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DEVELOPING A DISASTER PREPAREDNESS AND RISK MANAGEMENT PLAN FOR THE FISHERIES AND AQUACULTURE SECTOR OF SAINT VINCENT AND THE GRENADINES

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Developing a Disaster Preparedness and Risk Management Plan for the Fisheries and Aquaculture Sector of Saint Vincent and the Grenadines

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The information contained in the plan has been adapted from several Disaster Management Plans in the Caribbean and other Small Island Developing States (SIDS) of the Pacific Islands. Over a period of six weeks the plan was created including consultations with key informants and subsequently subjected to internal reviews.

ACRONYMS AND ABBREVIATIONS

CARICOM	Caribbean Community
CBM	Community-Based Disaster Management
CCA	Climate Change Adaptation
CCCCC	Caribbean Community Climate Change Centre
CDEMA	Caribbean Disaster and Emergency Management Agency
CDEMA CHC	Caribbean Disaster and Emergency Management Agency Council on Harmonisation and Coordination
CDEMA CU	Caribbean Disaster and Emergency Management Agency Coordinating Unit
CC	Climate Change
CCRIF	Caribbean Catastrophe Risk Insurance Facility
CDERA	Caribbean Disaster and Emergency Response Agency
CDM	Comprehensive Disaster Management
CNFO	Caribbean Network of Fisherfolk Organizations
COAST	Caribbean Oceans and Aquaculture Sustainability Facility
CSME	Caribbean Single Market and Economy
DM	Disaster Management
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DRRC	Disaster Risk Reduction Centre
ECROP	Eastern Caribbean Regional Oceans Policy
EOC	Emergency Operations Centre
HFA	Hyogo Framework for Action
HVA	Hazard and Vulnerability Assessment
ICT	Information, Communications and Technology
IFRC	International Federation of Red Cross
IPCC	Inter-governmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
FAO	Food and Agriculture Organization of the United Nations
MER	Monitoring, Evaluation and Reporting
mFDRMP	Model Fisheries Disaster and Risk Management Plan
NsDMA	National Disaster Management Agency
NDO	National Disaster Organization
NFADMP	National Fisheries and Aquaculture Disaster Management Plan
NEMA	National Emergency Management Agency
NEMO	National Emergency Management Organization
NEOC	National Emergency Operations Centre
ODM	Office of Disaster Management
OECD DAC	Organisation for Economic Co-operation and Development – Development Assistance
OECS	Organization of Eastern Caribbean States
ODPM	Office of Disaster Preparedness and Management
ODPEM	Office of Disaster Preparedness and Emergency Management
PBA	Programme Based Approach
PPCR	Pilot Programme for Climate Resilience
POA	Programme of Action
PS	Participating State
PVOs	Private Voluntary Organizations
RBM	Results Based Management

RSTS	Relief Supply Tracking System
SIDS	Small Island Developing States
SFDRR	Sendai Framework for Disaster Risk Reduction
SSC	Sector Sub-committee
SSF	Small Scale Fisheries
SRR	Search, Rescue and Retrieval
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations International Strategy for Disaster Reduction
USAID	United States Agency for International Development

DEFINITIONS / GLOSSARY

Climate Change	(a) The Inter-Governmental Panel on Climate Change (IPCC) defines climate change as: "a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. (b) The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods". *Comment: For disaster risk reduction purposes, either of these definitions may be suitable, depending on the context. The UNFCCC definition is the more restricted one as it excludes climate changes attributable to natural causes. The IPCC definition can be paraphrased for popular communications as "A change in the climate that persists for decades or longer, arising from either natural causes or human activity."* (UNISDR, 2009)
Climate Change Adaptation	The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. *Comment: This definition addresses the concerns of climate change and is sourced from the secretariat of the United Nations Framework Convention on Climate Change (UNFCCC). The broader concept of adaptation also applies to non-climatic factors such as soil erosion or surface subsidence. Adaptation can occur in autonomous fashion, for example through market changes, or as a result of intentional adaptation policies and plans. Many disaster risk reduction measures can directly contribute to better adaptation* (UNISDR, 2009).
Climate Variability	Variations in the mean state and other statistics (such as standard deviations, the occurrence of extremes, etc.) of the climate on all temporal and spatial scales beyond that of individual weather events (IPCC, 2007). Departures from long-term averages or trends over seasons or a few years (CARICOM, 2003).
Community	Rural villages and/or urban neighbourhoods, which include shared experiences, locality, culture, language and social interests. These characteristics imply that a community should have some common cohesive social structures, which can be schools, community policies, common rules and regulations and most often a clearly defined geographical area.
Contingency Planning	A management process that analyses specific potential events or emerging situations that might threaten society or the environment and establishes arrangements in advance to enable timely, effective and appropriate responses to such events and situations. *Comment: Contingency planning results in organized and coordinated courses of action with clearly identified institutional roles and resources, information processes, and operational l arrangements for specific actors at times of need.* (UNISDR,2009)
Disaster	A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

	Comment: Disasters are often described as a result of the combination of: the exposure to a hazard; the conditions of vulnerability that are present; and insufficient capacity or measures to reduce or cope with the potential negative consequences. Disaster impacts may include loss of life, injury, disease and other negative effects on human physical, mental and social well-being, together with damage to property, destruction of assets, loss of services, social and economic disruption and environmental degradation. (UNISDR, 2009)
Disaster Risk	The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period. *Comment: The definition of disaster risk reflects the concept of disasters as the outcome of continuously present conditions of risk.* UNISDR, 2009)
Disaster Risk Management	The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster. *Comment: This term is an extension of the more general term "risk management" to address the specific issue of disaster risks. Disaster risk management aims to avoid, lessen or transfer the adverse effects of hazards through activities and measures for prevention, mitigation and preparedness* (UNISDR, 2009)
Disaster Risk Reduction	The concept and practice of reducing disaster risks through systematic efforts to analyze and manage the causal factors of disasters, including through reduced to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events. *Comment: A comprehensive approach to reduce disaster risks is set out in the United Nations-endorsed Hyogo Framework for Action, adopted in 2005, whose expected outcome is "The substantial reduction of disaster losses, in lives and the social, economic and environmental assets of communities and countries." Note that while the term "disaster reduction" is sometimes used, the term "disaster risk reduction" provides a better recognition of the ongoing nature of disaster risks a d the ongoing potential to reduce these risks.* (UNISDR, 2009)
Emergency Management	The organization and management of resources and responsibilities for addressing all aspects of emergencies, in particular preparedness, response and initial recovery steps. *Comment: A crisis or emergency is a threatening condition that requires urgent action. Effective emergency action can avoid the escalation of an event into a disaster. Emergency management involves plans and institutional arrangements to engage and guide the efforts of government, non-government, voluntary and private agencies in comprehensive and coordinated ways to respond to the entire spectrum of emergency needs.* (UNISDR, 2009)
Environmental Degradation	The reduction of the capacity of the environment to meet social and ecological objectives and needs. *Comment: Degradation of the environment can alter the frequency and intensity of natural hazards and increase the vulnerability of communities. The types of human-induced degradation are varied and include land misuse, soil erosion and loss, desertification, wildland fires, loss of biodiversity, deforestation, mangrove destruction, land, water and air pollution, climate*

	change, sea level rise and ozone depletion. (UNISDR, 2009)
Hazard	A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage. *Comment: The hazards of concern to disaster risk reduction as stated in footnote 3 of the Hyogo Framework are "… hazards of natural origin and related environmental and technological hazards and risks." Such hazards arise from a variety of geological, meteorological, hydrological, oceanic, biological, and technological sources, sometimes acting in combination.* (UNISDR, 2009)
Impact (Disaster Risk Context)	A sudden occurrence without prior warning (EMA Manual 1998)
Impact (Results Based Context)	Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended. (OECD DAC)
Livelihood	A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base. (Chambers, 1991). Livelihoods are viewed as systems and provide a way to understand: (1) the assets people draw upon, (2) the strategies they develop to make a living, (3) the context within which a livelihood is developed, and (4) those factors that make a livelihood more or less vulnerable to shocks and stresses. Assets may be tangible, such as food stores and cash savings, as well as trees, land, livestock, tools, and other resources. Assets may also be intangible such as claims one can make for food, work, and assistance as well as access to materials, information, education, health services and employment opportunities. (International Recovery Platform, UNDP and ISDR)
Mitigation	The lessening or limitation of the adverse impacts of hazards and related disasters. Comment: The adverse impacts of hazards often cannot be prevented fully, but their scale or severity can be substantially lessened by various strategies and actions. Mitigation measures encompass engineering techniques and hazard-resistant construction as well as improved environmental policies and public awareness. **It should be noted that in climate change policy, "mitigation" is defined differently, being the term used for the reduction of greenhouse gas emissions that are the source of climate change.** (UNISDR, 2009)
Outcome	The likely or achieved short-term and medium-term effects of an intervention's outputs. (OECD DAC)
Preparedness	The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions. *Comment: Preparedness action is carried out within the context of disaster risk management and aims to build the capacities needed to efficiently manage all types of emergencies and achieve orderly transitions from response through to sustained recovery. The related term "readiness" describes the ability to quickly and appropriately respond when required.* (UNISDR, 2009)

Prevention	The outright avoidance of adverse impacts of hazards and related disasters. *Comment: Prevention (i.e. disaster prevention) expresses the concept and intention to completely avoid potential adverse impacts through action taken in advance. Very often the complete avoidance of losses is not feasible and the task transforms to that of mitigation. Partly for this reason, the terms prevention and mitigation are sometimes used interchangeably in casual use.* (UNISDR, 2009)
Recovery	The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors. *Comment: The recovery task of rehabilitation and reconstruction begins soon after the emergency phase has ended, and should be based on pre-existing strategies and policies that facilitate clear institutional responsibilities for recovery action and enable public participation.* (UNISDR, 2009)
Resilience	The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions. *Comment: Resilience means the ability to "resile from" or "spring back from" a shock. The resilience of a community in respect to potential hazard events is determined by the degree to which the community has the necessary resources and is capable of organizing itself both prior to and during times of need.* (UNISDR, 2009)
Response	The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected. *Comment: Disaster response is predominantly focused on immediate and short -term needs and is sometimes called "disaster relief". The division between this response stage and the subsequent recovery stage is not clear-cut. Some response actions, such as the supply of temporary housing and water supplies, may extend well into the recovery stage.* (UNISDR,2009)
Risk	The combination of the probability of an event and its negative consequences. Comment: This definition closely follows the definition of the ISO/IEC Guide 73. The word "risk" has two distinctive connotations: in popular usage, the emphasis is usually placed on the concept of chance or possibility, such as in "the risk of an accident"; whereas in technical settings the emphasis is usually placed on the consequences, in terms of "potential losses" for some particular cause, place and period. (UNISDR 2009)
Risk Assessment	A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend. *Comment: Risk assessments (and associated risk mapping) include: a review of the technical characteristics of hazards such as their location, intensity, frequency and probability; the analysis of exposure and vulnerability including the physical social, health, economic and environmental dimensions; and the evaluation of the effectiveness of prevailing and alternative coping capacities in respect to likely risk scenarios.* UNISDR, 2009)
Risk Management	The systematic approach and practice of managing uncertainty to minimize potential harm and loss. *Comment: Risk management comprises risk assessment and analysis, and the*

	implementation of strategies and specific actions to control, reduce and transfer risks. It is widely practiced by organizations to minimise risk in investment decisions and to address s operational risks such as those of business disruption, production failure, environmental damage, social impacts and damage from fire and natural hazards. (UNISDR, 2009)
Safety (Safer)	The control of recognized hazards to achieve an acceptable level of risk. The maintenance of an environment that is relatively free from actual or potential hazards that can injure people – Industrial Accident Prevention Association
Sustainable	A system (natural/ecological or human) which has the capacity to endure. The potential for long-term maintenance of well-being, which has ecological, economic, political and cultural dimensions. Sustainability requires the reconciliation of environmental, social equity and economic demands. (World Commission on Environment and Development, 1987)[1]
Sustainable Development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. *Comment: This definition coined by the 1987 Brundtland Commission is very succinct but it leaves unanswered many questions regarding the meaning of the word development and the social, economic and environmental processes involved. Disaster risk is associated with unsustainable elements of development such as environmental degradation, while conversely disaster risk reduction can contribute to the achievement of* sustainable *development, through reduced losses and improved development practices.* (UNISDR, 2009)
Vulnerability	The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard. *Comment: There are many aspects of vulnerability, arising from various physical, social, economic, and environmental factors. This definition identifies vulnerability as a characteristic of the element of interest (community, system or asset) which is independent of its exposure. However, in common use the word is often used more broadly to include the element's exposure.* (UNISDR, 2009)

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EXECUTIVE SUMMARY

The Model Fisheries Disaster and Risk Management Plan (mFDRMP) for the Fisheries and Aquaculture Sector of CRFM Member States has emerged out of a necessity to have a framework that would advise regional partners the measures to be taken in order to be better prepared, prevent and minimize loss, damage, destruction and death arising from hazards such as severe hydro-meteorological events, tsunamis and oil spills. The purpose of the Model Fisheries Disaster and Risk Management Plan is to enhance the Caribbean's ability to manage all disasters at a regional and national level, with special emphasis on the fisheries and aquaculture sector.

The Model Plan sets forth fundamental policies, using international and regional best practices such as the Hyogo Framework for Action 2005-2015 (HFA), the Sendai Framework for Disaster Risk Reduction 2015 – 2030 (SFDRR), The Caribbean Community Common Fisheries Policy (CCCFP) and the Regional Comprehensive Disaster Management Plan 2014-2024 (CDM). The Fisheries Disaster and Risk Management Plan (mFDRMP) framework would be based on four thematic areas; (i) Disaster Prevention and Mitigation (ii) Disaster Preparedness; (iii) Disaster Response (iv) Disaster Rehabilitation and Recovery. It outlines the concept of operations, response and recovery actions and responsibilities required of relevant agencies at the national level of each CRFM Member State.

There are already some adaptation initiatives in existence to help countries become more resilient to natural disasters as well as tools to monitor the health of ecosystems such as coral reefs. The Model Fisheries Disaster and Risk Management Plan is structured into five (5) parts; A Background of the Caribbean Region, the Vulnerability and Adaptability of CRFM States to Natural Disasters and Climate Change impacts, Guiding Principles using International Treaties, Guiding Principles using Regional Treaties, and the Model Disaster and Risk Management Plan.

The first four sections of the plan present the policies and framework of Disaster Risk Management within the Fisheries and Aquaculture Sector of the Caribbean Region. The final part of the presentation provides a framework for the national guiding principles, scope, response and recovery actions, and responsibilities for Disaster Risk Management. A template has been developed in the Appendix for CRFM Member States to adopt and insert the relevant information pertaining to their country.

1. BACKGROUND – THE CARIBBEAN REGION AND NATURAL DISASTERS

The Caribbean region is made up of over 700 islands, cayes, islets and mainland territories located in the Northern Atlantic Ocean (Figueredo and Argote-Freyre, 2008). The region lies southeast of the Gulf of Mexico and the North American mainland, east of Central America and north of the South American continent (Figueredo and Argote-Freyre, 2008).

The region of over 42 million inhabitants is synonymous with "sun, sand and sea" tourism because of its ideal year-round warm tropical weather (Shelter, 2004). Unfortunately, this popular tourist destination is also more vulnerable to the effects of climate change and natural disasters. It is considered the second most hazard prone region in the world (Caribbean Disaster Emergency Management Agency, 2014). With many countries being directly located within the "hurricane belt", islands have been grappling with the effects of an increase in the intensity of tropical storms and hurricanes which have decimated properties and destroyed livelihoods (Tannehill, 1939). According to the Food and Agricultural Organization (FAO) (2016), there have been 39 recorded hurricanes in the Caribbean basin from 2000 – 2009, compared to nine in the 1990s. This shows the impact of climate change on the frequency of hydrometeorological hazards in this region.

Countries like [Commonwealth of] Dominica and Haiti in most recent years are still rebuilding; Tropical Storm Erika hit Dominica in August 2015 killing at least 30 people and leaving hundreds homeless (Stewart, 2014; Balbus *et al.,* 2016). Reports have stated the island cannot afford to get hit again as it has already set the country back twenty years (Balbus *et al.,* 2016). Haiti whose economy was still recovering from the devastating 2010 earthquake, the worst in 200 years (Valecha *et al.,* 2013) was once again thrown into the abyss as Hurricane Matthew wreaked havoc in September 2016, the strongest storm recorded in the Atlantic for the season, taking with it over 500 lives and destroying over 90 per cent of southern Haiti (Martin, Li and Cutter, 2017; Stewart, 2017).

The Caribbean has also had its fair share of other natural disasters including extreme flooding, droughts, landslides, and on the rare but significant occasions catastrophic volcanic eruptions (Commonwealth Marine Economies Programme, 2017). These severe hydrometeorological hazards like droughts which are intensified by anthropogenic warming sometimes become disasters which in turn impact vital sectors that contribute to the country's GDP and overall economic growth and development (Herrera et al., 2018). Natural disaster losses account for approximately US $3billion annually (Caribbean Disaster Emergency Management Agency, 2014). With 60% of the region's population within 2 miles of the coastline and 70% of the economic activity within 2 miles of the coastline, the region must be proactive in its mission on mitigating the effects of natural disasters (IPCC, 2014; Caribbean Disaster Emergency Management Agency, 2014). Therefore, Disaster Preparedness and Risk Management Plans are critical for a more resilient Caribbean region.

2. VULNERABILITY AND ADAPTABILITY TO CLIMATE CHANGE IMPACTS

2.1 CRFM Region

Climate Change has affected countries all over the globe; however Small Island Developing States (SIDS) such as those in the Caribbean are among the countries to be most affected by the impacts of climate change (IPCC, 2014; Reguero *et al.*, 2015). Rising sea levels, higher temperatures, ocean acidification, more intense storms, hurricanes, floods and droughts are already posing a threat to the livelihoods of people who depend on coastal and marine ecosystems (Keller *et al.*, 2009; Commonwealth Marine Economies Programme, 2017).

With a projected sea level rise of 5mm for the next 100 years, low-lying areas would feel the impacts first (IPCC, 2014). A rise in sea level would cause heightened coastal erosion, leading to encroachment of land and property thereby forcing persons to move and seek alternative dwellings (Lin *et al.*, 2014; Toscano, 2015).

Saltwater intrusion into freshwater resources, reduced coastal ecosystem resilience and an increased risk from storm surges is also likely to occur (IPCC, 2014; Klassen and Allen, 2017). Temperature increases in the overall atmosphere would have negative impacts on coral reefs, mangroves sea grass beds and other coastal ecosystems (IPCC, 2014). The rate of coral bleaching continues to increase at unprecedented levels (Douglas, 2003; Done and Jones, 2006). Due to higher CO^2 concentrations, there is a reduction in coral calcification (Doney *et al.*, 2009) resulting in massive loss of reefs because constructions rates would fall below the destruction rates of corals (McNeil *et al.*, 2004). The destruction of coral reef ecosystems would threaten fish nurseries and critical fishing grounds (Williamson, D. *et al.* 2014). The impacts of this are two-fold: The fisher folk who depend on fisheries resources to earn money would find it more difficult to meet the demands of consumers and there will be fewer feeding grounds for reef fish (IPCC, 2014).

Climate Change does not only affect coastal communities; agriculture is also negatively affected by its impacts. With many low lying, small island states already struggling to find arable land, soil salinization exacerbates the problem to provide the required domestic food production (Kurukulasuriya and Rosenthal, 2013; Dasgupta *et al.*, 2014; Dasgupta *et al.*, 2015).

Tourism, an economic contributor and major source of foreign exchange income to many Caribbean nations will also face severe disruption from climate change and sea level rise (IPCC, 2014).

These examples are a clear indicator of the vulnerability of the Caribbean to Climate Change impacts. Therefore, it is important that everyone is aware of the impacts currently being felt in the region and what can potentially happen in the future. Efforts are already underway internationally, regionally and locally to help build more resilient societies. Failure to adapt to the impacts could potentially cost some countries millions in GDP.

As a region, the first step to consider in becoming more resilient to the impacts of climate change and natural disasters is identifying the risks, using climate change and risk information to assist development of our coasts and seas and prepare risk management and disaster preparation plans using a multi-hazard approach.

Some of the initiatives that have already been implemented and which contribute to adaptation, are as follows:

- Improving the Outlook for Caribbean Coral Reefs: A Regional Plan of Action 2013-2018 – a plan aimed to identify key actions that can be taken by coral reef managers, fisheries managers and local communities to improve the resilience of coral reef ecosystems.
- The Network of Coral Reef Early Warning Systems (CREWS) Stations – a network that monitors changes in ocean temperatures and currents to get a better understanding of the impact on coral reefs in the Caribbean.
- The Caribbean Climate Online Risk and Adaptation Tool (CCORAL) – a tool to help countries make climate-smart decisions based on available data for their area.
- Implementation of the Caribbean Disaster Emergency Management Agency's (CDEMA) Climate Change Disaster Risk Strategy (2014-2024) – A plan formulated "to strengthen regional, national and community level capacity for mitigation, management, and coordinated response to natural and technological hazards, and the effects of climate change."
- Implementation of the Climate Change Adaptation and Disaster Risk Management in Fisheries and Aquaculture in the CARICOM Region: Strategy and Action Plan – A strategy and action plan for integrating Disaster Risk Management (DRM), Climate Change Adaption (CCA) and fisheries and aquaculture with a focus on small-scale fisheries (SSF) and small-scale aquaculture.
- Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+) Project – this project addresses fisheries sustainability, habitat degradation, pollution and climate change using an integrated ecosystem approach.
- Organisation of Eastern Caribbean States' Eastern Caribbean Regional Oceans Policy (ECROP), which aims to maintain the benefits and functions of marine ecosystems for dependent communities.
- COAST (Caribbean Ocean Assets Sustainability Facility) – this is expected to provide an opportunity for countries to purchase insurance coverage to protect their fisheries sector from severe inclement weather.
- Pilot Programme for Climate Resilience (PPCR) – this programme provides capital to projects that focus on climate change adaption and resilience building.
- National Adaptation Policies - Several countries in the Caribbean such as Belize, Grenada and Antigua and Barbuda have come up with national climate change adaption policies.

2.1 Situational Analysis – the Saint Vincent and the Grenadines Context

GIS Mapping – A cursory vulnerability assessment (Figure 1).

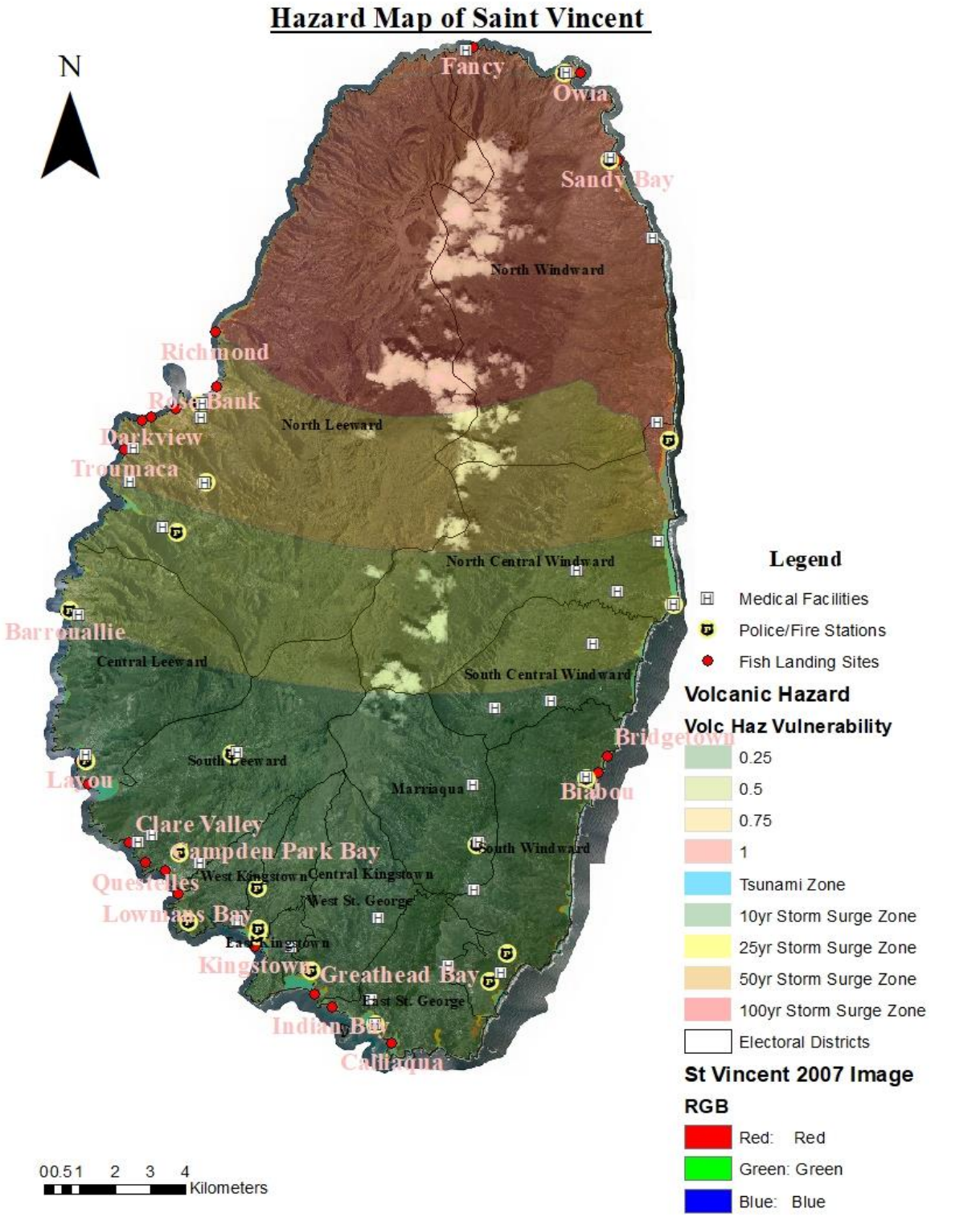

Figure 1: Hazard map of Saint Vincent with coastal and volcanic hazards in relation to essential services and activities (Source: Author)

The Hazard map created only considered mainland due to the unavailability of hazard data for the Grenadines and shows the possible extent of hazard encroachment upon communities, livelihoods, and peoples (Figure 2). It also serves as a cursory vulnerability assessment for the fish landing sites under investigation. Consideration of the situation at the 5 key sites gives a representative picture of the hazards that are to be regarded.

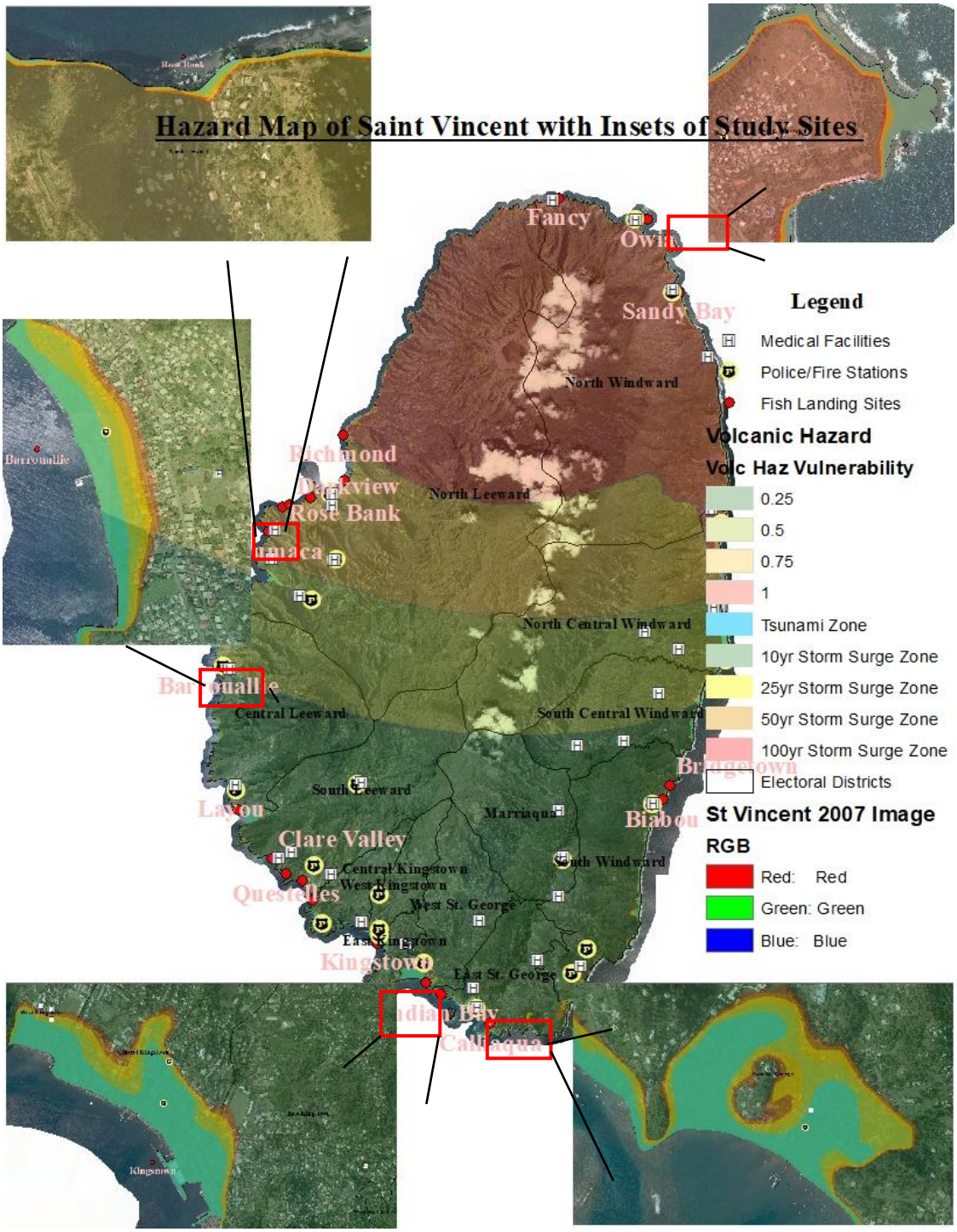

Figure 2: Hazard map with insets of the 5 key sites visited (Source: Author)

Rose Bank

This area is vulnerable to tsunamis and all storm surge activity. Many of the fishers live on the flat coastal land in the valley area and along the beach. While their livelihoods are at risk, so are their lives. Here, vulnerability extends to the volcanic hazard in that the landing site is within the second most at-risk area or the orange zone and can be affected by pyroclastic flows, mudflows, and ejecta. It is also important to note that the nearest medical facility is in Troumaca and the nearest police station is in Chateaubelair. Therefore, the first responders will be the community members which emphasizes the need for informing and educating at the community level, having community disaster response teams and district disaster committees. Many of the fishers also indicated that as soon as a hazard warning is issued and the emergency shelters are opened, they go to the community centre which is further inland for fear of their lives in their dwelling homes.

Barrouallie

The fish landing site and other important facilities like the police station are threatened by tsunamis and storm surge. Also, due to the extensively flat to gently undulating terrain of this coastal community, coastal inundation is also a major threat in times of excess rainfall and storm surge. These hazards are likely to render many roads impassable and invade homes and businesses. On the other hand, being just on the border between the zone with the lowest risk and the third-most at-risk zone makes Barrouallie less susceptible than Rose Bank is to the effects of a volcanic hazard.

Kingstown

Being the urban centre of the island, it is predominated by flat expanses of densely populated and widely urbanised areas. This sets up its context of multi-hazard vulnerability. It is therefore highly susceptible to coastal flooding by the activity of storm surge and tsunamis. The highly urbanised nature of Kingstown and the pervasive and persistent issues of poor drainage and disposal of garbage make urban flooding a recurrent hazard in times of excess rainfall. The threat of La Soufrière volcanic hazard is least in the green zone in which Kingstown is located. However, being in the south of the island, there is the threat of effects from 'Kick 'em Jenny' in more ways than one, being that this submarine volcano is located to our south. Further, many essential services like hospitals or medical facilities, churches, schools, and security services both private and public are located here – within the projected area of encroachment of the coastal hazards. Therefore, the risk in Kingstown is even higher. Notably, the Fisheries Division is located directly on the coast which is also the location of a principal fish landing site. Additionally, most Ministries and specifically that which is responsible for National Security and the Office of the Prime Minister who is the chair of the Emergency Council is also located on the coast in Kingstown on reclaimed land. These buildings do not have protection from the sea which presents another angle to the vulnerability discussion.

Calliaqua

Calliaqua is another highly urbanized area due to the presence of a wide expanse of flat land which is only available in the coastal margins of the island. Therefore, it is highly vulnerable to tsunami and storm surge hazards. The flat land and proximity to the coast make it also susceptible to coastal flooding. Additionally, essential services like the medical facility, the police station, schools and churches are in this hazardous zone. Dwelling houses are also at risk. It is notable that the projected encroachment of coastal hazards onto land is great in Calliaqua, like Kingstown. However, similarly to Kingstown, Calliaqua is in the southern tip of the island – furthest from the threat of the La Soufrière volcano but even closer to that of 'Kick 'em Jenny'.

Owia

Owia is a small community at the northern end of the windward side of the island. Therefore, the biggest threat for those fishers residing in this community is that of the La Soufrière volcano. Owia is located

within the red zone which is at highest risk from volcanic hazards. However, the threat of storm surge and tsunamis also exists albeit comparatively insignificant due to the considerably rapid rise of the land from the coast.

Fisherfolk Survey – Knowledge, Attitudes, Perceptions and Experience

This survey was carried out using Google Forms with an aim to obtain information on the knowledge, attitudes, perceptions and experiences of fisherfolk regarding hazards, risk and disasters in Saint Vincent and the Grenadines.

Five fish landing sites were selected from the mainland and one from the Grenadines for the study. These sites included: Rose Bank and Barrouallie on the leeward side, Kingstown, the urban central centre, Calliaqua and Owia on the windward side and Bequia in the Grenadines.

Thirty questionnaires were administered. Most of fisherfolk were mature in age and experienced as 50% of the fishers were over 50 years of age and approximately 87% were fishermen who have fished for 10 years or more (Figure 3).

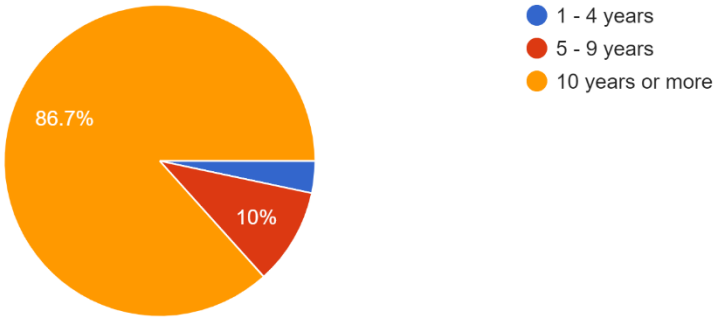

Figure 3: The experience of fisherfolk in years

Most fishers indicated that upon hearing the word ‘disaster’ the immediate thought is concerned with safety and security of life, boats and other fishing equipment and assets since disasters include hurricanes, bad weather and rough seas. Further, when asked if their belief is that disasters can be avoided, 60 percent of fishers responded negatively (Figure 4). Those who responded negatively went on to express that their belief is that these events are natural or acts of God which must take their course. However, those who responded favourably alluded to taking preventative and precautionary measures with forewarning which helps them to avoid disasters.

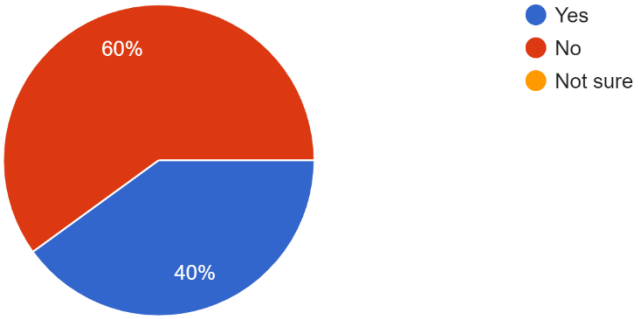

Figure 4: The belief of fishers regarding the possibility of disaster avoidance

An encouraging fact was that more than 75 percent of fishers indicated that they would be willing to take the necessary precautions once advised of best practices to secure livelihood and assets considering an impending hazard. More importantly, 23 percent stated that they have a clear, hazard-specific plan that is followed in emergency situations. This indicates an overall positive attitude among fishers towards preparing for hazards (Figure 5).

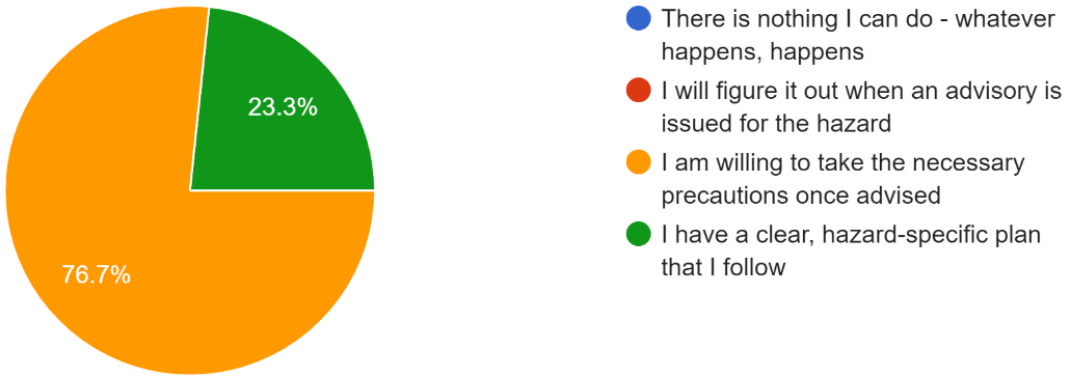

Figure 5: Attitudes of fisherfolk towards preparing for hazards

The top three hazards that fisherfolk believe they are vulnerable to are storms/hurricanes (100%), tsunamis (63.3%) and floods (50%) (Figure 6). However, one hazard unduly overlooked by the researcher was rough/high seas, which was indicated as a primary hazard of concern for many fishers. Interestingly, most fishers (70 percent) did not consider themselves as vulnerable to volcanic hazards although there are two active volcanoes in our immediate vicinity.

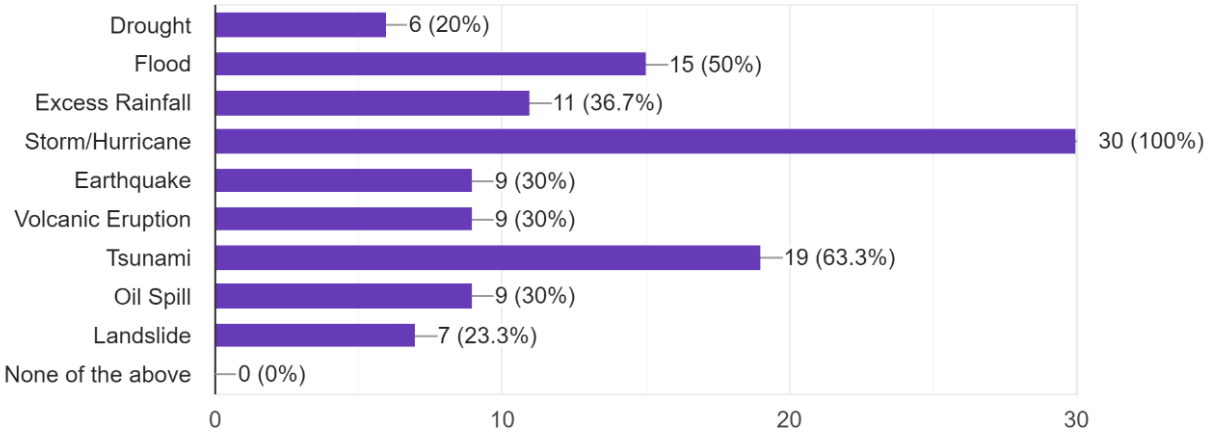

Figure 6: The multi-hazard vulnerability of fishers

Of the FOUR phases of the Disaster Management Cycle, the overwhelming majority of fishers indicated that preparedness is of utmost importance, followed by prevention/mitigation (Figure 7). When asked about the reasoning behind their choice, most fishers said that preparation can lessen impact on their livelihood while the others plainly stated that "an ounce of prevention is better than a pound of cure".

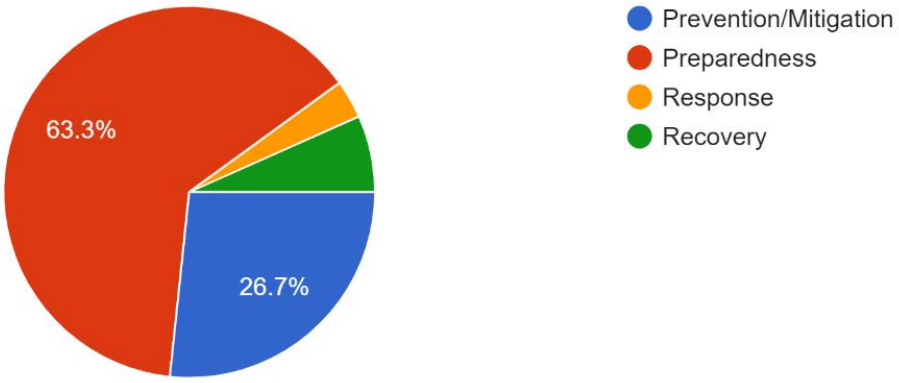

Figure 7: The most important phases of Disaster Management to fishers

Just over half of the sample indicated receipt of hazard preparedness information specific to the fishing industry (Figure 8).

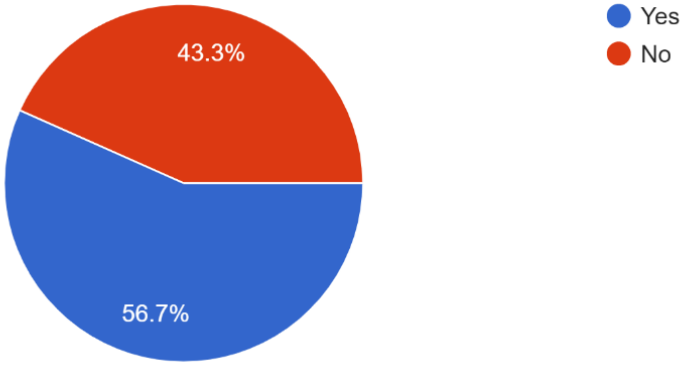

Figure 8: The percentage of fishers that has and has not received hazard preparedness information

The source of the hazard preparedness information is largely from the Fisheries Division (71 percent) and then by NEMO (41 percent) (Figure 9). However, if Fisheries is not currently intimately integrated into the NEMO process, they cannot effectively advise on an area that they have not been advised on by the National body. Therefore, hazard-specific best practices for fishers need to be decided upon by consultations between NEMO and the Fisheries Division following further integration into the disaster management process by NEMO.

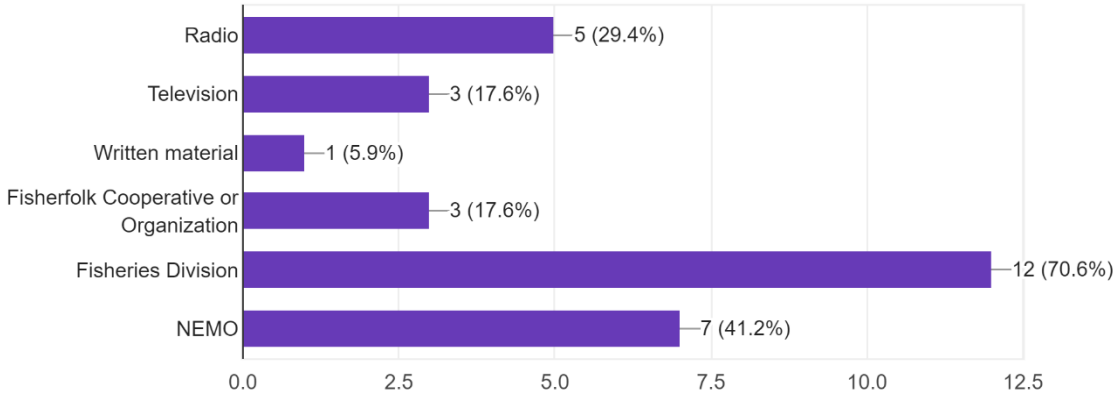

Figure 9: Sources of the hazard preparedness information

Very striking is the fact that almost half of the sample indicated that compulsory hazard risk education which is a preventative or mitigatory measure is most important in disaster risk management followed by emergency simulations or drills training and finally rehabilitating victims which is concerned with interim or short-term restoration to aid long-term recovery efforts (Figure 10). This shows that fisherfolk are interested in being educated on their risk and preparing to respond so that they may be adequately equipped and prepared in emergency situations.

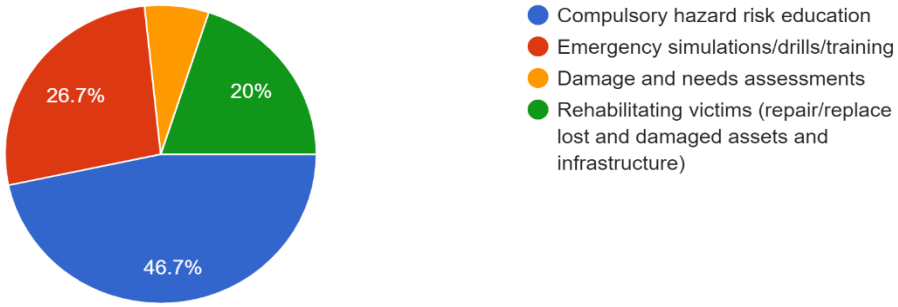

Figure 10: The activities found in the Disaster Management Cycle revealing the most important to fishers

Storms/Hurricanes most often result in losses for fishers as indicated in Figure 11 below. However, some fishers indicated that excess rainfall and floods have also resulted in notable losses for them in the past.

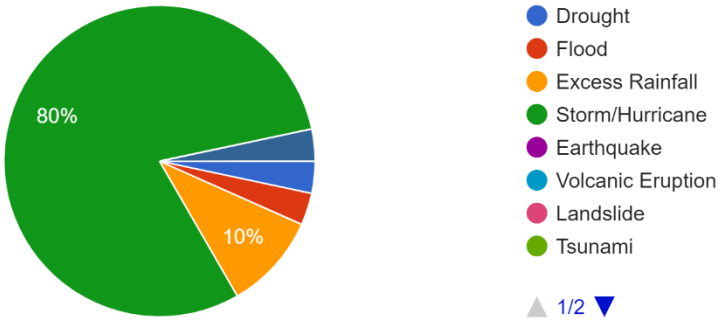

Figure 11: The hazard which causes losses most frequently

These losses over their careers have amounted to over 10,000XCD for more than half of the sample (15 fishers) while 5 fishers have lost between 5,000 and 10,000 and 1,000 and 5,000, which evidences the vulnerability of their livelihood (Figure 12). Fifteen fishers are more than half of the sample because there were only 28 respondents for this question as two fishers chose not to answer.

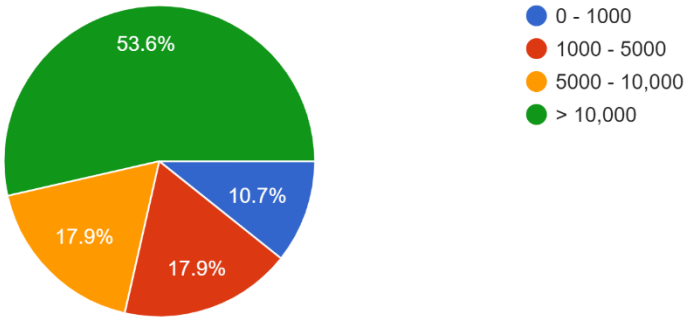

Figure 12: Losses incurred to hazards over their career in Eastern Caribbean dollars

It is very important to note that none of the fishers has boat insurance which means that they do not have shared losses or transferred risk (Figure 13). They indicated that no local companies insure open boats.

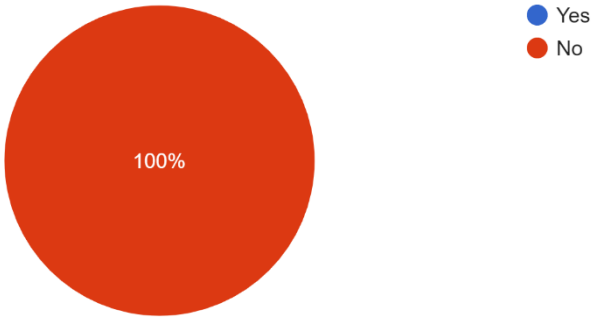

Figure 13: The status of insurance availability in the fishing industry

To compound the reality of an entirely independent livelihood is the fact that almost 80 percent of the fishers are forced to recover on their own if they suffer loss (personal funds). Further, community and other groups to support these vulnerable individuals is non-existent. Many fishers outrightly stated that "in fishing, whatever you do, you're independent – every man for himself" (Figure 14).

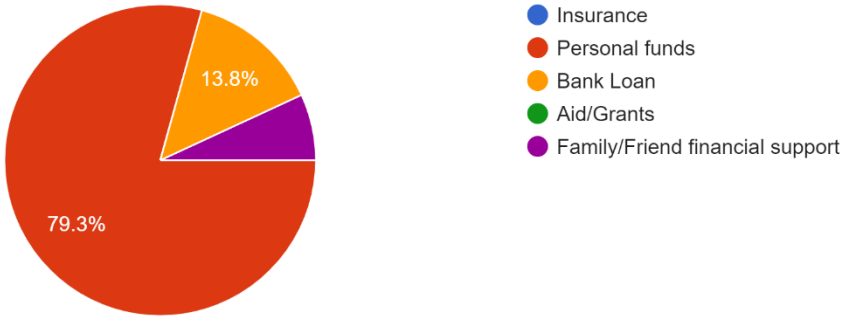

Figure 14: The likely method of recovery of fishers from hazards/disasters

These are the harsh realities of a vulnerable sector and livelihood which support food security in small island developing states like Saint Vincent and the Grenadines. Therefore Fisheries, albeit not currently intimately integrated into the NEMO process, should aim for more inclusion. There should be a representative for the Fisheries Division on the Emergency Council. This person should have a background in hazard/climate-related studies and risk management capabilities so that the knowledge to be imparted by NEMO and then disseminated to fisheries stakeholders would be done adequately and effectively. Furthermore, Fisheries and by extension ALL sectors should have a place on the Public Information and Education Operational Committee because knowledge is power and the people directly at risk should always keep informed.

Additionally, while these events, such as hurricanes and bad weather are natural, their frequency and strength are exacerbated by anthropogenic forcing such global warming through climate change. Further, in and of themselves, they are not disasters but rather hazards. Hazards only become disasters when they cause destruction beyond the capacity of the people/country to recover using their own resource thereby requiring external aid. It is clear that fishers did not make the distinction, but it is imperative that the distinction be made and understood in all spheres. As such, disasters can be avoided by altering the responses to hazards in three ways.

1. Firstly, modifying the event which is difficult or near impossible for natural hazards but still can be achieved by employing hazard-resistant design especially in the event of earthquakes etc.
2. Secondly, modifying the vulnerability can be achieved through community preparedness (public education and awareness campaigns) and adequate and effective early warning mechanisms such as Fisheries Early Warning and Emergency Response (FEWER) application which is currently used by the Fisheries Division of Saint Vincent and the Grenadines.
3. Thirdly, by modifying the loss which is primarily done through risk insurance initiatives like Caribbean Ocean and Aquaculture Sustainability FaciliTy (COAST) which is a risk insurance mechanism that CCRIF SPC has developed for the fisheries sector but can also be achieved through aid from NGOs and other organisations.

Hazard perceptions shape vulnerability so if fishers believe that these events are natural and can hardly be mitigated, they will be inclined to accept their risk and have an acceptance-based approach. However, if fishers believe that hazards are based on natural and human factors and their magnitudes can be guessed based on experience thereby having the opportunity to adapt flexibly, this approach allows for the a more resilient fishing community.

Therefore, a Fisheries Plan must begin with education and awareness. Many fishers are unaware of the full extent of their risks and vulnerabilities and therefore do not perceive danger adequately which inevitably puts them in danger. A distinction must be made between a hazard and a disaster so that these fishers know that the onus is partially on them to mitigate hazard risk and therefore avoid disasters. Certainly, firstly they need to be equipped with the information, then with the resources to build their capacity to cope with these recurrent and worsening hazards especially the hydrometeorological ones. Resources may include but are not limited to; insurance schemes and plans targeted to fisherfolk, access to equipment such as trailers and safe spaces to store/secure their boats in the event of an impending hazard (likely a hurricane) and access to clear, hazard-specific plans with prior planned simulations. Based on interactions with the fisherfolk during the survey, it is clear that the fisherfolk once engaged, will comply with the requirements to reposition themselves for greater resilience to natural and other hazards.

A cursory SWOT assessment was carried out with stakeholders in the National Disaster Risk Management process. From this SWOT, the information below was garnered which shows that the weaknesses of DRM in Saint Vincent and the Grenadines far outweigh the strengths, especially in terms of the enabling environment (Figure 15).

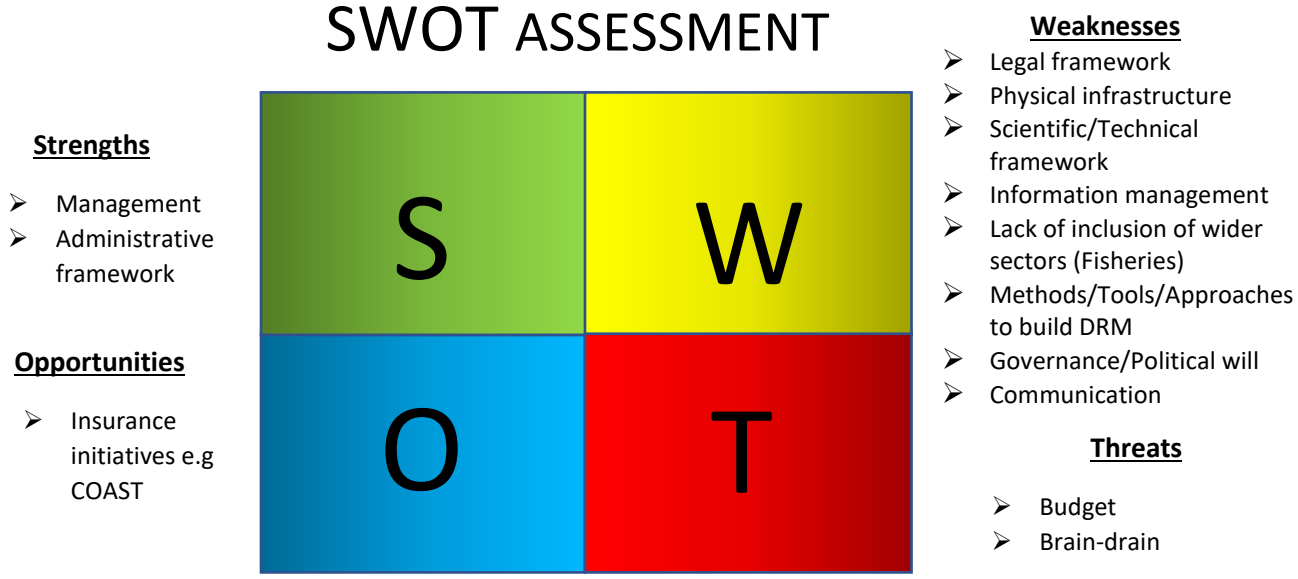

Figure 15: SWOT Assessment

All who engaged in this assessment unanimously agreed that the administrative setup and management of their organisations works for their benefit. These are therefore strengths.

A major weakness that was consistent was that of the physical infrastructure which is grossly lacking and detrimental to the disaster risk management process. Many structures are old and dilapidated and there is little or no equipment available to advance work in these areas. Further, the issue with the legal framework is that of enforcement because some legislation exists and is followed to some extent, but not enforced. Information management is another weakness whereby improper gathering, storage, use and dissemination of information increases risk of those involved because it also segues into communication which is hampered by improper information management. There is lack of technical and trained scientific staff to deal with hazards in the fisheries and aquaculture sector and nation-wide which highlights the threat of brain-drain. However, this is due to a lack of overall resources such as funding to first maintain a well-trained human resource base and to embark upon approaches and methods to reduce risk. Many of the approaches/methods/tools used in DRM are dependent on aid from projects or grants because the budget for DRM in Saint Vincent and the Grenadines is grossly inadequate. It is therefore classified as a threat to the development of resilient nation.

One opportunity which can be capitalised upon is that of fisher insurance schemes like COAST which will improve resilience of the fisheries and aquaculture sector to natural hazards and disasters.

3. GUIDING PRINCIPLES: INTERNATIONAL AGENDAS

Over the last few decades, disasters have increasingly become of global concern as its impacts can be felt from one region to the next. In fact, The International Strategy for Disaster Risk Reduction has estimated that more than 200 million people have been affected by natural disasters over the last two decades. Many countries are already vulnerable to other secondary issues related to demographics, unplanned urbanization, environmental degradation, competition for scarce resources and the impacts of epidemics such as HIV/AIDS (Neiderud, 2015). Hence, disasters can increasingly threaten the world's economy.

3.1 Hyogo Framework for Action 2005-2015

In order to better prepare for this predicament, a World Conference on Disaster Management was held in Kobe, Hyogo, Japan from 18-22 January 2005 and adopted the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters. The "Yokohama Strategy of 1994" provided the basis and guidance on disaster risk reduction. The Hyogo Framework identified the gaps from the Yokohama Strategy and sought to overcome these shortcomings by focussing more on community education and outreach and encouraging pro-active involvement among communities.

The Priorities for Action for the Hyogo Framework 2005-2015 are as follows:
1. Ensure that disaster risk reduction (DRR) is a national and a local priority with a strong institutional basis for implementation.
2. Identify, assess and monitor disaster risks and enhance early warning.
3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels.
4. Reduce the underlying risk factors.
5. Strengthen disaster preparedness for effective response at all levels.

3.2 Sendai Framework for Disaster Risk Reduction 2015-2030

From 14-18 March 2015, the United Nations held its Third World Conference on Disaster Risk Reduction in Sendai, Miyagi, Japan. After a critical assessment of the Hyogo Framework countries sought to adopt a succinct, progressive and action-oriented framework on disaster risk reduction. Thus, emerged the Sendai Framework for Disaster Risk Reduction 2015-2030.

Although the Hyogo Framework for Action was able to achieve a decrease in mortalities for some hazards, there was still a recorded 144 million people who were displaced by disasters between the period 2008-2012 as well as a $1.3 trillion total economic loss over the 10-year period 2005 - 2015.

The Priorities for Action for the Sendai Framework 2015-2030 are as follows:
1. Understanding Disaster Risk.
2. Strengthening disaster risk governance to manage disaster risk.
3. Investing in disaster risk reduction for resilience.
3. Enhancing disaster preparedness for effective response, and to <<Build Back Better>> in recovery, rehabilitation and reconstruction.

3.3 21st Conference of the Parties (COP21) of the United Nations Framework Convention on Climate Change – Paris Climate Agreement

COP21 is the twenty-first session of the Conference of Parties held in Paris from 30 November to 11 December 2015 (United Nations, 2015). This meeting was of great importance because for the first time in more than twenty years of UN negotiations, the Paris Climate Agreement was adopted under the UNFCCC. It is a legally binding and universal agreement on climate with the aim of keeping global warming below 2˚C.

COP21 recognizes that climate change represents an urgent and potentially irreversible threat to human societies and the planet and thus requires the widest possible cooperation by all countries, and their participation in an effective and appropriate international response, with a view to accelerating the reduction of global greenhouse gas emissions. It also recognizes the urgent need to enhance the provision of finance, technology and capacity-building support by developed country Parties, in a predictable manner, to enable enhanced pre-2020 action by developing country Parties, and acknowledges the need to promote universal access to sustainable energy in developing countries, through the enhanced deployment of renewable energy. Further, it emphasizes the enduring benefits of ambitious and early action, including major reductions in the cost of future mitigation and adaptation efforts.

Articles 7, 8, 11 and 12 are synergistic with the aim and scope of this Disaster Preparedness and Risk Management Plan. However, Article 8 is of paramount importance as it states:
"Parties recognize the importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of loss and damage."

Under Article 8, the key areas of cooperation and facilitation to enhance understanding, action and support may include:
(a) Early warning systems;
(b) Emergency preparedness;
(c) Slow onset events;
(d) Events that may involve irreversible and permanent loss and damage;
(e) Comprehensive risk assessment and management;
(f) Risk insurance facilities, climate risk pooling and other insurance solutions;
(g) Non-economic losses;
(h) Resilience of communities, livelihoods and ecosystems.
These are areas incorporated in this plan and as Saint Vincent and the Grenadines is Party to this convention, the state is thereby guided by the content therein.

3.4 Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) were formed at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012 (United Nations Development Programme, 2019). The objective was to produce a set of universal goals that meet the urgent environmental, political and economic challenges facing our world.

The SDGs replace the Millennium Development Goals (MDGs), which started a global effort in 2000 to tackle the indignity of poverty. The SDGs are also an urgent call to shift the world onto a more sustainable path. They are a bold commitment to finish what was started, and tackle some of the more pressing challenges facing the world today. All 17 Goals are linked. Therefore, success in one goal affects success in others. The SDGs coincided with another historic agreement reached in 2015 at the COP21 Paris Climate Conference. Together with the Sendai Framework for Disaster Risk Reduction, signed in Japan in March 2015, these agreements provide a set of common standards and achievable targets to reduce carbon emissions, manage the risks of climate change and natural disasters, and to build back better after a crisis. The SDGs are unique in that they cover issues that affect us all. More importantly, they involve us all to build a more sustainable, safer, more prosperous planet for all humanity. Goal number 11 – Make cities and human settlements inclusive, safe, resilient and sustainable; number 13 – Take urgent action against climate change and its impacts and goal number 14 – Conserve and sustainably use the oceans, seas and marine resources for sustainable development, are all central to the aims and purpose of this plan.

4. GUIDING PRINCIPLES: CARICOM REGIONAL DEVELOPMENT AGENDA

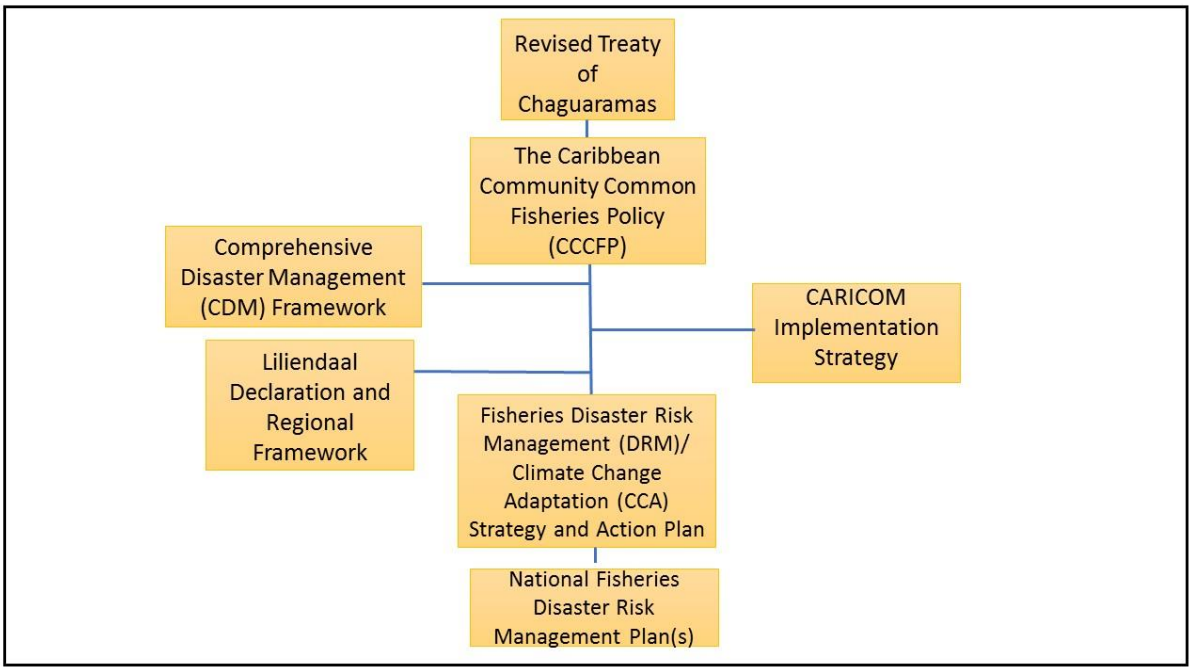

Figure 16: Organizational chart depicting CARICOM content for the formation of the National Fisheries and Aquaculture Disaster Risk Management Plan

4.1 Revised Treaty of Chaguaramas

This Disaster Preparedness and Risk Management Plan has had its foundation laid out in the Revised Treaty of Chaguaramas which was first ratified on 4 July 1973 and later revised on 5 July 2001 by the Caribbean Heads of Government in Nassau, Bahamas. The (Revised) Treaty of Chaguaramas established the Caribbean Community (CARICOM) as well as CARICOM Single Market Economy (CSME).

Through this agreement it was acknowledged that some countries within the region are considered "disadvantaged countries" or more vulnerable to natural disasters. Therefore, some Member States may require special attention as opposed to others in the event of a national emergency. The Caribbean Disaster Emergency Response Agency (CDERA) was one of the institutions formed to treat with these disasters. It was later renamed The Caribbean Disaster Emergency Management Agency (CDEMA).

Article 60 of the (Revised) Treaty of Chaguaramas focuses on the Fisheries Management and Development in the Caribbean. It states:

> *"The Community, in collaboration with competent national, regional and international agencies and organisations, shall promote the development, management and conservation of the fisheries resources in and among the Member States on a sustainable basis."*

Using Articles 62, 63 and 64 of the United Nations Convention on Law of the Sea (1982) each Member State would successfully discharge the goals of the CARICOM by establishing policies, registration and management systems, resource monitoring and assessment as well as harvesting and post-harvesting technologies. The CARICOM has committed to the sustainable development of the fisheries and aquaculture sector in the Caribbean.

4.2 The Caribbean Community Common Fisheries Policy (CCCFP)

Recognising that the Caribbean Sea is a vast maritime network sharing a social and economic bond among Members and non-Members of the Caribbean Community, a Caribbean Community Common Fisheries Policy was established to ensure appropriate measures were taken to conserve, manage, sustainably utilize and develop fisheries resources and related ecosystems so that capacity building and the optimisation of social and economic returns to fisheries could be achieved. The CCCFP also promotes competitive trade and stable market conditions in order to attain the vision of the policy.

The Caribbean Community Common Fisheries Policy has identified nine objectives, including one that focuses on the protection of marine ecosystems from natural disasters. It states: *"To integrate environmental, coastal and marine management considerations into fisheries policy so as to safeguard fisheries and associated ecosystems from anthropogenic threats and to mitigate the impacts of climate change and natural disasters."*

According to Article 7.1, Participating Parties will implement the appropriate measures to ensure total fulfilment of the obligations arising from the Policy and shall refrain from any activities which could jeopardise the attainment of the objectives.

Article 12 further outlines the Conservation and Management of Fisheries Resources. It states: "*The Participating Parties shall formulate, adopt, implement and revise conservation and management measures and, where appropriate, fisheries management and development plans on the basis of the best available information, including traditional knowledge."* Using international standards in fisheries management, participating parties would be better prepared to manage fisheries resources in a sustainable manner.

The Protocol on Climate Change Adaptation and Disaster Risk Management in Fisheries and Aquaculture under the Caribbean Community Common Fisheries Policy was adopted at the Eighth Special Meeting of the Ministerial Council of the Caribbean Regional Fisheries Mechanism held on 11 October 2018 in Bridgetown, Barbados. The goal of the protocol is to build resilience to climate change through comprehensive disaster risk management and sustainable use of marine and aquatic resources and ecosystems (Caribbean Regional Fisheries Mechanism, 2018).

4.3 The Liliendaal Declaration and CARICOM Implementation Plan

In July 2009, the CARICOM Heads of Government met at the Thirteenth Meeting at the Conference in Liliendaal, Guyana to discuss a Regional Framework in order to strengthen the cooperation and coordination of national and regional partners to effectively address the impacts of climate change and disasters in the fisheries and aquaculture sector in the Caribbean.

It was at this meeting that the Liliendaal Declaration was issued. The Declaration sets out 'key climate change related interests and aims of CARICOM Member States'. The Liliendaal Declaration lays the foundation for the CARICOM Implementation Plan (IP) which is entitled "Delivering Transformational change 2011-2021" (Figure 16). The plan incorporates several regional and international instruments concerning climate change and variability.

Figure 17: Implementation Plan for the Regional Framework (Source: CCCCC 2012)

The Regional Framework and IP set out a hierarchy of mechanisms required to make this transformational change from vision to action.

4.4 Regional Comprehensive Disaster Management (CDM) Strategy and Programming Framework 2014-2024

In recent years, there has been a growing concern about the vulnerability and susceptibility of the Caribbean region to properly treat with natural and man-made disasters (Kirton, 2013; Thompson 2015). Global terrorism, cyber-security, health epidemics and climate change have all been making international headlines, giving rise to more risks than simply natural disasters (The World Economic Forum, 2016). The emphasis for current, updated Disaster Management Plans is therefore needed.

At the regional level, the Caribbean Disaster Emergency Agency (CDEMA) has spearheaded the planning and adoption of Comprehensive Disaster Management (CDM). In 2001, in collaboration with stakeholders the CDEMA formulated a five-year strategic framework for the Caribbean. In 2007 on completion of the 2001-2006 CDM Strategy, a revised CDM Strategy was formed for the period 2007-2012. This enhanced CDM Strategy was the basis for developing of the 2014-2024 CDM Strategy.

The Regional Comprehensive Disaster Management (CDM) 2014 – 2024 is a ten-year plan which considers the goals, values and principles from several stakeholder consultations to be achieved within the decade. The purpose of the CDM Strategy 2014- 2024 is "*To strengthen regional, national and community level capacity for mitigation, management and coordinated response to natural and technological hazards, and the effects of climate change.*"

Through its theme "Resilient Caribbean States" it hopes to stimulate community level action and provide a unifying vision in order to guide the implementation of the CDM Strategy over the time frame.

4.5 Disaster Risk Management and Climate Change Adaptation for the Fisheries and Aquaculture Sector of CRFM Member States

The Caribbean Regional Fisheries Mechanism (CRFM) in collaboration with the Food and Agriculture Organization (FAO) have come up with a framework to prepare CRFM Member States for Climate change adaptation and disaster risk management in fisheries and aquaculture in the CARICOM region. They have therefore developed a Regional Strategy and Action Plan; and, a number of programme proposals to give effect to this.

With a common vision of creating a 'regional society and economy resilient to climate change through comprehensive disaster management and sustainable use of aquatic resources', the CRFM has used some guiding principles to ensure that this vision is achieved. Some of these guiding principles include adequate stakeholder consultation and participation, effective coordination so as to minimize any incurred costs of technical, administrative and financial resources and an enabling environment that will allow for the facilitation and adoption of appropriate technologies and practices so that national, regional and international commitments regarding climate change are fulfilled.

Caribbean Oceans and Aquaculture Sustainability facility (COAST).

One of the initiatives that would encourage more countries to become more resilient to climate change and be better prepared for natural disasters is the Caribbean Oceans and Aquaculture Sustainability Facility (COAST).

COAST is an initiative to provide the fisheries sector with insurance coverage against natural disasters. In order to access this insurance facility, they have outlined criteria that countries ought to meet; this includes incorporating Climate-smart food security strategies in the fisheries sector. Climate smart food security strategies in the fisheries sector would use the Code of Conduct for Responsible Fisheries as well

as the Caribbean Community Common Fisheries Policy (CCCFP) as international and regional frameworks for identifying the requirements for country-led initiatives and climate-smart food security strategies in order to fulfil the objectives of COAST.

COAST has four (4) main objectives:

- To increase the insurance penetration and the number of fishers indirectly covered by climate-risk insurance.
- To incentivize countries to implement the Caribbean Community Common Fisheries Policy (CCCFP) through country-led, climate-smart food security strategies and independent third-party verification.
- To encourage countries to develop coordinated disaster management plans for the fisheries sector – inter alia – marine capture catch fisheries, mari- and aquaculture, and bio-tourism and conservation to ensure that the benefits of parametric insurance coverage extend from the national level down to the level of small and medium enterprises, fisherfolk collectives, and individual fishers.
- To crowd-in finance for development to improve coastal resilience and support fisheries good governance and conservation.

5. GUIDING PRINCIPLES: NATIONAL AGENDAS

5.1 National Fisheries and Aquaculture Policy 2018 – 2038

The policy is an update on a draft policy prepared in 2012. The 2012 version was prepared from a review of existing national and regional policies and strategy documents, and the joint effort of a technical panel, thematic working groups and three public consultation meetings organised in Bequia, Union Island and Kingstown. The 2012 draft built upon and used elements from the Strategic Plan for Agricultural Development 2012-2018 released in November 2011, and the Caribbean Community Common Fisheries Policy (CCCFP) approved by the Fourth Meeting of the Ministerial Council of the CRFM in May 2011, and subsequently approved as Community Policy by CARICOM during the Fifty-first Special meeting of COTED-Agriculture in October 2014 (Government of Saint Vincent and the Grenadines, 2018).

The 2012 draft has since been reviewed and updated by the agencies comprising the national IUU Task Force during September 2017 to June 2018, taking into account new emerging needs, particularly, climate change, Marine Protected Areas (MPAs) and the prevention, deterrence and elimination of Illegal, Unreported and Unregulated (IUU) fishing. The present, expanded document was then finalized following industry stakeholder consultations in June 2018.

The policy can be presented as seven specific goals:

1. Reduce risks to the sector, build climate resilience, and increase competitiveness for international trade, production of under-utilised species and value-added products;
2. Ensure sustainable use and protection of the natural environment and biodiversity;
3. Strengthen institutions and enabling environment for integrated and responsible fisheries and aquaculture development and management, pursuant to agreed international standards;
4. Enhance viability of communities and rural areas;
5. Optimise contribution to food and nutrition security;
6. Optimise contribution to and cooperation with regional and international organisations with fisheries management responsibilities; and
7. Ensure gender equality and youth involvement.

Goal 1 is synonymous with the purpose of this plan and fundamental to the sustainability of fisheries and aquaculture in Saint Vincent and the Grenadines.

5.2 National Economic and Social Development Plan 2013 – 2025

The National Economic and Social Development Plan articulates bold and transformative long-term strategies for national development. It promotes a vision for improved quality of life for all Vincentians through balanced, comprehensive sustainable development (Government of Saint Vincent and the Grenadines, 2013). The Plan comprises five strategic goals as outlined below:

1. Reengineering economic growth;
2. Enabling enhanced human and social development;
3. Promoting good governance, and increasing the effectiveness of public administration;
4. Improving physical infrastructure, preserving the environment, and building resilience to climate change; and
5. Building national pride, identity and culture.

Strategic goal number 4 is most relevant to the aim of this plan and is underpinned by two very pertinent strategic objectives: 1. To enhance the capability of St. Vincent and the Grenadines to prepare effectively for, respond to and mitigate disasters and 2. To reduce the adverse impacts of climate change.

5.3 National Disaster Plan 2005

The Government of Saint Vincent and the Grenadines in 2014 drafted the Comprehensive Disaster Management Policy through collaboration with national, regional and international partners. This policy albeit not enforced is followed in part. However, since it is not currently legislated, the National Disaster Plan of 2005 guides the disaster risk management process in Saint Vincent and the Grenadines. The National Disaster Plan is up for review in 2020 but was designed to enhance the capacity of the government to prepare for, respond to, and recover from, disasters. The Emergency Powers Act 45 of 1970 and the National Disaster (Relief) Act 1947 provide the legislative authority for implementation of the Plan.

The plan outlines basic procedures for returning the country to a state of normalcy as quickly as possible following a disaster. It includes; the establishment of a National Emergency Operations Center (NEOC), the structure of the various emergency committees, the roles and functions of Government Ministries and key departments, public utilities, statutory bodies, non-governmental and other voluntary organisations (National Emergency Management Organisation, 2005).

The objectives of the plan are:
1. Prevent loss of life and property in the event of a disaster;
2. Establish policies and procedures to guide response, relief and rehabilitation measures;
3. Provide guidance to personnel of the NEMO in emergency operations management.

As the main instrument for advising disaster risk management in Saint Vincent and the Grenadines, the National Disaster Plan largely informs this plan.

6. NATIONAL FISHERIES AND AQUACULTURE SECTOR DISASTER AND RISK MANAGEMENT PLAN

6.1 Scope and Purpose

The Fisheries Disaster and Risk Management Plan is based on previous disaster management plans, using best practices from the International and Regional treaties. It is to be used as a framework for CRFM Member States within the Fisheries and Aquaculture sector to ensure that national disaster risk management in the fisheries sector is executed in a coordinated and collective manner to prepare, prevent and minimize losses, damage, destruction and death arising from hazards caused by severe hydro-meteorological events. The framework for the Fisheries Disaster and Risk Management Plan (FDRMP) should focus on four thematic areas; (i) Disaster Prevention and Mitigation (ii) Disaster Preparedness; (iii) Disaster Response (iv) Disaster Rehabilitation and Recovery.

The purpose of the Fisheries Disaster and Risk Management Plan (FDRMP) is to enhance the Caribbean's preparedness to manage all disasters that may occur. It provides the basis for:

- Articulating the Guiding Principles of the International and Regional Policy Frameworks to meet best practices
- The strategic approach to Fisheries Disaster Risk Management (FDRM) and Climate Change Adaptation (CCA) in CRFM Member States
- The roles, responsibilities, governance and accountability arrangements of each of the National Disaster Management Authorities in each CRFM Member State.

6.2 Expected Outcome

The effective cooperation and collaboration among CFRM Member States to substantially reduce the risk of disasters which result in losses in lives and livelihoods in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries within the CRFM Member States.

6.3 Strategic Goals and Objectives

The goal of the Fisheries Disaster and Risk Management Plan (FDRMP) is to establish, within the context of the Revised Treaty and Comprehensive Disaster Management appropriate measures for the conservation, management and sustainable utilisation of fisheries resources especially in the event of a natural disaster. Being guided by the Objectives of the Caribbean Community Common Fisheries Policy (CCCFP), the Fisheries Disaster and Risk Management Plan (FDPRMP) seeks to accomplish the following:

I. The integration of disaster risk reduction into sustainable development policies and fisheries legislation.
II. The development and strengthening of institutions, mechanisms and capacities to build resilience to hazards.
III. The systematic incorporation of risk reduction approaches into the implementation of emergency preparedness, response and recovery programmes.
IV. Improve the welfare and livelihoods of fishers and fishing communities;
V. Integrate environmental, coastal and marine management considerations into fisheries policy to safeguard fisheries and associated ecosystems from anthropogenic threats and to mitigate the impacts of climate change and natural disasters.

6.4 Guiding Principles

The coasts of Saint Vincent and the Grenadines are most likely to feel the impacts first when a disaster strikes making fishing communities most vulnerable to these impacts. Hence it is the primary responsibility of the State to prevent and reduce disaster risk, through cooperation of state, private and

civil societies. This plan is to be adopted through the appropriate national legislation where the procedures are established to address these events, as well as where the preventative measures are described, which result in the protection of the natural resources and the maintenance of optimal conditions of coasts and the rest of the environment presently and for posterity.

The Caribbean Community Common Fisheries Policy (CCCFP) has outlined fundamental principles, some of which should also be used for this management plan. They are as follows:

I. use of the best available scientific information in fisheries management decision-making, taking into consideration traditional knowledge concerning the resources and their habitats as well as environmental, economic and social factors;
II. principles of good governance, accountability and transparency, including the equitable allocation of rights, obligations, responsibilities and benefits.

6.5 Thematic Areas

The Fisheries Disaster and Risk Management Plan (FDRMP) should focus on four thematic areas; (i) Disaster Prevention and Mitigation (ii) Disaster Preparedness; (iii) Disaster Response (iv) Disaster Rehabilitation and Recovery (Figure 17).

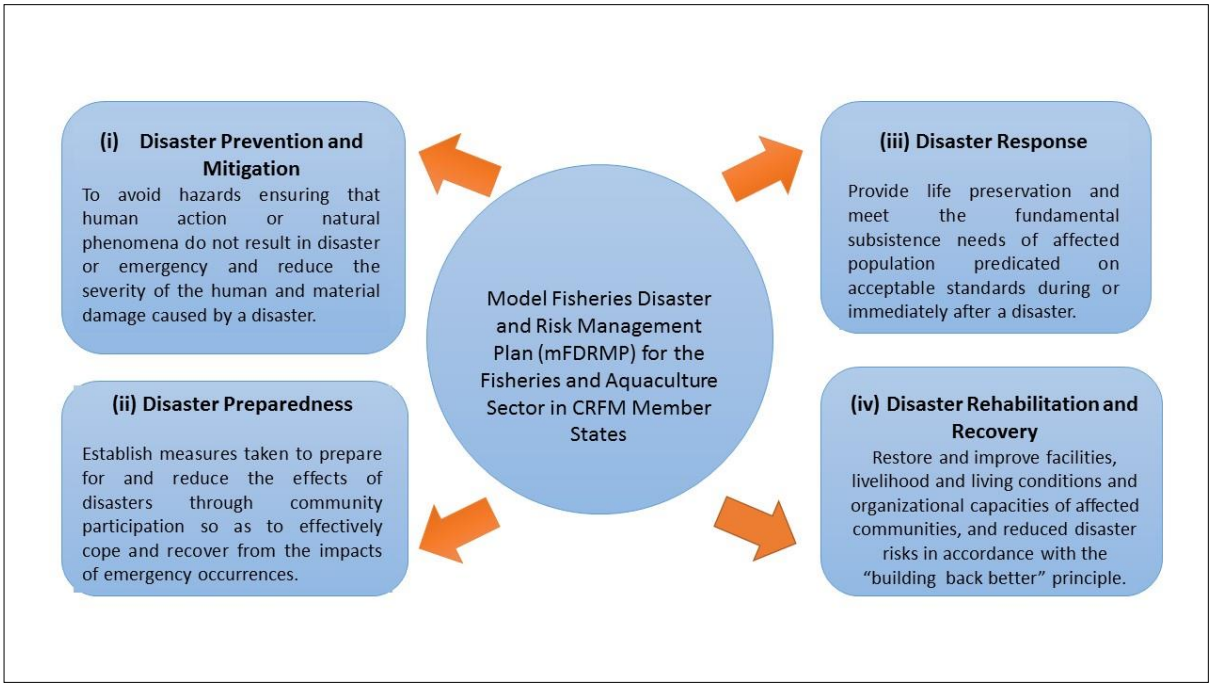

Figure 18: Diagrammatic representation and description of thematic areas of Disaster and Risk Management Plan for Fisheries and Aquaculture in CRFM Member States

Thematic Area 1: Disaster Prevention and Mitigation
Overall responsible agency: **NEMO**
Table 1: Lead Agencies of Disaster Prevention and Mitigation

Outcome	Lead Agency(ies)
1. Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) mainstreamed and integrated in national, sectoral, regional and local development policies, plans and budget	**NEMO, Office of the Prime Minister, Ministry of National Security, Ministry of Finance, Economic Planning, Social Development and Information Technology**
2. Disaster Risk Reduction (DRR) and Climate Change Adaptation-sensitive (CCA) environmental management	**Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour, Ministry of Finance, Economic Planning, Social Development and Information Technology**
3. Increased resiliency and infrastructure systems	**NEMO, Ministry of Transport, Works, Urban Development, Local Government**
4. Enhanced and effective community-based scientific Disaster Risk Reduction (DRR) and Climate Change Assessment, mapping, analysis and monitoring	**NEMO, SVG Red Cross Society**
5. Fishing communities' access to effective and applicable disaster risk financing and insurance	**Fisheries Division (Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour)**
6. End to end (monitoring and response), forecasting and early warning systems are established and/or improved	**NEMO, SVG Meteorological Office, Seismic Research Unit**

Thematic Area 2: Disaster Preparedness
Overall responsible agency: **NEMO**
Table 2: Lead Agencies of Disaster Preparedness

Outcome	Lead Agency(ies)
7. Increased level of awareness and enhanced capacity of the fishing community to the threats and impacts of all hazards	**Fisheries Division (Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour)**
8. Communities are equipped with necessary skills and capability to cope with the impacts of disasters	**NEMO, SVG Red Cross Society**
9. Increased Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) capacity of Local Offices and Operation Centres at all levels	**NEMO**
10. Developed and implemented comprehensive national and local preparedness and response policies, plans, and systems	**NEMO, Office of the Prime Minister, Ministry of National Security**
11. Strengthened partnership and coordination among all key fisheries and aquaculture sector players and stakeholders	**Fisheries Division (Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour)**

Thematic Area 3: Disaster Response
Overall responsible agency: **NEMO**
Table 3: Lead Agencies of Disaster Response

Outcome	Lead Agency(ies)
12. Well-established disaster response operations	**NEMO, SVG Red Cross Society, Police Department, Fire Department, Coast Guard**
13. Adequate and prompt assessment of needs and damages at all levels	**NEMO (Damage and Needs Assessment Sub-committee)**
14. Integrated and coordinated Search, Rescue and Retrieval (SRR) capacity	**NEMO, SVG Red Cross Society, Police Department, Fire Department, Coast Guard**
15. Safe and timely evacuation of affected communities	**NEMO, Ministry of National Mobilization, Social Development, Family, Gender Affairs, Persons with Disabilities & Youth, Ministry of Transport, Works, Urban Development, Local Government, Police & Fire Departments, District Disaster Committees, Voluntary Organizations (e.g. SVG Red Cross Society, Boy Scouts, Jaycees, Lions, Youth Council, Rotarians etc.)**
16. Temporary shelter needs adequately addressed	**NEMO (Shelter and Shelter Management Sub-committee), Voluntary Organizations, Ministry of Health, Wellness and the Environment, Ministry of National Mobilization, Social Development, Family, Gender Affairs, Persons with Disabilities & Youth, Ministry of Transport, Works, Urban Development, Local Government**
17. Basic social services provided to affected population (whether inside or outside evacuation centres)	**NEMO, Ministry of National Mobilization, Social Development, Family, Gender Affairs, Persons with Disabilities & Youth, Ministry of Transport, Works, Urban Development, Local Government**
18. Psychosocial needs of directly and indirectly affected population addressed	**NEMO, Ministry of Health, Wellness and the Environment, Ministry of National Mobilization, Social Development, Family, Gender Affairs, Persons with Disabilities & Youth, Voluntary Organizations (SVG Red Cross, Christian Council)**
19. Coordinated, integrated system for early recovery implemented	**NEMO (Rehabilitation and Reconstruction Sub-committee), Ministry of Transport, Works, Urban Development, Local Government**

Thematic Area 4: Disaster Rehabilitation and Recovery
Overall responsible agency: **NEMO**
Table 4: Lead Agencies of Disaster Rehabilitation and Recovery

Outcome	Lead Agency(ies)
20. Damages, losses and needs assessed	**NEMO (Damage and Needs Assessment Sub-committee)**
21. Economic activities restored, and if possible strengthened or expanded	**Office of the Prime Minister, Ministry of Foreign Affairs, Commerce and Trade, Utility Companies**
22. Houses/infrastructure rebuilt or repaired to be more resilient to hazard events; safer sites for fisheries infrastructure	**NEMO, Ministry of Transport, Works, Urban Development, Local Government, Ministry of Housing, Informal Human Settlements, Land and Surveys, and Physical Planning, Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour**
23. Disaster and climate change-resilient infrastructure constructed/reconstructed	**NEMO, Ministry of Transport, Works, Urban Development, Local Government, Ministry of Housing, Informal Human Settlements, Land and Surveys, and Physical Planning, Ministry of Finance, Economic Planning, Social Development and Information Technology**
24. A psychologically sound, safe and secure citizenry that is protected from the effects of disasters is able to restore to normal functioning after each disaster	**NEMO, Ministry of Health, Wellness and the Environment, Ministry of National Mobilization, Social Development, Family, Gender Affairs, Persons with Disabilities & Youth, Ministry of Education, Reconciliation, Ecclesiastical Affairs and Information, Voluntary Organizations (SVG Red Cross, Christian Council)**

These thematic areas were populated with guidance from the National Disaster Plan of 2005 and the Government of Saint Vincent and the Grenadines website.

DISASTER PREPAREDNESS AND RISK MANAGEMENT PLAN FOR THE FISHERIES AND AQUACULTURE SECTOR OF SAINT VINCENT AND THE GRENADINES

Draft for stakeholder consultation

EXECUTIVE SUMMARY

The National Fisheries and Aquaculture Disaster Management Plan of Saint Vincent and the Grenadines 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 Fisheries and Aquaculture Disaster Management Plan (NFADMP) is to enhance Saint Vincent and the Grenadines' ability to manage all disasters using a comprehensive national approach. This plan emphasizes that the purpose of assistance from Government of Saint Vincent and the Grenadines 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 sets forth fundamental polices, 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 fishing communities throughout the country that have been affected by a disaster. The general direction and control of the National Emergency Management Organization (NEMO) resides with the Honourable Prime Minister. The NFADMP also organizes the types of national responses that are available according to the National Emergency Management Organization (NEMO) which comprises of the Cabinet at the helm, then the National Emergency Council (NEC) which is chaired by the Prime Minister and is composed of Ministers, Permanent Secretaries, District Representatives and key ex-officio members of government agencies, corporations, businesses and non-governmental organisations. The Director of the NEMO Secretariat serves as Secretary to the National Emergency Council. Third in command is the NEMO Secretariat, then the National Emergency Executive Committee, the National Emergency Operations Centre (NEOC) with ten (10) Operational Committees and District Disaster Management Committees. The ten Operational Committees are as follows: Public Information and Education, Damage and Needs Assessment, Transport and Road Clearance, Emergency Supplies, Shelters and Shelter Management, Health Services, Emergency Communications, Security and Search and Rescue, Voluntary Services and Rehabilitation and Reconstruction. Local disaster committees have been organized to operate at the community level and disaster management activities are conducted in accordance with the National Disaster Plan of 2005.

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 NFADMP 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 NFADMP changes and revisions, and overview of a disaster operation.

INTRODUCTION

Due to its multi-hazard vulnerability, limited capacity and resources, issues of poverty and institutional weakness, and fragile ecosystems and economy, St. Vincent and Grenadines should engage in comprehensive disaster management efforts. With an aim to promote resilience and country risk reduction, this approach incorporates all phases of the disaster management cycle (prevention/mitigation, preparedness, response and recovery), and is done by all peoples – public and private sectors, all segments of civil society and the general population. Most importantly in comprehensive disaster management there is a shift from a reactive approach by a singular disaster office to an anticipatory approach with shared responsibility and an aim to reduce vulnerability across all sectors and empower sector partners to take responsibility in leading dissemination and advocacy within their sector.

The development of a National Fisheries and Aquaculture Disaster Management Plan will guide the persons within the fisheries sector 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 fisheries and aquaculture sector's responsibility to address these hazards. For this to be meaningful the underlying causes of the country's vulnerability must be identified, and the necessary measures taken. 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. These Emergency Services include: Health Service, Fire and Rescue services, Police Service, 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 National Emergency Management Organization (NEMO). The National Disaster Plan dated 2005 stipulated that the National Emergency Operations Centre has authority to task line agencies to perform critical and life-saving operations. 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 such as emergency drills/training for response teams like search and rescue because one must prepare to respond
2. Implementation of a national public awareness and education programme (schools, communities, private and public sectors)
3. The development of a comprehensive disaster preparedness training programme in all levels of disaster management
4. The monitoring of relief supplies
5. Regular developing, testing and improving of emergency plans and procedures

5. Detailing of evacuation plans, identification of Emergency Shelters and personnel
6. Full examination of relevant laws, enforcement, implementation and revision/updating/amending
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. Emergency Supplies/Relief
    e. Shelter and Shelter Management
    f. Health Services
    8. Emergency Communications
    h. Security and Search and Rescue
    i. Voluntary Services
    j. Rehabilitation and Reconstruction

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 NEMO and the Fisheries Department to ensure that directives issued by the government of Saint Vincent and the Grenadines are carried out with maximum efficiency and communicated to relevant stakeholders adequately.

The Response Stage includes:
Alert and Warning Stage
a) Short term forecasting, and warning and alerting measures e.g. Early Warning Systems
b) Issuing of Advisories and updates Response Stage
c) 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 Management Organization in order to utilize modern technological tools including the Common Alerting Protocol (CAP) Application. Provisions are made for the establishment of 10 Operational Committees, 13 District Emergency Committees, and the other Community Agencies.

The Post-Disaster/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 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
8. Risk Assessment, Mitigation/Prevention

The achievement of a resilient nation will be realized when the people of the country are empowered to recognize their role and take up their responsibility in the process of risk reduction.

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 fisheries-related sectors in 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 Caribbean Regional Fisheries Mechanism (CRFM) and the National Emergency Management Organization (NEMO), 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 fishing community levels.

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Ms. Michelle Forbes – Director, NEMO
Ms. Hulda Peters – Training Officer, NEMO

SIGNATURE PAGE

The Saint Vincent and the Grenadines National Fisheries and Aquaculture Disaster Management Plan has been approved by

……...
The Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour.

On ……..
Date:

…… ……..
Hon. Saboto Caesar Date
Minister of Agriculture, Forestry, Fisheries,
Rural Transformation, Industry and Labour

RECORD OF REVIEWS AND UPDATES

Serial	Date	Amendment/Update	Signature

I. PREFACE TO 2019 PLAN

The National Fisheries and Aquaculture Disaster Management Plan was developed during 2-month internship period under the Caribbean Regional Fisheries Mechanism (CRFM) and facilitated jointly by the Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC), the National Emergency Management Organization (NEMO) and the Fisheries Division of Saint Vincent and the Grenadines.

The process used was a consultative one where a technical team discussed/consulted with various planning and response agencies. The following agencies participated in discussions about the plan:

1. Caribbean Regional Fisheries Mechanism (CRFM)
2. Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour
3. National Emergency Management Organization (NEMO)
4. Saint Vincent and the Grenadines Fisheries Division

In the future, the updated version of the plan will be presented to a wide range of stakeholders.

This National Fisheries and Aquaculture Disaster Management Plan is based on previous plans and good practices both in the Caribbean and other Small Island Developing States (SIDS) in the Pacific. This plan is focused on the Fisheries and Aquaculture sector and is to be used solely in Saint Vincent and the Grenadines as the primary document for disaster management – including disaster planning and response in the fisheries and aquaculture sector.

October 12, 2019.

II. 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 Saint Vincent and the Grenadines. 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 Fisheries and Aquaculture Disaster Management Plan (NFADMP) is to enhance Saint Vincent and the Grenadines' ability to manage all disasters the fisheries sector may face, using a comprehensive national approach.

The NFADMP will outline the prevention, mitigation, preparedness, response and recovery activities, before, during and after an emergency associated with impacts from natural/man-made hazards or technological incidents in Saint Vincent and the Grenadines. It provides operational concepts relating to the various emergency situations, describes the overall responsibilities of the National Emergency Management Organization (NEMO) and the role of the relevant sectors in assisting in minimizing loss of life, destruction to property and human suffering within the fisheries sector.

The National Fisheries and Aquaculture Disaster Management Plan documents the Government of Saint Vincent and the Grenadines' commitment to Comprehensive Disaster Management within the fisheries sector 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; in Saint Vincent and the Grenadines. The scope of the Plan is as hereunder:

a. The NFADMP classifies small, medium, and large-scale natural and manmade disasters in the state of Saint Vincent and the Grenadines 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.

III. MISSION STATEMENT, AUTHROITY AND CRITICAL ASSUMPTIONS

1. MISSION

The state of Saint Vincent and the Grenadines has developed a culture of disaster management among all sectors of the society.

2. AUTHORITY

The National Fisheries and Aquaculture Disaster Management Plan (NFADMP) is developed under the authority of the Ministry of National Security of the Government of Saint Vincent and the Grenadines.

There are statutes that provide guidance in the mitigation, preparedness, response and recovery efforts in Saint Vincent and the Grenadines. These are found in the following regulations: National Disaster (Relief) Act 1947, Emergency Powers Act 45 of 1970, National Disaster Plan 2005, and the Comprehensive Disaster Management Policy 2014.

3. CRICTICAL 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 copious 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 eruptions 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 NEMO, SVG Red Cross Society, CDEMA 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 Fisheries and Aquaculture Disaster Management Plan is a living document that 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 of the structure of the plan.

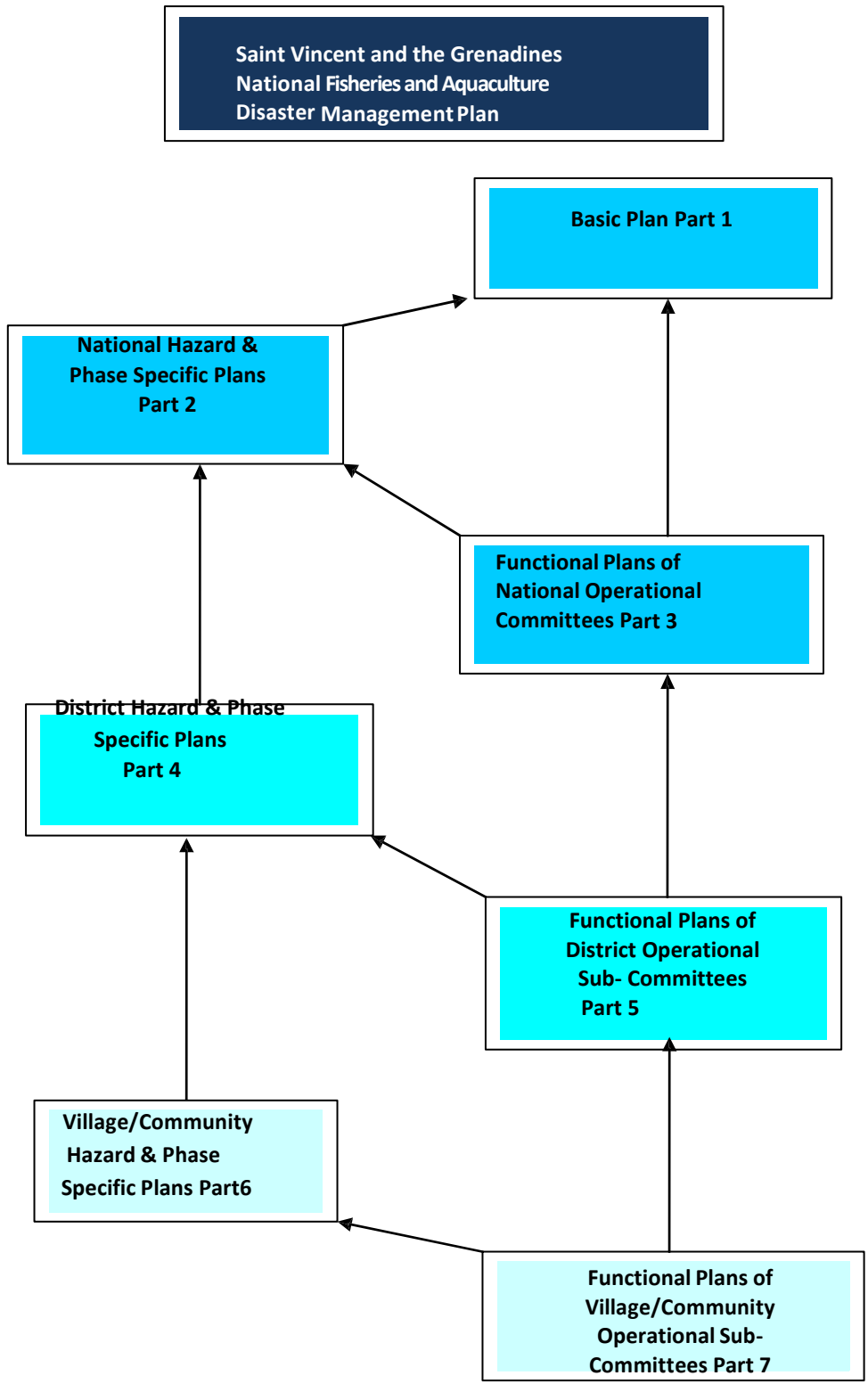


Figure 19: National Structure of the Fisheries and Aquaculture Disaster Preparedness and Risk Management Plan

IV. COUNTRY OVERVIEW

Saint Vincent and the Grenadines is in the southern section of the volcanic island arc of the Lesser Antilles. As part of the Windward Islands, it is found at 12˚98' north of the equator and 61˚28' west of the Prime Meridian. Saint Vincent and the Grenadines is located west of Barbados, south of Saint Lucia and north of Grenada. The archipelagic state consists of 32 islands and cays. The total land area is 389 square kilometers (344.5 square kilometers is mainland) and the islands are bordered on the East by the Atlantic Ocean and on the West by the Caribbean Sea.

The mainland is separated into five parishes namely; Charlotte, St. George, St. Andrew, St. Michael and St. Phillip, 13 electoral districts which constitute district disaster committees, and many smaller communities which constitute community response teams and groups.

Saint Vincent is volcanic in origin and has a mountainous terrain with a central north-south trending volcanic mountain range. The mountainous interior is heavily dissected by rivers which flow to the comparatively gentle terrain increasing flash-flood susceptibility. The island enjoys a humid tropical climate with mean temperatures ranging from 25.6 – 27.3˚C varying in space with elevation. The diurnal range is around 3 – 5 degrees Celsius and widest in the dry season due to cool nights. Annual rainfall also varies with elevation from 1700 mm in coastal areas to approximately 7000 mm in the mountainous interior of mainland. There are two distinct seasons – wet and dry, with 70% of the total annual rainfall being recorded in the rainy season. This season occurs from June – November and is also referred to as the Atlantic Hurricane season where hydrometeorological hazards like tropical disturbances are common. The rainfall is significantly less from December – May which marks the dry season.

Based on preliminary data from the 2012 'redo' Population and Housing census, the population was estimated at 109,188. Due to the terrain pattern of the country, 85% of the population is settled on a narrow coastal strip less than 5 m above sea level and less than 5 km from the high-water mark. The three census divisions located in the southerly section of the mainland namely Kingstown, Kingstown suburbs and Calliaqua, and dominated by generally flat to gently undulating terrain account for 46% of the total population. Further, the 2007/8 Country Poverty Assessment reported that 30.2% of the population was classified as poor with an overall 48.2% under the vulnerability line.

The GDP of Saint Vincent and the Grenadines is $US 771 million (2016) with a growth rate of 0.8%. The primary sector is agriculture, which is dominated by banana production, followed by the service sector rooted predominantly in the tourism industry.

V. SUMMARY OF COUNTRY'S VULNERABILITY

Saint Vincent and the Grenadines, like many Small Island Developing States (SIDS), is characterized by high vulnerability. One attribute of the island which makes it vulnerable is its high degree of exposure to a range of hazards.

Saint Vincent and the Grenadines is vulnerable to multiple hazards – both natural and technological. Throughout its history, it has been affected by hydrometeorological hazards like hurricanes, tropical storms, floods and droughts, geological hazards like earthquakes, volcanic eruptions and landslides and biological hazards such as insect infestations and epidemics. There is also the threat of storm surge, tsunamis and sea level rise due to climate change. These hazards are expected to affect all factions of society but are known to disproportionately disturb the socio-economically depressed.

Being home to an active volcano, situated at the edge of a convergent plate boundary and located within the Atlantic Hurricane belt, Saint Vincent and the Grenadines is exposed to most natural hazards. The La Soufrière volcano has erupted twice in recent history – first on May 7, 1902 causing 1565 deaths, and again on April 13, 1979 causing two deaths whilst affecting 20,000 individuals. The 1902 eruption was estimated at an economic cost of approximately $US 200 million while the 1979 eruption which was a moderate explosive eruption was estimated at an economic cost of $US 100 million. There were two other eruptions before 1902.

Hurricane Tomas, a category one hurricane was the most significant and costly hurricane of recent history. This hurricane caused significant impact to the agricultural sector which is very important to the economy and the total impact was estimated at $US 49.2 million or 10.5% of the GDP. Further, a trough system brought torrential rains to the mainland on December 24, 2013 resulting in flash flooding in many areas and landslides in others. This system affected over 50% of the populations, caused 12 deaths and damage and losses amounted to $US 108.4 million.

Coastal inundation is experienced during high sea swells and storm surge, and flooding is highly prevalent in Saint Vincent and occurs on an almost annual basis in both the wet and dry seasons.

There have been many tremors in the Eastern Caribbean over the last couple of years – most aligned with the convergent plate margin to the East of the Lesser Antilles. The last major earthquake experienced by the Eastern Caribbean and felt strongly in Saint Vincent and the Grenadines was the 7.4 magnitude quake which struck 42 km southeast of Roseau, Dominica at a focal depth of 145 km. The quake struck at 2pm EST on November 29, 2007 and lasted for about 20 seconds. However, no damage was recorded in Saint Vincent and the Grenadines.

In addition to the threat of La Soufrière on mainland Saint Vincent, is the threat of the currently most active volcano in the Eastern Caribbean – Kick 'em Jenny. Kick 'em Jenny is a submarine volcano located 8 km off the northern coast of Grenada that last erupted in December 2001. There have been at least 11 eruptions since it was first identified in 1939. Since its hazardous effects are largely unknown, nearby islands are highly vulnerable as an eruption can generate tsunamis.

Apart from these natural vulnerabilities, the situation worsens when other intrinsic characteristics of SIDS such as fragile ecosystems often linked to economic and social development, large populations in hazard-prone areas, coastal positioning of major functions and economic activity, small open economies, poverty, limited capacity and resources and institutional weaknesses are considered. However, it is the responsibility of the National Emergency Management Organisation (NEMO), the Government and people of Saint Vincent and the Grenadines, along with other local, regional and international stakeholders to do what is necessary to mitigate or lessen the impact of these hazards on the country.

PART 1: BASIC PLAN

VI. 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 Emergency 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 Emergency Organization with respect to emergencies can be divided into seven categories:

1. **Training** – the identification of skills necessary to implement a national disaster management programme and the sourcing of the necessary trainers to prepare and conduct the relevant training.
2. **Informing** – the development and dissemination of information packages to enhance the capability of individuals, government entities and the private sector to cope with emergencies, to get help when needed.
3. **Warning** – the analysis and forecasting of the nature of potential hazards or emergencies and the development and operation of systems designed to maximize warning time and precision for the benefit of both victims and volunteers.
4. **Coordinating** – the development and implementation of systems to coordinate the work of the various agencies involved in disaster preparedness, response and rehabilitation, and to enable resources to be effectively applied to emergencies and disasters.
5. **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.
6. **Warehousing** – the provision and maintenance of extraordinary resources and stocks to meet emergency needs.
7. **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 Emergency Management Organization (NEMO), but also for every citizen, government agencies and private organizations alike. They are 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 Fisheries and Aquaculture 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 oneself 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 Saint Vincent and the Grenadines. Hazards can be divided into two categories:

Natural hazards
Natural hazards are natural processes or phenomena occurring in the biosphere that may form a damaging event. Natural hazards may be geological, hydrometeorological or biological in nature. They may include: hurricanes, earthquakes, landslides, floods, droughts, wildfires, tidal waves, tsunami, storm surges, volcanic eruptions, lightning strikes, and sink holes.

Geological hazards: Natural earth processes or phenomena that may cause the loss of life or injury, property damage, social and economic disruption, or environmental degradation. Geological hazards include internal earth processes of tectonic nature, such as earthquakes, geological fault activity, tsunamis, volcanic activity, and emissions as well as external processes such as mass movements: landslides, rockslides, rock falls or avalanches, surfaces collapses, expansive soils and debris, or mud flows.

Hydrometeorological hazards: Natural processes or phenomena of atmospheric, hydrological, or oceanographic nature that may cause the loss of life or injury, property damage, social and economic disruption, or environmental degradation. Hydrometeorological hazards include floods, debris, and mud floods; tropical cyclones, storm surges, thunder/hailstorms, rain and windstorms, blizzards, and other severe storms; drought, desertification, wildland fires, temperature extremes, sand or dust storms; and permafrost and snow or ice avalanches.

Biological hazards: Processes of organic origin or those carried by biological vectors, including exposure to pathogenic micro-organisms, toxins, and bioactive substances, which may cause the loss of life or injury, property damage, social and economic disruption, or environmental degradation. Biological hazards include: outbreaks of epidemic diseases, plant or animal contagion, insect plagues, and extensive infestations.

Man-made Hazards
Man-made hazards are also referred to as technological hazards. Technological hazards are the potential threat or dangers caused by technological or industrial accidents, dangerous procedures, infrastructural failures or some human activities which may cause loss of lives, injury, property damage, social and economic disruption or environmental degradation.

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 Saint Vincent and the Grenadines are:

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 fueled 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).

Hurricane - A hurricane is a type of tropical cyclone with sustained winds of 74mph (64kt) or higher, which is accompanied by thunderstorms with a counterclockwise 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 this hazard.

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.

Droughts

There are three types of droughts namely; meteorological, hydrological and agricultural. Therefore, droughts have different meanings for different sections of society. Meteorological droughts are related to rainfall amounts, hydrological droughts are related to water levels in reservoirs while agricultural droughts are related to the extent of soil moisture available for crop growth. Droughts are slow, creeping hazards which have no clear beginning, middle or end.

Volcanic Eruptions

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. Volcanic eruptions occur when lava and gas are expelled from a volcanic vent (IFRC 2019). Saint Vincent and the Grenadines is home to the active La Soufrière volcano which is a stratovolcano with a crater lake standing at approximately 1220 m above sea level (Oregon State University, 2019). It is the youngest volcanic centre on the island, located within the northernmost third of the mainland and the main crater of La Soufrière is about 1.6 km wide and 300-600 m deep (UWI Seismic Research Centre, 2011).

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 time. Earthquakes are measured with a seismometer; a device which also records earthquakes as a seismograph. The magnitude of an earthquake in 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.

Wildfires
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 it ability to jump gaps such as roads, rivers and fire breaks.

Man-made Hazards

Fires
Structural fires destroy properties annually, causing millions of dollars in damage in the State of Saint Vincent and the Grenadines. 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.

Road Accidents
In Saint Vincent and the Grenadines, motor vehicle collisions lead to loss of lives death and disability as well as significant financial costs to both society and the individual.

Important distinction between A HAZARD & A DISASTER

Hazards - A potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards can include latent conditions that may represent future threats and can have different origins. Hazards can be single, sequential or combined in their origin and effects.

Disasters - A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources.
A disaster is a function of the risk process. It results from the combination of hazards, conditions of vulnerability and insufficient capacity or measures to reduce the potential negative consequences of risk.

Therefore, a hazard (hurricanes, etc.) only becomes a disaster when it causes destruction beyond the capacity of the country of impact to cope and recover using its own resources i.e. without external aid.

Consequences of Disasters
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.

PART 2: NATIONAL HAZARD & PHASE SPECIFIC FISHERIES AND AQUACULTURE SECTOR PLANS

VII. NATIONAL FISHERIES AND AQUACULTURE SECTOR DISASTER PLAN

The National Fisheries and Aquaculture Disaster Management Plan

The National Fisheries and Aquaculture Disaster Management Plan 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 Saint Vincent and the Grenadines and its fisheries sector 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 Emergency Management Organization (NEMO) is to ensure that the country is always prepared to deal effectively with any disaster that 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, etc.)
3. Warning systems, warning dissemination, responsibility and control of broadcasting.
4. Anticipatory orders under the [Emergency Powers Act].
5. Securing of boat vessels, files, equipment and windows with hurricane shutters.
6. Storage and control of reserve equipment, fuel, medication, medical equipment, food, radios and other relief supplies.
7. Public information and press briefings.
8. Evacuation plans, shelter and refuge areas, including promulgation of the plans.
9. Arrangements for relief aircraft and ships, including customs and visa clearance for relief supplies and personnel.
10. Transport and equipment requirements.
11. Direction of labour.
12. Entry control of non-essential visitors.
13. Post-disaster reconnaissance and reports.
14. Post-disaster demolition and repair.
15. Damage Assessment and Needs Analysis

The successful implementation of the National Fisheries and Aquaculture 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].

SAINT VINCENT AND THE GRENADINES' NATIONAL DISASTER COMMUNICATION FLOWCHART

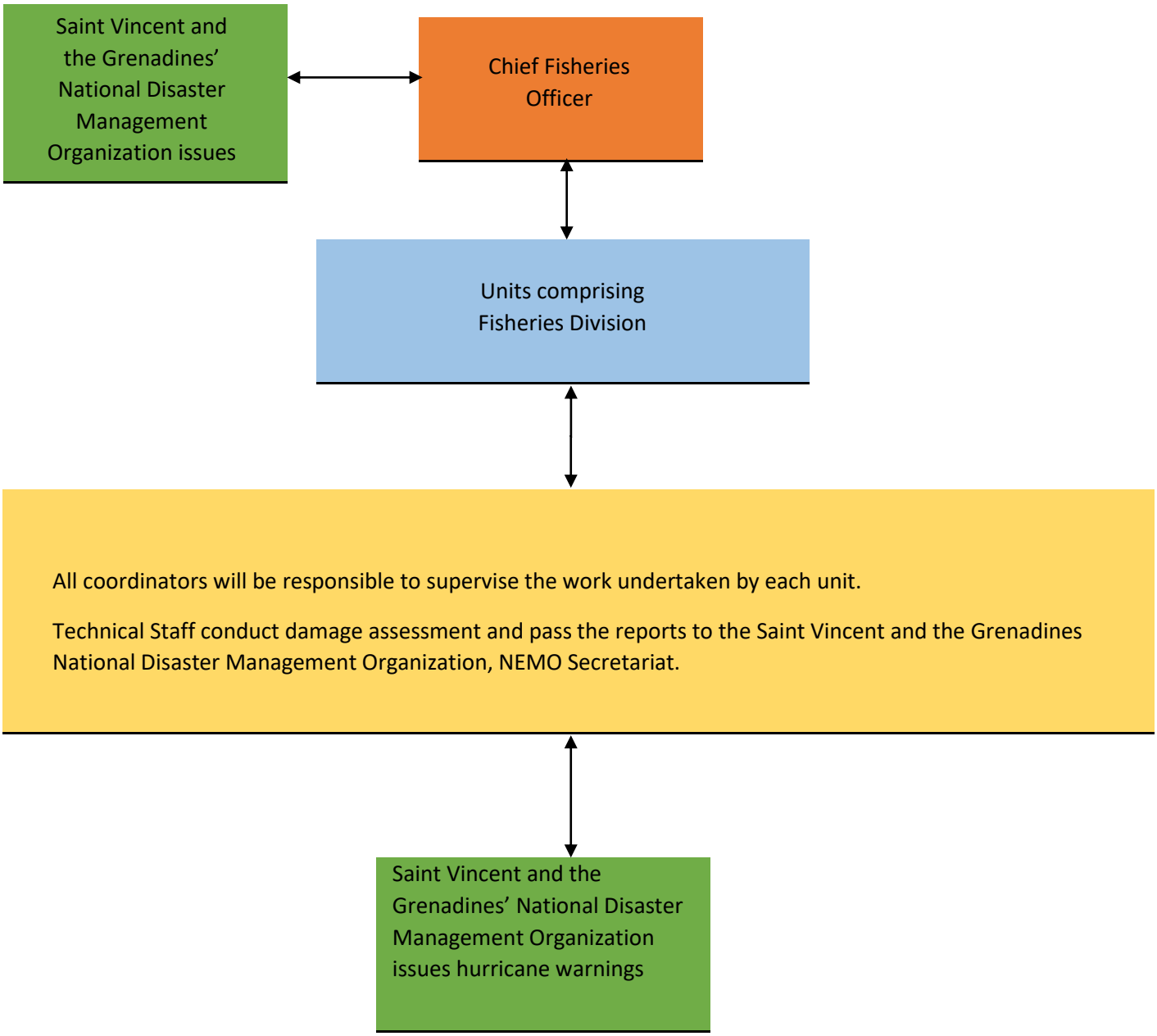


Figure 20: Saint Vincent and the Grenadines' National Disaster Communication Flowchart

The following Initiatives can be used by the Saint Vincent and the Grenadines Fisheries Department in order to make fisherfolk more prepared for and resilient to Natural Disasters.

I. A Pilot Vessel Monitoring System (VMS) and Communications System - This will be purchased and outfitted on all suitable fishing vessels per target community. It will assist the Saint Vincent and the Grenadines Fisheries Division in collecting baseline data on sea temperatures, strong cold fronts and increased sedimentation from surface run-off. The VMS would also benefit communities as it would be able to strengthen communication with fishers for safety and will be used to update fishers in each fishing zone of weather forecast and port calls during hurricane and craft warnings.

II. To establish a Mooring Buoy Program - The mooring buoy system which will be in place for special mooring of fishing vessels in the case of very inclement weather conditions will help to ensure fishers safety and safeguarding of vessels at sea. The purchase and installation of a practical number of mooring buoys for safe harbour will be purchased. The moorings will be maintained by protected area personnel and fishers operating in those areas.

III. Disaster and Adaptation funds at low interest rates – The Saint Vincent and the Grenadines Fisheries Division will hire a consultant to dialogue with lending institutions and identify funding mechanisms that would be accessible to fisherfolk. This would serve as an incentive to fisherfolk as they would want to reduce their vulnerabilities to severe weather patterns by improving their seaworthiness of fishing boats and fishing gear. The Saint Vincent and the Grenadines Fisheries Division would benefit from a structured National Fisheries and Aquaculture Disaster Management Plan through increased communication with fisherfolk at sea and in turn will gather information of the location, type and quantity of fishing gear and data that can be used to produce maps of fishing grounds.

IV. Product Improvement and Alternative Income Generating Activities - This would involve training and capacity building workshops provided by the Saint Vincent and the Grenadines Fisheries Division in primary seafood safety, processing, handling and storage for fishers. The aim is to help fishers improve their product quality which will in turn result in an increase in fish sales. This opportunity will assist fishers in securing a stable income that is necessary to provide their families in the event of adverse weather conditions when they are unable to go out.

V. Additionally, the Saint Vincent and the Grenadines Fisheries Division has begun to develop a Lionfish Fishery. This has helped to control this invasive species in Saint Vincent and the Grenadines for a few years now. The Fisheries Division will encourage the establishment of a commercial fishing industry to improve the health of the Saint Vincent and the Grenadines Reef System. The Lionfish Industry would help stimulate the creation of permanent jobs and long-term income generation opportunities for fishers and unemployed youths thus reducing the national poverty level. Further, with the augmented threat from the effects of climate change among Small Island Developing States, the issue of species invasion and extinction is likely to worsen, thereby necessitating control. The Fisheries Division is committed to building the capacity to control such.

VIII. SAINT VINCENT AND THE GRENADINES COMPREHENSIVE DISASTER MANAGEMENT STRATEGY

Saint Vincent and the Grenadines' comprehensive disaster management strategy seeks to create a culture in which ***NFADMP*** 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

Organization for Comprehensive Disaster Management

Responsibility for Comprehensive Disaster Management in Saint Vincent and the Grenadines lies with The National Emergency Council of the National Emergency Management Organization which is chaired by the Honourable Prime Minister. The Executive Group comprises the ministers of government, permanent secretaries, district representatives and key ex-officio members from government agencies, corporations, businesses, and non-governmental organizations.

The National Emergency Management Organization (NEMO) has ten operational committees and thirteen district disaster committees. The National Emergency Management Organization (NEMO) has responsibility for national emergency/disaster management and coordination of international assistance. Day to day programme management is carried out by NEMO Secretariat.

Operational functions are the responsibility of the National Committees. These committees are:

1. Public Information and Education
2. Damage and Needs Assessment
3. Transport and Road Clearance
4. Emergency Supplies
5. Shelters and Shelter Management
6. Health Services
7. Emergency Communications
8. Search and Rescue (Land and Sea)
9. Voluntary Services
10. Rehabilitation and Reconstruction.

Community disaster response teams are organized to operate on a smaller scale than district disaster committees and are usually the first responders on a disaster site.

SAINT VINCENT AND THE GRENADINES NATIONAL DISASTER MANAGEMENT STRUCTURE

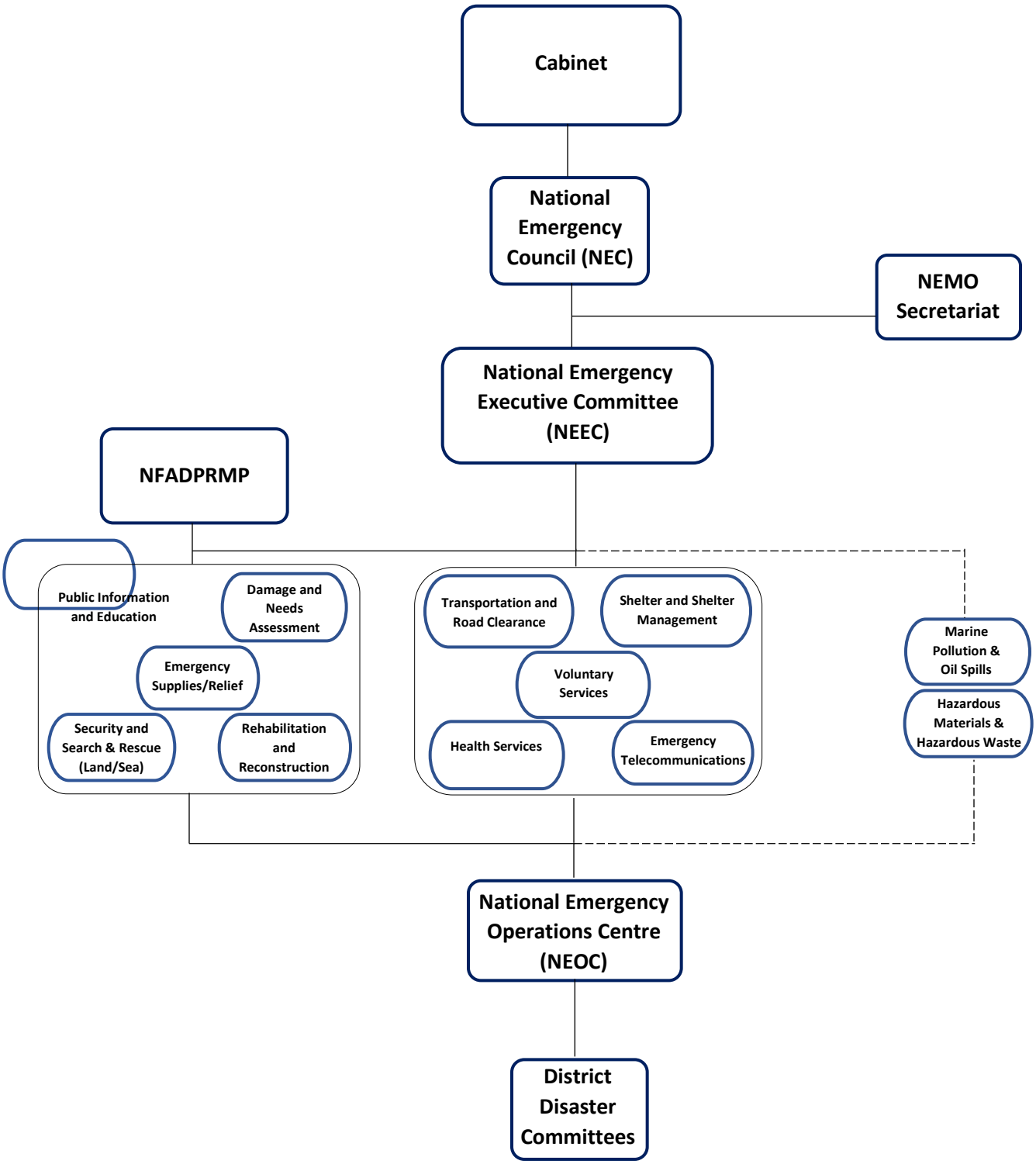


Figure 21: National Structure depicting how NFADPRMP fits into NEMO Process

PART 3: FUNCTIONAL PLANS OF NATIONAL OPERATIONAL COMMITTEES

IX. NATIONAL DISASTER MANAGEMETN 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 (NGOs), Private Voluntary Organizations (PVOs) or Volunteers, and is depicted by the Organization chart shown above and comprises:

- Prime Minister's Office
- Ministry of Finance and Economic Planning
- Ministry of National Security, Air and Sea Port Development
- Ministry of National Mobilization, Social Development, Family, Gender Affairs, Persons with Disabilities and Youth
- Ministry of Education
- Ministry of Agriculture, Industry, Forestry, Fisheries and Rural Transformation
- Ministry of Transport, Works, Urban Development and Local Government
- Ministry of Health, Wellness and the Environment
- Ministry of Housing, Informal Human Settlements, Land and Surveys and Physical Planning
- Ministry of Tourism, Sports and Culture
- Ministry of Legal Affairs
- Ministry of National Reconciliation, Information, Labour and Public Service
- Ministry of Foreign Affairs, ICT, Trade and Commerce
- National Emergency Management Organization (NEMO)
- Agency for Public Information
- Utility Companies
- SVG Red Cross Society
- SVG Port Authority
- SVG Coast Guard
- Police Service
- Fire Service
- SVG Christian Council
- Youth Council
- Jaycees, Lions, Rotarians
- Girl Guides, Boy Scouts, Cadets, Brigades, 4H Clubs
- Telecommunications companies
- Chamber of Commerce

The organizational structure has been developed to ensure the effective functioning of the National Plan. The membership of the NEMO National Emergency Council is as follows:

(a) the Prime Minister, who shall be the Chairperson,
(b) the Deputy Prime Minister,
(c) the Attorney General,
(d) the Ministers responsible for; disaster management, national security, works, housing, telecommunications, health and the environment, social development or mobilization, and energy,
(e) the Permanent Secretaries in the Ministries responsible for; disaster management, national security, works, agriculture, tourism, education, social development or mobilization, energy,
(f) the Secretary to Cabinet,
(g) the Director General of Finance and Planning, the Director of Planning,
(h) the Director of the National Emergency Management Organization,

(i) the Commissioner of Police,
(j) the Chief Medical Officer,
(k) the Chief Engineer,
(l) the Manager of the Saint Vincent and the Grenadines Port Authority,
(m) the Director of the Agency for Public Information,
(n) the Director of Airports,
(o) the Managers of the telecommunications providers,
(p) the Chief Executive Officer of the Saint Vincent and the Grenadines Electricity Services Ltd,
(q) the Manager of the Central Water and Sewerage Authority,
(r) a representative, who shall be chosen by a recognized worker's organization representing workers employed by the Government,
(s) a representative from the Saint Vincent and the Grenadines Chamber of Industry and Commerce,
(t) a representative from the National Youth Council,
(u) a representative from the Saint Vincent and the Grenadines Red Cross Society,
(v) representatives from Mayreau, Canouan, Bequia, Union Island and Mustique designated by Cabinet, and
(w) a representative from a volunteer organization (National Disaster Plan, 2005).

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

Duties and Responsibilities

The following duties and responsibilities have been developed for the Emergency Executive Committee:

(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 National Emergency 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 Secretary, National Emergency Management Organization (NEMO),
Prime Minister's Office.

National Fisheries and Aquaculture Disaster Management Sub-Committees

Membership

There will be five (5) National Disaster Management Committees, which will be responsible for the planning and execution of the National Fisheries and Aquaculture Disaster Management Plan. They are as follows:

1. Public Information and Education Sub-committee
2. Damage and Needs Assessment Sub-committee
3. Search and Rescue (Land and Sea) Sub-committee
4. Emergency Supplies Sub-committee
5. Rehabilitation and Reconstruction Sub-committee

National Fisheries and Aquaculture Sector Disaster Management Sub-Committees Roles and Responsibilities

The national committees as presented below have been developed by the National Emergency Management Organization (NEMO) to facilitate a better distribution of services and as a method of streamlining and co-coordinating all disaster management services within the State of Saint Vincent and the Grenadines.

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 equally important and do not take precedence over each other. Their duties are defined against the background of the sectoral and specific needs of the country.

Sub-Committees

The membership of the National Fisheries Disaster Management Sub-Committees and their Terns of Reference are as follows:

1. Public Information and Education Sub-Committee

***Membership*:** Training Officer of NEMO, Representatives from ALL divisions of EACH Ministry, Members of the Media, Representatives from the Christian and National Youth Councils, the District Public Education and Information Officers.

Terms of Reference:

1. To design/update an emergency public information and education plan for the State of Saint Vincent and the Grenadines.
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 Saint Vincent and the Grenadines is prone to 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 Saint Vincent and the Grenadines.
4. To alert the population on any impending disaster and the precautionary measures to be taken.
5. To disseminate all decisions of NEMO to the Public.
6. To design and conduct an annual exercise to test the Public Information and Education Plan.
7. To arrange for training of disaster personnel at all levels.
8. To inform the public of location of emergency shelters and first-aid posts.

2. <u>Damage Assessment and Needs Analysis Sub-Committee</u>

***Membership*:** Director General of Finance and Planning, Budget Director, Director of Planning, the Chief; Engineer, Agricultural Officer, Fisheries Officer and Environmental Health Officer, the Managers; Housing and Land Development Corporation, Central Water and Sewerage Authority, the Saint Vincent and the Grenadines Port Authority, SVG TV and Representatives from; Telecommunications providers, the Chamber of Industry and Commerce, the SVG Red Cross Society, the Insurance Companies, the Tourism Ministry, and VINLEC.

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 NEMO and the relevant Disaster Relief Management agencies and 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 coordinate, with NEMO, 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 asset
15. To design and conduct an annual exercise to test the Plan
16. To keep records of relief supplies and other assistance received by government and other non-governmental organizations.

3. Emergency Supplies Sub-Committee

Membership: Permanent Secretary in the Ministry of Trade, Representatives from Ministry of National Security, Ministry of Health, SVG Port Authority, Customs and Excise Department, Airport Authority, the Chamber of Commerce and Trade, Farmers Association, Association of Fishermen, Volunteer Organizations, Chief Environmental Officer, Chief Agricultural Officer, Chief Fisheries Officer, Police Commissioner.

Terms of Reference

1. Design a specific disaster relief management plan and mechanisms.
2. To coordinate the activities of all agencies, public and private, involved in relief management.
3. To ensure adequate training of all involved in relief management.
4. Arrange for suitable buildings for the storage of food, clothing, building material and other emergency supplies.
5. Arrange for other safe areas for storage of non-perishable emergency supplies.
6. Establish distribution centers for bulk distribution of emergency supplies.
7. Arranging for staff to package and distribute emergency supplies.
8. Arranging for the transportation of emergency supplies to storage at all predetermined points.
9. Arrange for security of areas where emergency supplies are stored.
10. Determine the quantity and type of assistance required with information of the damage and needs assessment committee.
11. Maintain proper records of emergency supplies received and distributed.
12. To co-ordinate NGOs supplies from arrival to distribution.
13. Keep statistics of damage to agriculture, livestock, fisheries, and forests.
14. To maintain adequate stocks of food supplies, building materials etc. throughout the year.

4. Security and Search & Rescue – Land & Sea Sub-Committee

Membership: Police Commissioner, Representatives from Ministry of National Security, Private Security Companies, Police Commissioner, Fire Service, SVG Port Authority, SVG Coast Guard, SVG Cadet Force, and the Telecommunications Authority, Chief Medical Officer, Chief Fisheries Officer, Association of Fishermen, Director of Airports.

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

5. Rehabilitation and Reconstruction Sub-Committee

***Membership*:** Representatives from ALL Divisions of EACH Ministry, the Telecommunications providers, Public and Private Construction Companies, Public Utilities, Public Health Departments, the group of Insurance companies, Volunteer Organizations and NGOs, Permanent Secretaries in the Ministry of Transport, Works, Urban Development and Local Government and the Ministry of Housing, Informal Human Settlements, Land and Surveys and Physical Planning.

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 NEMO.
14. Plan/co-ordinate /liaise for external assistance for rehabilitation and reconstruction.

There are two sub-committees developed in the model plan that are not part of the NEMO process documented in the National Disaster Plan, 2005. These sub-committees would support the National Fisheries and Aquaculture Disaster Preparedness and Risk Management Plan greatly in dealing with technological hazards and should be examined. They are as follows:

6. Marine Pollution & Oil Spills Sub-Committee

***Membership*:** Representatives from the SVG Port Authority, the Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour, the Ministry of Health, Wellness and the Environment, the Ministry of Legal Affairs and the Ministry of National Security.

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.

7. **Hazardous Materials & Hazardous Waste Sub-Committee**

***Membership*:** Representatives from the Fisheries Division, the SVG Port Authority, the SVG Coast Guard, the Fire Service, and the Solid Waste Management Unit of the CWSA, Ministry of Health, Wellness and the Environment, and the Ministry of National Security.

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.

Further, the following sub-committees are part and parcel of the NEMO plan but do not directly involve the Fisheries Division, yet still these sub-committees will aid Fisheries stakeholders in the event of a disaster. Therefore, interaction between all sub-committees is anticipated during normal and emergency situations.

8. **Transport and Road Clearance sub-Committee**

***Membership*:** Representatives from the Ministry of Transport, Works, Urban Development and Local Government, the SVG Port Authority, Airport Authority, Solid Waste Management Unit of the CWSA, and Private Construction Companies.

Terms of Reference

1. To develop a plan to meet transportation needs for the various committees of National Fisheries and Aquaculture Disaster Management Plan 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 Memorandum of Understanding (MOU) 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 standardized 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 relevant authorities.
12. To design and conduct an annual exercise to test the Transport and Road Clearance plan.

9. **Shelter Management Sub-Committee**

***Membership*:** Representatives from the Ministry of Housing, Informal Human Settlements, Land and Surveys and Physical Planning, the Ministry of Health, Wellness and the Environment, the Ministry of National Mobilization, Social Development, Family, Gender Affairs, Persons with Disabilities and Youth, the SVG Red Cross Society, the Christian Council, the Voluntary Services Sub-committee, the Social Welfare Department and the RSVG Police Force, The Permanent Secretary in the Ministry of Education, Reconciliation, Ecclesiastical Affairs and Information, the Chief Environmental Health Officer.

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 Saint Vincent and the Grenadines.
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 NEMO 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 counseling.
17. To co-ordinate with NGOs and develop resource lists.

10. **<u>Voluntary Services Sub-Committee</u>**

***Membership*:** Representatives from ALL Volunteer Organisations and the Ministry of National Mobilization, Social Development, Family, Gender Affairs, Persons with Disabilities and Youth.

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 centers
12. Assist with sorting and parceling of clothing
13. Assist in record keeping
14. Perform messenger service

11. Health Services Sub-Committee

***Membership*:** Representatives from the Ministry of Health, Wellness and the Environment, Public and Private Hospitals, and the SVG Red Cross Society. The Hospital Administrator of the Milton Cato Memorial Hospital, the Chief Medical Officer, Chief Environmental Health Officer, and the District Health and Wellness Officers.

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 – Land and Sea 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 Saint Vincent and the Grenadines, 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 counseling 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.

12. Emergency Telecommunications Sub-Committee

***Membership*:** Representatives from Telecommunications service providers, the SVG Port Authority and the Airport Authority. The Manager of SVGTV, the Police Commissioner and the District Telecommunications Officer.

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 operators, to be conducted annually.
5. Establish contact with the regional emergency communication system.
6. Coordination of the availability of telecommunications by the relevant authorities.
7. Conduct simulation exercises on a regular basis to test the effectiveness of the telecommunication system.

PART 4: FISHING DISTRICT HAZARD AND PHASE SPECIFIC PLAN

X. 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 assist 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 National Emergency Management Organization not later than 30th April of each year for submission to the National Emergency Council within one month of receipt of document.

Generally, 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 or Department Head. The Permanent Secretary or Department Head 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 must 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 of the National Emergency Council.
2. Coordinate all preparedness, response, relief and rehabilitation activities from the NEOC during emergencies and disasters.
3. Issuing of notices for areas considered unsafe.
4. Coordinate all the reconstruction activities.

Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures for the ministry.
2. Organize 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 Service

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
8. Search and rescue operations

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
8. Rescuing trapped or dislocated persons in post-disaster operations

SVG 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 Saint Vincent and the Grenadines.
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 Transport, Works, Urban Development and Local Government and Ministry of Housing, Informal Human Settlements, Land and Surveys and Physical Planning which will be used as emergency shelters should be done in co-operation with Emergency Committees as required.
4. In collaboration with NEMO, liaise with Ministry of Health with regards to Sanitary Services at shelters.
5. In collaboration with NEMO, preparation 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 in collaboration with NEMO
8. Through NEMO, collaborate with voluntary services sub-committee in distribution of supplies and other materials.

Ministry of Health, Wellness and the Environment

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 in collaboration with NEMO and the SVG Red Cross Society
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 centers 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 and environmental health services at emergency shelters
11. Establishing procedures for collaboration with the SVG Red Cross Society
12. Arranging for sanitary inspection of relief food supplies
13. Recording, tagging, identifying the injured and the dead and 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
17. Maintenance of staff of First-Aid stations in collaboration with the District Emergency Committees
18. Coordination of medical and first aid assistance with voluntary organizations
19. Identification and operation of field hospital if necessary

Ministry of Transport, Works, Urban Development and Local Government

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 Service
4. Provision of emergency transport service
5. Co-ordination with the Central Water and Sewerage Authority (CWSA) for debris management after clearance
6. Demolition of unsafe buildings
7. Evacuation operators as necessary e.g. Transfer of people from high-risk areas
8. Erection of temporary roads and bridges
9. Provision of protective materials, maintenance and repair to Government buildings maintenance

Ministry of National Mobilization, Social Development, Family, Gender Affairs, Persons with Disabilities and Youth

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 schools 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
10. Distribution of welfare supplies (other than food)
11. Maintenance of adequate stocks of blankets, beds, feeding utensils, lanterns, torch lights, etc. during hurricane season

NEMO & 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 Council on emergency preparedness matters
7. Arrange with the local media for broadcast, interviews and publication of information on disaster preparedness and prevention
8. Advise in collaboration with the SVG Port Authority, the Ministry of Fisheries on safe methods for guarding the Fishing Fleet.

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 NEMO and 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, Forestry, Fisheries, Rural Transformation, Industry and Labour

1. To design, update, test and evaluate continuity of operations and emergency management plans and procedures for land and maritime search and rescue.
2. Identification possible sources of food that can be used if a disaster occurs
3. Maintenance of adequate food centers throughout the country
4. Assignment of personnel to work in these centers in the event of an emergency
5. Co-ordination with the Ministry of Transport, Works, Urban Development and Local Government to arrange adequate transport service for the distribution of food
6. Assist in the designing of rationing systems in collaboration with the Government Nutritionist.
7. Keeping the National Emergency Organization informed of the level of essential food and other emergency supplies in the country.
8. Keeping statistics of damage to agriculture, livestock, fisheries and forests
9. Fisheries Division in collaboration with NEMO, advise small boat owners on safety of their boats.

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

SVG Port 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 in collaboration with NEMO, the Ministry of Fisheries on safe methods for guarding the Fishing Fleet.
5. Informing and advising ships in the harbor of impending disaster

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

PART 5: FUNCTIONAL PLANS OF DISTRICT OPERATION SUB-COMMITTEES

XI: ROLE OF PRIVATE SECTOR, NON-GOVERNMENTAL ORGANIZATIONS & SERVICE CLUBS IN THE DRM PLAN

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. Identify and provide warehousing.
5. To ensure availability and distribution of essential emergency supplies that could be provided by the private sector.
6. 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 first aide at medical centres and 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. Assist with rehabilitation through providing psychological support and counselling
12. Assist in public awareness programmes

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 through providing psychological support and counselling in collaboration with the SVG Red Cross Society
4. Assist with public awareness programmes
5. Assist with management of shelters
6. Assist with distribution of supplies
7. Provide relief supplies

Telecommunications – FLOW SVG, Digicel SVG

1. Participate in the Emergency Telecommunications Sub-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.
6. Prepare a list of all telecommunications facilities in Saint Vincent and the Grenadines which can be used in the event of a disaster.

7. Restoration of telephone and telexes services to the Emergency Operation Centre and other key areas.

Service Clubs and Youth Organizations

- Lions
- Rotarians
- Boys Scouts
- Girl Guides
- Brigades
- 4-H
- Cadet Corps
- Jaycees
- National Youth Council

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 senior citizens
8. Assist in clearing debris
9. Assist in distributing relief supplies
10. Assist local disaster preparedness Committees
11. Assist at emergency shelters and feeding centers
12. Assist with sorting and parceling of clothing
13. Assist in record keeping
14. Perform messenger service

Public Utilities

1. Supply of emergency water service to key areas by CWSA
2. Immediate restoration of electricity services to key areas re emergency operation centre, health and security centers by VINLEC
3. Restoration of municipal solid waste collection and disposal services by CWSA in collaboration with the Ministry of Transport, Works, Urban Development and Local Government

PART 6: FISHING VILLAGE/COMMUNITY HAZARD & PHASE SPECIFIC PLANS

XII: DISTRICT DISASTER MANAGEMENT COMMITTEES

The value of advanced planning for 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 Community/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 and Community Management Committees will provide the essential link between the National Organization and the community, which they represent.

Proposed 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, Reconciliation, Ecclesiastical Affairs and Information, Ministry of Transport, Works, Urban Development and Local Government, Ministry of Housing, Informal Human Settlements, Land and Surveys and Physical Planning and the Ministry of National Mobilization, Social Development, Family, Gender Affairs, Persons with Disabilities and Youth 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 Emergency Management Organisation Secretariat
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 centers 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 centers
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. Mobilization 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 Ministry of National Security in charge of the Police Service and therefore the District Police Station.

PART 7: FUNCTIONAL PLANS OF VILLAGE/COMMUNITY OPERATIONAL SUB-COMMITTEES

XIII: TELECOMMUNICATIONS

Emergency Telecommunications Centre

- Responsibility for telecommunications rests with the Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology and the Ministry of Education, Reconciliation, Ecclesiastical Affairs and Information.
- Points will be established for the installation of equipment for radio operator organisations likely to be used during the impact of a hazard.
- In the event of a disaster or major emergency the Chairman of the Emergency Telecommunications Sub-Committee will contact the relevant radio operator organisations for assistance in telecommunications.
- The telecommunications committee will ensure that there is communication to and from the National Emergency Operations Centre with all the key response organisations.
- In the event of an emergency and when so requested, the radio operators or radio operators organisation will make available to the National Emergency Management Organisation such equipment and operators as may be necessary for providing communications between the Emergency Telecommunications Centre in the National Emergency Operations Centre 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 radio operators or radio operators organisation should draw up their own internal disaster plans for submission to the National Disaster Coordinator for inclusion in the National Plan.
- Public and Private Cellular service providers will assist in providing emergency links between the National Emergency Operations Centre and other areas as required.

XIV: EMERGENCY SHELTERS

For the management of emergency shelters, a Chief Shelter Warden (CSW) for the Fisheries and Aquaculture sector should be appointed and work in collaboration with the CFO to maintain a list of buildings, which have been identified as shelters for use by the fisheries and aquaculture sector in an emergency.

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

The CSW for the Fisheries and Aquaculture sector, in collaboration with 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 Fisheries and Aquaculture CSW will ensure the appointment of suitably qualified staff to manage emergency shelters. Specific procedures should be developed for each member of a shelter organisation.

The Fisheries and Aquaculture CSW will collaborate with the District Committees, the District Disaster Coordinator and the Ministry of Transport, Works, Urban Development and Local Government 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.

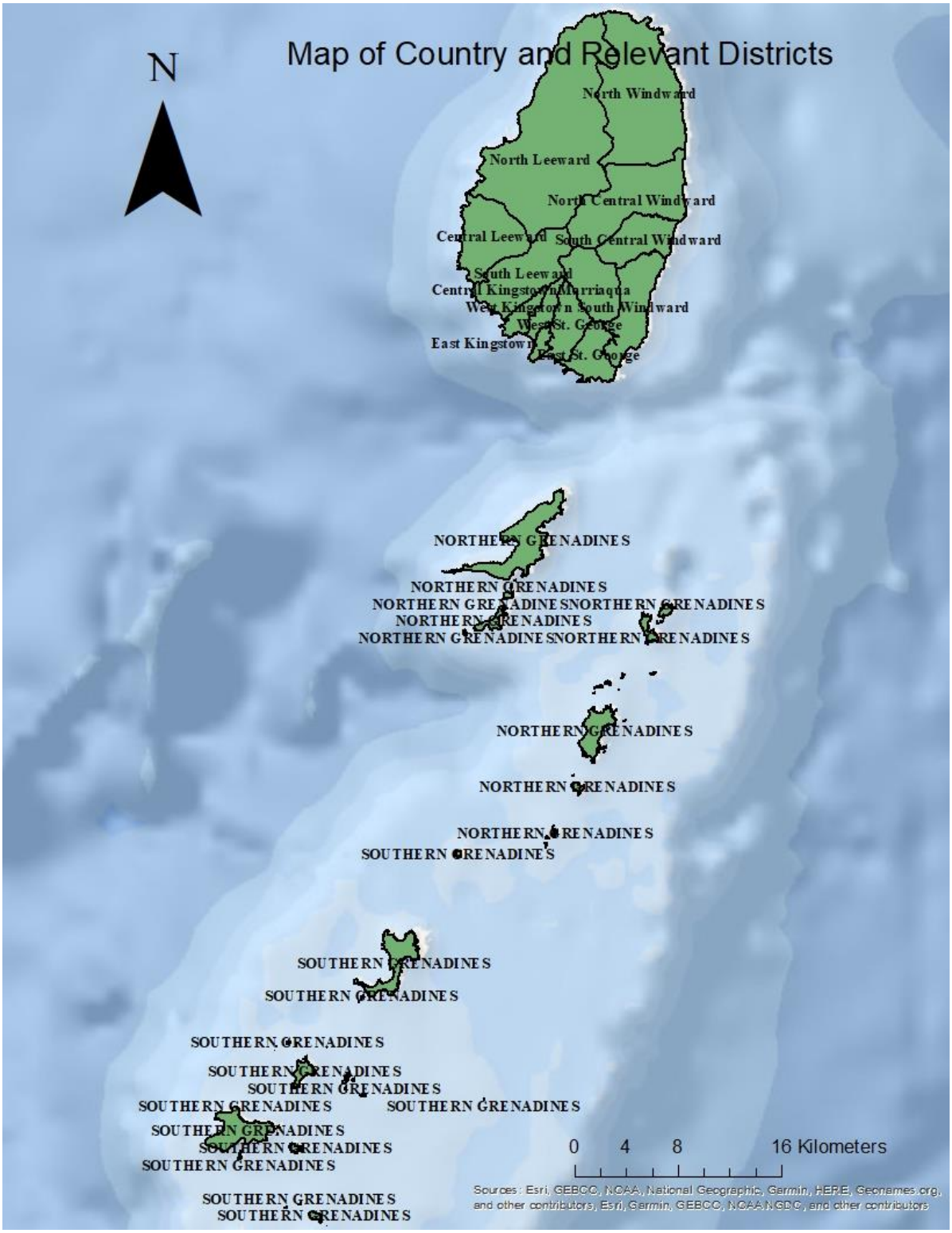
Internal Emergency procedures sectoral plan will be developed and presented to the National Emergency Management Organisation. The guidelines as outlined in the preceding paragraphs provide the foundation for the management of all fisheries and aquaculture sector shelters in Saint Vincent and the Grenadines.

XV: LIST OF ABBREVIATIONS

CDEMA	Caribbean Disaster Emergency Management Agency
CDEMA CU	Caribbean Disaster Emergency Management Agency Coordinating Unit
CDM	Comprehensive Disaster Management
GIS	Government Information Service
IO	International Organizations
MPH	Miles per Hour
NGO	Non-Government Organization
PO	Private Organization
RSTS	Relief Supply Tracking System
UN	United Nations
VO	Voluntary Organization

XVI: ANNEXES

Annex I: Map of Saint Vincent and the Grenadines and Relevant Districts (Made by: Author, 2019).



Annex II: List of Emergency Shelters by District – 2019 Atlantic Hurricane Season (NEMO SVG, 2019).

North Windward

1. Fancy Bethel Baptist Church
2. Apostolic Faith Mission - Fancy
3. Owia Government School
4. Sandy Bay Government School
5. Sandy Bay Seventh Day Adventist Church
6. Tourama / Overland Government School
7. Langley Park Government School (New Wing only)
8. Orange Hill Community Centre
9. Farmer Institute – Orange Hill

North Central Windward

1. Georgetown Community Centre
2. Georgetown Secondary School
3. Georgetown Primary School
4. Dickson Methodist Church
5. Covenant SDA Church – South Rivers
6. Emmanuel Baptist Church – South Rivers
7. South Rivers Learning Resource Centre
8. Park Hill Evangelical Church
9. Pamelus Burke Government School - Byera
10. George Stephens Sr. Secondary School – Colonarie

South Central Windward

1. Greggs Government School
2. Christopher Bernard Pre-school – Mt. Grenan
3. New Grounds Primary School
4. New Life Ministries
5. North Union Secondary School (New Wing)
6. South Central Windward Learning Resource Centre
7. Lowmans Windward Anglican School
8. Diamonds Government School

South Windward

1. New Prospect Primary (Simon)
2. Adelphi Secondary School (New Wing)
3. Biabou Church of Christ
4. Biabou Methodist Church
5. Argyle Primary School - Argyle
6. Calder Primary School
7. New Creation Baptist Church –Peruvian Vale
8. Calder Seventh Day Adventist Church
9. Mount Coke Methodist Church – Stubbs
10. South Windward Learning Resource Center
11. St. Clair Dacon Secondary School- Stubbs
12. Stubbs Seventh Day Adventist Church

East St. George

1. Apostolic Assemblies - Diamond
2. Mt. Moriah S.D.A. Church & Development Centre – Belvedere
3. Brighton Government School
4. Calliaqua Anglican School
5. St. Paul Parish Hall - Calliaqua
6. Fair Hall Primary School
7. Belmont Government School

West St. George

1. Church of God of Prophesy – Belair
2. Kingdom Hall of Jehovah's Witnesses - Belair
3. West St. George Secondary School - Belair
4. Doris McKie Learning Resource Centre – Upper Cane Hall
5. St. Theresa's Roman Catholic Church - Gomea
6. Glad Tidings Tabernacle Pre School – Gomea
7. Gomea Methodist Church and Pre School
8. Dorsetshire Hill Evangelical Church
9. Dorsetshire Hill Government School

Marriaqua

1. Light of Truth Church of God Seventh Day - Richland Park
2. Church of Prophecy - Richland Park

3. Church of God 7th Day – Richland Park
4. Richland Park Government School
5. Richland Park International Pentecostal Assembly
6. Richland Park Methodist Church
7. Richland Park SDA Church
8. Mesopotamia Gospel Hall Assembly
9. Adventist Church - Yambou
10. Kingdom Life Tabernacle - Mesopotamia
11. Emmanuel High School - Mesopotamia
12. Marriaqua Government School
13. St. John's Evangelist Roman Catholic Church - Cane End
14. Streams of Power Church – Carrierre
15. Evesham Learning Resource Centre
16. Evesham SDA Church

Kingstown

1. The Church of the Ascension (Sion Hill Anglican Church)
2. Faith Evangelistic Outreach Church - Sion Hill
3. Sion Hill Government School
4. Church of God Worldwide Mission Pentecostal - Redemption Sharpes
5. Redemption Sharpes Community Centre – Redemption Sharpes
6. Revival Centre – Murray's Village
7. Gospel Hall Church - Kingstown
8. New Testament Church of God - Wilson Hill
9. First Church of the Open Bible - Dasent Cottage
10. Faith Temple Church - New Montrose
11. Lodge Village Government School
12. Faith Deliverance Church - Lodge Village
13. New Testament Church - Lodge Village
14. Church of Jesus Christ of Latter-Day Saints - Kingstown
15. J.P. Eustace Memorial School - Edinboro
16. Fundamental Bible Church - Gibson Corner

South Leeward

1. Lowmans Leeward Anglican Primary School
2. Bethel Secondary School – Campden Park

3. Apostolic Faith Mission Church - Campden Park
4. Campden Park Community Baptist Church
5. Wesleyan Holiness Church - Campden Park
6. Apostolic Faith Mission Church - Questelles
7. South Leeward Learning Resource Centre - Questelles
8. Clare Valley Community Centre
9. Seventh Day Adventist Church – Clare Valley
10. Rillan Hill Roman Catholic Church
11. Rillan Hill Community Centre
12. Worldwide Mission Church – Penniston
13. Paradise Seventh Day Adventist Church – Vermont

Central Leeward

1. Buccament Government School – Dubois
2. Golden Years Centre - Buccament
3. Layou Grace and Truth Hall
4. Layou Miracle Church School
5. Central Leeward Secondary School - Peters Hope
6. Grace and Truth Church Barrouallie
7. Barrouallie Learning Resource Centre
8. Barrouallie Government School
9. Kingdom Hall Ministries – Barrouallie
10. Evangelical Church –Barrouallie

North Leeward

1. Chateaubelair New Testament Church
2. Chateaubelair Methodist School
3. Chateaubelair Faith and Life Pentecostal Church
4. Petit Bordel Secondary School
5. Rose Hall New Testament Church of God
6. Rose Bank Community Centre
7. Rose Hall Community Centre
8. Spring Village Worldwide Mission Church & Preschool
9. Troumaca Government School
10. Troumaca Ontario Secondary School
11. Westwood Methodist Church -Coulls Hill

12. Spring Village Methodist Church
13. Spring Village Seventh Day Church
14. Fitz Hughes Government School
15. Golden Grove Learning Resource Center – Fitz Hughes

Northern Grenadines

1. Bequia Anglican Primary School - Port Elizabeth, Bequia
2. Evangelical Church - Port Elizabeth, Bequia
3. Pentecostal Church - Union Vale, Bequia
4. Kingdom Hall of Jehovah's Witnesses - Friendship Bay, Bequia
5. Apostolic Faith Mission - Paget Farm, Bequia
6. Paget Farm Community Centre - Paget Farm, Bequia
7. Paget Farm SDA Church - Bequia
8. The Rotary Center of Bequia - Lower Bay, Bequia
9. Port Elizabeth SDA Church
10. Paget Farm Evangelical Church - Bequia
11. St. Michael's Catholic Church and Pre-School - Hamilton, Bequia

Southern Grenadines

1. Canouan Anglican Church
2. Canouan Roman Catholic Church
3. Canouan SDA Church
4. Canouan Society Lodge
5. Canouan Kindergarten – Grand Bay
6. Wells of Living Water Church - Canouan
7. Mayreau Government School
8. Mayreau Recreational Centre (Roman Catholic Church)
9. Union Island Secondary School
10. Ashton Gospel Hall Church – Union Island
11. St Matthias Anglican Church – Ashton, Union Island
12. Rocky Hill Seventh Day Adventist Church - Ashton, Union Island
13. Union Island Baptist Church, Ashton
14. Clifton Pre School
15. Ashton Learning Resource Centre
16. St. Joseph's Roman Catholic Church - Clifton, Union Island

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