Division of the Government of the Virgin Islands. The programme of study articulates with the Bachelor of Science Degree in Emergency Administration and Management (EAM) offered by Arkansas Tech University and it is hoped that in 2005, students from the first cohort will be advancing to that stage.

The diversity of disaster management professionals as well as HLSCC faculty who have served as lecturers has greatly enriched the programme. Faculty has included disaster management professionals from the USA, Bermuda, and St. Lucia and among whom are individuals certified by the US Federal Emergency Management Agency (FEMA) and the Pan American Health Organization (PAHO) for the delivery of courses in their respective areas. As the programme is, to the best of our knowledge, the only one of its kind in the Caribbean, its significance for regional training is becoming apparent. It is envisaged that future enrollments will include participants from other OECS and CARICOM countries. Much of that outreach effort is being facilitated by the continuing networking efforts of regional Disaster Management agencies. Students in the programme have been able to participate in a number of regional fieldtrips—to Montserrat in March 2002 to learn first hand of the disaster management policy, planning and recovery efforts caused by the eruption of the volcano on that island and similarly, in March 2004, to the island of Grenada to learn about coastal protection and land stabilization methods currently being implemented in that country.

The programme has already had significant impact on the practice of disaster management in the British Virgin Islands. The Royal Virgin Islands Police Force, for example, has appointed a Disaster Management Liaison Officer, a graduate of the programme, who has reviewed existing plans and procedures, developed Terrorism, Search and Rescue plans, and conducted drills, training and exercises for officers within the Force. Similarly, as part of their project assignments during their course of study, students have developed disaster management plans for their places of employment. Several students have, moreover, participated in vulnerability studies for critical public sector agencies, increasing the level of awareness among key sectors of Government in the British Virgin Islands.

A number of initiatives have developed around topical areas related to this programme. The College is in mature discussions with the Government of the Virgin Islands regarding the securing of land adjacent to the Terrance B. Lettsome International Airport (BVI) for the purpose of construction of a fire and rescue training facility which would jointly serve the College's Marine Studies Programme and relevant public rescue services such as the airport fire and rescue unit. Emergency medical-care training is delivered through two courses in the programme—*Mass Casualty Management* and *Emergency Care and Treatment*. These courses have been adapted from existing PAHO courses and have led to discussions with PAHO regarding the possibility of mounting a regional Emergency Medical Technician Training programme of similar dimensions and structure to the Disaster Management Programme at HLSCC. Finally, HLSCC and the Disaster Management Programme plan to participate in the Caribbean Disaster Emergency Response Agency (CDERA)-proposed regional initiative in Safe Building Design and Construction, drawing on the resources that CDERA will make available for workshops, short courses and seminars in this regard.

(REFERENCE G)

VIRGIN ISLANDS

DISASTER MANAGEMENT ACT, 2003

PART X EMERGENCY DISASTER FUND

26. (1) there is established a fund to be known as the Emergency Disaster Fund which shall comprise

- (a) such monies as may be appropriate by the Legislative Council;
- (b) such donations and grants as may be made by persons and organizations approved by the Ministry of Finance;
- (c) such sums of money as may be raised by way of loan with the approval of the Legislative Council upon the Recommendation of the Minister Responsible for finance (in this Part Referred to as "the Minister"); and
- (d) such other monies as the Council may raise through activities organized by or on behalf of the Council.

(2) The Fund shall be administered by a Committee (hereinafter referred to as "the Fund Committee") comprising the Financial Secretary, as *ex officio* Chairman, and not more than four other persons,

appointed by instrument under the hand of the Governor after consultation with the Minister

(3) The Fund Committee appointed under subsection (2) may include members of the Council.

(4) The members of the Fund Committee, other than the Chairman, shall be appointed

- (a) for a period of two years; and
- (b) on such other terms and conditions as the Governor may determine.

(5) The Fund Committee shall

- (a) meet at such times and place as its Chairman may determine; and
- (b) regulate its procedure in such manner as it may determine.

27. (1) The Fund shall be applied towards recovery efforts and the adoption and promotion of preventive measures before, during and after a disaster emergency.

(2) The Fund may, subject to the prior approval of the Executive Council, be applied towards assisting, by way of grants or loans, other countries or territories that have suffered disasters to which this Act would apply.

28. In the administration of the Fund Committee shall, in consultation with the Council, be responsible for

- (a) determining the criteria to be applied in
 - (i) funding projects and programmes in relation to the mitigation of, preparedness for, response to and recovery from, emergencies and disasters;
 - (ii) providing financial assistance to persons for their relief and

recovery from an emergency or disaster;

- (b) the keeping of proper books of accounts and other records;
- (c) the preparation and submission of reports relating to the administration of the Fund to the Minister; and
- (d) making recommendations to the Council on activities geared towards raising funds as provided for in section 26 (1) (d).

29. (1) Subject to subsection (2), no money shall be withdrawn from the Fund except upon the authority of a warrant under the hand of the Minister who shall make such authorization after consultation with the Fund Committee.

(2) Where it is not reasonably practicable for the Minister to sign a warrant, the Financial Secretary may disburse the necessary funds subject to ratification by the Minister at the earliest opportunity.

30. (1) Any money credited to the Fund shall be kept in an account at such bank in the Territory as the Minister may approve.

(2) The Fund Committee may, with the approval of the Minister, invest monies credited to the Fund in such manner as it considers prudent and any interest or benefit received from such investment shall form part of the Fund.

31. (1) The accounts of the Fund shall be audited and reported on annually by the Chief Auditor, and for that purpose the Chief Auditor or any person authorized by him in that behalf shall have access to all books, records, returns and other documents relating to such accounts.

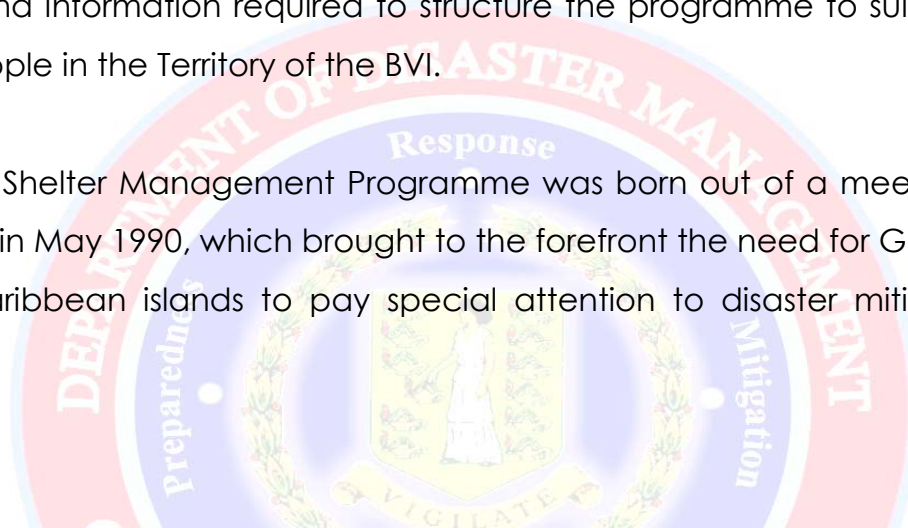
(2) The Chief Auditor shall submit the report referred to in subsection (1) to the Minister who shall cause it, together with the report received by him under section 28(c), to be laid before the Legislative Council.

(REFERENCE H)

A REVIEW OF THE BRITISH VIRGIN ISLANDS SHELTER MANAGEMENT PROGRAMME

The BVI Emergency Management Programme began in the late 1980's through the assistance of the United States Agency for International Development (USAID) and the Pan Caribbean Disaster Preparedness and Prevention Programme (PCDPPP). These agencies provided the technical support and information required to structure the programme to suit the needs of the people in the Territory of the BVI.

The Shelter Management Programme was born out of a meeting held in Barbados in May 1990, which brought to the forefront the need for Governments of the Caribbean islands to pay special attention to disaster mitigation and



rehabilitation for the shelter sector. At this meeting, a workshop was proposed with the objective to produce an action plan for countries to examine housing losses and damage, assess rehabilitation needs, develop recovery programs and integrate the response efforts into national emergency management programmes. The workshop examined the experiences of Montserrat, St. Kitts and Antigua and targeted planners and emergency managers from many member states of the PCDPPP. This workshop came at an opportune time when the BVI was preparing to develop its own emergency management programme and as such, this workshop was used as a starting point in the development of their Shelter Programme. The workshop provided a framework for the programme as well as it established the context under which an emergency management programme should be developed with emphasis being on all areas of the disaster cycle.

Shelter Assessment

1990 saw the launching of a campaign by the Office of Disaster Preparedness (ODP), now the Department of Disaster Management (DDM) through the Territory's Community Emergency Organizations (CEO's) to raise funds to assist in the improvements needed in many of the emergency shelters. The ODP, at this point, launched an "Adopt-a-shelter project" which sought assistance from building contractors and service clubs in adopting shelters. Service clubs including the Lions Club and the Rotary Club, as well as Cable and Wireless (West Indies) Ltd., agreed to support this effort in various ways.

Initially this project addressed the minor issues affecting the shelter accommodations but as the shelter programme began to establish wider boundaries there was a greater awareness to the structural and non-structural needs of the emergency shelters and as such the government undertook the responsibility of retrofitting and maintaining these critical facilities.

The service clubs and other volunteer agencies then focused on equipping the shelters with emergency supplies while Cable and Wireless agreed to connect the emergency shelters to the generating systems of their nearby stations in order to provide standby power in the event of an emergency. In addition, the ODP contracted a local architect to conduct a survey of all emergency shelters and to document the actions needed for improving them. This study was also conducted to identify other buildings that could be used as emergency shelters.

Shelter Management Committee

In 1992, the National Disaster Coordinator for the British Virgin Islands, Jennifer Worrell, established a committee for implementing a formal shelter management programme for the BVI, which paved a way for the BVI's overall emergency management programme. The committee was tasked with developing a shelter policy, manual, training schedule, and a shelter retrofit programme. In order to establish the membership of the committee, a meeting was held with various community members, the Public Works Department (PWD), the BVI Red Cross and the Ministry of Health and Welfare. One main concern brought forward by the members of the meeting was the poor condition of the Territory's emergency shelters and the reluctance of the ODP, at that point in time, to publish a list of these shelters for the public's use.

Previously, the upkeep and readiness of emergency shelters was assigned to the PWD; however, no maintenance programme was established to ensure that the necessary steps were implemented for these buildings to be kept in a constant state of readiness.

The newly formed shelter management committee was mandated to develop a policy which would relate specifically to the upkeep, maintenance, selection, and use of emergency shelters throughout the Territory. The committee's task of assessing the current emergency shelters involved a categorization of shelters based on their site, and the accommodations available. The assessment was carried out using forms that were developed by the National Emergency Management Agency (NEMA) of Trinidad and Tobago. The Emergency Operations Center (EOC) was also included in the assessment.

Shelter Management Training

The year 1992 began with the organization of a shelter management training course from 19-20 May to educate community members on the procedures required in managing an emergency shelter during an emergency. Yvonne Patterson, an instructor from St. Vincent and the Grenadines, who was used regionally by PCDPPP for similar training events, conducted the workshop. The workshop targeted service clubs, community groups, legislative members and members of the local community emergency organizations. A report on this training was presented to the National Emergency Advisory Council (NEAC), which included a number of recommendations for review. These were:

- All school principals and their deputies be mandated to be responsible for manning emergency shelters; and
- A national shelter committee formed to advise on shelter related matters where persons are appointed to chair each CEO.

In July, a follow-up meeting was organized by the ODP with participants who attended the previously held shelter management training workshop. The purpose of this meeting was to formally establish a national subcommittee under the NEAC. The committee was now comprised of trained personnel who would be responsible for addressing the issues related to the upgrade, selection, maintenance, and management of the Territory's emergency shelters. The issue of the shelter policy and shelter manual was made priority as well as the

development of a plan to identify strategic storage areas for emergency supplies in all districts.

Shelter Outfitting

The first project to be undertaken by the committee was an extensive retrofitting project. This involved assessing the Territory's 30 designated emergency shelters for general improvement and structural retrofitting as well as the construction of two emergency shelters, one in Jost van Dyke and the other between Sea Cows Bay and West End as no public buildings were located in these areas. The retrofit project sought to upgrade the designated emergency shelters to structurally sound buildings, suggest recommendations for construction additions, equip the buildings with adequate internal facilities, erect buildings in areas with no suitable buildings for this purpose, and equip shelters with emergency supplies. Concentration was also paid to training a cadre of 90 persons in shelter management to allow at least three persons to operate each shelter on eight-hour rotations.

As the retrofitting project was becoming overwhelming for the ODP and PWD, this task was assigned to a consultant from the BVI Consultancy Associates, Civil Engineers, and Project Managers and was completed in 1994. The final report provided pictorial views of all 30 emergency shelters, listing the age of each building as well as those recommended to be retired. Findings and recommended maintenance works needed as well as retrofit costs were documented along with a descriptive commentary on building components. Supplementary reports included in the report were data sheets, a hurricane checklist, inspection forms, floor plans, and recommended construction details. Six churches and 1 school were recommended to be retired as emergency shelters, the reasons being lack of internal facilities, age and size of the buildings.

Since 1997, the Government has been providing funding in accordance with the shelter policy to retrofit the shelters assessed through the report. This work is being managed by the ODP with supervision by PWD. A decision was made to concentrate on the retrofitting and maintenance needs of the Category A shelters first. Since the study, some of the buildings have been upgraded and as such new assessments are undertaken before work is implemented on these buildings.

In 1987, Telecommunications Officer Arthur Swain and the NDC at that time Robert Creque obtained a CIDA Grant for Emergency Telecommunications equipment. The Canadian High Commission in Barbados granted Canadian \$28,000.00, which was used to purchase VHF repeaters and handheld radios. After Hurricane Hugo in 1989, a decision was made to install VHF Base Stations in Shelters because of the problem of not being able to recharge the VHF handheld radio batteries when the main's power was unavailable. In addition, handheld operation was marginal from some shelters due to their location with respect to the repeaters creating a poor line-of-sight. Base stations running more power and with an outside antenna provided better communication.

A radio network has been established in which persons allocated radios are required to check in with the ODP at 9:30 every morning. The ODP Emergency Telecommunications Officer organizes the net with support from the BVI Fire and Rescue Service. At present, the network is being expanded to include an emergency broadcast system, a siren system as well as satellite phones assigned to each district.

Policy Framework

The next project undertaken by the ODP was the development of a shelter manual. This process began with a review of the shelter management

procedures implemented during Hurricane Hugo in 1989. Reports indicated that during Hurricane Hugo the shelter names were aired on local radio stations for the public's information. The Permanent Secretary in the Ministry of Natural Resources and Labor made routine checks on designated shelters as the chairpersons for the CEO's were identified. A National Disaster Plan existed; however, it failed to categorize the shelters in terms of availability and suitability. Shelters were opened on an ad hoc basis and the BVI Red Cross provided supplies. Emergency health personnel were also stationed at most shelters. The post recovery period called for the homeless to be offered accommodation at various hotels, the hospital, the geriatric home and with relatives and friends. This proved to be an extremely costly process for the Government and created chaos in the tracking of persons rendered homeless. In October of that same year, the Ministry of Health and Welfare met with CEOs. The following were identified as urgent requirements for emergency shelters in the Territory:

- The need for standby generators at all shelters
- Access to sanitary facilities was needed at some shelters
- Provision of supplies to shelters
- Use of the Red Cross building for accommodation of the homeless
- Communication capabilities between the EOC and shelters

Hurricane Hugo resulted in 44 building being used as shelters, 7 being damaged, 5 buildings used for the homeless for 4 days, 10 shelters being flooded and 78 persons sheltered at non designated shelters.

Recommendations after the passage of Hurricane Hugo called for the categorization of shelters; establishment of a shelter committee; procedures for activating shelters and the need for shelter communication.

The first version of the BVI Shelter Manual was completed in 1994. The manual served as a means of defining roles and responsibilities for shelter managers and to providing guidelines and information for management of designated shelters. The manual also served to define the shelter programme within the context of the National Disaster Plan and to provide resource material for the training and delivery of shelter related services. The manual outlined a National Shelter Policy; terms of reference for the shelter committee, Chief Shelter Manager as well as shelter managers; the role of Non-governmental Organizations, categorization of shelters and information on siting, selection, maintenance and operating procedures for the proper administration of shelter services. The manual includes a number of appendices, which list menus, feeding guides, contact lists, and medical information. The manual has since been updated to reflect up-to-date information.

OFDA Shelter and Shelter Management Training

In 1994, the shelter management training began with the assistance of the Office of Foreign Disaster Assistance (OFDA). The BVI was selected as a testing ground for OFDA's newly completed shelters and shelter management training. This training continued annually and by 1996 the BVI had reached its goal of 100 trained shelter managers, with six of them being trained as instructors. Two of these persons went on to become regional instructors for OFDA. As each hurricane season brought with it increasingly devastating events to the Region many of the trained shelter managers resisted leaving the safety of their home to serve as shelter managers. The shelter managers list was reviewed in 1997 and the numbers decreased from 100 to 45. The ODP had the task of

replenishing the numbers. The shelter management training programme continues yearly in order to maintain the number of persons needed to manage the Territory's emergency shelters. Simulation exercises have also been designed for communities to test the procedures, which they have learned through the training received.

Disaster Auxiliary Corps

1995 brought with it devastating Hurricanes such as Luis and Marilyn. Both of these systems threatened the BVI. Interestingly the ODP was flocked with young volunteers who wanted to assist in anyway they could. This spawned the creation of the Disaster Auxiliary Corps. DAC is an organization, which is staffed by over 22 young volunteers. These volunteers serve as a medium through which emergency management awareness is raised in our communities. Members serve as instructors, assist in various capacities in the EOC, and serve as shelter managers. The organization is now six years old and it continues to play an important role in the BVI Emergency Management Programme and in the overall functioning of the ODP.

Shelter Supplies Project

The shelter supplies project received its first allocation of funding from the government in 1994. Since then funding to the tune of 35 thousand dollars has been allocated towards the purchase of personal protection, lighting, communication, identification items, tools, water, notes, guides, medical, cooking utensils, sanitation items, sleeping equipment and other miscellaneous items.

A maintenance programme is in place to ensure that these supplies are updated and maintained annually. In addition, excess relief supplies are

purchased and stored in a warehouse, which can be accessed in the event of an emergency.

Restructuring of Community Emergency Organizations

In 1997, a thorough review of the Territory's CEO's was undertaken. A handbook was prepared to provide basic information on setting up committees, provide terms of reference for various tasks as well as guidelines for developing community disaster plans. The handbook is a comprehensive document, which includes the shelter list, a list of shelter supplies, key holders, and a list of committee members and available shelter managers. The district committee structure was restructured to form 10 zonal committees, which were designated based on population densities and available shelter accommodation.

Other Activities

The shelter committee previously formed also underwent a rigorous review. The committee's functions were expanded to include welfare services and a **National Welfare and Relief Distribution plan** was subsequently developed which included procedures for persons to follow from the point of evacuating their homes and occupying shelters, to receiving benefits in the post impact phase. The formulation of this plan called for the restructuring of the ODP's work programme to expand the shelter programme to include a wider range of community preparedness activities. This process took place in 1999 with the introduction of training in **Supply Management** (SUMA). This training allowed for the formulation of a team tasked with the responsibility for the upkeep of the Territory's relief supplies and in the event of an emergency these persons will be called upon to assist in tracking of incoming relief supplies at ports and other designated points of entry. The Pan American Health Organisation supported this training. PAHO has also supported training in the area of **stress**

management for community groups. This basic training will assist community personnel and shelter managers in the techniques required for conducting interventions required for persons exposed to disaster events, a skill that is necessary for shelter management teams. In addition to a fully computerized system of managing the Territory's emergency relief supplies, the ODP has invested in developing a database using the **Geographic Information System (GIS)** to design maps illustrating the location of all shelters. The maps also contain high-risk areas in close proximity to these shelters utilizing hazard maps and data developed through the Hazard and Risk Assessment study completed in 1997. This information is now available to community organizations as well as other agencies requiring this information.

In 2000, The ODP's community preparedness programme continued to address many of the issues included in this report; however, a new trend developed whereby the programme is attempting to incorporate **community emergency medical response** training into the programme. This training will aid in minimizing loss of life and property in the event of an emergency/disaster by teaching individuals the proper first response techniques needed for the non-medical community. PAHO has pledged their support in this area.

SUMMARY OF MAJOR ISSUES AND CHALLENGES

The BVI has had many successes in its shelter management programme. It has taken approximately 10 years for this development to take place; this is not a surprisingly long length of time seeing the extent of the work that has been undertaken. Many persons have been instrumental in allowing the programme to reach to this level and for it to be recognized on a regional and international level as a success story in the field of emergency management. The driving force behind this success is the dedication and commitment of the

Government. A tremendous amount of money has been allocated to this effort – a sign that officials are sensitized to the importance of an effective shelter management programme as well as an effective national emergency management programme. Mitigation is a priority on the agenda of the development plan for the BVI and should be for all governments of the Region. The goal of the BVI development plan is to reduce vulnerability to a minute level by investing in activities surrounding good emergency management practices.

Many challenges and difficulties surfaced with the development of the shelter management programme, in particular, the instability of the CEO's or Zonal Committees as they are now called. In order for these committees to function at their optimal level, measures such as making the appointment of Chairpersons for these committees a civil service appointment must take place. A concerted effort must be maintained by the ODP to ensure that every effort is made to motivate these committees in order that the work of the ODP is channeled into the community. The necessary documents have already been developed to guide in this process. One important asset that the ODP can utilize is the DAC. The obvious interest and dedication shown by these volunteers can be nurtured and used in bringing the message of preparedness across to the communities of the BVI.

Shelter Maintenance and Upkeep

Upkeep and maintenance of emergency shelters was identified early as a function that the Government had to undertake. The shelter policy and manual were the first steps in guiding this process. The BVI government has sought to invest some \$150,000 towards bringing emergency shelters to a level that will make them safe for occupancy by evacuees. A concerted effort is also being undertaken to ensure that building codes are enforced and new construction on community centers adhere to the guidelines outlined in the shelter manual as

it pertains to site, layout and construction of emergency shelters. One great challenge for the ODP was to ensure that mitigation efforts be addressed in particular by the PWD. Their role in the shelter programme is pivotal as they are tasked with ensuring the security and maintenance of emergency shelters. The PWD has been working with the ODP closely in the supervision and monitoring of the Shelter Retrofit project. Officers have been assigned to this project to ensure that deadlines are met and mitigation measures are implemented correctly.

Coordination of Shelter Management Services

The greatest challenge for the BVI was in implementing the shelter management programme in the outer islands. Tortola, the mainland, has always been paid focus as it is the center of government and is where the ODP is located. The ODP sought to bring the communities of the outer islands up to the same level as those on Tortola whereby training can be offered on a regular basis. The Zonal Committees on these islands had to be strengthened as in the event of a disaster the functions of emergency response and recovery will fall heavily upon them. Shelter provisioning is one of the challenges that the ODP is faced with when it comes to supplying these islands. The Zonal Committees must fully recognize their importance in the emergency management process – the ODP's job is to fully convince them of this.

Shelter Selection

One issue, which the ODP has paid special attention to over the years, is the use of schools as emergency shelters. The shelter list calls for the use of no more than 3 schools in the event of an emergency all of which have been classified as shelter used after impact, if necessary. This is in order to ensure that the community is brought back to a state of normalcy in the event of a disaster in as little time as possible. Children require an environment that they are familiar with

in order to achieve this normalcy and what better way than to bring them back into their school environment – a place where they spend some eight hours or more daily with friends and teachers and where a working system is in place. The preference in shelter selection for the BVI is first with community centers followed by church halls.

(REFERENCE I)

NATIONAL DISASTER MANAGEMENT PLAN

AUTHORITY

The National Disaster Management Plan envisages preparations for and responses to a wide range of hazards and incidents. They are identified in the Plan. The Plan is based upon the realization that not every hazard impact or incident will constitute a disaster. It is also based on the fact that some hazards such as hurricanes may give a relatively long lead time for preparations whereas an explosion will not.

The Plan will be implemented on the basis of the authority implied in its endorsement and approval by the Executive Council.

Enactment of the Disaster Management Act, inter alia:



- clarifies the authority and role of the Director of Disaster Management
- the composition and functions of the National Disaster Management Council (NDMC)
- the required contents of the National Disaster Preparedness and Response Plan
- provisions for the management of specially vulnerable areas
- hazard inspections and the powers of inspectors
- regulations for the management of emergency shelters
- defines offences and spells out penalties

There are also laws and regulations specific to sectors and agencies which are relevant to the Plan e.g. Fire Prevention and Control and Petroleum Regulations.

Emergency Powers

The Leeward Islands Emergency Powers Order in Council 1959, provides the legal basis for the exercise of emergency powers by the Governor. The Governor is required to consult the Chief Minister unless circumstances make it impractical to do so.

The Emergency Powers legislation, gives the Governor powers to bypass the normal legislative process, when the exigencies of the situation require such action. Specifically, the Governor may during a period of emergency "make such laws as appear to be necessary or expedient of securing the public safety, defense the maintenance of public order, or for maintaining supplies and services essential to the life of the community."

It is obvious from the above, that during a period of emergency, directives given by His Excellency the Governor (after consultation with the Honorable Chief Minister) can have the force of law when promulgated in the requisite manner. The procedures laid down in the National Disaster Management Plan will have the necessary legal framework in an emergency when His Excellency the Governor provides the necessary directives and executes those directives in accordance with the provisions of the law.

Administrative Context

The Government of the British Virgin Islands regards the management of crises, emergencies and disasters as one of its primary responsibilities in support of the developmental objectives of saving human lives, protecting the natural environment, maintaining the social and economic infrastructure, and

promoting equity and sustainable development. These policies are all clearly outlined in the National Integrated Development Strategy. Specifically, the role of disaster management in reducing vulnerability is clearly outlined.

Government has taken the lead in promoting a comprehensive approach to Disaster Management, in which appropriate policies, strategies, structures, plans, projects, programmes and resources are put in place in all phases of the Disaster Cycle to plan for, prepare for, and respond to recover from disasters of all kinds. Emphasis is also being placed on the development of skills and capacity building in all organizations.

Government continues to promote the appropriate enabling environment by ensuring that relevant legislation is updated and enacted and that such institutional and organizational frameworks as are necessary, are put in place.

***Disaster Management in the BVI**

The Governor has overall responsibility for disaster management in the British Virgin Islands. But he can nominate a Minister or a Public Officer to serve as Chairman of the National Disaster Management Council (NDMC).

There are two organizational structures operating within the Emergency Management System in the British Virgin Islands. There is the National Disaster Organisation that deals with issues from Executive Council to the community level, and there is the Department of Disaster Management, which administers the disaster management programme.

***The National Disaster Management Council**

The National Disaster Management Council (NDMC) is an inter-institutional umbrella organization that normally meets at the start of the Atlantic Hurricane Season to review reports and work programmes and make recommendations to Government on disaster Management. It is organized into eight sub-committees—Health; Welfare Services and Relief Distribution; Damage Assessment and Mitigation; Public Education, Information and Training; Emergency Telecommunication; Marine Pollution Action Group; Transport, Road Clearance and Logistics; and Administration and Finance. Each subcommittee is expected to have its own sub-plan, which becomes part of the National Disaster Plan, and to exercise and update this plan.

The National Disaster Management Council (NDMC) has the mandate for policy and the execution of the work done by the Department of Disaster Management. When this body meets, whatever policies or new projects

proposed must be presented to Council for approval. On a day-to-day basis, this is done through the current Chairman—the Deputy Governor.

***The Department of Disaster Management (DDM)**

The Department of Disaster Management was established in the year 2002 as a government department under the Deputy Governor's Office. The person directly responsible for the day-to-day operations of the DDM is the Director of Disaster Management. This Officer is responsible for coordinating all national emergency services. The antecedent was the Office of Disaster Preparedness established in 1983.

When the DDM is activated during a disaster/emergency situation, it becomes the secretariat and base of the National Emergency Operations Centre (NEOC). When the NEOC is set up, officials from the critical agencies and the emergency services report to the NEOC, from where official information would be disseminated and critical response actions coordinated.

DDM's Vision

An organization that anticipates the potential negative impacts of disasters and emergency situations and develops effective and efficient plans, procedures and systems to minimize such impacts, by relying on sound principles of disaster management, community participation and interagency collaboration.

DDM's Mission

To reduce loss of life and property within the Territory of the British Virgin Islands by ensuring the adequate preparedness, mitigation, response and recovery mechanisms are established to counteract the impact of natural and man-made hazards.

DDM's Values

- The goal of the DDM is to preserve human life in times of crisis
- Effective Disaster Management depends upon the consistent coordination and integration of the work of many agencies, organizations and individuals
- A community that is well prepared for hazards of all kinds will survive and recover quickly from disasters
- Excellent service must be provided to the community before, during and after a disaster or emergency

- Flexibility and adaptability of approach must be the basis of the delivery of disaster management services
- Staff commitment, capacity, teamwork and motivation will be the primary contributors to the organization's success

DDM's Function

Disaster Management is the overall function of this department. The department strives to efficiently and effectively administer those components of the Territory's Disaster Management Programme for which it is responsible (mitigation planning, community preparedness, public information, emergency telecommunications and recovery coordination) in accordance with relevant legislation, government policy and public accountability requirements.

***Zonal Committees**

The Territory was divided into ten (10) zones for the purpose of community level organization and participation in Disaster Management. The zones include committees on the Sister Islands. Activity varies from zone to zone and consequently the degree of empowerment and participation in the National Disaster Management Programme.

***Disaster Auxiliary Corps (DAC)**

The Disaster Auxiliary Corps was established in 1995. The objectives of the DAC are to train and organize volunteers to assist in disaster preparedness activities and in the performance of immediate post disaster relief and rehabilitation activities and inform volunteers regarding disasters and disaster preparedness in general.

The group in the main consists of young people between the ages of 18 and 35 years. To become fully trained and prepared to assist the DDM members undergo a training programme. Training includes radio operations, shelter management, first aid and disaster management concepts. The DAC provides a pool of additional personnel for the DDM especially during "high alert" and response activities.

***Ad Hoc Committees**

The DDM often establishes ad hoc committees to advance its work programme. These include those with a strong sectoral focus such as tourism. Such committees are often sent up to assist in updating plans or in staging exercises such as Mass Casualty or airport accident simulations.

***Liaison Officers**

Departments and agencies in the public sector are expected to appoint liaison officers to interface with the Department of Disaster Management on matters, which affect their organizations generally or specifically. These officers are expected to take the lead in agency preparedness activities. The Director of Disaster Management shall establish a liaison with such organization in the private sector to establish appropriate communication links. Further, the Director may enter into such arrangements as are considered necessary with any organization requiring the provision by that organization of any information deemed necessary by the Director of Disaster Management.

PLANNING DATA

The Caribbean Disaster Emergency Response Agency (CDERA)

The Caribbean Disaster Emergency Response Agency (CDERA), an inter-government, regional disaster management organization was established in 1991 by an Agreement of Heads of Government of the Caribbean Community (CARICOM). Headquartered in Barbados and with a membership of 16 States, CDERA was mandated to coordinate disaster response. The Agency also undertook to conduct disaster preparedness training and public education programmes. The BVI has been a member of CDERA from its inception in 1991 when the then Chief Minister, the Honourable H. Lavity Stoutt, was a signatory to signed agreement establishing the Agency.

CDERA's main function is to make an immediate and coordinated response to any disastrous event affecting any of its Participating States, once the State requests such assistance. The other functions of CDERA include securing, collating and channeling (to interested governmental and non-governmental organizations) comprehensive and reliable information on disasters affecting Participating States; establishing and maintaining (on a sustainable basis), adequate disaster response capabilities among Participating States; and mobilizing and coordinating disaster relief from governmental and non-governmental organizations for affected Participating States.

The Agency is headed by a Regional Coordinator who is responsible for the work and staff of the Coordinating Unit and who is accountable to the Council, which comprises the Minister with responsibility for Disaster Management in each Participating State. A Board of Directors (comprising the National Disaster Coordinators in each Participating State), serves as an advisory body to the

Coordinator, and reviews the Agency's financial status and its annual work programme.

Over the years, CDERA's mandate has expanded and now includes training, institutional strengthening for Disaster Management Organizations, development of model Disaster Legislation, contingency planning, resource mobilization, improving early warning and telecommunication systems, education and public awareness. CDERA collaborates with national, regional and international organizations, which have overlapping interest in these areas. The Agency is vigorously promoting the concept of comprehensive Disaster Management among all Participating States.

INTRODUCTION

Goal of the National Disaster Management Plan

The goal of the National Disaster Management Plan is to provide a framework, which promotes centralized coordination, control and effective collaboration in preparing for and providing immediate responses to the hazards shown below or any other unforeseen hazards, which could arise. The Plan is an over-arching document which is supported by a range of important subsidiary plans such as the:

- Hazardous Materials (HAZMAT) Plan
- National Emergency Operations Centre Plan
- The Recovery Plan
- Agency Plans
 - i. The External Affairs Disaster Plan
 - ii. The Oil Spill Plan
- Major Economics Sector Plans
- Operations Orders
- The National Mitigation Strategy
- NIDP
- Hazard Specific Plans
- Telecommunications Plan
- Evacuation Plan

Hazards and Incidents Covered by the Plan

Natural Hazards

- Hurricanes and Tropical Storms
- Earthquakes
- Floods

- Landslides
- Tsunami
- Drought

Human-Induced Hazards and Incident Threats

- Transport Incidents and Accidents
 - i. Air
 - ii. Sea (Ferry, Cruise Ships)
 - iii. Land
- Oil Spills—A separate plan exists for Oil Spills
- Fires
- HAZMATS—A separate plan exists for HAZMATS
- Bomb Threats—Terrorist incidents
- Mass Gatherings—A separate plan exists for mass gathering
- Epidemics
- Biological Hazard

Objectives of the Plan

- Clarify the many roles and responsibilities required for effective emergency and disaster responses
- Outline procedures, which enhance timeliness and effectiveness in emergency and disaster situations
- Specify the procedures, which should be followed to save lives, reduce human suffering and promote rapid Disaster Recovery
- Present mechanisms for warning and informing the public during critical stages of an emergency response
- Establish procedures for the deployment of materials, manpower and equipment to the site of any emergency or disaster
- Promote the involvement and empowerment of organizations representing the community and civil society in effective disaster response
- Identify the mechanisms for obtaining external assistance if required in an emergency or disaster

Critical Assumptions

The following assumptions underpin the revision of the National Disaster Management Plan:

- All relevant agencies will embrace the Plan as the primary national-level framework for emergency and disaster response
- The resources, which were identified during the planning process as being essential to its implementation will be provided
- Agencies will develop the necessary internal plans and procedures required in support of this Plan
- The Contingency Planning process will continue in areas such as training, orientation, simulation exercises, public awareness and national capacity building
- In general, the individuals required to perform critical roles in emergencies will be available when required or have capable stand-ins