



Government of Grenada

National Disaster Management Plan

BASIC PLAN – PART 1

FINAL DRAFT - 2011

*With technical assistance from
Caribbean Disaster Emergency Management Agency Coordinating Unit (CDEMA CU)*

**Disaster Risk Management Sub-Regional Programme for the
Caribbean under the ACP-EU Natural Disaster Facility
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MAP OF GRENADA



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INTRODUCTORY STATEMENT

With the threat of more frequent and intense natural hazards coupled with our country's size, fragile economy, increase population density laced with growing poverty; the people of Grenada Carriacou and Petite Martinique needs to be more involved in comprehensive disaster management. We need to build peoples resilience to achieve country risk reduction.

The comprehensive disaster management strategy gives every individual, in what area they are involved, an opportunity to participate in all its phases (prevention and mitigation, preparedness, response and recovery).

The development of a National Disaster Plan will guide the population as to the measures that must be taken to reduce the risk and respond to save lives and properties. This will only be achieved if all persons/sectors play their part in all phases of the strategy.

The plan will address the hazards the country is prone to and the sectors responsibility to address these hazards. For this to be meaningful the underlying causes of our country's vulnerability must be identified and the necessary measures, at the correct point in time, must be taken to increase its resilience in the prevention, mitigation and preparedness phases.

The achievement of a resilient nation will be realized when the people of this country is empowered to recognize their role and take up their responsibility in the process of risk reduction. They will have to realize the importance of doing what is good for the country, do it for the benefits that their actions bring and not the punishment they will avoid from doing so.

This plan will act as a guide for the stakeholders to get involved in mainstreaming comprehensive disaster management by paying attention to risk reduction and response in the sectors which they are involved. The indicator of the mainstreaming efforts at their sectors will be when disaster management is seen as a line item in their budgets.

The development of this plan is a cooperative effort designed with the input of all the relevant stakeholders from the government ministries, international organizations, non-government organization (NGOs), community based organizations (CBOs) and the private sector. This plan fulfils the mandate of the National Disaster Management Organization (NaDMO), which is to provide a comprehensive disaster management strategy with complementing disaster management plans at the national level. These will be further mirrored at the district and more localized at the village levels.

Benedict Peters
National Disaster Coordinator

EXECUTIVE SUMMARY

The revised National Disaster Management Plan of Grenada is the result of a consultative process involving several stakeholders who play an instrumental role in disaster management in that state. The purpose of the National Disaster Management Plan (NDMP) is to enhance Grenada's ability to manage all disasters using a comprehensive national approach. This plan emphasizes that the purpose of assistance from Government of Grenada is to save lives, protect property and to help its people return to a state of normalcy as soon as possible after a disaster. The plan covers the family of islands that forms the country of Grenada.

The plan sets forth fundamental policies, planning assumptions, a concept of operations, response and recovery actions and the responsibilities of relevant agencies; seeks to establish the threshold for when events are considered disasters; and the types of response, recovery, and mitigation resources available to assist communities throughout the country that have been affected by a disaster. The NDMP also organizes the types of national responses that are available according to thirteen (13) National Disaster Committees, each of which has a designated chair and deputy chair. These are; Public Information and Education, Damage and Needs Assessment, Transport and Road Clearance, Shelter Management, Welfare and Voluntary Services, Health Services, Emergency Telecommunications, Disaster Relief Management, Public Utilities, Rehabilitation and Reconstruction, Search and Rescue - Land and Sea, Security Services, Marine Pollution and Oil Spills, Hazardous Materials and Hazardous Wastes.

This plan also outlines the roles and responsibilities of governmental and non-governmental agencies, private sector and service clubs, district organizations and regional and international institutions. As a result it provides the basis for interagency cooperation in both the public and private sectors in emergency planning, training, disaster management coordination and information exchange.

The NDMP is structured in seven (7) parts; the Basic Plan, National Hazard & Phase Specific plans, Functional Plans of National Operational Committees, District Hazard & Phase Specific Plans, Functional plans of District Operational sub-committees, Village/Community Hazard & Phase Specific Plans, and Functional Plans of Village/Community Operational sub-committees.

The Basic Plan presents the policies and concept of operations that guide how disaster response will be handled. It also summarizes national planning assumptions, scope, response and recovery actions, and responsibilities. In addition the Appendices cover other relevant information, including terms and definitions, acronyms and abbreviations, guidelines for NDMP changes and revisions, and overview of a disaster operation.

Acknowledgements

Recognition of individuals or agencies that have made a contribution to the development of the plan

1. Ministry of Legal Affairs,
2. Ministry of Works,
3. Ministry of Health,
4. Community Health Services,
5. Royal Grenada Police Force,
6. Head Physical Planning Unit,
7. Grenada Ports Authority,
8. Grenada Airport Authority,
9. Government Information Service (GIS)
10. Grenada Meteorological Office
11. Grenada Solid Waste Management Authority,
12. NAWASA,
13. Grenlec,
14. NaDMA,
15. Grenada Red Cross,
16. Rotary Club of Grenada,
17. Rubis International (Chevron),
18. SOL,
19. LIME Grenada,
20. DIGICEL,
21. FLOW,
22. Saint George's University, and
23. The Office of the Prime Minister

SIGNATURE PAGE

The Grenada National Disaster Management Plan has been approved by

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On

.....

Hon. Tillman Thomas, Prime Minister

.....

Date

RECORD OF REVIEWS AND UPDATES

Serial	Date	Amendment/Update	Signature

I. PREFACE TO THE 2011 PLAN

The National Disaster Management Plan was revised during the period June 2010 to July 2011 under the ACP-EU project and facilitated jointly by the Caribbean Disaster Management Agency Coordinating Unit (CDEMA CU) and the National Disaster Management Agency (NaDMA) Secretariat.

The format used was a consultative one where a technical team visited Grenada and discussed/consulted with various planning and response agencies. The following agencies participated in the review:

Ministry of Legal Affairs, Ministry of Works, Ministry of Health, Community Health Services, Royal Grenada Police Force, Head Physical Planning Unit, Grenada Ports Authority, Grenada Airport Authority, GIS, Met Office, Grenada Solid Waste Management Authority, NAWASA, Grenlec, NaDMA, Grenada Red Cross, Rotary Club of Grenada, Chevron, SOL, LIME Grenada, DIGICEL, FLOW, Saint George's University and the Office of the Prime Minister.

The updated version of the plan was presented to a wide range of stakeholders during an Orientation Seminar which was followed by a Table Top Exercise designed to identify and evaluate the changes made to the National Disaster Management Plan.

This 2011 National Disaster Management Plan is based on previous plans in Grenada and good practices both in Grenada and the Caribbean. It supersedes the 2005 National Disaster Plan (from which it is patterned) and is to be used solely in Grenada as the primary document for disaster management- including disaster planning and response.

The National Disaster Legislation, which has been drafted and submitted to Cabinet, has not yet been passed into law. This draft legislation has now been superseded by a newly approved CDM Draft Legislation, which fully embraces the Comprehensive Disaster Management principles, is being circulated for adaption by CDEMA Participating States. The NaDMA has agreed that the new version of the Model Legislation will be adapted within the national context and used to design Grenada's National Emergency Management Act for approval in 2011.

Throughout this document Grenada means the islands of Grenada, Carriacou and Petite Martinique as described in the Constitution of Grenada.

July 31st 2011

II: BACKGROUND TO THE 2005 PLAN

The 2005 National Disaster Plan was revised during the Grenada Disaster Preparedness Workshop held the 19th of May 2005 in St. George's Grenada. The workshop was organized by the National Disaster Management Organization of Grenada; the facilitator was provided by the CDERA CIDA IVAN Project. The workshop had the participation from a wide range of stakeholders who made recommendations using the 1985 Plan as their basis.

The recommendations from the workshop were compiled by the NaDMA and a new draft version was circulated amongst key stakeholders. After incorporation of their feedback the 3rd version of the plan was prepared for the 2005 hurricane season.

A number of revisions were made including the responsibilities and composition of the National Emergency Advisory Council (NEAC) and the National Disaster Management Committees. The new name of National Disaster Management Council was suggested for the NEAC. The functions and activities of governmental organizations, the private sector, NGOs and service clubs were revised.

The management of a disaster is beyond question an inter-sector activity. Co-operative action is essential. To maximize the effect of such action each sector must be prepared to undertake at its highest level of performance the functional role designated by its terms of reference.

The 2005 Plan was utilized successfully during the impact of Hurricane Emily in 2005 and a number of floods, sea swells, tropical depressions/waves and other hazards that affected Grenada between 2005 and 2010.

III: AIM PURPOSE AND SCOPE OF THE PLAN

1. AIM

The aim of this plan is to set out the structure and operating procedures for addressing all aspects of Comprehensive Disaster Management in Grenada. This plan seeks to ensure that disaster management is executed in a coordinated and collaborative manner, ensuring that the protection of life and property is paramount.

2. PURPOSE

The purpose of the National Disaster Management Plan (NDMP) is to enhance Grenada's ability to manage all disasters using a comprehensive national approach.

The NDMP will outline the prevention, mitigation, preparedness, response and recovery activities, before, during and after an emergency situation associated with impacts from natural/man-made hazards or technological incidents in Grenada. It provides operational concepts relating to the various emergency situations, describes the overall responsibilities of the National Disaster Management Agency [NaDMA] and the role of the relevant sectors in assisting in minimizing loss of life, destruction to property and human suffering.

The National Disaster Management Plan (NDMP) documents the Government of Grenada's commitment to Comprehensive Disaster Management and provides for a rapid response to such disasters through maximum use of local, national, regional and international resources.

3. SCOPE

The extent of the coverage of the plan is state wide; including the family of islands that form the state of Grenada. The scope of the Plan is as hereunder:

- a. The NDMP classifies small, medium, and large-scale natural and manmade disasters in the state of Grenada and corresponding response mechanisms and procedures.
- b. Illustrates structures and mechanisms for providing operational direction to disaster management authorities at national, district and community levels.
- c. Defines emergencies at local and national levels and clearly identifies the process of declaring each level of emergency and response mechanisms and procedures accordingly.
- d. Explains roles/responsibilities and coordination among National, Districts, Communities, and sectoral disaster committees including their relationships with United Nation Agencies, Non Government Organizations, civil society, and the news media.
- e. Describes the Terms of Reference and Composition for each emergency support function in case of a disaster and further defines the role of concerned government departments as lead and support agencies including the roles of the Non Government Organizations, Voluntary Organizations and Private Organizations.
- f. Expresses a consistent approach for reporting disasters, providing assessments, and making recommendations to the Prime Minister and the National Emergency Advisory council for disaster management operations.

IV. MISSION STATEMENT, AUTHORITY AND CRITICAL ASSUMPTIONS

1. MISSION

The state of Grenada has developed a culture of disaster management among all sectors of the society.

2. AUTHORITY

The National Disaster Management Plan is developed under the authority of the Cabinet of the Government of Grenada.

There are a number of statutes that provide guidance in the mitigation, preparedness, response and recovery efforts in Grenada. These are found in the following regulations: Customs, Immigrations, Town Planning, Natural Resources, Environment, Public Service Commission, etc.

3. CRITICAL ASSUMPTIONS

The following assumptions are made:

- a. Incidents are managed at community, district and national levels according to the intensity and magnitude of the disaster.
- b. A national catastrophe results in a large number of casualties and damage to infrastructure, severely affects population and livelihoods; gives rise to the potential threat of disease outbreak; and displaces large numbers of people, triggering the declaration of a national disaster in the country.
- c. The nature and scope of catastrophes can include natural and manmade hazards; industrial, chemical or biological, wars, and terrorist attacks.
- d. Hurricanes (Cyclones), earthquakes, floods, tsunamis, storm surges, landslides, volcanic eruption and technological accidents can cause the destruction of physical and communication infrastructure, large-scale casualties and displacement of local communities.
- e. The response capacity and resources at community and district level may be insufficient and will therefore trigger a National response.
- f. In some cases the first responders, e.g., local authorities, communities, and other response structures, may be affected by an incident and left unable to perform their duties.
- g. Disasters can occur at any time or of any scale, with little or no warning in the context of general or specific threats or hazards.
- h. Resources of government, local and regional Agencies such as CDEMA, Grenada Red Cross Society, Cadet Corps, UN Agencies and NGOs can be requisitioned at short notice for effective response.
- i. The Plan will be a dynamic document and changes and amendments will continue, as and when required, to address the emerging needs.

4. INSTITUTIONAL FRAMEWORK

The National Disaster Management Plan shall be a living document which is structured in seven (7) parts – The Basic Plan (Part 1) is standard to all other parts which are also independent (stand alone/pull out) for their individual sectors. Figure 1 is a diagrammatic layout:

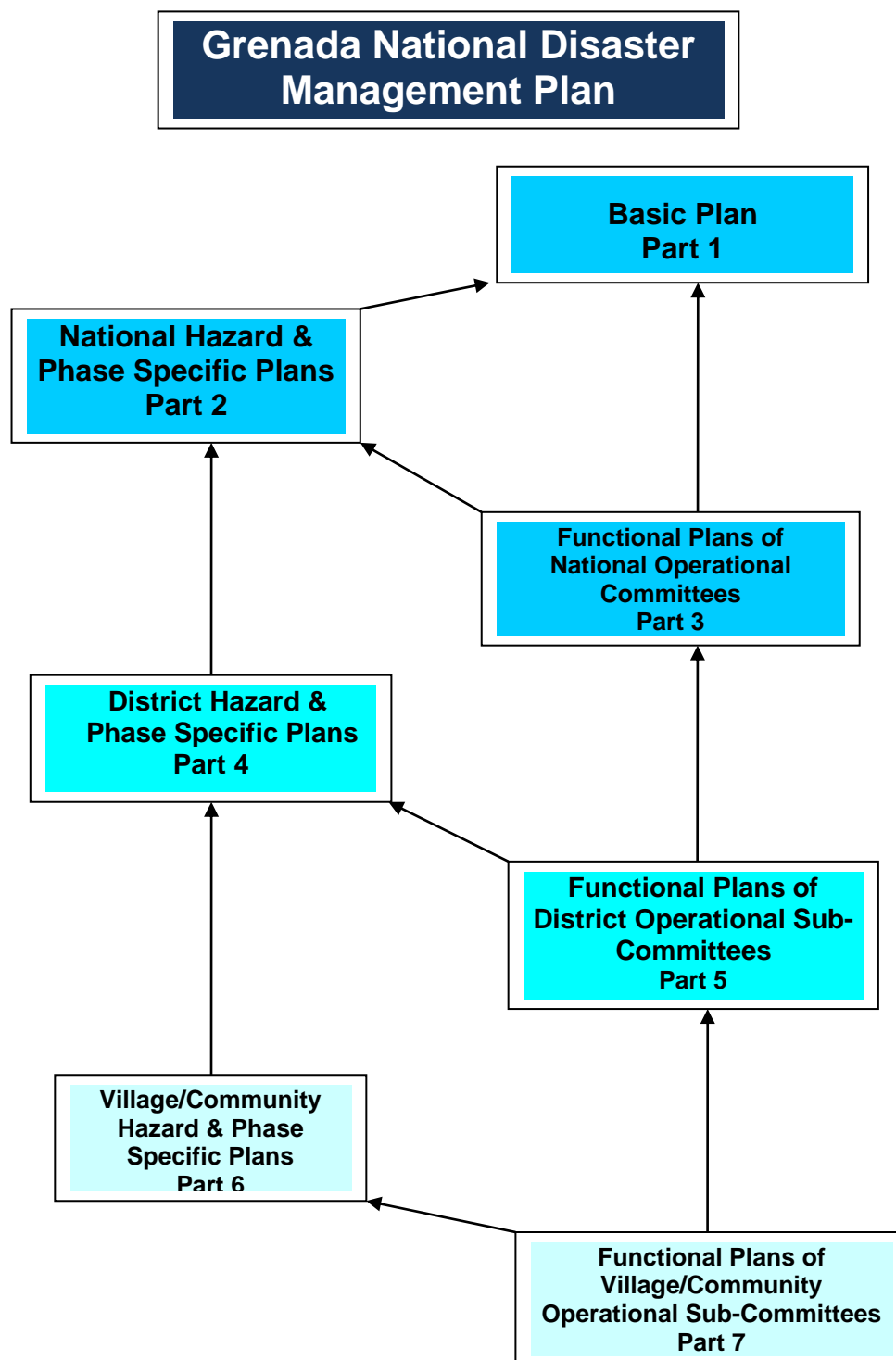


Figure 1: National Structure

V: INTRODUCTION

The countries and nations of the Earth share many concerns and responsibilities for their respective populations. One such mutual concern and responsibility is the effect of a disaster, be it domestic, civil or natural in occurrence. It is also necessary for the country to be aware of the types of disasters that affect the country. Once these have been identified, adequate protective preventative mechanisms can be instituted. This protective mechanism must be augmented by thorough preventative, mitigation and preparedness planning. All national organizations must participate in developing preparedness, mitigation and preventative National Plans by first identifying their existing emergency services, which are established for normal circumstances.

Emergency Services -Health Service, Fire and Rescue services, Police and Para-Military Services, the Coast Guard and the Voluntary Organizations

Under normal circumstances each of these agencies has specific functions and defined rules of operation. During national emergencies, these agencies will fall under the control of the NEAC. This will of necessity require a new managerial approach to the emergency situation and it is against this background that the 2011 National Plan amendments allow a system, which is best suited to the needs of the country and its people. It also allows for the introduction of a new management system, which has created the components required for effective deployment of all emergency services, either on a sectoral or national basis.

The plan provides for all phases of the disaster cycle – This includes the Pre and Post Disaster stages as follows:

Pre-disaster Stage (Normal Times)

- a) Prevention activities
- b) Mitigation activities
- c) Long and medium term preparedness

These include but not limited to:

- 1. Carrying out of preparedness exercise
- 2. Implementation of a national public awareness programme
- 3. The development of a comprehensive disaster preparedness training programme in all levels of disaster management.
- 4. The monitoring of relief supplies
- 5. Detailing of evacuation plans, identification of Emergency Shelters and personnel
- 6. Full examination of relevant laws
- 7. The re-development of the District Organization
- 8. The establishment of the following management committees:
 - a. Public Information and Education
 - b. Damage and Needs Assessment
 - c. Transport and Road Clearance
 - d. Shelter Management
 - e. Health Services
 - f. Emergency Telecommunications
 - g. Disaster Relief Management

- h. Public Utilities, Rehabilitation and Reconstruction
- i. Search and Rescue - Land and Sea
- j. Welfare and Voluntary Services
- k. Security Services
- l. Marine Pollution and Oil Spills
- m. Hazardous Materials and Hazardous Wastes

In order to ensure that the populace is always in a state of preparedness, it was agreed that the following activities should be included:

Knowledge of First Aid

Increase the knowledge of the general populace and emergency response support personnel on domestic emergencies, e.g. house fires, drowning, automobile accidents and sickness, hurricane preparation techniques, hurricane shelters, identification of shelter personnel and the correct interpretation of warning bulletins.

Enhance the coordinating mechanisms within the NaDMO to ensure that directives issued by the government of Grenada are carried out with maximum efficiency.

The Post disaster stage includes:

Alert and Warning Stage

- a) Short term forecasting, and warning and alerting measures
- b) Issuing of Advisories and updates

Response Stage

- a) Response measures such as saving life, providing emergency medical care, rescue, evacuation, shelter, security.

The plan will provide for the restructuring of the National Emergency Operations Centre in order to utilize modern technological tools including Web EOC and Relief Supply Tracking System (RSTS). Provisions are made for the establishment of the District Emergency Operations Centres, Community Agencies and Ministries Satellite Emergency Operations Centres.

Recovery Stage

- a) Rehabilitation measures such as short term restoration of utilities, emergency repair of infrastructure
- b) Reconstruction and rebuilding of the society, inclusion of prevention and mitigation measures, improvement of building codes and standards

Some of the activities are:

1. Evacuation, house repair and house relocation
2. Pumping off of flood waters and the control of fires
3. Restoration of essential services
4. Examination of public health hazards
5. Erection of alternative shelters
6. Collection of damage assessment information and the presentation of financial estimates
7. Co-ordination of international and regional offers of assistance

VI: COUNTRY OVERVIEW

Grenada is the southernmost country in the windward island chain and is located at approximately 12.6 degrees North latitude and 61.7 degrees West longitude. The state of Grenada consist of three islands, Grenada is the largest, followed by Carriacou and Petite Martinique. The total area of the three islands is 340 square kilometres, with mountainous terrain and the islands are ringed by extensive coral reef. The mountains rise steeply from the west coast and descend more gently on the east coast. The highest point is Mt. St. Catherine which rises to 840 meters above sea level. Other high peaks on the island are; Fedon Camp 767 meters, Mt. Qua Qua 735 meters, Mt. Lebanon 715 meters and Mt. Sinai 701 meters. Seventy seven percent of the land area has slopes exceeding 20 degrees. Although many of the rocks and soils are of volcanic origin, most of the volcanic cones dotting Grenada are long dormant. Some of the drainage features on Grenada remain from its volcanic past. There are a three crater lakes, the largest of which is Grand Etang. The swift upper reaches of rivers, which occasionally overflow and cause flooding and landslides, generally cut deeply into the conic slopes. But the water courses in the lowlands tend to be sluggish and meandering.

The main towns and socio-economic facilities are situated on approximately three percent of the land area which is at sea level. Its maximum length is 34 meters and its maximum width is 19 meters. St. Georges the main harbour is conveniently located near a lagoon on the south-western coast.

Grenada's climate is tropical and is tempered by the north east trade winds with two seasons, wet and dry. Annual rainfall, mainly generated by the warm and moisture-laden north-easterly trade winds, varies from more than 3,500 millimetres (137.8 in) on the windward mountainsides to less than 1,500 millimetres (59.1 in) in the lowlands. The greatest monthly totals are recorded throughout Grenada from June through November, the months when tropical storms and hurricanes are most likely to occur. Rainfall is less from December through to May, when the equatorial low-pressure system moves south. Similarly, the highest humidity, usually close to 80 percent, is recorded during the rainy season and values from 68 to 78 percent are registered during the drier period. Temperatures averaging 29 °C (84.2 °F) are constant throughout the year, however, with slightly higher readings in the lowlands. Nevertheless, diurnal ranges within a 24-hour period are appreciable: between 26 and 32 °C (78.8 and 89.6 °F) during the day and between 19 and 24 °C (66.2 and 75.2 °F) at night.

VII: SUMMARY OF COUNTRY'S VULNERABILITY

Throughout its history Grenada has been affected by hurricanes, floods, sea surges, landslides and volcanic hazards. The most memorable disaster to impact Grenada was Hurricane Janet in September 1955 which destroyed the agriculture sector and killed over 200 residents. However, the most recent disaster event was Hurricane Ivan which impacted Grenada in 2004 and destroyed 90% of its housing stock and killed 39 persons. Hurricane Emily impacted the southern part of Grenada in 2005 while the island was still recovering from (Hurricane) Ivan, but did not cause widespread damage.

The island is susceptible to flash flooding following excessive rainfalls which is experienced several times during the rainy season. Coastal flooding is also experienced during periods of high sea swells (high wave actions) and storm surge.

The submergible volcano, Kick Em Jenny, also presents a continuous threat to the state of Grenada with its toxic fumes and potential to cause a local tsunami. This Tsunami is regarded as a threat to the region.

Many landslides have been reported in the hilly areas, but to date these have not caused any large-scale impact.

There is no history of a major earthquake affecting the state of Grenada. However, the state was one of the twelve CDEMA Participating States that felt the November 29, 2007 earthquake.

VIII: DISASTER PREPAREDNESS

Disaster Preparedness

Disaster preparedness means preparing the response organizations and the communities of the State to react promptly to save lives and protect property if it is threatened or hit by a hazard or major emergency of any kind. In order to do this, planning must be done before there is even the threat of an emergency. This involves the assignment of responsibilities, classification and cataloguing of resources, training, practice drills and evaluation of experiences.

The role of the National Disaster Organization must not be seen simply as that of rendering "help after the disaster event". Instead, its role is one of activating the response organizations and the community on a country wide basis to deal with any type of disaster event. The function of the National Disaster Management Organization with respect to emergencies can be divided into five categories:

1. **Informing** - the development and dissemination of information which will enhance the capability of the individual or the private Organization to cope with emergencies, to get help when needed.
2. **Warning** - the analysis and forecasting of the nature of potential emergencies and the development and operation of systems designed to maximize warning time and precision for the benefit of both victims and volunteers.
3. **Coordinating** - the development of systems to enable resources to be effectively applied to emergencies and disasters.
4. **Providing** - the provision and maintenance, when necessary, of extra-ordinary resources as well as the diversion of normal resources to meet emergency or disaster needs.
5. **Evaluating** - the review of the performance of the Organization with a view to its improvement.

Disaster Preparedness is a continuous exercise - it is a year round pre-occupation not only for members of the National Disaster Management Organization, but also for every citizen, government agencies and private organizations alike. They required to prepare their own internal disaster plans and these must be reviewed every year in order that they are kept up-to-date.

It is, therefore the responsibility of every responder at the national and local level to become familiar with this National Disaster Management Plan and to be so versed in the roles, which he/she is expected to play in the event of a disaster that, should action be necessary, the response would be instinctively orderly rather than merely a panic-stricken reaction. Everyone must see himself as a disaster responder.

Types of Hazards

This document focuses on procedures/measures that can be followed in the event of any hazards that are likely to threaten Grenada. Hazards can be divided into two categories:

Natural Hazards

Natural hazards include: hurricanes, earthquakes, landslides, floods, droughts, tidal waves, tsunamis, storm surges, volcanic eruptions, lightening strikes, and sink hole.

Man-made Hazards

Man-made hazards include: pollution, power failure, civil strife, epidemic, invasion, shipwreck, strikes, air crash, oil spills, explosion, nuclear accidents or spills, building and structural collapses, construction failures, major road accidents, hazardous material spills, mass poisoning, toxic chemical spills, pest infestations, fires, terrorism, hijacking and insurrection.

The most commonly occurring hazards affecting Grenada are:

- Hurricanes and associated storm surge
- Floods - riverine and coastal
- Fires - structural and forest
- Road accidents
- Landslides
- Volcano
- Storm surge from severe weather systems

Natural Hazards

Tropical Cyclones

A tropical cyclone is a storm system characterized by a large low-pressure centre and numerous thunderstorms that produce strong winds and heavy rain. Tropical cyclones strengthen when water evaporated from the ocean is released as the saturated air rises, resulting in condensation of water vapour contained in the moist air. They are fuelled by a different heat mechanism than other cyclonic windstorms such as nor'easters, European windstorms, and polar lows. The characteristic that separates tropical cyclones from other cyclonic systems is that any height in the atmosphere, the centre of a tropical cyclone will be warmer than its surrounds; a phenomenon called "warm core" storm systems.

Tropical cyclones are classified as follows:

Tropical Depression

A tropical depression is an organized system of clouds and thunderstorms with a defined surface circulation and maximum sustained winds of 38 mph (33 kt) or less. Sustained winds are a 1-minute average wind measured at about 33 ft (10 meters) above the surface. 1 knot = 1 nautical mile per hour or 1.15 statute miles per hour and is abbreviated as "kt".

Tropical Storm

An organized system of strong thunderstorms with a defined surface circulation and maximum sustained winds of 39-73 mph (34-63 kt)

Hurricanes

A hurricane is a type of tropical cyclone with sustained winds of 74mph (64kt) or higher, which is accompanied by thunderstorms with a counter clockwise circulation of winds near the earth's surface in the Northern Hemisphere, maximum sustained winds of 74 mph (64 kt) or higher.

The official hurricane season in the Gulf of Mexico, the Caribbean Sea and the North Atlantic Ocean runs from 1st June to 30th November annually. However, the record shows that hurricanes have occurred outside of this period. It is important that the public be well advised of precautions to be taken before the actual hurricane season as well as those to be taken during the occurrence of a hurricane and in the aftermath of any such disaster.

Floods

Floods are one of the most prevalent hazards in the Caribbean. A flood can be defined as an overflow of an expanse of water that submerges land that is not normally covered by water. Flooding may result from the volume of water within a body of water, such as a river or lake, which overflows or breaks levees, with the result that some of the water escapes its usual boundaries.

A flash flood is a rapid flooding of geomorphic low-lying areas - rivers, dry lakes and basins. It may be caused by heavy rain associated with a tropical wave, depression, tropical storm or hurricane.

Fires

Structural fires destroy a number of properties annually, causing millions of dollars in damage in the State of Grenada and are responsible for an average of 5 deaths each year. Heat and smoke from fire can be more dangerous than the flames. Inhaling the super-hot air can sear your lungs. Fire produces poisonous gases that make you disoriented and drowsy. Instead of being awakened by a fire, you may fall into a deeper sleep. Asphyxiation is the leading cause of fire deaths, exceeding burns by a three-to-one ratio.

A wildfire is any uncontrolled fire in combustible vegetation that occurs in the countryside or a wilderness area. Other names such as brush fire, bush fire, forest fire, grass fire, hill fire, vegetation fire and wild land fire may be used to describe the same phenomenon depending on the type of vegetation being burned. A wildfire differs from other fires by its extensive size, the speed at which it can spread out from its original source, its potential to change direction unexpectedly, and its ability to jump gaps such as roads, rivers and fire breaks.

Road Accidents

In Grenada, motor vehicle collisions lead to loss of lives death and disability as well as significant financial costs to both society and the individual.

Volcanoes

A volcano is an opening, or rupture, in the earth's surface or crust, which allows hot magma, volcanic ash and gases to escape from below the surface. Grenada own "Kick em Jenny" mud volcano has been active and continues to emit poisonous gasses.

Earthquakes

An earthquake (also known as a quake, tremor or temblor) is the result of a sudden release of energy in the Earth's crust that creates seismic waves. The seismicity or seismic activity of an area refers to the frequency, type and size of earthquakes experienced over a period of time. Earthquakes are measured with a seismometer; a device which also records earthquakes is known as a seismograph. The magnitude of an earthquake is conventionally reported, with magnitude 3 or lower earthquakes being mostly imperceptible and magnitude 7 causing serious damage over large areas. Intensity of shaking is measured on the modified Mercalli scale.

Consequences of Disaster

The consequences of a disaster on a community or country includes the loss of life, personal injury, hopelessness, physical damage to property, **negative** impact on social and economic development, and **negative** impact on social and political organizations.

IX: NATIONAL DISASTER PLAN

National Disaster Management Plan

The National Disaster Management Plan (NDMP) involves the mobilization of human and material resources of the country in planning, training and managing the various aspects of a disaster or major emergency in order to return the State of Grenada to a state of normality as quickly as possible. It includes:

- (a) The establishment of national and local disaster management organizations and its structures, the role and functions of government ministries and key departments, public utilities, statutory bodies, non-governmental and other voluntary Organizations.
- (b) The classification and cataloguing of resources at all levels.
- (c) The role and functions of all agencies before, during and after a disaster.
- (d) The need for emergency telecommunications network.
- (e) The need for the assessment of loss.
- (f) The co-ordination between the various committees within the operation.
- (g) The post-disaster relief and rehabilitation mechanisms.

Pre-disaster Planning

The main function of the National Disaster Management Agency (NaDMA) is to ensure that the country is in a state of preparedness at all times to deal effectively with any disaster, which may occur. Its areas of planning include:

- 1. Co-ordination of comprehensive disaster management activities in the country.
- 2. Collaboration with regional and international Disaster Management Organizations (CDEMA, ECDG, RSS, etc.)
- 3. Warning systems, warning dissemination, responsibility and control of broadcasting.
- 4. Anticipatory orders under the Emergency Powers Act.
- 5. Storage and control of reserve equipment, fuel, medication, medical equipment, food, radios and other relief supplies.
- 6. Public information and press briefings.
- 7. Evacuation plans, shelter and refuge areas, including promulgation of the plans.
- 8. Arrangements for relief aircraft and ships, including customs and visa clearance for relief supplies and personnel.
- 9. Transport and equipment requirements.
- 10. Direction of labour.
- 11. Entry control of non-essential visitors.
- 12. Post-disaster reconnaissance and reports.
- 13. Post-disaster demolition and repair.
- 14. Damage Assessment and Needs Analysis

The successful implementation of the National Disaster Management Plan depends on public awareness of the hazards, which are likely to affect the country, the roles, which everyone is expected to play in the event of the country being threatened or affected by a hazard and the expectation as per the Disaster Management Cycle

This is clearly articulated in the Comprehensive Disaster Management (CDM) strategy as:

- 1) All hazards that threaten the country; 2) All the people to be involved [Public, Private, NGOs, VOs & IOs]; and 3) All phases of the Disaster Management Cycle [Prevention/Mitigation, Preparedness, Response, Recovery].

X: GRENADA'S COMPREHENSIVE DISASTER MANAGEMENT STRATEGY

Grenada's comprehensive disaster management strategy seeks to create a culture in which NaDMA and citizens are able to mitigate and/or prevent the impact of hazards, and if that is not possible to effectively and quickly respond to and recover from these impacts.

This is achieved by:

- a) Establishment of a dedicated emergency management office and staff
- b) Development of plans
- c) Country-wide training at all levels
- d) Establishment of monitoring, forecasting and warning capability
- e) Provision of budget and resources for disaster management activities
- f) Simulation exercises and drills
- g) Decentralization of disaster management by establishment of Operational, District, Ministry, Agency and Community Committees

Organisation for Comprehensive Disaster Management

Responsibility for Comprehensive Disaster Management in GRENADA lies with NaDMO the National Disaster Management Agency which is chaired by the Prime Minister. The Executive Group comprises the Prime Minister, the Permanent Secretary, Office of the Prime Minister and the three Cabinet members. The Permanent Secretary, Office of the Prime Minister also acts as Deputy Chairman NaDMA in the absence of the Prime Minister.

NaDMA is further comprised of the National Disaster Office (NDO) which is the NaDMA Secretariat, fourteen (14) National Committees chaired by Permanent Secretaries/Heads of Departments at national level, and seventeen (17) Districts Disaster Management Committees Emergency Committees chaired by volunteer District Coordinator at district level. (See Fig.2)

Other permanent members are the Grenada Red Cross, the Chief Meteorological Officer, and the Commissioner of Police, all of whom sit on National Disaster Management Committees. NaDMA/NaDMO has responsibility for national emergency/disaster management and coordination of international assistance. Day to day programme management is carried out by NaDMA Secretariat.

Operational functions are the responsibility of the National Committees as listed below:
(Responsibilities of Committees are summarised in the matrix at Fig. 1).

1. Public Information and Education
2. Damage and Needs Assessment
3. Transport and Road Clearance
4. Shelter Management,
5. Welfare and Voluntary Services
6. Health Services
7. Emergency Telecommunications
8. Disaster Relief Management
9. Public Utilities, Rehabilitation and Reconstruction
10. Search and Rescue - Land and Sea
11. Security Services
12. Marine Pollution and Oil Spills
13. Hazardous Materials and Hazardous Wastes

GRENADA'S NATIONAL DISASTER MANAGEMENT STRUCTURE

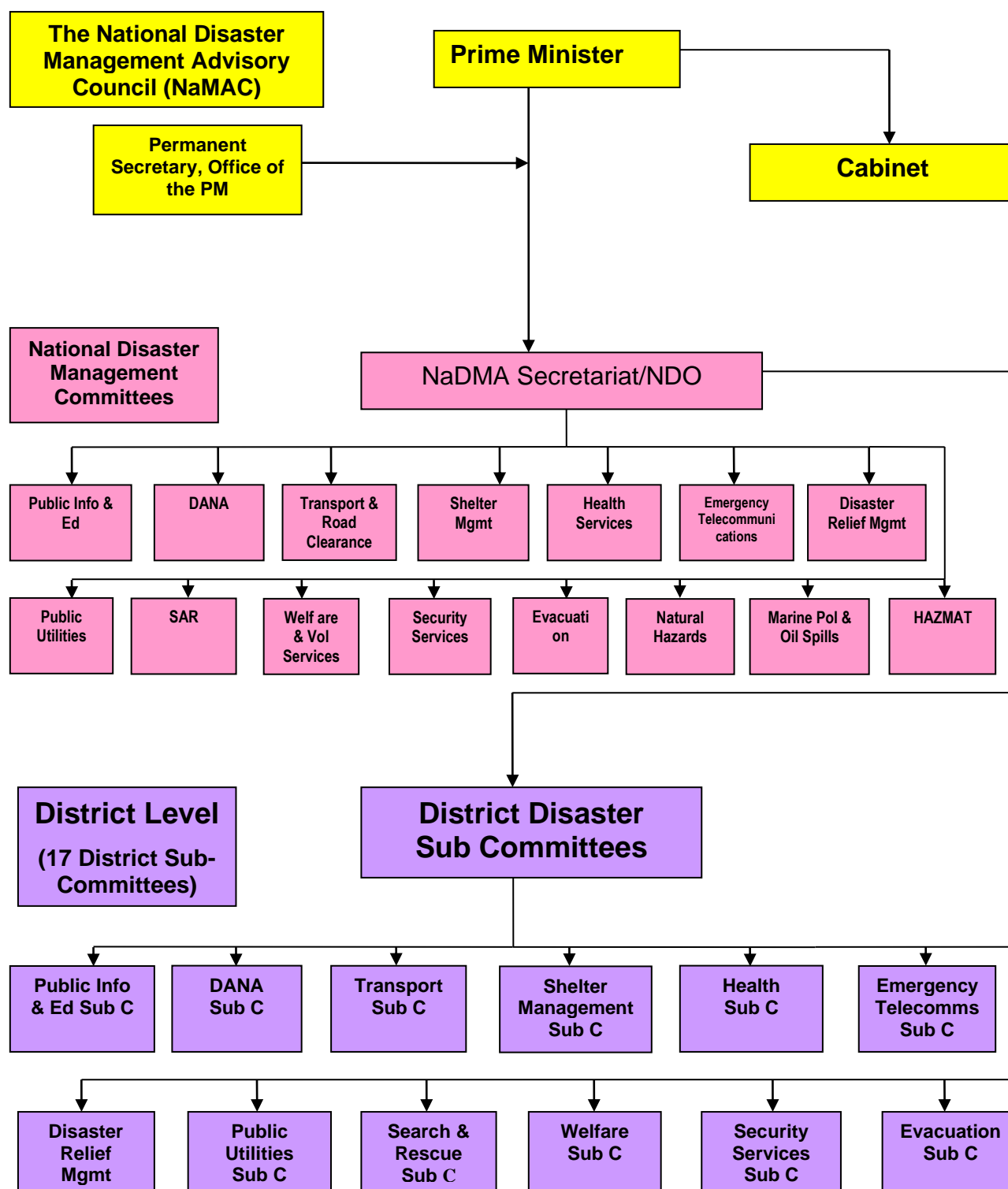


Figure 2: The National Disaster Management Organization

XI: NATIONAL DISASTER MANAGEMENT ORGANIZATION

The National Disaster Management Organization is the term used to refer to all participants in national disaster management efforts, whether Government, Non-Government Organizations (NGO's), Private Voluntary Organizations (PVO's) or Volunteers, and is depicted by the Organization chart shown above and comprises:

- The National Disaster Management Advisory Council (NaDMAC)
- The National Disaster Management Committee
- The National Emergency Operations Centre

National Disaster Management Advisory Council (NaDMAC)

The Organization's general direction, control and the development of policy will reside with the Minister of National Security who is also the Prime Minister of Grenada.

The organizational structure has been developed to ensure the effective functioning of the National Plan.

The membership of the NaDMO is as follows:

1. Prime Minister - Chairman
2. Permanent Secretary, Office of the Prime Minister - Deputy Chairman
3. Minister of National Security
4. Permanent Secretary Ministry of Foreign Affairs
5. Permanent Secretary, Ministry of Finance
6. Permanent Secretary Ministry of Tourism
7. Commissioner of Police
8. Chief Educational Officer, Ministry of Education.
9. Chief Medical Officer, Ministry of Health
10. Chief Technical Officer, Ministry of Communication & Works.
11. Chief Technical Officer, Ministry of Agriculture.
12. Chief Meteorologist, Point Salines International Airport
13. Director of Information. Government Information Service.
14. Representative, Point Salines International Airport.
15. Representative, Grenada Ports Authority.
16. Representative, Grenlec.
17. Representative, National Water & Sewage Authority.
18. Representative, LIME.
19. Representative, Digicel.
20. Director General, Grenada Red Cross Society
21. Representative, Customs & Excise Department.
22. Representative, National Telecommunications Regulatory Commission.

23. Representative, Grenada Solid Waste Management Authority.
24. Representative, Grenada Private Sector Organization
25. Representative, FLOW
26. Representative, Chevron
27. Representative, SOL
28. Saint George's University School of Medicine.
29. Representative, Conference of Churches Grenada.
30. Representative, Service Clubs – Rotary & Salvation Army.
31. Representative, Marketing & National Importing Board.
32. Representative, Trades Union Council.
33. Representative, National Youth Council.

The National Disaster Coordinator (NDC) will be the Secretary to the NaDMAC and will attend, either in person or by proxy, meetings of all Management Committees established by the Council. The NDC will also be responsible for the administrative secretariat of the NaDMAC as established by the Government of Grenada.

Duties and Responsibilities

The following duties and responsibilities have been developed for the Advisory Council:

- (a) To ensure that all disasters and emergency preparedness processes and resources are adequate.
- (b) To mobilize, direct and co-ordinate preventative, mitigation, preparedness, response, rescue and relief mechanisms for all hazards and emergency situations.
- (c) To promote preventative mechanisms and activities and rapid response techniques by all Organizations and agencies with disaster functions or services especially Police, Fire, Health Services, etc.
- (d) To prepare for approval by Cabinet, guidelines and administrative policy for all sections of the National Disaster Management Organization.
- (e) To ensure the acquisition and dissemination of adequate public information

The Council shall meet at least once per month, and as necessary during cases of emergency.

All correspondence concerning the Organization should be addressed to:

The National Disaster Coordinator,
National Disaster Management Agency, (NaDMA),
Fort Frederick,
St. George's,
Grenada.

National Disaster Management Committees

Membership

There will be thirteen (13) National Disaster Management Committees which will be responsible for the planning and execution of the National Disaster Management Plan. They are as follows:

1. Public Information and Education
2. Damage Assessment and Needs Analysis
3. Transport and Road Clearance
4. Shelter Management,
5. Welfare and Voluntary Services
6. Health Services
7. Emergency Telecommunications
8. Disaster Relief Management
9. Public Utilities, Rehabilitation and Reconstruction
10. Search and Rescue - Land and Sea
11. Security Services
12. Marine Pollution and Oil Spills
13. Hazardous Materials and Hazardous Wastes

National Disaster Management Committees

Roles and Responsibilities

The national committees as presented below have been developed by the National Disaster Management Agency (NaDMA) to facilitate a better distribution of services and as a method of streamlining and co-coordinating all disaster management services within the State of Grenada.

The national disaster management committee's primary responsibility will be that of ensuring that the Comprehensive Disaster Management strategy is adapted and the required preparedness and preventative measures have been instituted, in order to minimize loss of life and reduce damage to property damage where possible.

The national and district committees are all designed to function and carry out their duties and responsibilities before the event so that the required level of preparedness can be achieved that ensures an adequate and effective response. Their role is one of pre-disaster planning, establishing management systems for implementation of an adequate response and responding when an emergency or a disaster occurs.

The committees have not been presented in any specific order, as they are all of equal importance and do not take precedence over each other. Their duties are defined against the background of the sectoral and specific needs of the country.

Committees

The membership of the National Disaster Management Committees and their Terms of Reference are as follows:

1: Public Information and Education Committee

Membership

1. Director of Information. GIS - Chairperson
2. Chief Education Officer– Deputy Chairperson
3. Chief Medical Officer or Nominee
4. Representative, Sports, Community Development & Co-operatives,

5. Representative, Social Development.
6. Representatives, All Radio Stations.
7. Representatives, All Printed Media.
8. Representatives, All TV networks
9. Representative, Grenada Red Cross Society
10. Representative, Voluntary Organizations
11. Representative, Meteorological Service.
12. Representative, Health Service Committee (for psychological advice)

Terms of Reference

1. To design/update an emergency public information and education plan for the State of Grenada
2. To use all available media to develop and organize ongoing public awareness and education programmes on all types of disasters/hazards the State of Grenada is prone to Grenada as well as the preventative measures to be taken.
3. To disseminate accurate and updated information to the public in an efficient manner before, during and after any type of emergency or disaster situations or threats to Grenada.
4. To alert the population on any impending disaster and the precautionary measures to be taken.
5. To disseminate all decisions of NaDMA to the Public.
6. To design and conduct an annual exercise to test the Public Information and Education Plan.

2: Damage Assessment and Needs Analysis Committee

Membership

1. Director of Statistics - Chairperson
2. Director of Budget and Planning – Deputy Chairperson
3. Representative, Ministry of Agriculture
4. Representative, Ministry of Health
5. Representative, Ministry of Education - (shelters)
6. Representative, Public Works - Public Utilities
7. Representative, Grenada Housing Authority
8. Representative, Ministry of Finance
9. Chamber of Commerce.
10. Grenada Association of Professional Engineers.

Terms of Reference

1. To develop and maintain plans for post-disaster damage and needs assessment
2. To develop and maintain data bases necessary for support of post-disaster damage assessment and recovery planning
3. To ensure that the committee and its members are prepared to assess damage and needs at the national and local levels if a disaster occurs.
4. To assign specific responsibilities to committee members to assess damage and needs of different sectors: housing, health services, agriculture, utilities, etc.

5. To coordinate the resources needed to rapidly assess the damage caused by a hazard to determine number of deaths, casualties, damages to property and relief requirements (food, shelter, medical attention).
6. To coordinate the assessment of damages to public utilities (– water, sewage and drainage facilities, telephone, electricity, and cable) and assist where possible with the other utilities.
7. To co-ordinate the assessment of damages to agriculture and livestock.
8. To co-ordinate the surveys of roads, bridges, ports and other infrastructure to determine extent of damage.
9. To supply information to the National Emergency Operations Centre (NEOC) and to the Disaster Relief Management and the Public Utilities and Rehabilitation and Reconstruction Committees, as necessary and provide initial financial evaluations and estimates to the relevant ministries and departments as required.
10. To conduct assessments of damages to private sector including tourism, distribution, retailers, etc.
11. To co-ordinate, within the NEOC, with regional and international Organizations conducting damage and needs assessment in the case of a disaster.
12. To prepare an initial assessment of the damage and needs within eight hours of a disaster, and a second report twenty-four to thirty-six hours later
13. Up-date assessments periodically until the disaster is finished
14. To spearhead efforts leading to eventual establishment of a national inventory of assets
15. To design and conduct an annual exercise to test the DANA Plan

3: Transport and Road Clearance Committee

Membership

1. Chief Technical Officer, Ministry of Communications & Works - Chairperson
2. Manager, Grenada Port Authority – Deputy Chairperson
3. Airport Authority.
4. Grenada Solid Waste Management Authority.
5. Grenada Chamber of Industry and Commerce.
6. Representative, Office of the Commissioner of Police
7. Representative, Grenada Taxi Association
8. National Bus Association.
9. Private Construction Companies Representative.

Terms of Reference

1. To develop a plan to meet transportation needs for the various committees of NaDMA to assist them in the execution of their duties.
2. To develop an emergency plan to cope with transportation requirements at national and sectoral level to include traffic control.
3. To develop MOUs with private construction companies.
4. To develop a resource list of all transport (including boats and other marine craft) chain saw and heavy equipment that would be available for use in a disaster.

5. To arrange for the release of privately owned vehicles, equipment and boats and other marine craft and where necessary and if available aircraft.
6. To ensure that fuel supplies are available for preparedness and response operations.
7. To arrange for the relief drivers to assist in road clearance and transportation
8. To arrange for the release of all vehicles from any department to be use as emergency ambulances and other emergency purposes.
9. To arrange for clearing of main roads and movement of emergency personnel and relief supplies as soon as possible after a disaster.
10. To co-ordinate standardised road passes, identification cards and vehicle passes for approval of the Security Services Committee.
11. To collaborate with evacuation and the distribution of relief goods always in co-ordination with the NEOC.
12. To design and conduct an annual exercise to test the Transport and Road Clearance plan.

4: Shelter Management Committee

Membership

1. Chief Education Officer,- Chairperson
2. Chief Welfare Officer – Deputy Chairperson
3. Senior Education Officer, Chief Shelters Warden
4. Representative, Ministry of Communication & Works- Technical Division
5. Representative, Ministry of Health - Public Health
6. Representative, Grenada Housing Authority
7. Representative, Grenada Red Cross Society
8. Representative, Grenada Conference of Churches
9. Representative, Grenada Voluntary Organizations

Terms of Reference

1. Selection of suitably safe buildings for use as emergency shelters.
2. To provide general education programme on management of informal shelters in Grenada.
3. To coordinate the identification of emergency shelters through the relevant Government departments.
4. To arrange for the inspection and proper maintenance of emergency shelters through the relevant Government departments, ensuring that they are structurally sound and located in safe areas.
5. To submit a list of approved shelters to the National Disaster Office by April 30 annually (with further updates on a quarterly basis).
6. To organize the staffing and administration of approved emergency shelters.
7. To maintain a list of all approved emergency shelters with locations, ownership, capacity facilities as well as contact persons, addresses and telephone numbers, where possible.
8. To conduct training for shelter management personnel on an annual basis to maintain the standards of management.
9. To maintain a list of Shelter managers and key holders for the shelters

10. To design and conduct an annual exercise to test the Shelter Management Plan
11. Arranging for the movement and care of the aged, disabled and incapacitated to safe areas if evacuation is needed.
12. Providing special emergency needs (medicines, food, etc.) to the aged, disabled and incapacitated.
13. Arranging for the delivery of emergency supplies to institutions.
14. Assisting in the management of emergency shelters.
15. Providing messenger and stretcher-bearer services.
16. Assist in providing psychological support and counselling
17. To co-ordinate with NGOs and develop resource lists.

5: Welfare and Voluntary Services Committee

1. Chief Community Development and Social Extension Officer – Chairperson
2. Representative, Community Development – Deputy Chairperson
3. Representative, National Council of the Disabled
4. Representative, Grenada Red Cross Society
5. Representative, Grenada St. John's Ambulance Brigade
6. Representative, Grenada Conference of Churches
7. Representative, Ministry of Ecclesiastic Affairs
8. Representative, Grenada Service Clubs
9. Representative, Police Boys Brigade
10. Representative, LIONS
11. Representative, ROTARY
12. Representative, Youth Organizations
13. Representative, Boys Scout & Girls Guide Organization
14. Representative, Inter-agency Group of Development Organization
15. Representative, Duke of Edinburgh Organization
16. Representative, Peace Corps

Terms of Reference

1. Design their own emergency management plans and procedures
2. Participate in the National Disaster Management Committees
3. Participate in the District Disaster Committees
4. Assist with public awareness programmes
5. Assist with the distribution of educational material
6. Assist with the evacuation of disaster victims
7. Assist with evacuation of victims and aged persons
8. Assist in clearing debris
9. Assist in distributing relief supplies
10. Assist local disaster preparedness Committees
11. Assist at emergency shelters and feeding centres
12. Assist with sorting and parcelling of clothing

13. Assist in record keeping
14. Perform messenger service

6: Health Services Committee

Membership

1. Permanent Secretary, Ministry of Health - Chairperson
2. Chief Medical Officer, - Deputy Chairperson
3. Chief Public Health Inspector (Environmental Health)
4. Hospital Administrator
5. Chief Nursing Officer
6. Medical Storekeeper (Supplies requisition and distribution)
7. Representative, Grenada Red Cross Society
8. Representative, Grenada St. John's Ambulance Brigade
9. Representative, Grenada Chamber of Commerce (Pharmacy Group)
10. Grenada Solid Waste Management Authority.
11. NAWASA.
12. Private hospitals
13. Saint George's University Health Services.

Terms of Reference

1. To ensure that an adequate supply of emergency medical supplies is available.
2. To coordinate with the relevant public/private health related voluntary organizations, the medical and first-aid assistance required before, during and after a disaster.
3. To monitor post-disaster public and environmental health conditions and maintain public health standards including within shelters
4. Requisitioning of medical supplies through the relevant departments as necessary.
5. Proper identification of health service workers and first aid personnel and First-Aid stations for information of field personnel and the public.
6. To coordinate the arrangements with the Transport sub-committee for the use of additional vehicles to augment existing ambulance service where necessary.
7. To make provision for the establishment of field hospital units at designated areas if required.
8. To coordinate with Search and Rescue – L & S subcommittees
9. To organize training of health service workers and emergency First-Aid personnel and operation at all emergency shelters and other First-Aid Stations established in the Districts.
10. To ensure the provision of environmental health services at emergency shelters and the development of plans for quick deployment of health personnel to all pre-determined points.
11. To develop a list of all health facilities including pharmacies, in Grenada, that can be used in the event of a disaster.
12. To develop guidelines for the identification and disposal of the dead.
13. To develop a program for prevention and management of epidemics.
14. To ensure that counselling is provided to the affected population after a disaster.

15. To develop plans for management of mass casualty situations and stress management in disasters.
16. To design and conduct an annual exercise to test the Health disaster plans.

7: Emergency Telecommunications Committee

Membership

1. National Telecommunication Regulatory Commission. - Chairperson.
2. Telecommunication Officer, Office of the Commissioner of Police – Deputy Chairperson
3. Representative, LIME.
4. Representative, Digicel
5. Representative, Grenada Amateur Radio Society
6. Representative, Grenada Citizen Band Operators (CB'ers)
7. Representative, Mariners.

Terms of Reference

1. Identify emergency telecommunications needs.
2. Make inventories of available telecommunications equipment
3. Design a national emergency telecommunications plan.
4. Establish a training programme for all radio operations, to be conducted annually.
5. Establishment contact with the regional emergency communication system.
6. Coordination of the availability of telecommunications by the NTRC.
7. Conducting simulation exercises on a regular basis to test the effectiveness of the telecommunication system.

8: Disaster Relief Management Committee

Membership

1. Marketing Board Director - Chairperson.
2. Chief Technical Officer, Ministry of Communication & Works- Deputy Chairperson
3. Representative, Police.
4. Representative, Grenada Port Authority.
5. Representative, PSIA International Airport
6. Fisheries Officer, Ministry of Agriculture
7. Representative, Ministry of Health.
8. Representative, Ministry of Education
9. Comptroller of Customs
10. Representative, Conference of Churches.
11. Representative, Grenada Red Cross Society
12. Representatives, Voluntary Organizations.
13. Grenada Chamber of Industry and Commerce.

Terms of Reference

1. Design a specific disaster relief management plan and mechanisms.
2. Arrange for suitable buildings for the storage of food, clothing, building material and other emergency supplies.
3. Arrange for other safe areas for storage of non-perishable emergency supplies.
4. Establish distribution centres for bulk distribution of emergency supplies.
5. Arranging for staff to package and distribute emergency supplies.
6. Arranging for the transportation of emergency supplies to storage at all predetermined points.
7. Arrange for security of areas where emergency supplies are stored.
8. Determine the quantity and type of assistance required with information of the damage and needs assessment committee.
9. Maintain proper records of emergency supplies received and distributed.
10. To co-ordinate NGOs supplies from arrival to distribution.

9: Public Utilities, Rehabilitation and Reconstruction Committee

Membership

1. Permanent Secretary, Ministry of Communication & Works - Chairperson
2. Deputy Permanent Secretary, Ministry of Finance. - Deputy Chairperson
3. Chief Technical Officer, Public Works Department
4. Representative, Physical Planning.
5. Manager, LIME
6. Manager, Digicel.
7. Manager, GRENLEC
8. Manager, NAWASA
9. Manager, Grenada Ports Authority
10. Manager, Point Salines International Airport
11. Manager Grenada Solid Waste Management Authority.
12. Grenada Association of Professional Engineers.
13. Manager, National Housing Authority
14. Representative, Public Utilities Department
15. Representative, Public Health Department
16. Representative, Ministry of Finance
17. Representative, Ministry of Agriculture
18. Representative, Grenada Conference of Churches/Ministry of Ecclesiastical Affairs.
19. Representative, Grenada Chamber of Commerce
20. Representative, Chevron
21. Representative, SOL.
22. Representative, Police
23. Representative, Private Sector
24. Representative, NGOs

Terms of Reference

1. Design specific plans for the rehabilitation of public utilities after a disaster.
2. Maintain of alternative backup services for use in disaster situations.
3. To identify damage to public utilities including information from the damage and needs assessment.
4. Restore services as soon as possible after disaster.
5. To co-ordinate supply of labour – local and external.
6. Repair and reconstruction of buildings and infrastructure to permit population to revert to normal activity in the shortest possible time.
7. Determine suitability for resettlement in formerly hazardous areas.
8. Determine the need for land use/ownership policy.
9. To procure and subsequently make available building supplies.
10. Transfer of population from high-risk areas.
11. Identify of hazardous industries before the disaster.
12. To adhere to building codes and maintain prices.
13. Liaise with the NaDMA
14. Plan/co-ordinate /liaise for external assistance for rehabilitation and reconstruction.

10: Search & Rescue - Land & Sea Committee

Membership

1. Commissioner of Police - Chairperson
2. Commander, Grenada Coast Guard - Deputy Chairperson.
3. Chief Fire Officer
4. Manager, Point Saline International Airport
5. Manager, Grenada Port Authority
6. Chief Medical Officer or Nominee.
7. Chief Fisheries Officer.
8. Representative, Associations of Fishermen.
9. Representative, Search and Rescue Associations.
10. Representative, Marine and Yacht Association of Grenada.
11. Representative, Coast Guard Auxiliary.
12. Representative, Saint George's University.

Terms of Reference

1. To train, orient and drill individuals in emergency procedures, and the development of a rapid deployment procedure.
2. To Rescue trapped or dislocated persons and animals in post-disaster operations, and prepare reports for the Executive Committee within 48 hours.

11: Security Services Committee

Membership

1. Commissioner of Police
2. Representative, Private Security Companies
3. Representative, Saint George's University Security.

Terms of Reference

1. To design a specific disaster security plan.
2. To immediately deploy resources to key places for security and safety before, during or after a disaster.
3. To be responsible for the identification of personnel
4. To plan and organise simulation exercise
5. To advise the National Disaster Management Council on all emergency security matters
6. To manage crowd and protect barriers
7. To manage traffic
8. To arrange for the supply of special equipment

12: Marine Pollution & Oil Spills Committee

Membership

1. Chairman of the National Science & Technology Council - Chairperson
2. Director Maritime Office /Ports Authority. – Deputy Chairperson
3. Representative, Ministry of Legal Affairs
4. Representative, Ministry of Health - Environmental Division
5. Representative, Ministry of Tourism
6. Representative, Ministry of Finance
7. Representative, Physical Planning.
8. Representative, Fire Service
9. Representative, Police Department
10. Representative, Grenada Coast Guard
11. Representative, Grenada Chamber of Commerce - Shipping Group
12. Representative Wildlife Foundation.
13. Representative Grenlec
14. Representative SOL
15. Representative Chevron.

Terms of Reference

1. To design/redesign a national oil spill plan according to regional and international guidelines and international conventions.
2. To plan for and co-ordinate all actions to deal with any oil spill which may affect the State.
3. To train persons to deal with oil spill contingencies and other forms of marine pollution.
4. To develop a prevention and mitigation plan for oil spills.

5. To alleviate the effects of wildlife as soon as possible.

13: Hazardous Materials & Hazardous Waste Committee

Membership

1. Chief Fire Officer - Chairperson
2. Deputy Chief Fire Officer - Deputy Chairperson
3. Representative, NAWASA.
4. Representative, Grenada Coast Guard
5. Representative, Science & Technology Council
6. Representative, Police Department
7. Representative, Ministry of Health -Environment Department
8. Representative, Ministry of Agriculture
9. Chief Fisheries Officer.
10. Representative, Ports Authority
11. Representative, M.B.I.A
12. Grenada Solid Waste Management Authority

Terms of Reference

1. To identify hazardous materials used in the country.
2. To identify the method of storage, handling, transfer, movement, transportation and disposal of such materials.
3. To train personnel to identify, handle and dispose of hazardous material and toxic waste.
4. To design specific regulations for the management of hazardous materials.
5. To design specific hazardous materials emergency plan for the response to specific types of accidents involving hazardous materials.

XII: RESPONSIBILITIES OF GOVERNMENT AGENCIES

All Government Agencies and Ministries are responsible for designing their own continuity of operations and emergency management plans. These plans must provide for security of the Organizations' facilities, materials, information, vehicles, equipment, uniforms and personnel as well as to determine emergency response procedures to provide assistance to the population according to the specific Organizations' role during emergencies and disasters.

All plans and revisions must be submitted to the National Disaster Coordinator of the NaDMA not later than 30th April of each year for submission to the National Disaster Management Council within one month of receipt of document.

As a general rule, Government agencies and officers will continue to exercise their normal functions during a disaster, but in some cases, special additional responsibilities will be assigned.

It is important to note the following:

1. In cases where a Department or Statutory Body is assigned specific responsibilities in this document, ultimate responsibility rests with the Permanent Secretary of the Ministry concerned. The Permanent Secretary must ensure that all members of staff involved are familiar with the plan.
2. Where more than one agency is involved with the same area of activity, it is the responsibility of the first listed Permanent Secretary or Head of Department, unless otherwise indicated herein, to arrange meetings to arrive at a common line of action.
3. Where an agency has to liaise with another Organization it must make sure that inter-communication is well established, e.g. by exchange of telephone numbers of relevant personnel and a code for recognition.

Some of the actions, which will be required to be performed, and which should be detailed in individual disaster plans are as follows:

Office of the Prime Minister

1. Chair the National Disaster Management Council.
2. Co-ordinate all response, Relief and rehabilitation activities from the NEOC during emergencies and disasters.
3. Declare a National Disaster when necessary.
4. Co-ordinate all the reconstruction activities.

Ministry of Finance, Planning & Development

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures for the ministry.
2. Organise post-disaster damage and needs assessments
3. Collect, collate and maintain damage statistics
4. Estimate amounts of financial and other relief and rehabilitation requirements
5. Assist with co-ordination of supplies and other assistance received by government and non-governmental Organizations
6. Provide budgetary support for emergency expenditure

Police

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures.
2. Protection of public property, and prevention of looting/vandalism.
3. Traffic control to and from Emergency areas and hospitals
4. Crowd Control
5. Evacuation procedures
6. Security of essential services and vulnerable points
7. Co-ordination of Telecommunication system

Fire Service

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures
2. Hazardous material and hazardous waste handling.
3. All fire-fighting operations
4. Assistance in fires at sea
5. Assistance in evacuation
6. Pumping of flood water
7. Airport fire and rescue

Grenada Coast Guard

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures for land and maritime search and rescue.
2. Search and Rescue - from any part of the island; including Carriacou and Petite Martinique
3. Law Enforcement - in contact with other vessels carrying Arms and Ammunition.
4. Marine Safety - Distress, saving lives and property
5. Pollution Control - oily substances into the sea from other ships and from land into the sea
6. National Security - Along the coastline etc.
7. Evacuation - assistance when required

Ministry of Education

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures
2. Ensure selection and maintenance of government and non-governmental buildings considered as shelters is carried out.
3. Staffing of shelter in collaboration with the Ministry of Public Works, which will be used as emergency shelters should be done in co-operation with Emergency Committees as required.
4. Liaise with Ministry of Health with regards to Sanitary Services at shelters
5. Preparation of and the annual review of the operations administrative manual for shelter wardens
6. Requisitioning relief food and other essential supplies for shelter occupants
7. Training of shelter staff

8. Collaborating with Voluntary services Sub-Committee in distribution of supplies and other material

Ministry of Health

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures (including hospitals plans and procedures for other health facilities)
2. Training of personnel
3. Caring for injured, elderly persons, children and treatment of mass casualties
4. Education of the public in matters concerning public health
5. Arranging for mass immunization, if required
6. Investigating the quality of water supply
7. Ensuring that hospital and health centres make and practice disaster plans
8. Arranging for the prevention and /or control of any outbreak of disease resulting from a disaster
9. Preparation of a manual for First-Aid stations and personnel
10. Providing sanitary services for shelters
11. Establishing procedures for collaboration with the Red Cross Society and St. John's Ambulance Brigade
12. Arranging for sanitary inspection of relief food supplies
13. Recording, tagging, identifying the injured and the dead and also ensuring adequate disposal of the dead by delivering the dead to their next of kin. (Write MOUs with funeral homes).
14. Manning ambulance services
15. Monitor, assort, store and distribute relief medical supplies
16. Participate in assimilated drill on airport, accidents in co-operation with fire service and airport authority

Ministry of Works, Public Utilities and Transport

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures
2. Road clearance
3. Assistance in rescue work in collaboration with Fire Officers
4. Provision of emergency transport service
5. Co-ordination with the Grenada Solid Waste Management Authority for debris management after clearance.
6. Maintenance of telecommunication system
7. Supply generators and motorcar batteries as directed by E.O.C.
8. Demolition of unsafe buildings
9. Evacuation operators as necessary
10. Erection of temporary bridges
11. Provision of protective materials, maintenance and repair to Government buildings
Maintenance and purification of National Water Service
12. The supply of emergency water service to key areas in association with NAWASA

13. Immediate restoration of electricity services to key areas re emergency operation centre, health and security centres.
14. Restoring of telephone and telexes services to the Emergency Operation Centre and other key areas.
15. Co-ordination with GSWMA for the restoration of municipal solid waste collection and disposal services.

Community Development Division

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures
2. In collaboration with the relevant government departments assist in the possible identification of suitable buildings, within their scope of authority, other than school which may be used as alternative emergency shelters.
3. Assist with registration of evacuees at shelters
4. Supplying of additional manpower if required by the senior shelter manager
5. Assist with the transfer and relocation of evacuees
6. Assist with information on possible numbers of evacuees.
7. Assist with the distribution of food and other supplies
8. Assist in the development of a register of all youth Organizations as a resource manual for manpower support.
9. Assist with unsupervised children and senior citizens

Government Information Service

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures
2. To ensure all members of the media design, update, test and evaluate continuity of operations and emergency management plans and procedures
3. Keep the public informed about disaster preparedness by the publication of special leaflets
4. Control the dissemination of information during and after a disaster.
5. Inform the public of the whereabouts of emergency shelters and first-aid post
6. Provide liaison between the public and the National Emergency Advisory Council on emergency preparedness matters
7. Arrange with the local media for broadcast, interviews and publication of information on disaster preparedness and prevention

Ministry of Legal Affairs

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures
2. Review and the development of rules and regulation for shelter administration in collaboration with the Ministry of Education
3. Examine and update relevant sections of the Insurance Act for public liability
4. Examine and revise relevant sections under the Emergency Powers Act, to provide additional supervisory authority, through legislation, when required by the National Emergency Relief Organization in order to guarantee full delivery of relief services.

Ministry of Agriculture

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures
2. Identification possible sources of food that can be used if a disaster occur.
3. Maintenance of adequate food centres throughout the country
4. Assignment of personnel to work in these centres in the event of an emergency
5. Co-ordination with the Ministry of Works and Communication to arrange adequate transport service for the distribution of food
6. Assist Food and Nutrition Council in the designing of rationing systems.

Marketing and National Import Board

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures
2. Maintenance of adequate stocks of food during the hurricane season
3. In collaboration with the Ministry of Agriculture assign MNIB personnel to work in Food Centres

Ministry of Social Development

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures
2. Distribution of welfare supplies (other than food)
3. Maintenance of adequate stocks of blankets, beds, feeding utensils, lanterns, torch lights, etc. during hurricane season

Department of Customs & Excise - Finance

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures
2. Speedy handling of document in order to facilitate the inflow of relief supplies

Ports Authority

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures.
2. Collaborate in the receipt and storage of disaster relief goods.
3. Oil Spills and Coastal Zone Monitoring
4. Advise Ministry of Fisheries of safe methods of guarding the Fishing Fleet.
5. Informing and advising ships in the harbour of impending disaster.
6. Advising small boat owners on safety of their boats.

Ministry of Foreign Affairs

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures
2. Informing Missions abroad of impending disaster
3. Establish contact with International Organization and Agencies
4. Provide protocol services for visiting diplomats

XIII: ROLE OF PRIVATE SECTOR, NON GOVERNMENTAL ORGANIZATIONS & SERVICE CLUBS

Chamber of Commerce

1. Ensure its members design continuity of operations and emergency management plans
2. Identify and provide resources from the private sector to be used in emergencies and disasters.
3. Identify needs from the private sector to increase its level of preparedness.
4. To ensure availability and distribution of essential emergency supplies that could be provided by the private sector.
5. To provide damage assessment of the private sector during emergencies and disasters.

Red Cross Society

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures.
2. Assist with First-Aid training
3. Provide relief supplies
4. Assist with distribution of relief supplies
5. Assist with Emergency Shelters
6. Co-ordinate activities of voluntary Organizations
7. International tracing
8. Assist in search and rescue
9. Educate on water and sanitation
10. Liaise with health services re: health issues/risks following disasters
11. Provide psychological support and counselling

Conference of Churches/Ministry of Ecclesiastical Affairs

1. Design continuity of operations and emergency management plans and procedures.
2. Assist with the identification of specific vulnerable areas and communities.
3. Assist with rehabilitation
4. Assist with public awareness programmes
5. Assist with management of shelters
6. Assist with distribution of supplies
7. Provide relief supplies

Telecommunications

- LIME
- Digicel
- FLOW
- Amateur Radio Club
- C.B. Radio

1. Participate in the National Telecommunications Committee.
2. Participate in the design of the national telecommunications plan.
3. Assist with telecommunications at essential points in keeping with directions of the Telecommunications committee
4. Provide emergency telecommunications services at the National Emergency Operations Centre
5. Restore telephone and internet services as soon as possible.

Service Clubs and Youth Organizations

- Lions
- Rotarians
- Boys Scouts
- Girl Guides
- Brigades
- 4-H
- Cadet Corps

15. Design their own emergency management plans and procedures
16. Participate in the National Disaster Management Committees
17. Participate in the District Disaster Committees
18. Assist with public awareness programmes
19. Assist with the distribution of educational material
20. Assist with the evacuation of disaster victims
21. Assist with evacuation of victims and senior citizens
22. Assist in clearing debris
23. Assist in distributing relief supplies
24. Assist local disaster preparedness Committees
25. Assist at emergency shelters and feeding centres
26. Assist with sorting and parcelling of clothing
27. Assist in record keeping
28. Perform messenger service

XIV: DISTRICT DISASTER MANAGEMENT COMMITTEES

The value of advanced planning of effective action in emergencies has often been proved to be the best method of maintaining and achieving efficiency.

Through advanced and effective organizational systems, before, during and after the emergency situation the District Disaster Committees will be able to coordinate the activities of the communities in support of the national response. In respect of national planning, the involvement of the community ensures the widest level of co-operation. The District Management Committee will provide the essential link between the National Organization and the community, which they represent.

Objectives

1. Selection and appointment of members of the sub-committee
2. Development of an organizational plan for each district
3. Selection and training of volunteer personnel for field operations
4. Participation in the overall planning of disaster preparedness operations in the district
5. Co-ordination of operational plan of all emergency services at district level.
6. Development of job functions for members of the district organization
7. Supplying half yearly reports to the Executive Committee on all disaster preparedness activities.

The District Organization should provide for the development of the following management structures and services:

1. District Disaster Coordinator
2. Deputy Disaster Co-ordinator
3. District Shelter Management Officer
4. District Health and Welfare Officer
5. District Damage and Needs Assessment Officer
6. District Emergency Works and Transport Officer
7. District Supplies Management Officer.
8. District Telecommunications Officer
9. District Safety and Security Officer
10. District Public Education and Information Officer

Services

District Shelter Service

1. Selection of, in collaboration with, the Ministry of Education and Ministry of Public Works, suitable community buildings for Emergency Shelters
2. Implementation of all Government directives and procedures
3. Assist with staffing at Emergency Shelters
4. Co-ordination of District Shelter Plans with the National Disaster Management Organization
5. Ensure continuous service by developing a shift for staff if required
6. Provide the National Organization and the District Chairman with periodic reports on the situation

Emergency Feeding Service

1. Establishing centres for distribution of supplies
2. Supplying staff and provide a briefing on the operation of the centre
3. Assisting with transportation of food supplies from Official depots to district distribution centres
4. Maintaining records on all supplies received and distributed in the area.

Emergency Medical Service

The Ministry of Health is responsible for all medical services. The District Organization can provide the following supportive services:

1. Identification of, in collaboration with the Ministry of Health, Emergency First-Aid Stations
2. Providing a rescue service for severely injured persons in the transportation of all injured personnel
3. Provision of supervisory support for injured, elderly and unsupervised children
4. Selecting persons to be stretcher bearers
5. Requesting medical supplies for First-Aid stations as required
6. Co-ordination of the District Medical rescue and First-Aid service with the Ministry of Health, the Health Services Committee and the National Organization.

Functions

Pre-Emergency activities

1. Liaise with group leaders
2. Conduct evacuation operations
3. Nominate work teams
4. Rescue of persons from endangered areas
5. Chair committee
6. Develop operational plans
7. Develop an information and education Programme
8. Develop training programmes
9. Secure emergency equipment
10. Conduct simulation exercises
11. Maintain co-ordination of services at National and the district levels

Post Emergency

12. Mobilisation of services
13. Damage assessment
14. Implementation of the district plan for the following:
 - Shelters, welfare, rescue of trapped persons, transport, First-Aid, road clearance, building repairs, communication systems and operators
 - The district Organization will require the assistance and co-operation of the security services; the Organization should therefore establish contact and involve the N.C.O., in charge of the District Police Station.

XV: TELECOMMUNICATIONS

Emergency Telecommunications Centre

The Emergency Telecommunications Centre is located in the Emergency Operations Centre in Fort Frederick in the NaDMA headquarters.

Points will be established in the Telecommunications Centre for the installation of equipment for the Amateur Radio, Citizen Band and other radio operators likely to be used during an impact of a hazard.

In the event of a disaster or major emergency the Chairman of the Emergency Telecommunications Sub-Committee will contact the Amateur Radio and other operations with regard to assistance in telecommunications.

The telecommunications committee will ensure that there is communication to and from the EOC with all the key response Organizations.

Amateur Radio & C.B. Operators

In the event of an emergency and when so requested, the Amateur Radio and Citizen Band Operators will make available to the National Disaster Organization such equipment and operators as may be necessary for providing communications between the Emergency Telecommunication Centre in the EOC and the respective areas to which they may be assigned.

The Clubs will assign equipment and operators to the various areas identified by the Chairman of the Telecommunications Committee.

The Amateur Radio & Citizens Band Clubs should draw up their own internal disaster plans for submission to the National Disaster Coordinator for inclusion in the National Plan.

LIME and Digicel will assist in providing emergency links between the Emergency Operations Centre, Police Headquarters and other areas as required.

XVI: EMERGENCY SHELTERS

The Chief Education Officer, as Chief Shelter Warden, will maintain a list of buildings, which have been identified as shelters for use in an emergency.

The list of Emergency Committee members will arrange for the wide publicity of shelters in its area through churches, school voluntary Organizations and community groups.

The Chief Education Officer in collaboration with the Chief Community Development Officer and the District Disaster Management Committees will ensure that the manager of every emergency shelter has the shelters open and ready to receive evacuees when necessary.

The Chief Education Officer will ensure the appointment of suitably qualified staff to manage emergency shelters. Specific procedures should be developed for each member of a shelter Organization.

The Chief Education Officer will collaborate with the District Committees and the Chief Community Development Officer and the Public Works Department to ensure the proper maintenance of emergency shelters.

Where tents are used as emergency shelters they will be under the control of the Department responsible for such equipment.

Internal Emergency procedures sectoral plan will be developed and presented to the National Disaster Organization. The guidelines as outlined in the preceding paragraphs provide the foundation for the management of all shelters in Grenada.

XVII: LIST OF ABBREVIATIONS

ACP-EU	-	African, Caribbean & Pacific – European Union
CDEMA	-	Caribbean Disaster Emergency Management Agency
CDEMA CU	-	Caribbean Disaster Emergency Management Agency Coordinating Unit
CDM	-	Comprehensive Disaster Management
CHEVRON	-	
DIGICEL		
FLOW	-	
GIS	-	Government Information Service
GRENLEC	-	Grenada Electricity Services Limited
IO	-	International Organizations
LIME	-	Landline Internet Mobile Entertainment
MPH	-	Miles per Hour
NAWASA	-	National Water and Sewerage Authority
NaDMA	-	National Disaster Management Agency
NaDMAC	-	National Disaster Management Agency Council
NDMC	-	National Disaster Management Council
NDMP	-	National Disaster Management Plan
NEAC	-	National Emergency Advisory Council
NGO	-	Non Government Organization
PO	-	Private Organization
RSTS	-	Relief Supply Tracking System
SOL	-	
SUMA	-	Supply Management
UN	-	United Nations
VO	-	Voluntary Organization

XVIII: APPENDICES

Appendix 1: Drawing Up of a Disaster Plan

Specific Plans

The preceding chapters outline some of the main responsibilities of various agencies, and these must provide for individual plans. Bear in mind that the aims of any disaster plan must ensure the following:

1. That all personnel are ready to make the earliest possible response to an emergency
2. That some system for crowd control must be established as early as possible, so as to avoid unnecessary casualties
3. The quick and efficient evacuation of any building or area considered to be in a dangerous situation
4. The provision of first aid with a minimum of delay
5. That factual information is relayed as early as possible to the Emergency Operation Teams

Leadership

Although there will be a main coordinating body - the Emergency Operation Centre - it will be necessary to form your own central point of communication etc.

Public Information

Public information is of major importance in disaster planning. Make sure that members of the public are versed in preparations for coping with hazards before they strike.

Action Checklist

Provide a list of actions to be taken by individual members of your staff (or individual groups) in a disaster. This list should be clear and concise so that there is no doubt as to what has to be done, and when.

Maps

Preparation of maps before hand is essential. These maps should show key areas, reporting points, etc. coloured pins are helpful in showing locations of shelters, centres communications points etc.

Organizational Charts

Simple Organizational charts are useful before and during emergency operations. Do not clutter your charts with copious details. The chart should indicate which members of your staff are responsible for certain actions. Include brief instructions on how to acquire emergency supplies, and emergency purchasing and requisitioning procedures. You should also include names, titles, address and telephone numbers of key emergency personnel.

Identification Cards

Identification cards and/or permits should be issued to key personnel to allow them passage through police lines.

Resource Data

Every major source of local manpower, equipment and supplies should be considered in preparing what could be called a "Resources Data Book". This information will have to be updated frequently.

In drawing up plans, effort should be made to make provision for action in the event of a disaster other than a hurricane or flood. Consideration should also be given to procedures in the event of the following hazards:

- Fire
- Earthquake
- Bomb threat
- Oil Spills
- Volcanoes
- Landslides
- Storm Surges

Hurricane & Emergency Supplies

Water

An adult will need a minimum of 1 litre (35 oz.) of clean drinking water per day. One gallon (128 oz.) per adult is a recommended quantity per adult per day - when he is active in tropical sun. Man will die in three days without water, but will survive about ten days without food. Keep water in a sealed clean plastic container (such as the containers used to package vinegar and cooking oil or the 25lb. plastic salt meat pails). If you have to use water from land, boil for at least ten minutes before drinking.

Food

Persons should stock up with items that do not require cooking. Provide food supplies for your family for at least ten days. In case of a hurricane, public feeding with hot meals is unlikely until day five - except injured, infants and young children.

1. Corned beef
2. Sardines
3. Luncheon meat
4. Jam/jelly/honey
5. Biscuits
6. Salt-body needs daily salt to avoid cramp
7. Fruit juice
8. Raisins/currants/dates -dried
9. Rolled oats
10. Chocolate bars/barley sugar
11. Condensed milk, sugar
12. Toilet paper

First Aid Kit

1. Band-aids
2. Bandages
3. Scissors/tweezers/needles/safety pins
4. Alcohol
5. Cotton-wool/lint
6. Aspirin or other analgesic
7. White Petroleum Jelly/Antiseptic Ointment
8. First Aid Book

Tools

1. Waterproof Flashlight - spare batteries/bulbs
2. Hurricane Lantern - Kerosene oil spare

3. Other safe lighting (NOT candles)
4. Matches - waterproof container/plastic bag
5. Hammer - professional with claw
6. Wood saw - 3ft cutting edge
7. Nails - 2 lb 2", 2 lb 4", 2 lb galvanise drive-nails
8. Waterproof Plastic - 12'x12'
9. Cutlass/axe
10. Rope - nylon - about 50'x1/4'
11. Pen-knife (heavy duty)

Miscellaneous

1. Transistor Radio - spare batteries
2. Note Book - pencils/pens
3. Map of Grenada - Topographical
4. Stove - Oil, Gas - Camp type
5. Metal cup/plate/spoon/cooking pot
6. Needle, thread, button, etc.

Clothes

1. Raincoat and Rain Hat
2. Umbrella
3. Tennis shoes/Rubber boots

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Appendix 2: Emergency Disaster District Zone Classification

ST. ANDREW'S

St. Andrew's South East

- Crochu
- Walker
- Mt. Cassell
- Union
- Mama Cannes
- Canal Road
- Hope
- Soubise
- Lower Mt. Carmel
- Telescope
- Tulleries
- Marquis
- Post Royal
- Felix Park
- Cafe
- Grand Bacolet
- Cuma

St. Andrew's South West

- Upper Mt. Carmel
- Lower Capital
- Lower Mt. Carmel
- Harford Village
- Bamboo
- Munich
- Tuilleries
- Walker
- Post Royal
- De Blando
- Plaisance
- Union
- Richmond
- Chutz
- La Digue
- Belle Vue Land
- St. James
- Upper Capital
- Birchgrove
- Holy Innocents
- Grand Bras
- Canal Road
- Caruth
- Forde
- Mt. St. Ervans
- Cook Hill
- Dunmore

St. Andrew's North East

- Simon
- Paradise
- Dunfermline
- Upper Pearls
- Paraclete
- Lower Pearls
- Blaize
- Upper St. John's
- Carriere
- Lower St. John's
- Tivoli
- Belair
- Pearls/Moyah
- Upper Conference
- La Poterie
- Lower Conference
- Belmont

St. Andrew's North West

- La Force
- Balthazar
- Adelphi
- Windsor
- Chantille
- Simon
- Morne Longue
- Dunfermline
- St. Clouds
- Mt. Horne
- Bylands
- Springs
- Mirabeau
- Paraclete
- Columbe
- Paradise
- Beauregard
- La Fillette
- Boulogne

ST. GEORGE'S

St. George's

- Town of St. George's
- Tanteen
- River Road

St. George's South

- Belmont/Mt. Pandey
- Jean Anglais
- Grand Anse
- Morne Tout
- Grand Anse Valley
- The Limes
- Morne Rouge
- Calliste
- Frequente
- Point Salines
- True Blue
- Upper Woburn
- Lance Aux Epines
- Lower Woburn
- Woodlands
- Calivigny
- Fort Jeudy
- Confer
- Springs

St. George's South East

- Morne Jaloux
- Morne Delice
- Richmond Hill
- Creighton
- La. Borie
- St. Paul's
- Lower St. Paul's
- Mt. Airy
- Cobo Town
- Hope Vale
- Paddock
- Lowther's Lane

St. George's North East

- Radix
- Willis
- Mt. Gay
- Annadale
- Mt. Parnassus
- Ravine
- Tempe
- Sung Corner
- Lower Mardigras
- Belle Vue
- La Mode
- Mt. Dor
- St. George's Estate
- New Hampshire
- Boca
- Vendomme
- Beaulieu
- Constantine

St. George's North West

- Cherry Hill
- Grenville
- Vale
- Fontenoy
- Grand Mal
- Mt. Moritz
- Molinierre
- Happy Hill
- Beausejour
- Shende
- Brizan
- Perseverance
- Darbeau

ST. PATRICK'S EAST

- Belmont
- Points Field
- Upper Hermitage
- Rose Hill
- Lower Hermitage
- Plains
- Mt. Reuil
- River Sallee
- Mt. Rich
- La Taste
- River Antoine
- Mt. Fendue
- Mt. Rose
- Snell Hall

ST. JOHN'S

- Gouyave
- Douglaston
- Central Palmiste
- Grand Roy
- Waterloo
- Mt. Plasair
- Florida
- Marigot
- Clozier
- Concord
- Belvidere
- Black Bay
- Brothers
- Woodford
- Loretto

ST. MARKS

- Union/Duquesne
- River Sallee
- Industry & Duquesne Coast Guard
- Diego
- Piece
- Victoria
- Fountain
- La Source/Gross Point
- Waltham
- Maran

St. Patrick's West

- La Fortune
- Mt. Rodney
- Levera
- Mt. Craven
- Madeys
- Prospect/Davie
- Caleste
- Mt. Williams
- La Mode
- Chantimelle
- Upper & Lower Marli
- Samaritan
- Sauteurs
- Red Mud

ST. DAVID'S

- Morne Delice
- Upper Mardigras
- Perdmontemps
- Windsor Forest
- Vincennes
- Laura
- Bailes Bacolet
- Beaton Place
- La Femme
- Charlotte Vale
- Barwoe
- Petite Bacaye
- New Westerhall
- Old Westerhall
- Corinth
- Syracuse
- Dudmar
- Providence
- Thebaide
- Apres Toute
- Belle Vue
- Belle Isle
- Requin
- La Sagesse
- Content
- Maulty
- Central St. David's
- Retreat
- Mt. Agnes
- Pomme Rose
- Marlmont
- La Tante

CARRIACOU & PETITE MARTINIQUE

- Hillsborough
- Belair
- Beausejour
- Windward
- Lauriston
- Petite Carenage
- L'esterre
- Bogles
- Belmont
- Cherry Hill
- Dumfries
- Craigston
- Grand Bay
- Petite Martinique
- La Resource

Appendix 3: Metrological Information

Alert:

The Alert is a formal message issued from the Meteorological Office giving warning information along with details on tropical depression, storm or hurricane location, intensity and movement. The Alert is issued at regular intervals when a tropical storm or hurricane is first detected in the area of south of 20 degrees latitude and between 40 and 65 degrees West longitude.

Watch:

The Watch is issued when it is established that a storm or hurricane conditions are expected in parts of Grenada within 48 hours. Everyone is encouraged to keep listening attentively to the approved media (the Public Information and Education Committee).

Warning:

The Warning is issued when once it is established that a tropical storm or hurricane conditions are expected within 36 hours. Action to protect life and property should be rushed to completion immediately.

Tropical Wave

A Tropical Wave an area of low pressure in the tropics without a circulation, but with thundershowers and gusty winds.

Tropical Depression:

A Tropical Depression is an area of low pressure in the tropics with a circulation, but with winds of less than 39 miles per hour (mph).

Tropical Storm:

A Tropical Storm is an area of low pressure in the tropics with a circulation with maximum sustained winds of (39-74) mph; (34-64) knots.

Hurricane:

A Hurricane is an intense area of low pressure in the tropics with a circulation with maximum sustained winds greater than 74 mph (64 knots). There are five Categories of Hurricane:

- Category I - Sustained winds 74-95 mph, 64-82 kt, or 119-153 km/hr
- Category II - Sustained winds 96-110 mph, 83-95 kt, or 154-177 km/hr
- Category III - Sustained winds 111-130 mph, 96-113 kt, or 178-209 km/hr
- Category IV - Sustained winds 131-155 mph, 114-135 kt, or 210-249 km/hr
- Category V - Sustained winds greater than 155 mph, greater than 135 kt, or greater than 249 km/hr

Storm Surge: Abnormal use of water above the predicted astronomical tide generated by the strong winds and low pressure associated with the storm or hurricane.

Eye (of the Hurricane) - The relatively calm area near the Centre around which the strongest winds blow. As the eye passes, light winds rapidly give way to very severe winds from the opposite direction.

Appendix 4: Glossary of Terms

Disaster:

Any adverse event (natural or human-induced) which disrupts the basic fabric and normal functioning of a society or community, giving rise to casualties and/or damage to property, infrastructure, essential services and means of livelihood on a scale which is beyond the capacity of the affected society to cope without external assistance

Disaster Management:

A collective term encompassing all aspects of planning for and responding to disaster, including policy and administrative decisions and operational activities

Disaster Management Cycle:

Disaster management can be seen as a series of phases on a time continuum. The Disaster Management Cycle is a six-stage system on this continuum, designed for effectively managing disasters by relying on (preventative, mitigation) pre and post-disaster measures. The Disaster Management Cycle is: Prevention/Mitigation, Preparedness, Response, Recovery and Reconstruction.

Damage Assessment:

The preparation of quantified estimates of physical and economic damage resulting from a disaster

Disaster Mitigation:

Measures taken to reduce the loss of life, livelihood and property by hazards and disasters, either by reducing vulnerability or by modifying the hazard where possible

Disaster Preparedness:

Actions taken in advance of a disaster to minimize loss of life and damage, organize temporary removal of people and property from a threatened location, and facilitate timely and effective rescue, relief rehabilitation (which would enhance response, recovery and reconstruction actions) after the disaster.

Disaster Prevention:

The actions persons take to minimize the impact of hazard/hazards so that the cost of the damages does not overwhelm their resources.

Disaster Response/Relief

Actions intended to save lives, alleviate suffering and provide basic care in the immediate aftermath of a disaster.

Early Warning

Process of monitoring vulnerable areas in order to forecast impact of a hazard so as to enable protective or preventive actions to be taken by disaster management officials

Emergency

An extraordinary situation in which there are serious and immediate threats to life and well-being

Evacuation

The removal of persons and property from a threatened area in order to safeguard life and property

Evacuation Route

Road or Highway designated by NaDMA as a primary route for moving evacuees from threatened areas.

Hazard

A potentially damaging phenomenon, whether natural or man-induced

Hazardous Substance/Materials

Any substance or material which may be classified into one of the following categories: toxic, corrosive, flammable, explosive or infectious.

Initial Damage Assessment (IDA):

An assessment usually carried out within the first 48 hours after the impact of a hazard, by trained evaluators, to obtain an initial evaluation of the damage.

Post-Disaster:

Period following a disaster event

Rapid-Onset Disaster/Event

A disaster or event which occurs with little or no warning

Reconstruction

Full restoration of all services, infrastructure, damaged structures, revitalization of the economy and restoration of social and cultural life to conditions equal to or better than pre-disaster. This may extend for months or even years after a disaster.

Recovery:

Medium to long-term actions for repair of physical, social and economic damage and the return of affected structures to a condition equal to or better than before the disaster. As used here, includes Rebuilding and Rehabilitation phases.

Refuge of Last Resort

A facility identified for temporary shelter during severe weather. It is a possible safe haven for emergency workers or other persons caught in the affected area, and unable to leave due to dangerous outside conditions.

Rehabilitation:

Short-term actions such as restoration of basic services, repair, and restoration of physical, social and economic damage, undertaken after the immediate threat has passed, intended to bring life back to normal. May be completed within 10 – 12 weeks of the disaster event

Risk

Expected losses from a given hazard to a given element at risk over a specified time period

Saffir – Simpson Scale

A scale developed by Herbert Saffir and Robert Simpson which projects hurricane damage for five hurricane intensities from Category 1 - least damaging to Category 5 – most severe damage

Storm Surge

The increase in height of sea level caused by the wind and central pressure of the storm system and interaction with the sea-floor topography as it approaches land

Tropical Storm Force Winds

Wind speeds of 39mph or higher

Vulnerability

The extent to which a community's structures, services or environment are likely to be damaged or disrupted by a disaster

Warning Systems

Arrangements to rapidly disseminate information concerning imminent disaster threats to government officials, institutions and the population at large in the areas at immediate risk

NATIONAL CONTACT LIST					
If some numbers are restricted then they will only reside at NaDMA Secretariat					
NaDMA SECRETARIAT AND NATIONAL DISASTER OFFICE STAFF					
APPOINTMENT	NAME	WORK PHONE	WORK FAX	Cell	E-MAIL
National Disaster Coordinator	Mr. Benedict Peters	440-8390-4	440-6674	4056574/405-5046	bouncing98@hotmail.com
Deputy Coordinator	Mr. Terence Walters	440-8390-4 440-0838	440-6674	405-6576/4050 110/420-8885	terryactive@yahoo.com
Public Relations Officer					
Project Officer					
Administrator					
Secretary					
Warehouse Manager					
Radio Operator					
Driver	Sean Alexander	440-8390-94	440-6674	449-7217/442-2321	
PERMANENT SECRETARIES AND NATIONAL COMMITTEE CHAIRPERSONS					
Position	Name	Work Number	Fax Number	Cell Number	Email Address
Acting Permanent Secretary, Ministry of Agriculture, Forestry & Fisheries	Mr. Aaron Francois	440-2708 Ext. 3034	440-4191		agriculture@gov.gd aafrancois2002@yahoo.com afrancois@gov.gd
Permanent Secretary, Ministry of Carriacou & Petite Martinique	Mrs. Bernadette Lendore-Sylvester	443-6026/6028	443-6040		sylvesterbernadette@hotmail.com

Affairs					
Acting Permanent Secretary, Ministry of Carriacou & Petite Martinique Affairs	Mr. Javan Williams	443-6026/6028	443-6040		Javan.fw@gmail.com
Permanent Secretary, Ministry of Education and Human Resource Development (Responsibility for Education)	Mrs. Arlene Buckmire- Otram	440-2737 ext.7332	440-6650		aboutram@gmail.com
Permanent Secretary, Ministry of Education and Human Resource Development (Responsibility for Human Resource Development)	Mrs. Eunice Sandy-David	440-2737 ext.7359	440-6650		Eusd_gda@yahoo.com Euuice.david@gov.gd
Permanent Secretary, Ministry of Finance, Planning & Economy, Energy and Co-operatives (with Responsibility for Strategic issues, major reforms and overall management of the ministry)	Mr. Timothy Antoine	440-2928/440-2731-6	440-4115		timothy.antoine@gov.gd timothyantoine@gmail.com
Deputy Permanent Secretary, Ministry of Finance, Planning & Economy, Energy and Co-operatives (with Responsibility for Economic Management and Planning, budgeting, Macro-economic policy & planning)	Mr. Mike Sylvester	44435-0596	440-4115		Mike.sylvester@gov.gd
Acting Deputy Permanent Secretary, Ministry of Finance, Planning & Economy, Energy and Co-operatives (with Responsibility for Administration, Human Resource Development, Customer Service and	Ms. Maureen Baptiste	440-5883 Ext. 5103	440-4115		mones@spiceisle.com

Public Sector Modernization					
Permanent Secretary, Ministry of Foreign Affairs, the Environment, Foreign Trade and Export Development (Responsibility for Foreign Affairs)	Mrs. Elizabeth Henry-Greenidge	440-2640/271 Ext.4016	440-4184		foreignaffairs@gov.gd Elizabeth.greenidge@gov.gd ligreenidge@hotmail.com
Acting Permanent Secretary, Ministry of Foreign Affairs, the Environment, Foreign Trade and Export Development (Responsibility for Environment, Foreign Trade and Export Development)	Mrs. Sally Anne Bagwhan-Logie	440-2101/2214 ext. 3003	440-0775		tradegrenada@gov.gd sbagwhan.logie@gov.gd tradegreanda@gmail.com
Acting Permanent Secretary, Ministry of Health	Mr. Isaac Bhagwan	440-2649 Ext. 2126/2141	440-4127		Min-healthgrenada@spiceilse.com isaacbhagwan@yahoo.com
Permanent Secretary, Ministry of Housing, Lands & Community Development (on assignment for Lands)	Ms. Nodica McIntyre	440-2103/1439	435-5864		flackdsuper@gmail.com
Acting Permanent Secretary, Ministry of Housing, Lands & Community Development	Mrs. Allison Miller	440-2103/1439 Ext. 2142	435-5864		audainmiller@gmail.com Min-healthgrenada@spiceilse.com
Acting Permanent Secretary, Ministry of Legal Affairs	Mrs. Glenna Knights	435-2962	435-2964		legalaffairs@spiceisle.com sibyl.alexander@gov.gd

APPOINTMENT	NAME	WORK PHONE	WORK FAX	Cell	E-MAIL
CHAIRS, DISASTER COMMITTEES					
Public Information and Education	440-1791/1830				
Damage Assessment and Needs Analysis	Beryl- Ann Clarkson				
Transport and Road Clearance	Cecil Harris		4404122	405-4508/440-3321	
Shelters and Shelter Management	Ms. Pauline Findley	440-7685	440-6650		
Welfare and voluntary Services	Yvonne Debreu				
Health Services Committee	Mr. Isaac Bhagwan				

Emergency telecommunication committee	Baldwyn Ferguson	4356872	435-2132	405-4955	gntrc@spiceisle.com
Disaster Relief Management committee	Oliver Patrick				
Public Utilities, Rehabilitation and Reconstruction					
Search and Rescue Land and Sea/hazardous material and hazardous waste	Asp Mitchell	4402112		4053955	jmitchgnd@hotmail.com
Marine Pollution and oil spill					
HEADS OF AGENCIES					
Commissioner of Police	Wigan Thompson	440-3999/435-2346	435-3805	----	rgpf@spiceisle.com
Fire Chief	ASP John Mitchell	440-2112		405-3955/43-3783	
Airport Manager	Mr. Lester And all	444-4101	4444838	536-8002	alandall@mbiagrenada.com/gaa@mbiagrenada.com
Ports Authority	Ambrose Phillip	440-7678/440-3015	440-3418	405-1802	grenport@spiceisle.com
Chief Aviation Officer					
Telecommunication Officer					
Grenada Coast Guard	ASP Osmond Griffith	444-1931	444-2839	405-7478/40-5173	gcgco@hotmail.com/rgpfcoastguard@spiceisle.com
Grenada National Council for the Disabled	Hilary Gabriel	440-0112	435-2668	404-1400/40-	gncd@spiceisle.com

				4237	
Grenada Red Cross	Terry Charles	440-1483/1830	440-1829	403-4824	grercs@spiceisle.com/terrycharles_grenada@yahoo.com
Marketing and National Importing board	Patrick Oliver	4401791-2/440-3191	440-4152	415-0497	mnibhr@gmail.com/opatrickl@hotmail.com
Grenada Solid Waste Management Authority	Karen Roden-Layne	444-3009/4442019	444-0330	415-1465/444-8443	gndswma@spiceisle.com
National Water & Sewage Authority	Christopher Husbands	440-2155	440-4107	409-0372/440-2431	husbands@spiceisle.com/chusbands@nawasa.gd
Meteorological Services	John Peters	444-4142	444-1574/444-4838	534-5206/444-4101 ext.2023/442-6877	jpeters@mbiagrenada.com/jhpet@hotmail.com
APPOINTMENT	NAME	WORK PHONE	WORK FAX	Cell	E-MAIL
Private Sector Organizations					
SOL Petroleum	Shawn Best	440-2184/3066	440-2112	420-1446/435-0003	Shawn.best@solpetroleum.com
Grenada Electricity Services Ltd.	Clive Hosten	444-0910	440-4106	407-0255/4448895	chosten@grenlec.com
Tropical Shipping	Cheney Joseph	4408787	440-6696	407-1953/534-1953/444-2211	cjoseph@tropical.com/cheneyjoseph230@gmail.com

Rubis West Indies(chvron)	Steven George	440-2683/440-7850	440-4190	409-3142	sgck@chervon.com
LIME Grenada	Gary Louison	441-2272	439-8000	4071175	Gary.louison@time4lime.com
FLOW	Yvonne Duncan	232-3569/	230-3323	534-0702	ydunan@columbusgrenada.com
REGIONAL & INTERNATIONAL ORGANIZATIONS					
CDEMA Representative					
United Nations Representative					
PAHO Representative					
USAID/OFDA Rep					
DISTRICT COORDINATORS					
District Coordinator Town of St. George Deputy	Silvan Chan Hermlyn Andrew	----- 	----- ---	440-0028 h 405-5003m 420-1843m	Silvanchan2006@yahoo.com
District Coordinator – St. George South Deputy	William George Paul Finlay			444-2216h 406-3474 415-2030 440-3600h 440-3268w 403-7821m	williamgeorge@spiceisle.com finlaybp@spiceisle.com
District Coordinator – St. George South East Deputy	Ralph Lord Randal Robinson			457-5606m 533-8538m 405-1379m	ttsboy@live.com
District Coordinator – St. George North East Deputy	Kelvin Dottin Josette Joseph			435-5059h 444-2708m 403-3933m 443-0615h 444-4258w 403-4417m 537-8239m	ktdotts@yahoo.co.uk
District Coordinator – St. George North West	Michelle Greaves Warrick			440-8197h 440-2737w	mcbgreaves@gmail.com

Deputy	Robin James			4051242m 440-4556h 404-4720m	
District Coordinator – St. John	Jean Fredrick			444-8191h 440-8043w 449-7131m 416-8094m	jfredrick@spiceisl.com
Deputy	Jean St. Louis			443-0021h 457-0516m	stlouisj5@yahoo.com
District Coordinator – St. Mark	Ian Dharangit			437-0152h 440-3232w 533-2552m 404-3168m	dharangit@hotmail.com
Deputy	Rebecca Jerome			437-1753h 415-5111m	
District Coordinator – St. Patricks East	Frank Philbert			442-9463h 440-4835w 403-7677m	philbertfk@yahoo.com
District Coordinator – St. Patricks West	Valdon Paul			442-1551h 416-9722m	Balgo61@hotmail.com
Deputy	Laurie Mc Guire			442-2535h 534-1535m	pas1gd@yahoo.com
District Coordinator – St. Andrew North East	Edith M. Williams			438-0249h 442-7579w 415-4514m	Willies250@hotmail.com
Deputy	Dwight Gibbs			438-4381h 442-7931w 404-6969m	Dwightgibbs69@yahoo.com
District Coordinator – St. Andrew North West	Richard Thomas			442-8756h 533-8333m	
District Coordinator – St. Andrew South East	Pauline Andrews			442-7365h 405-7365m	pauline_andrew@hotmail.com
Deputy	Norris Henry			416-0583m 405-6561m	norrisevi@hotmail.com
District Coordinator – St. Andrew South West	Selwyn Prince			438-5959h 456-8244m 442-7872h	Rph142@hotmail.com
Deputy					

	Richard Hopkin			442-7636w 415-3077m	
District Coordinator – St. David North	Delon Edwards			444-6121h 444-6313w 404-7921m	Deled79@hotmail.com
District Coordinator – St. David South	Shanta Cox			443-3059h 440-2101w 406-3032m	shantacox@hotmail.com
Deputy	Patricia La Touch			443-2468h 459-0265m	pat_latouch@yahoo.com
District Coordinator – Carriacou	Shawn Patrice			443-7404h 443-9335w 4063032m	glacer3@hotmail.com
Deputy	Ronald Gittens			443-7415h 406-7220m	rgittens@spiceisle.com
District Coordinator – Petite Martinique	Reuben Patrice			443-9254h 443-9204w 417-0871m	Fitz-patrice66@hotmail.com
Deputy	Dwight Logan			443-9080h 443-9204w 449-9080m	

MINISTRY LIAISON OFFICERS

APPOINTMENT					
Liaison Officer, Ministry of Social Services					
Liaison Officer Housing & Shelter Committee					
Liaison Officer Food & Materials Committee					
Liaison Officer Foreign Assistance					
Liaison Officer					

Liaison Officer					

National Disaster Management Agency (NaDMA).
Fort Frederick, St. George's, Grenada
nadma@spiceisle.com
Telephone (473)440-0838/8390-4 Facsimile (473)440-6674
<http://www.spiceisle.com/nero>

MANAGING THE HURRICANE HAZARD

2.1 Mitigation and Prevention

Mitigation and prevention activities will not be detailed in this contingency plan, however major activities are mentioned below as a guide. The National Mitigation Plan when developed should address mitigation measures for hurricane and other hazards.

Mitigation and prevention activities must be planned during non-crisis times when adequate time exists for planning and implementation and will be implemented over a period of years.

ACTIVITY	RESPONSIBILITY
Design and build physical protection structures such as groins, dykes, bunds	Ministry of Works
Develop policies and procedures for national mitigation and prevention programmes	NaDMO Secretariat
Develop/update building codes for wind resistance of structures	Physical Planning
Develop design codes and standards for bridges and other critical infrastructure	Ministry of Works
Develop/review zoning and planning regulations for flood-prone areas including coastal areas	Physical Planning Unit, Ministry of Lands
Carry out public awareness activities on hurricane hazard and mitigation and prevention measures	NaDMO Secretariat
Carry out hazard and risk mapping and vulnerability analyses for wind and water hazards from hurricane	National Meteorological Service
Control of development in flood-prone areas	Physical Planning Unit
Declare undeveloped high risk flood prone areas as green areas	Physical Planning Unit
Retrofitting of shelters and other infrastructure related to emergency management	Ministry Works/Ministry of Education

3.0 PREPAREDNESS

This refers to activities which can be undertaken prior to the impact of any hazard and may be on a timescale of years to months. Many preparedness activities are best implemented through the work programmes of Ministries and Agencies.

The Lead organisations are listed first. Abbreviations will be used for long identifiers.

ACTIVITIES TO BE COMPLETED BY START OF HURRICANE SEASON JUNE 01 EACH YEAR

Long to Medium Term Activities

ACTIVITIES	RESPONSIBILITY
Convene meeting of all NEAC members	PM/NaDMO Secretariat
Convene meetings of all Committees	National Disaster Management Chairpersons
Update National Contact List, National Resource Listing	NaDMO Secretariat
Complete inspection and classification of shelters	Shelter Comm./Ministry of Works
Submit report on all shelters, proposals for new shelters by April of each year to NaDMO Secretariat	Chairperson, Shelter Comm.
Publish updated shelter list	NaDMO Secretariat
Exercise and update plans, review policies and procedures and update as necessary by March 15	NaDMO Secretariat
Updated plans to be sent to NaDMO Secretariat By May of each year	Chairpersons of all National Committees
Acquire critical stores and equipment, review arrangements for food acquisition and storage	NaDMO secretariat and District Committees and Agencies
Ensure all resources, equipment and supplies for NEOC in place and functional	NaDMO Secretariat
Ensure communications equipment checked, critical spares bought and equipment tested	NaDMO secretariat/Police

PUBLIC AWARENESS AND WARNING

Electronic media broadcast weather bulletins and other information at regular intervals as directed by NEOC	All electronic media houses
Keep public updated on weather systems	Media/NaDMO secretariat
Ensure warnings for special populations given	Welfare Committee/NaDMAO secretariat
Provide information on precautionary measures to public	Meth Office/NaDMO secretariat
Ensure population of flood-prone and coastal areas are warned	Meth Office/NaDMO secretariat

COMMUNICATIONS

Ensure all communications equipment operational and operators ready	NaDMA/POLICE/National telecommunication committee

ACTIVITIES	RESPONSIBILITY
Install flood monitoring and warning systems, Establish Community Flood Warning Systems	NaDMO Secretariat/NAWASA, Land use division
Ensure revision of plans	NaDMO Secretariat
Plan exercises and drills	NaDMO Secretariat/ Operational Committees
Training of NADMO Members	NaDMO Secretariat
Community training and preparedness	NaDMO Secretariat/Red Cross/St. Johns ambulance
Inspect and classify shelters	Shelter team/Ministry of Education/NaDMO
Put in place arrangements for broadcasting emergency information with neighbouring countries in case of loss of capacity in Grenada	NaDMO Secretariat/CBERS and HAM
Put in place arrangements with cable operators for display of emergency information	NaDMO Secretariat/FLOW
Identify proper disposal sites and prepare specially engineered sites for disposal of contaminated debris. Sensitise teams to environmental concerns and environmental protection measures	Ministry of Health/National solid waste management Authority
Train specialized teams in management of hazardous materials	National Fire Service/ NaDMO Secretariat
Establish Memoranda of Understanding with partners and suppliers	NaDMO Secretariat/District committees
Establish risk mapping programmes	NaDMO Secretariat/Red Cross

ACTIONS TO BE TAKEN IMMEDIATELY BEFORE AND AT DECLARATION OF THE Alert PHASE
Impact expected within 72 hrs.

ONE RED FLAG TO BE FLOWN

ALERTING AND ACTIVATION OF PLANS	
ACTIVITIES	RESPONSIBILITY

Alert NaDMA of the threat	Met Office
Alert Ministries, chairpersons and Agencies	NaDMO secretariat

ALERT PHASE

ADMINISTRATIVE FUNCTIONS	
Prepare emergency statutory instrument	Attorney General
Advise on procedures for acquisition of private property if necessary	Attorney General
Print Extra-ordinary Gazette as required	Government Printer
Announce price freeze on all goods	PM / Deputy PM/ NEOC
Confirm purchase arrangements with Operational Sub-Committee Chairs	Finance/NaDMA

ALERT PHASE

SHELTER MANAGEMENT	
Alert Shelter Managers of the possible of the use of shelters	Shelter Committee/ NaDMA

ALERT PHASE

TRANSPORTATION	
Start preparation of vehicles and equipment for pooling	Ministry of Works
Ensure arrangements for fuel in place	Ministry of Works/NaDMA
Confirm arrangements with private suppliers as per MOUs	Ministry of Works/NaDMA

ALERT PHASE

RELIEF SUPPLIES MANAGEMENT	
Start collection of food and materials stores and prepare storage areas	Relief Management Committee

ALERT PHASE

BRIEFING OF PARTNERS	
Advise CDERA, ODPEM Trinidad of activation	NaDMO secretariat
Advise foreign missions, international organisations of situation	Ministry of Foreign Affairs
Advise Grenadian Missions abroad of situation	Ministry of Foreign Affairs
Advise military partners of situation	Police

ACTIONS TO BE TAKEN AT DECLARATION OF WATCH PHASE

Impact expected within 36-48hrs

ONE RED FLAG WITH BLACK CENTRE TO BE FLOWN

ACTIVITIES	RESPONSIBILITY
FORECASTING, WARNING AND ALERTING	
Monitor system and alert NaDMA to the progress of system	Met Office
Alert Government, Quasi-Government and Non-Government entities	NaDMO secretariat
Brief other policy persons as appropriate	NaDMO secretariat
Inform all NaDMO partners of watch phase including District Coordinators	NaDMO secretariat
Put up one red flag with black centre	Commissioner of Police
Continue implementation of Operational Committee Plans/District Plans/Special Committee Plans	Committee Chairs

ACTIONS TO BE TAKEN AT DECLARATION OF WATCH PHASE

PUBLIC INFORMATION	
Ensure following repeated at regular intervals for public: Declaration of Watch Phase Names, locations of public shelters to be opened Hurricane precautionary advice Weather bulletins and updates	Media/GIS/NaDMO secretariat

All other relevant public information including information on evacuation	
---	--

ACTIONS TO BE TAKEN AT DECLARATION OF WARNING PHASE

TRANSPORTATION	
Ensure all vehicles are turned in to Ministry of Works compounds country-wide(WARNING PHASE)	National Transport and Road clearance Committee/Min. of Works
Pool and deploy vehicles in support of Plan as necessary	National Transport and Road Clearance Committee/Min of Works
Deploy transportation and heavy equipment to threatened areas in consultation with NEOC	National Transport and Road Clearance Committee/ Min of Works

ACTIONS TO BE TAKEN AT DECLARATION OF WARNING PHASE

RELIEF SUPPLIES	
Continue collection and storage of strategic food and materials at appropriate points	National Disaster Relief Management Committee
Procure and store district level food and supplies	DEOCs

ACTIONS TO BE TAKEN AT DECLARATION OF WARNING PHASE

MEDICAL SERVICES	
Screen hospital patients, discharge appropriately and make arrangements for safety and care of remaining patients	Health Services Committee/Ministry of Health

ACTIONS TO BE TAKEN AT DECLARATION OF WARNING PHASE

UTILITIES	
Check with utility companies, ensure plans activated and being implemented	Ministry of works

ACTIONS TO BE TAKEN AT DECLARATION OF WARNING PHASE

SEARCH, RESCUE AND EVACUATION	
Ensure SAR personnel ready	National search and rescue Committee
Ensure evacuation arrangements proceeding as planned. Start all necessary evacuations	NSARE Committee Chairperson/District Coordinators

ACTIONS TO BE TAKEN AT DECLARATION OF WARNING PHASE

BRIEFING OF PARTNERS	
Update foreign missions, international organisations, Grenadian Missions	/Ministry of Foreign Affairs
Update CDERA, ODPEM Trinidad and Tobago	NaDMO secretariat

ACTIONS TO BE TAKEN AT DECLARATION OF WARNING PHASE

ADMINISTRATIVE FUNCTIONS	
Cease collection of tolls	Ministry of Works
Order boats and barges to safe moorings	NEOC/Ports Authority
Take decision on closing time for airports and announce on electronic media. Advise interests through appropriate means	Airports Authority
Prepare draft State of Emergency Declaration to be used if necessary	Attorney General
Initiate check of all resources available including those of MOUs	NaDMO secretariat/District coordinators

ACTIONS TO BE TAKEN AT DECLARATION OF WARNING PHASE

MINISTRIES AND AGENCIES	
Ministries/Agencies to ensure staff rostered and given time to secure homes as per Ministry Plans. Duty staff to be deployed as per plans	CEOs, Heads of Agencies
All Liaison Officers report to NEOC	Permanent Secretaries

--	--

ACTIONS TO BE TAKEN AT DECLARATION OF WARNING PHASE

NEOC MANAGEMENT	
Ensure NEOC fully staffed and equipped according to SOPs	NEOC Director
Ensure all communications equipment and channels at NEOC functional as per National Telecommunications Plan. Run test transmissions to all field sets.	Telecommunication committee/Police
Check and ensure DEOCs operational	NEOC Operations Officer
Check on status of Operational Committee EOCs and state of implementation of plans. Flag potential problem areas and address if possible	NEOC Operations Officer
Ensure NEOC generator functional and filled, Water tank full as per SOPs	NEOC Director/ Operations Officer

ACTIONS TO BE TAKEN AT DECLARATION OF WARNING PHASE

EVACUATION	
Give final evacuation order as necessary for areas at risk	POLICE
Ensure evacuation of hospitals proceeding as planned. Organise assistance as necessary	Ministry of Health/Director of Hospital Services
Monitor notification and evacuation of tourists, other visitors proceeding as planned. Organise assistance as necessary	Ministry of Tourism/Ministry of Foreign Affairs
Ensure adequate transportation available and dispatched for evacuation	Ministry of Works/Police

ACTIONS TO BE TAKEN ON DECLARATION OF WARNING PHASE**Impact within 24 hrs - HURRICANE/TS WARNING****TWO RED FLAGS WITH BLACK CENTRES TO BE FLOWN**

WARNING AND ALERTING	
ACTIVITIES	RESPONSIBILITY
Brief PM NEAC ON THE WEATHER	Met Office

Declare Warning Phase	PM
Ensure all NaDMO members, partners aware of declaration	NaDMO secretariat
Broadcast declaration of Warning Phase by all available means.	GIS/Media/NaDMO secretariat
Ensure special populations warned	Welfare community/District Coordinators
Ensure two red flags with black centres flown	Commissioner of Police
Continue to monitor system and update NaDMA on conditions	Met Office

ACTIONS TO BE TAKEN ON DECLARATION OF WARNING PHASE

EOC MANAGEMENT	
Finalize staffing of NEOC during impact	NEOC Director
Release personnel who will staff post impact shift	NEOC Director
Ensure all key personnel are located and whereabouts known	NEOC Operations Officer
Report on status of preparations of Operational Committees, District and Special Committees, Key Ministries and Agencies, Utilities	Chairs of Committees, CEOs
Ensure DEOCs staffed and ready	NEOC Director/District Committee Chairpersons
Report on DEOC status to NEOC	District Coordinators
Verify status of communities most under threat, alert DEOC of potential social problems	Police
All National Committees, Ministries, report to NEOC on status of preparations. NEOC to initiate checks if no report received	NEOC Director/Operations Officer
Report on status of preparations to Executive Group	NEOC Director

ACTIONS TO BE TAKEN ON DECLARATION OF WARNING PHASE

SHELTER MANAGEMENT	
Decide on which remaining public shelters are to be opened	Shelter Committee/DEOCs/NEOC Director
Give instruction for opening of those shelters	Shelter Committee/NEOC Director
Broadcast list of all open shelters	Public Information Committee

ACTIONS TO BE TAKEN ON DECLARATION OF WARNING PHASE

TRANSPORTATION	
Complete deployment of vehicles, equipment, personnel to areas most likely to be affected	Ministry of Works

ACTIONS TO BE TAKEN ON DECLARATION OF WARNING PHASE

EVACUATION	
Complete all evacuations	NSAREC/DSARECs
Provide security for evacuated areas if safe	Police
Give final warnings for evacuation to resistant persons	NEOC/DEOCs/POLICE
Complete all evacuation/patient transfer at hospitals	Health Services Committee/ Ministry of Health
Complete preparation of other hospitals to receive extra patients	Health Services Committee/ Ministry of Health

ACTIONS TO BE TAKEN ON DECLARATION OF WARNING PHASE

BRIEFING OF PARTNERS	
Update foreign missions, donors, Grenadian Missions	Ministry of Foreign Affairs
Update CDERA, ODPEM Trinidad and Tobago	NaDMO secretariat Coordinator

ACTIONS TO BE TAKEN ON DECLARATION OF WARNING PHASE

COMMUNICATIONS	
Test communications links, verify arrangements for additional support if necessary	National Telecommunication committee/Police

ACTIONS TO BE TAKEN ON DECLARATION OF WARNING PHASE

PUBLIC INFORMATION	
Increase amount and frequency of public information being broadcast. Use public address systems, town criers in areas at high risk	Public information committee/NaDMO secretariat/DEOCs

ACTIONS TO BE TAKEN ON DECLARATION OF WARNING PHASE

RELIEF SUPPLIES	
Complete transportation of food and supplies to designated centres	NATIONAL Relief and Supplies Management Committee
Receive and secure supplies at sites	POLICE/Customs

ACTIONS TO BE TAKEN ON DECLARATION OF WARNING PHASE

ADMINISTRATIVE FUNCTIONS	
Ensure all necessary administrative and financial procedures activated and copies of documentation available to NEOC	Ministry of the Attorney General
Close Airports, Ports and inform interests of closure	Ports, Airports Authority
Order all marine interests to secure vessels in safe harbour and get to safety	Ports Authority
Advise all aircraft to be secured	Airports Authority/Ministry of Tourism

ACTIONS TO BE TAKEN ON DECLARATION OF WARNING PHASE

SECURITY	
Deploy security forces as necessary for security	Police, ssu
Prime Minister/Deputy addresses nation, supports need to obey precautionary instructions	Prime Minister/Deputy PM
Verify status of vulnerable/special populations. Assist where necessary. Inform NEOC/DEOCs of special concerns	National Relief and Supplies Management Comm./DEOCs/Red Cross/National Welfare Committee

ACTIONS TO BE TAKEN ON DECLARATION OF WARNING PHASE

DAMAGE ASSESSMENT	
Place Damage Assessment teams on stand-by	NDANA Committee

ACTIONS TO BE TAKEN TWELVE HOURS BEFORE EXPECTED LANDFALL

ACTIVITIES	RESPONSIBILITY
MONITORING AND ALERTING	
Continue monitoring system, brief Prime Minister, NEAC	Met Office/NaDMO secretariat

ACTIONS TO BE TAKEN TWELVE HOURS BEFORE EXPECTED LANDFALL

PUBLIC INFORMATION	
FINAL WARNINGS TO ALL INTERESTS, PUBLIC ON SECURING LIFE AND PROPERTY	NEOC/P Education, Information, Communication and Warning Committee
Continue to broadcast information to public, Update website	GIS/Media/NaDMA
Continue updating all interested parties of new developments	NEOC
All elected representatives reinforce final warnings, being disseminated from NEOC	Elected representatives

ACTIONS TO BE TAKEN TWELVE HOURS BEFORE EXPECTED LANDFALL

EOC MANAGEMENT	
Ensure all pre-positioning of personnel, other resources completed	NEOC/DEOCs/POLICE
Assess weather conditions and decide when no longer safe to work outdoors	Met Office
Call off all outdoor movement if conditions dangerous	Operations Officer/NEOC Director

ACTIONS TO BE TAKEN TWELVE HOURS BEFORE EXPECTED LANDFALL

SHELTER MANAGEMENT	
Carry out check on all open shelters	National Shelter Committee/DEOCs/NEOC

ACTIONS TO BE TAKEN TWELVE HOURS BEFORE EXPECTED

LANDFALL

DAMAGE ASSESSMENT	
Ensure all information, data, needed to support rapid initial damage assessment available and updated	NNDANA Committee,
Carry out “what-if” analyses which will inform rapid damage assessment	NNDANA Committee

DURING LANDFALL

ACTIVITY	RESPONSIBILITY
Monitor incoming reports. Maintain NEOC information management function as per SOPs	NEOC Director
Provide information for broadcast as conditions permit	Public Education and Information Committee

RESPONSE - POST IMPACT

All Clear

ONE GREEN FLAG TO BE FLOWN

All clear will be declared after the hurricane/storm has passed and is no longer a threat to the country.

ACTIVITIES TO BE UNDERTAKEN FOR AND AT ALL CLEAR

ACTIVITY	RESPONSIBILITY
MONITORING AND ALERTING	
Monitor system and advise Prime Minister re declaration of All Clear	Met Office
Declare All Clear	PM/Deputy PM
Advise all emergency committees of All Clear	NEOC
Change flag to one green flag	Commissioner of Police
Notify Ports/Airports Authorities of All Clear	NEOC

ACTIVITIES TO BE UNDERTAKEN WITHIN SIX HOURS OF ALL CLEAR

EOC MANAGEMENT	
Direct implementation of emergency response functions:	NEOC/Operational Committee Chairs/DEOCs
Provide initial situation report within six hours	NEOC/DEOCs

ACTIVITIES TO BE UNDERTAKEN WITHIN SIX HOURS OF ALL CLEAR

PUBLIC INFORMATION	
Ensure broadcast of All Clear via electronic media	Public information and Education Committee/NaDMO secretariat/Media
Ensure special populations aware of all-clear	Welfare committee
Broadcast information to public on SAR, safety precautions, re-entry to evacuated areas	Search and Rescue/NEOC

ACTIVITIES TO BE UNDERTAKEN WITHIN SIX HOURS OF ALL CLEAR

RESTORATION OF ACCESS	
Clearing of runways, airstrips	Airport Authority/Ministry of Works
Inspect ports, harbours and return to normal operations If possible	Ports Authority
Check evacuated areas to see if safe, Clear evacuated areas for re-entry if safe	NEOC/SARE Committees
Announce all-clear for re-entry to evacuated areas	NEOC COORDINATOR

ACTIVITIES TO BE UNDERTAKEN WITHIN SIX HOURS OF ALL CLEAR

UTILITIES	
Coordinate assessment and restoration of Utilities	Utility Companies/Ministry of Works

ACTIVITIES TO BE UNDERTAKEN WITHIN SIX HOURS OF ALL CLEAR

BRIEFING OF PARTNERS	
Brief foreign missions, donors, Grenadian embassies	Ministry of Foreign Affairs
Brief CDERA, ODPEM Trinidad and Tobago	NEOC COORDINATOR

ACTIVITIES TO BE UNDERTAKEN WITHIN TWELVE HOURS OF ALL CLEAR

DAMAGE ASSESSMENT and NEEDS ANALYSIS	
Compile initial report within eight hours of all clear	NDANA Committee
Disseminate initial damage assessment report to PM,	NEOC Director/NDANA
Prepare initial needs list for international community	NDANA Committee/NEOC Director/Red Cross
Approve initial needs list	PM
Disseminate initial needs list	Cabinet/Ministry of foreign affairs
Determine level of casualties and prepare list For NEOC	Police/Search and Rescue Committee/Red Cross
Report on damage to critical facilities	NDANA Committee
Report on capability of medical care facilities	Health Services Committee/Ministry of Health/ Min of Works

ACTIVITIES TO BE UNDERTAKEN WITHIN TWELVE HOURS OF ALL CLEAR

RELIEF SUPPLIES	
Prepare to receive relief supplies, foreign assistance teams	Disaster Relief Management Committee
Activate LSS teams	Disaster Relief Management Committee/LSS Team Leader
Start movement of food & supplies to affected areas	Disaster Relief Management Committee/DEOCs/Red Cross

ACTIVITIES TO BE UNDERTAKEN WITHIN TWELVE HOURS OF ALL CLEAR

ADMINISTRATIVE FUNCTIONS	
Establish labour exchanges	Ministry of Labour
Advise whether suspension of Labour Ordinance necessary	Ministry of Legal Affairs/the Attorney General/Ministry of Labour
Advise on acquisition of private property if necessary	Attorney General

ACTIVITIES TO BE UNDERTAKEN WITHIN TWENTY FOUR – FORTY EIGHT HOURS OF ALL CLEAR

ACTIVITIES	RESPONSIBILITY
SITUATION AND DAMAGE ASSESSMENT	
Full situation report from all emergency committees to NEOC as per standard form	DEOC/NDANA, IDA
Produce situation reports twice per day as per EOC SOPs	NEOC/DEOCs
Prepare full brief for Prime Minister.	NEOC Director
Establish incoming and outgoing information flows as per SOPs.	NEOC/DEOCs

ACTIVITIES TO BE UNDERTAKEN WITHIN TWENTY FOUR TO FORTY-EIGHT HOURS OF ALL CLEAR

ADMINISTRATIVE FUNCTIONS	
Advise on ability of Government offices to continue functioning	Ministry of Works
Brief teams of public officers and despatch to affected areas	Ministry of Labour/Ministry of Works
Declare disaster areas if appropriate	PM

ACTIVITIES TO BE UNDERTAKEN WITHIN TWENTY FOUR TO FORTY EIGHT HOURS OF ALL CLEAR

PUBLIC INFORMATION	
Advise public of available facilities, assistance centres, food distribution centres	NEOC/Welfare committee
Update Web Site	Public information Committee

ACTIVITIES TO BE UNDERTAKEN WITHIN TWENTY FOUR TO FORTY EIGHT HOURS OF ALL CLEAR

MEDICAL AND PUBLIC HEALTH	
Medical personnel to check all shelters	Health Services Committee/Min of Health
Initiate monitoring of environmental and public health parameters	Health Services Committee/Min of Health/Ministry of Environment

ACTIVITIES TO BE UNDERTAKEN WITHIN TWENTY FOUR TO FORTY EIGHT HOURS OF ALL CLEAR

RELIEF SUPPLIES	
Check that Points of entry ready to receive relief supplies, LSS teams in place	Disaster Relief Management Committee/LSS teams
Coordinate all pledges from abroad	NEOC /Ministry of Foreign Affairs
Coordinate and channel relief supplies from abroad (Not Red Cross)	Disaster Relief Management Committee/LSS team
Coordinate, check and channel all incoming medical supplies	Health Services Committee/LSS Team
Identify additional storage space at national level If necessary	NaDMO secretariat Disaster Relief Management Committee
Identify additional storage space at District level	DEOC/ Disaster Relief Management Committee

Establish feeding centres' in affected areas	DEOCs/ Disaster Relief Management Committee/Red Cross
Start registration of affected persons	DEOCs/Red Cross

ACTIVITIES TO BE UNDERTAKEN WITHIN TWENTY FOUR TO FORTY EIGHT HOURS OF ALL CLEAR

INCOMING PERSONNEL	
Ensure facilitation of immigration, customs procedures	Customs/Ministry of Foreign Affairs/NaDMO secretariat

RECOVERY

Activities under the Recovery phase will cover Rehabilitation and Reconstruction and will be as laid out in the National Recovery Plan (to be developed). General response activities and responsibilities, under the National recovery Committee (NRC), are given here.

ACTIVITIES

RESPONSIBILITY

Coordination of recovery programmes for all sectors:

PM

Socio-economic restoration

Ministry of Social Development/Finance

Assessment of longer term needs

Ministry of Finance

Restoration of economic infrastructure

Ministry of Finance

Restoration of utilities, services

Utility Agencies/Ministry of Works

Collection and disposal of debris

Ministry of Environment/Health/Works

Restoration of health systems

Health Services
Committee/Ministry of Health

Monitoring of public/environmental

Health Services
Committee/Ministry of Health

Human Resource Management

Human Resource
Department/Public Service Commission

Restoration of the environment	Ministry of Environment/Agriculture/Health
Relocation and resettlement	Ministry of Housing/Ministry of Social Development
Restoration of housing stock	Ministry of Housing
Restoration of Agriculture/Fisheries	Ministry of Agriculture

RECOVERY Cont'd.

ACTIVITIES

RESPONSIBILITY

Reconstruction of emergency shelters	Ministry of Housing/Works
Restoration of Cultural heritage sites	=====
Reconstruction of schools	Ministries of Works/Education
Review and updating of Building Code	Physical Planning Unit/Ministry of Works/ Association of Professional Engineers

APPENDICES

Documents placed here only for Ease of Reference.
Also in Basic Plan

1. Situation Report Form

APPENDIX ONE

SITUATION REPORT FORM

1. NAME OF EOC GENERATING REPORT:

2. EVENT: (Name of Hurricane, Identification of flood etc.)

3. DATE OF EVENT:

4. SITUATION REPORT NUMBER:

Date: _____ Time _____
:

5. BRIEF DESCRIPTION OF EVENT:

6. AREAS AFFECTED: (Include any major infrastructural damage, loss of roads, bridges, etc.)

7. POPULATION

a) Dead b) Injured C) Missing

8. ACTIONS TAKEN: (Since last Sit Rep)

9. WELFARE / RELIEF ASSESSMENT

a) Health of Population

b).Nos. in Shelters

c).Displaced Population

d) Other