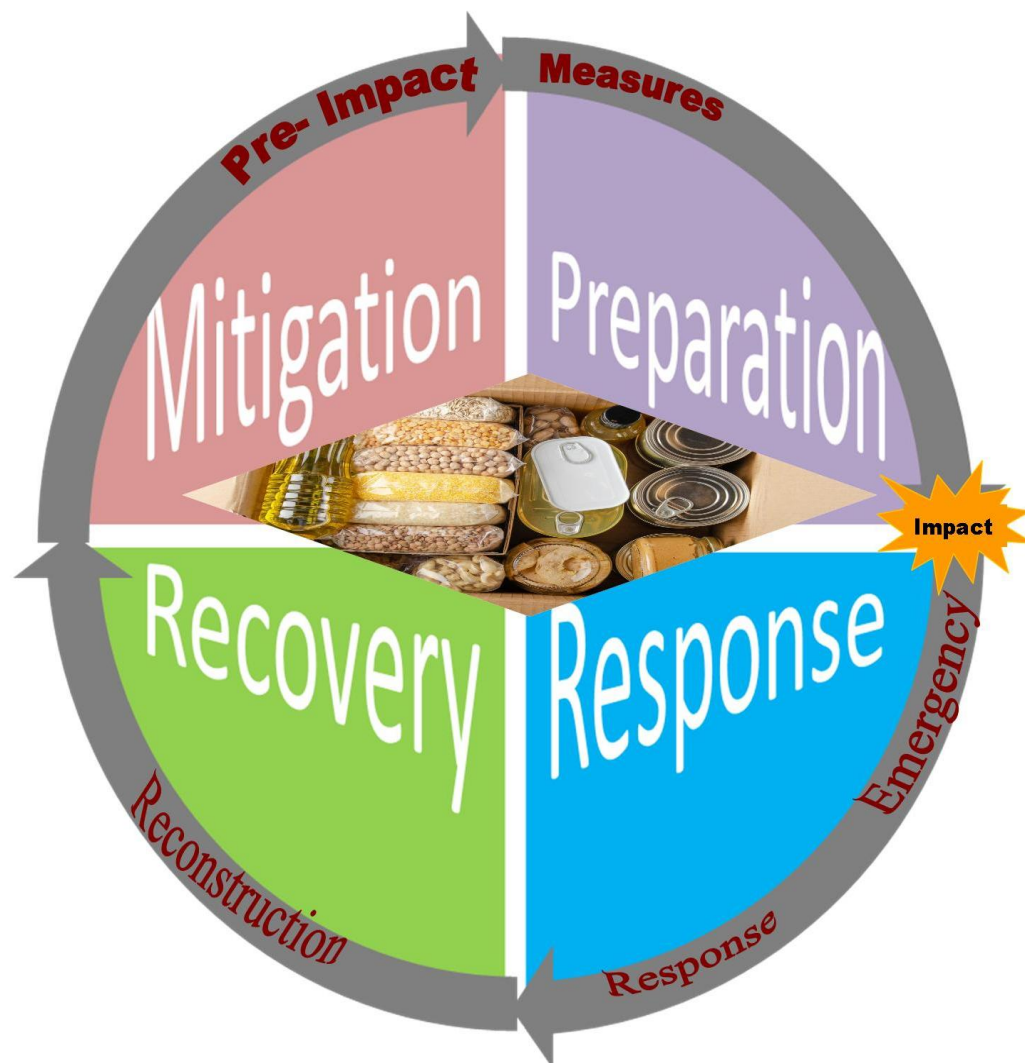


2021



GRENADA NUTRITION IN EMERGENCY DISASTER MANAGEMENT PLAN

This Plan serves as a supplement to the National Disaster Plan and the National Multi-Hazard Health Sector Disaster Emergency Management Plan

Preface

The Grenada Food and Nutrition Council recognized that there is no definite plan in Grenada to deal with the nutritional implications of major disasters and emergencies. As a result, the “Grenada Nutrition in Emergency Disaster Management Plan” was created to provide key nutrition-related stakeholders with directives on appropriate response activities in the event of a disaster or emergency. This plan aims to complement the “National Disaster Management Plan” and the “National Multi-Hazard Health Sector Disaster Emergency Management Plan”.

Aside from the major benefit of guiding an emergency response, the development of this plan also illuminated issues relating to availability of resources (equipment, trained personnel, supplies), or lack thereof, and areas that can be corrected now, before a disaster or emergency occurs.

All in all, rapid decisions, shortage of time, and lack of resources/trained personnel can lead to an increased risk for the development of under-nutrition in some of the most vulnerable groups among any population. Timely intervention plays a pivotal role in preventing the onset of malnutrition and decreasing incidences of morbidity and mortality. As such, a well thought out, well-organized disaster emergency response plan was created to prevent or mitigate these issues.

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- The Ministry also thanks the organizations that were represented during consultation on the development of this Plan; your contributions could not go unnoted.

ABBREVIATIONS

ACF --- Action Against Hunger (French - Action Contre La Faim)

BFHI--- Baby Friendly Hospital Initiative

GNiEDMP --- **Grenada** Nutrition in Emergency Disaster Management Plan

GFNC --- Grenada Food and Nutrition Council

IYCF ---Infant and Young Child Feeding

MOH --- Ministry of Health

MNIB ---Marketing and National Importing Board

MOUs --- Memoranda of Understanding

NaDMA ---National Disaster Management Agency

NAWASA ----National Water and Sewage Authority

NEAC --- National Emergency Advisory Council

NEOC --- National Emergency Operating Centre

NiE — Nutrition in Emergency

NiEOC --- Nutrition in Emergency Operating Centre

SOPs --Standard Operating Procedures

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**GRENADA NUTRITION IN EMERGENCY DISASTER
MANAGEMENT PLAN (GNiEDMP)**

2021

INTRODUCTION

During a disaster or an emergency, there is an increased risk for the development of undernutrition in some of the most vulnerable groups among any population. Timely intervention plays a pivotal role in preventing the onset of malnutrition and decreasing incidences of morbidity and mortality.

Grenada is exposed to various hazards such as floods, earthquakes, hurricanes, fires and droughts, which can severely impact the nutritional status of individuals and communities. “Despite all humanitarian responses over the past 30 years, in recent times, major catastrophes ‘response mechanisms’ assessment shows that inappropriate responses continue in the areas of: Emergency infant and young child feeding; timely response to crises; and Considering the causes of malnutrition.” Additionally, the study of Infant and Young Child Feeding (IYCF) during emergencies showed that response efforts increased the risk of under nutrition, disease and death, instead of improving conditions (ACF International, 2011, p9.).

It must be recognized that it is more cost effective to prevent than to treat malnutrition. Therefore, a Preparedness, Response, and Recovery plan of action to ensure food security that would assist in the prevention of malnutrition and related diseases in emergency situations is essential.

In developing this plan, consideration was given to the country’s geographical location and risk to occurrence of hazards such as hurricanes, floods, earthquakes and volcanic eruptions, as well as various food, nutrition and health related policies and plans of Grenada such as:

- The National Food and Nutrition Security Policy 2013
- Grenada National Disaster Management Plan 2013
- Draft Infant and Young Child Feeding Policy 2016
- Baby Friendly Hospital Initiative 2017

- National Multi-Hazard Health Sector Disaster Emergency Management Plan for Grenada, Carriacou and Petite Martinique, 2017

There is a profound concern for all groups in planning for nutrition management in emergencies and disasters; however, the focus must be placed on the most vulnerable groups to prevent and address the onset of malnutrition. This will include infants and young children less than 5 years of age, particularly infants less than 6 months that are in extreme danger, children that are not breastfed, pregnant and lactating women, persons with disabilities, the elderly and persons suffering from chronic diseases. Therefore, programmes and adequately trained responders at the national and community level are necessary.

AIM

To establish a set of procedures, roles and responsibilities that will ensure appropriate planning and timely activation of intervention of nutrition services in the event of an emergency or disaster

MAIN OBJECTIVES

1. Develop and disseminate a national plan for nutrition in emergencies and disasters.
2. Train responders to carry out nutrition surveillance among vulnerable and impacted population groups
3. Promote and support exclusive breastfeeding and continued breastfeeding, when practicable.
4. Coordinate the appropriate receipt and distribution of suitable Breast Milk Substitutes (BMS)
5. Promote and advise on safe food handling practices
6. Collaborate with national, regional and international agencies in the procurement of essential and appropriate food supplies
7. Provide guidance for nutrition services at places with large gatherings
8. Monitor and report on nutrition interventions to the relevant authorities

BACKGROUND

The State of Grenada, which is inclusive of three islands, mainland Grenada, and the sister isles of Carriacou and Petite Martinique, is approximately 344km² or 132 square miles in size, combined. There are two seasons, a wet season which is experienced during the period of June to November and a dry season from December to May. However, in recent years, due to the effects of climate change, there has been significant variance in the weather pattern with extremely dry spells being experienced during the months of August and September.

Grenada, based on its geographical location, is exposed to numerous hazards and the risks can be potentially dangerous and disastrous such as flash floods which were experienced in July 2018 as well as landslides, coastal flooding and droughts. Earthquakes have also been felt on the island; the latest being in August 2018 when a 7.3 magnitude struck Venezuela and Trinidad and was strongly felt in Grenada, but fortunately with no significant damages reported.

Additionally, there is a high risk that can occur from Kick 'em Jenny; a submarine volcano located 8 kilometers north of Grenada (12.18°N, 61.38°W). There have been reports of seismic activity over the past years with the most recent activities recorded in June 2020. Any volcanic eruption, especially submarine volcanoes, increases the risk for tsunamis and their consequences. Additionally, it poses severe threat to marine life, earnings of fisher folk and consequently the food supply chain.

Hurricanes and storms, which are slow-onset events, are very common in the region. However, the last major ones were Hurricane Ivan, a category 4 in September 2004, followed by Hurricane Emily, a category 2, in July 2005, which heavily affected the agriculture sector. Prior to these was Hurricane Janet some 50 years earlier.

The effects of these hazards on the agricultural sector can result in food shortages and subsequently compromise the nutritional status of the populace. Droughts can also affect the agricultural sector, including livestock. Events resulting in an emergency or disaster can negatively affect access to local, safe and wholesome foods as well as regional and international trade. In the absence of adequate safe food and water, there is an increased risk of infectious and diarrheal diseases causing energy and nutrient deficiencies, resulting in reduced nutrient absorption and/or losses and dehydration.

Grenada has an established National Disaster Management Agency (NaDMA) that comprises a number of sub-committees which includes a Multi-sectoral Supplies Management Committee, that is responsible for procurement and distribution of food supplies. However, the emphasis has not been on nutritional needs, but rather on distribution of food without regard to caloric and nutrient requirements, particularly for vulnerable groups. In light of the emphasis now being placed on nutrition in emergencies and disasters, the Grenada Food and Nutrition Council (GFNC) will now assume the lead role of nutrition management should the country be impacted by any hazard(s).

Currently, in the state of Grenada, there are 7 nutritionists employed in the public sector, who are supported by nutrition officers as well as other nutritionists involved in private practice. There are approximately 3.1 registered nurses per 1000 inhabitants that provide a level of nutrition support at the hospital and community level (MOH, 2020). Additionally, there are medical doctors in the public and private sector as well as public health professionals.

Nutrition Risk Assessment/Analysis

Vulnerable Groups

The Grenada Food and Nutrition Council and the Ministry of Health (MOH) monitor nutrition-related indicators for various sectors of the population. Between January and June of 2019, the parish of St Patrick had the highest rate (88.7%) of exclusive breast feeding at six months, which appears to be a consistent trend. Between the years of 2015 and 2018, the overall rate of exclusive breast feeding for six months, averaged 28.8% of a total of 10,770 infants assessed. An increase is however noted with the launch of the Baby Friendly Hospital Initiative (BFHI) in 2017; a shift from 31.1% in 2017 to 32.8% in 2018 (MOH, 2015-2019).

The table below shows the highest levels of anemia among screened antenatal and post-natal women and one-year-old children in 2017 and 2018 and levels of highest breastfeeding, by parish.

Table 1

Rates of Anaemia and Exclusive Breastfeeding

Parish	Antenatal Women Hb<10g		Parish	Postnatal Women Hb<10g		Parish	One Year Olds Hb<11g		Parish	Highest Exclusive breastfeeding to 6 months	
							2017	2018			
	2017	2018		2017	2018					2017	2018
St. Andrew	21.2%	20.2%	St. Andrew	2.4%	9.9%	Carriacou	56.0%	100%	St. Patrick	42.5%	47.2%
Carriacou	6.3%	7.6%	St. Patrick	6.6%	13.5%	St. David	67.6%	85%	St. David	32.6%	42.0%
St. Patrick	17.9%	26.2%	Carriacou	0%	6.3%	St. Patrick	63.9%	100%	St. Andrew	20.2%	30.0%
St. George	5.1%	7.2%	St. John/ St. Mark	10.7%	3.3%	St. John/ St. Mark	45.5%	22.2%	St. George	40.4%	23.7%
						St. George	35.5%	2.1%	St. John/St. Mark	29.5%	35.3%

Source: MOH

In 2018, 100% of one-year old infants screened in Carriacou (25) and St. Patrick (44) were anaemic and 85% (79/93) in St. David.

GFNC monitors children ages 0-5 years old for weight and height for age, as well as length for age; these children are referred from private pediatricians, community health district clinics and discharges from various hospitals. Some of these children have been diagnosed with failure to thrive and others were born with low birth weight (<2.5kg or 5.5lbs). The children are placed on a register and are monitored monthly. There were 49 children on the GFNC register in January of 2018, 32 children in January 2019 and 16 in January of 2020 indicating a gradual decrease in the number of underweight children. Additionally, a variable number of children are monitored if deemed at risk of becoming wasted. As of October 2020, there are (12) children on the register with St. George having the highest number of children at (6), followed by St. David and St. Patrick at (2) each; over the last several years, Carriacou and Petite Martinique rarely have underweight children recorded. Data collected from the General Hospital shows that in 2017, there were 124 newborns with low birth weight, 118 in 2018, 121 in 2019 and 124 for 2020.

Within the period 2017-2019, 63 children were discharged from the hospital with a diagnosis of failure to thrive (MOH, 2020). These children were followed up by the GFNC until they successfully gained weight to achieve z- score between -1 and +1 (indicative of stability and good growth patterns) or until age 5 years, whichever is first achieved.

Breastfeeding is encouraged and supported and a limited food basket is provided to the families of underweight children. Donated food items such as legumes, rice and flour and a few other items are usually added monthly to strengthen the food baskets, for example oil, corn meal as well as peanut butter and dry powdered milk to families with children over two years old. In recent times, attempts have been made to add local vegetables and staple items, when feasible. Once the children have

achieved school age and are enrolled, they are referred to the School Feeding Programme to ensure the provision of at least one healthy meal per day.

Table 2: shows the number of wasted/thin children registered by parish at the end of October 2019-October 2020

PARISH	NO. REGISTER October 2019	NO. REGISTER October 2020
ST. ANDREW	3	1
ST. DAVID	5	2
ST. GEORGE (south)	3	3
ST. -GEORGE (north)	3	3
ST. PATRICK	4	2
ST. JOHN	1	1
ST. MARK	0	0
CARRAICOU	0	0
TOTAL	19	12

Annual surveys of day care centres and quadrennial surveys of preschools are conducted to capture other children that are undernourished or at risk of under nutrition. The GFNC works closely with the Ministries of Social Development, Education, and Health in administering these surveys and in implementing corrective actions.

Already, throughout the tri-island state, there is evidence of vulnerable segments of target groups which means that currently there are children that are at nutritional risk even in the absence of an emergency or disaster. Particular attention will be needed in areas of St. Andrew, St. Patrick, and St. Mark, which are deemed the most poverty stricken based on the poverty assessment report of 2008. This report also indicated that St George's had the most children that were wasted and also highlighted the fact that Carriacou and Petite Martinique depend heavily on food transported from mainland Grenada. Therefore, there is need to pay particular attention to these parishes, should the country be severely impacted by any hazard(s) that can compromise the nutritional status of individual groups and communities.

Risks/Potential Impact on Vulnerable Groups

a) Breastfed children 0 -6 months

- Temporary disruption of the flow of breast milk during periods of high stress
- Use of contaminated water and utensils
- Lack of support system for continued breastfeeding, including inadequate nutrition for lactating women

b) Non-breastfed children 0- 6 months

- Unavailability of appropriate infant formula
- Improper mixing of infant formula
- Poor sanitation and poor hygiene practices in the preparation of feeds

c) Children receiving complementary foods 6 months – 2 years

- Inadequate diversity of available foods
- Absence of fortified foods during the complementary feeding period
- Inadequate knowledge and support for appropriate complementary feeding

d) Pregnant and Lactating women

- Insufficiency in types and variety of food
- Inadequate support and professional guidance

e) Elderly and Disabled

- Insufficiency in types and variety of food
- Inadequate support for meal preparation and feeding
- Physiological and physical challenges
- Limited access to professional support and guidance

f) Persons with Chronic Diseases

- Unavailability of appropriate foods to manage diseases
- Limited access to professional support and guidance

Nutrition Support/Advice for Vulnerable Groups

Vulnerable Groups	Nutrition Support/Advice
0 to 6 months (breastfed)	<ul style="list-style-type: none">• Continuous exclusive breastfeeding
0 to 6 months (non-breastfed)	<ul style="list-style-type: none">• Re-lactation where possible• Access to prescribed breast milk substitutes• Safe food and water• Appropriate feeding utensils
6 months to 2 years	<ul style="list-style-type: none">• Access to breast milk• Access to prescribed breastmilk substitutes• Access to a variety of nutrient dense foods• Safe food and water• Appropriate feeding utensils• Professional guidance and support on complementary feeding
Pregnant and lactating women	<ul style="list-style-type: none">• Access to a variety of foods from the major food groups (<i>staples, food from animals, vegetables and legumes</i>)• Safe water, food/food handling• Professional guidance and support for breastfeeding
Chronic disease	<ul style="list-style-type: none">• Access to a variety of foods to manage condition• Safe food/food handling• Professional guidance and support
Elderly and disabled	<ul style="list-style-type: none">• Access to a variety of foods from the major food groups (<i>staples, food from animals, vegetables and legumes</i>)• Safe water, food/food handling• Advice and/or assistance with meal preparation and feeding• Professional guidance and support
Persons in shelters	<ul style="list-style-type: none">• Access to a variety of foods from the major food groups (<i>staples, food from animals, vegetables and legumes</i>)• Safe water, food/food handling• Safe space for eating and feeding• Professional guidance and support

General Roles of key Nutrition Services Stakeholders during an Emergency/Disaster

Stakeholders		General Roles
Grenada Food and Nutrition Council		Planning, coordinating of national nutrition services, surveillance, monitoring
Ministry of Health	Nurses	Assessment and referrals Identify vulnerable individuals, families in communities Breastfeeding support
	Physicians	Assessment, monitoring, treatment and reporting
	Environmental Health Officers	Food inspection/food safety and reporting
	Health Promotion Officers	Health and nutrition education, public service announcements
	Epidemiologist	Nutrition data receipt, analysis and reporting & dissemination
Nutritionists/Dietitians/ Nutrition Officers		Assisting with coordination of food distribution, support breastfeeding, assessment and reporting
National Disaster Management Agency (NaDMA)		Procurement, distribution of food and coordination of humanitarian assistance
National Water and Sewage Authority (NAWASA)		Availability and distribution of potable safe water and Sewage Management
Ministry of Trade, Industry, Co-operative and CARICOM Affairs/ MNIB		Sourcing and importation of foods
Ministry of Agriculture		Storage of food and seed, revitalization of food crops after the emergency
Ministry of Education		Shelter management; procurement, preparation and distribution of nutritious food for school aged children
Ministry of Social Development		Identification of vulnerable individuals and groups Coordination distribution of food
Faith-Based and Non-Governmental Organizations (Grenada Red Cross, Adventist Development and Relief Agency International, Grenada National Organization of Women, Grenada Citizen Advice and Small Business Agency, Conference of Churches, Salvation Army, Alliance of Evangelical Churches, Peace Corp) Organizations)		Procurement, packaging and distribution of food Provision of volunteers Identification of vulnerable groups/impacted persons
Academic Institutions		Training/capacity building in nutrition
Regional/International bodies (eg. UNICEF, PAHO,FAO, WFP)		Identification and procurement of food, technical guidance, capacity building, information sharing and humanitarian assistance and coordination
Media		Nutrition education and promotion, public service announcements

National Nutrition Service Capacities and Contact Information

Actors	No.	Nutrition Related Capacity	Contact Information
Dietitian	1	Community Nutrition Support	Food and Nutrition Council 1 473 440-2126 gfn08@gmail.com
Nutritionists	3		
Paraprofessionals- Nutrition Officers	4		
Nutritionists- MOH- Hospital Services	3	Clinical Nutrition	Grenada Hospital Services 440-2051
Other Nutritionists	3	Community/Clinical	Private Sector
Breast Feeding Coordinator	1	Breast feeding support Nursing	MOH 440-2649

Barriers or obstacles to nutrition support for vulnerable groups

1. Limited knowledge and non-prioritization of nutrition in disasters/emergencies response
2. Misconception that mere food distribution would solve all nutrition problems
3. Limited trained nutrition human resource
4. Inadequate budgetary support for training, procurement of food items and dissemination of nutrition-related information
5. Limited coordination among key stakeholders
6. Untargeted distribution of food such as infant formula
7. Difficulty accessing listing of vulnerable individuals and groups

The Plan

Name: Grenada Nutrition in Emergency Disaster Management Plan

Purpose: To have a set of documented activities to identify and manage the nutritional needs of affected individuals, groups and communities in the event of any emergency or disaster

Specific Objectives

1. Outline the coordinated mechanism for nutrition response in emergencies or disasters
2. Outline nutrition related prevention/mitigation, preparedness, response and recovery measures
3. Identify the roles and responsibilities of key nutrition stakeholders

Legal Framework

- People's law No. 32 of 1980
- Caribbean Disaster Emergency Management Agency Policy and Strategy
- National Disaster Management Plan
- Emergency Powers Act of 1987
- Food and Nutrition Security Policy 2013

Concept of Operation

- **Scope of the plan**

This plan is multi-hazard in scope and focuses on the management of the nutritional status of the population in the event of the impact of any hazard(s). It covers the actions to be undertaken by nutrition stakeholders with specific emphasis on the vulnerable groups such

as children 0-2 years, pregnant and lactating women, elderly persons, persons with disabilities, chronic illnesses and displaced persons, particularly those living in shelters.

This plan is intended to guide the provision of nutrition services in Grenada, in the event of an emergency or disaster.

- **Assumption**

The necessary resources (human, financial, material and time) will be made available by the relevant authorities to implement the activities outlined in this plan.

- **Command and Coordination**

- The National Disaster Management Agency will be responsible for overall Command and Control. This will be done in accordance with the roles and responsibilities of the Supplies Management Committee which is chaired by the Marketing and National Importing Board. The Ministry of Agriculture, also represented on the Supplies Management Committee, is responsible for food and nutrition security, with support from the Grenada Food and Nutrition Council.

- **Activation**

This plan will be activated on the advice of the National Disaster Management Agency, through the Ministry of Agriculture.

- **Deactivation**

This plan will be deactivated on the advice of the National Disaster Management Agency through the Ministry of Agriculture.

- **Triggers of Activation**

The impact of any hazard(s) resulting in the displacement of persons, food insecurity and malnutrition, such as floods, fires, hurricanes, tsunamis.

- **Reporting procedures**

Reports on the nutritional status of impacted communities, groups and individuals, will be submitted to the National Emergency Advisory Council (NEAC) through the Supplies Management Committee. These reports will be generated by the Grenada Food and Nutrition Council from data collated from the various nutrition stakeholders. The reports should include information as outlined in the prescribed Nutrition Status Data Reporting Form with supporting Malnutrition Screen Reference Ranges found in Appendices A and B, respectively.

- **Plan Review and Update**

This plan will be reviewed annually and updated every three years, on the premise of Exercises (drills/tabletop) conducted and/or occurrence of actual events. Any recommended changes to the plan should be forwarded to the Custodian of the plan for inclusion and/or deletion. Recommendations/amendments to the plan will be recorded using the Recommendations/Amendment Form in Appendix L.

- **Custodian of the plan**

The Executive Secretary of the Grenada Food and Nutrition Council will be the Custodian of the plan on behalf of the Ministry of Agriculture.

Management Phases of an Emergency or Disaster

Phase I

These are proactive preventative, preparedness and mitigation actions that are to be taken before the impact of any hazard (s).

Phase II

These are response actions that are to be taken during and immediately after any impact of any hazard(s).

Phase III

These are recovery, restorative and rehabilitative actions that are taken after the immediate response has been appropriately conducted and it has been declared safe to return to pre-impact operations.

Main Focus Areas

Prevention/Mitigation

The GNiEDMP will ensure that all segments of the population are informed on healthy eating practices and ways to achieve and maintain a well-nourished status through:

Monitoring nutrition status of vulnerable populations

Monitoring school feeding programme

Disseminating food and nutrition-related information to the public

Training on utilization of locally available foods and ways to conserve nutrients

Supporting vulnerable families with food parcels and in growing their own food

Training on early identification of malnutrition among vulnerable groups

Preparedness

This involves steps that will be undertaken to ensure the country is prepared to respond effectively and efficiently to the nutrition needs of the affected population.

These steps include:

A. Establishment of the Grenada Nutrition in Emergency Disaster Management Committee (GNiEDMC)

In an effort to coordinate the management of nutrition in the event of an emergency/disaster, a GNiEDMC must be established. The committee should comprise key nutrition services stakeholders. This committee will be responsible for ensuring the development of the GNiEDMP as well as Nutrition Stakeholders' respective Sub-plans or Standard Operating Procedures (SOPs). Members of the GNiEDMC also serve in the NiEOC when activated. Representative(s) will be expected to serve on the NaDMA Supplies Management Committee as well as on the National Emergency Operations Centre (NEOC), when activated.

B. Development of Plans, Sub-Plans and SOPs

The GNiEDMC will ensure the development of the Grenada Nutrition in Emergency/ Disaster Management Plan and respective Nutrition Stakeholders' Sub-plans/ SOPs and that these plans are disseminated and understood. Stakeholders should be committed to the implementation of these plans during all stages of the disaster management cycle.

C. Training

Conduct nutrition related training for select groups and individuals, such as nurses, care givers at special homes and media personnel. These trainings will focus on the **roles and responsibilities** of stakeholders; food safety, storage and preparation; identification indicators for assessing malnutrition and prevention and management of nutrition-related diseases/conditions. Information dissemination will be done through presentations to groups, institutions and businesses as well as practical food demonstration /preparation sessions.

A selected group(s) of first response nutrition stakeholders should be identified for early deployment and sustainability throughout the response phase.

D. Exercises

Periodic Drills and/or Simulations (tabletops/desktops) should be conducted to enhance the skills and capabilities of Nutrition Stakeholders

E. Procurement

It is important that a reliable and accessible stock of essential and nutritious food items be available for distribution, in the event of an emergency or disaster. At the national level, the Supplies Management Committee, under the auspices of NaDMA, is entrusted with that responsibility. However, the GFNC will provide advice on the appropriate foods and rations. The list can be found in Appendix E.

F. Communication

The ability to communicate promptly with Stakeholders is vital for the successful management of nutrition services in the event of any emergency or disaster. Therefore, appropriate communication equipment must be in place. Presently, the reliance is strictly on cell phones

and landlines. However, depending on the type of hazard impacting the country, VHF radios may be required. The contact information of stakeholders, inclusive of telephone numbers and addresses, should be obtained and disseminated prior to the impact of any hazard(s), as seen in Appendix K. Arrangements should also be made for obtaining VHF radios in places where they are not currently available to facilitate intra and intercommunication. Nutrition-related messages for dissemination to the public should be crafted with guidance from the GFNC and the MOH to avoid misinformation. These messages should be prepared in advance and appropriate adjustments made based on the impacting hazard. Sample messages can be found in Appendix I.

G. Staff welfare

The well-being of nutrition stakeholders must be given priority attention. Preparation should be made to cater for their psychological as well as their social needs, such as food, water, shelter and health care services. Counseling sessions (pre-impact) should be conducted to develop their coping skills in emergency and disaster situations.

Consideration should also be given to debriefing after an emergency or disaster to first response nutrition personnel.

H. Identification of Alternative Facilities/Service Providers

During the impact of a hazard, depending on its type and/or severity, facilities that are expected to provide nutrition-related services can be severely compromised. Therefore, to ensure the continuity of quality nutrition care, nutrition stakeholders should ensure that appropriate alternative facilities and/or nutrition service providers are identified and Memoranda of Understanding (MOUs) established by the relevant authorities.

I. Sensitization of an Impending Hazard

Once information of an impending hazard has been received, nutrition stakeholders will be sensitized and the Nutrition in Emergency Operation Centre (NiEOC), located in the GFNC building, will be activated, either virtually or physically.

Response

The response phase in the disaster management cycle is critical to the saving of lives and the salvaging of property (buildings, equipment, domestic and sanitary supplies). These are the actions taken during and immediately after the impact of any hazard. In this phase, a nutrition-needs assessment of affected individuals, groups, and communities has to be conducted, provided that it is safe to do so. This will be the responsibility of nutrition stakeholders, working in collaboration with the national agency NaDMA, and other relevant institutions. As it relates to nutrition, priority must be given to the most vulnerable persons impacted. The cooperation of all nutrition stakeholders is expected for the successful implementation of the Plan. During this phase, procured essential nutrition-related supplies should be prudently distributed and managed, and necessary nutrition-related advice given. Also, it may become necessary for Nutrition Stakeholders to relocate to pre-identified alternative facilities or utilize pre-determined service providers to ensure the provision of nutrition services.

All nutrition-related reports and data generated should be submitted to the NiEOC for onward submission to NaDMA. It must be noted that the NiEOC can become compromised, likewise other nutrition stakeholders' facilities. Therefore, arrangements should be made for evacuation and/or relocation to alternative predetermined sites. The transmission of data/reports would be facilitated through whatever functional medium available at the time, using the prescribed reporting form.

It is important that timely reports be submitted to the relevant authorities on all response actions and activities conducted.

Recovery

This phase includes ongoing response activities and monitoring and evaluation of impacted persons. It also includes the identification and prioritization of affected facilities for refurbishment, replenishment of equipment and nutrition-related supplies as well as reimbursement to service providers. A concerted effort should be made on the part of Nutrition Stakeholders to ensure return to normal operations.

Roles and Responsibilities of key Nutrition Services Stakeholders

National Disaster Management Agency (NaDMA)

Preparedness

- Prepare and sensitize stakeholders on the National Disaster Management Plan
- Ensure that the Disaster Relief Management Committee is functional and that the Food and Nutrition Council is represented
- Ensure that the appropriate nutrition-related relief supplies are stocked in accordance with established guidelines
- Establish Memoranda of Understanding (MOUs) with suppliers and other service providers and renew and update existing MOUs
- Develop and establish MOUs with property owners for use of their properties as shelters
- Organize a mechanism for the storage and distribution of food and supplies through the Disaster Relief Management Committee

Response

- Activate and deactivate the nutrition-related emergency/disaster management plan
- Provide and distribute food and supplies to identified shelters, vulnerable groups and individuals based on the needs analysis
- Provide the necessary manpower and transportation services
- Monitor and report on relief distribution
- Identify and prioritize individuals for continued nutrition-related services

Recovery

- Continue the provision of nutrition-related services, where necessary, by individual service providers
- Conduct an overall assessment on the implementation of the plan
- Prioritize and document areas for improvement
- Implement improvement measures
- Ensure that the Disaster Relief Management Committee replenishes stocks of food supplies
- Ensure that the Disaster Relief Management Committee reimburses suppliers and other nutrition-related service providers
- Deactivate the emergency/disaster plan in relation to nutrition services, provided that it is safe to do so

Ministry of Agriculture

Preparedness

- Ensure that an Emergency Disaster Management Plan for the Agriculture sector is developed
- Ensure the development of the Grenada Nutrition in Emergency Disaster Management Plan and respective sub-plans or Standard Operating Procedures (SOPs)
- Ensure that adequate resources are provided for the implementation of the National Nutrition in Emergency Disaster Management Plan
- Ensure that the National Nutrition in Emergency Disaster Management Committee is established and that a focal point is appointed
- Set up a monitoring and reporting system for the overall operation of the national nutrition-related response
- Ensure that there is a National Food Security Plan

- Maintain a database of farmers, farms, types of crops cultivated and their respective quantities
- Establish a seed bank and expand the program of provision of planting material
- Identify persons to work in the food distribution centres
- Collaborate with the Grenada Food and Nutrition Council to design a rationing system
- Participate in the National Nutrition in Emergency Disaster Management Committee meetings

Response

- Activate and deactivate the Agriculture Disaster Management Plan
- Advise the National Nutrition in Emergency Disaster Management Committee on the activation and deactivation of the National Nutrition in Emergency Disaster Management Plan
- Conduct assessments of affected farms and farmlands and submit reports to the Permanent Secretary of the Ministry of Agriculture
- Collaborate with the Supplies Committee to arrange adequate and appropriate transportation for the distribution of food and other nutrition-related relief
- Monitor the implementation of the Agriculture Disaster Management Plan and provide reports to the Permanent Secretary of the Ministry of Agriculture

Recovery

- Conduct ongoing monitoring and prioritize farmers/farms for continued agriculture-related relief support
- Facilitate the return to normal operations after it has been declared safe to do so
- Advise on the deactivation of the Agriculture Disaster Management Plan, provided that it is safe to do so

Grenada Food and Nutrition Council

Preparedness

- Ensure the Grenada Nutrition in Emergency Disaster Management Plan is developed and disseminated.
- Ensure respective stakeholders' sub-plans and/or SOPs are developed
- Ensure that annual and ad-hoc meetings of the Grenada Nutrition in Emergency Disaster Management Committee are convened
- Ensure that nutrition-related plans are developed by the various nutrition stakeholders
- Sensitize stakeholders and the general public of any impending event that may negatively affect their nutrition status
- Provide advice on the procurement and storage of essential nutritious foods
- Keep current lists of vulnerable children that are tracked by the Council
- Educate the population on good nutrition and lifestyle habits
- Encourage and promote exclusive breastfeeding from birth to 6 months and continued breastfeeding up to 2 years and beyond.
- Advocate for breastfeeding mothers and their infants to be kept together, especially at shelters and hospitals to ensure that routine breastfeeding is not interrupted
- Train the population on food preparation, preservation, and storage methods
- Encourage planting of nutritious foods among vulnerable groups
- Identify and train nutrition staff and other personnel to perform the nutrition needs assessment
- Participate in the Grenada Nutrition in Emergency Disaster Management Committee meetings

Response

- Activate and deactivate the National Nutrition in Emergency Disaster Management Plan, on the advice of the Ministry of Agriculture
- Activate the established MOUs with service providers in relation to the use of alternative buildings, on the advice of the Ministry of Agriculture
- Attend meetings of the Disaster Relief Management Committee and the National Emergency Advisory Council (NEAC), as requested
- Provide advice on the types, quantities, procurement methods and distribution of foods at the national level
- Monitor the donation and receipt of foodstuff to reduce risk of acceptance of unhealthy foods such as energy dense and nutrient-poor products
- Monitor compliance with the International Code of Marketing of Breast-milk Substitutes especially as it relates to donations of infant formula
- Provide support to breastfeeding mothers and mothers with young children
- Assign nutrition response staff to conduct needs-assessment of impacted individuals/groups/communities and submit reports to the relevant authorities
- Provide public information and education on the proper preparation, handling, and storage of foods
- Provide case-specific nutritional advice to vulnerable groups such as persons with under-nutrition and those living with chronic diseases (diabetes and hypertension)
- Monitor the nutrition status of affected individuals/groups/communities

Recovery

- Identify and prioritize individuals for continued nutrition-related services

- Conduct ongoing monitoring of the nutritional status of the identified persons
- Maintain records and make the necessary referrals
- Monitor any ongoing receipt and distribution of humanitarian food supplies such as baby formulas
- Monitor and advise nutrition stakeholders on the transition to normalcy once it is safe on the advice of the relevant authority
- Advise on the deactivation the Grenada Nutrition in Emergency Disaster Management Plan, sub-plans and/or SOPs accordingly
-

Marketing and National Importing Board (MNIB)

Preparedness

- Ensure that an Emergency Disaster Management Plan for the Marketing, National and Importing Board is developed
- Convene and chair the meetings of the Disaster Relief Management Committee
- Ensure that adequate resources are maintained for the national response, especially the implementation of the Marketing and National Importing Emergency Disaster Management Plan
- Collaborate with the Ministry of Agriculture to maintain a database of farmers, farms and types of crops cultivated
- Establish MOUs with food suppliers as well as local farmers, in collaboration with the Ministry of Agriculture
- Participate in the Grenada Nutrition in Emergency Disaster Management Committee meetings

Response

- Activate and deactivate the Marketing National and Importing Emergency Disaster Management Plan
- Activate the MOUs with food suppliers as well as local farmers
- Identify areas for priority intervention in collaboration with the National Disaster Management Agency
- Collaborate with the Food and Nutrition Council in the implementation of the Grenada Nutrition in Emergency Disaster Management Plan
- Collaborate with the Ministry of Agriculture in the food operation centres in regard to receipt and distribution of food items, provision of human resources and transportation support
- Provide reports to the National Emergency Advisory Committee (NEAC), NaDMA, MNIB Board of Directors, and the Ministry of Agriculture

Recovery

- Monitor and evaluate the implementation of the response and identify priority areas for continued intervention
- Reimburse suppliers and replenish stocks
- Deactivate the Marketing National and Importing Emergency Disaster Management Plan provided that it is safe to do so
- Evaluate the overall disaster relief interventions and submit reports accordingly

Ministry of Education

Preparedness

- Ensure that an Emergency/Disaster Management Plan is developed for the education sector
- In collaboration with NaDMA, identify appropriate buildings to be used as shelters

- Ensure that the shelters meet standards stipulated in the shelter manual, especially areas for food preparation and distribution
- Identify persons to receive training in assessment of nutrition-related needs, with guidance from the NiE committee
- Facilitate training in shelter management as well as food safety and preparation
- In collaboration with other NaDMA subcommittees, ensure that sanitizing materials and accessories are available for use at shelters
- Encourage the planting of nutritious foods, especially in school gardens
- Participate in the Grenada Nutrition in Emergency Disaster Management Committee meetings

Response

- Activate and deactivate the Ministry of Education Emergency/Disaster Management Plan
- Assist with the dissemination of nutrition-related information
- Assist with the assessment of nutrition-related needs of persons in shelters
- Assist in the preparation and distribution of food, especially at shelters
- Ensure proper procedures for sanitization of equipment and utensils during food handling at shelters

Recovery

- Evaluate response activities and identify areas for continued assistance
- In collaboration with the Ministry of Health, ensure that the shelters are cleaned, sanitized and secured after evacuation of occupants
- Provide reports to the relevant authorities
- Deactivate the Ministry of Education Emergency Management Plan, provided that it is safe to do so, on the advice of the relevant authorities

Ministry of Health

Preparedness

- Ensure that a National Multi-hazard Health Sector Disaster/Emergency Management Plan is developed
- Ensure the development and dissemination of sub-plans for nutrition services at hospitals and other health-related institutions
- Conduct health and nutrition education sensitization sessions in communities
- In collaboration with the Food and Nutrition Council, prepare and disseminate nutrition-related information
- Identify, document, and refer vulnerable persons within the communities
- Promote breastfeeding to women of childbearing age
- Participate in training on nutrition and health assessments for hospital and community health care providers
- Identify alternative facilities and establish MOUs for continuation of nutrition services post-impact
- Stock quantities of nutritious foods and water supply that can last at least 7-14 days
- Participate in the National Nutrition in Emergency Disaster Management Committee meetings

Response

- Activate and deactivate the disaster/emergency plan in relation to nutrition services
- Provide support to pregnant and lactating women and mothers with young children and make the appropriate referrals
- Monitor the donation and receipt of foodstuff to reduce risk of acceptance of unhealthy foods such as energy dense nutrient poor products

- Monitor compliance with the International Code of Marketing of Breast-milk Substitutes especially as it relates to donations of infant formula
- Share nutrition-related information regarding vulnerable individuals/families with the National Emergency Operating Centre (NEOC) through the Nutrition in Emergency Operating Centre (NiEOC)
- Conduct food and water safety inspections, especially at shelters and heavily impacted areas
- Conduct impact assessments on the health and nutrition status at hospitals and communities
- Provide support to persons with NCDs
- Make referrals to the NiEOC, community health centres and/or the hospitals, accordingly
- Identify and prioritize individuals for continued nutrition-related services
- Submit reports to the relevant authorities

Recovery

- Continue the provision of nutrition-related services, where necessary
- Conduct an overall assessment of the implementation of the respective sub-plans for nutrition services
- Prioritize and document areas for improvement
- Implement improvement measures, as needed
- Replenish supplies, as needed
- Reimburse suppliers and other nutrition-related service providers
- Deactivate the nutrition services sub-plans, provided that it is safe to do so, on the advice of the relevant authorities

National Water and Sewage Authority (NAWASA)

Preparedness

- Ensure that a Water Supplies and Sewage Management Plan is developed for emergencies and disasters
- Ensure that there is an adequate amount of potable water for distribution
- Educate the public on the safe storage of water pre-impact
- Make provisions for the distribution of water
- Identify alternative water supply sources
- Participate in the National Nutrition in Emergency Disaster Management Committee meetings

Response

- Activate and deactivate the Water Supplies and Sewage Management Plan for emergencies and disasters
- Conduct damage assessments and provide reports to the relevant authorities
- Conduct quality testing to ensure safety of the water
- Distribute potable water based on needs analysis
- Identify areas for priority repairs
- Provide the public with current information relating to water supply, usage, and sewage management

Recovery

- Continue ongoing repairs of priority areas
- Restore the normal water supply
- Evaluate the implementation of the plan

- Implement improvement measures
- Deactivate the Water Supplies and Sewage Management Plan for emergencies and disasters

Ministry of Social Development, Housing and Community Empowerment

Preparedness

- Ensure that a Ministry of Social Development, Housing and Community Empowerment Multi-Hazard Disaster Emergency Management Plan is developed
- Identify volunteers to assist in food distribution
- Identify and maintain a database of vulnerable groups
- Provide education to the public on stress or crisis management
- Work along with geriatric and special homes to identify alternative shelters
- Make provisions for relief supplies such as food, clothing, shelter and finance
- Participate in the Grenada Nutrition in Emergency Disaster Management Committee meetings

Response

- Activate and deactivate the Ministry of Social Development, Housing and Community Empowerment Multi-Hazard Disaster Emergency Management Plan
- Assign Social Service response staff to affected areas and communities
- Conduct needs-assessment of impacted individuals/groups/communities and submit reports to the relevant authorities
- Identify and prioritize individuals or families most needed of nutrition-related assistance
- Assist in the coordination and distribution of humanitarian food supplies from both local and external organizations
- Deploy volunteers to assist in food distribution

- Provide psychosocial support services to affected individuals, families and persons living with chronic diseases

Recovery

- Advise on persons who need continued nutrition support
- Identify and prioritize individuals for continued psychosocial support
- Assist in establishing linkages with organizations for continued food and nutrition support, if needed
- Deactivate the Ministry of Social Development, Housing and Community Empowerment Multi-Hazard Disaster Emergency Management Plan, provided that it is safe to do so, on the advice of the relevant authorities

Faith-Based/Non- Governmental Organization

Preparedness

- Develop their respective Disaster Management Plans
- Identify sources and establish MOU's for relief food supplies
- Maintain a database of volunteers
- Ensure volunteers are appropriately trained in safe food handling procedures
- Prepare buildings and facilities for food preparation and distribution
- Participate in the National Nutrition in Emergency Disaster Management Committee meetings

Response

- Activate their respective Disaster Management Plan in relation to food and nutrition services
- Inspect food and water supplies to ensure safety before distribution
- Deploy volunteers to assist in identifying affected individuals in relation to their

nutritional needs

- Collaborate with the NiEOC in providing nutrition-support to affected individuals, groups, and communities
- In collaboration with the Ministry of Social Development, deploy volunteers to assist in the distribution of food supplies
- Identify individuals, groups and communities that are in need of continued nutrition support
- Submit reports to the relevant authorities

Recovery

- Provide continued nutrition-support, where needed
- Replenish stocks and remunerate suppliers, where necessary
- Deactivate their respective Disaster Management Plans, provided that it is safe to do so, on the advice of the relevant authorities

Academic Institutions

Preparedness

- Ensure that the respective Disaster Management Plans are developed
- Participate in the Grenada Nutrition in Emergency Disaster Management Committee meetings
- Conduct training programs on nutrition-related services
- Conduct research on the nutritional status of the population
- In collaboration with the Grenada Food and Nutrition Council and the Ministry of Health, provide nutrition-related public education programs
- In collaboration with the Ministry of Social Development, identify volunteers that can assist in providing nutrition-related services

Response

- Assist in conducting assessments of impacted individuals, groups, and communities
- Recommend volunteers that can assist in post-impact nutrition-related services
- Identify and prioritize individuals, groups and communities in need of continued nutrition-related support
- Provide reports to the relevant authorities

Recovery

- Advise on individuals, groups, and communities in need of continued nutrition-related support
- Deactivate their respective Disaster Management Plans, provided that it is safe to do so, on the advice of the relevant authorities

External Assistance and Bilateral Arrangements And Memoranda of Understanding (MOUs)

Nutrition-related arrangements and assistance will be facilitated at the national level through NaDMA. However, nutrition stakeholders, working through the NiEOC, will provide guidance on the type, quantity and quality of food items to be solicited. Foods that are received through donations will be inspected by the Environmental Health Department of the Ministry of Health and the Grenada Bureau of Standards, to ensure safety of such goods and vetted by the NiE Disaster Management Committee prior to distribution. This will ensure compliance with the established food specifications which can

be found in Appendix G. MOUs can also be established with service providers and local suppliers, pre- impact.

Continuity of Operations and Recovery Management

Every effort should be made for the continuation of nutrition services post-impact. The aim is to return to a state of normalcy. In so doing, nutrition stakeholders should develop their respective plans for the continuation of operations. This will also involve movement to previously identified alternative facilities should existing nutrition facilities and nutrition services become compromised.

Appendix B

Malnutrition Screen Reference Ranges

MUAC [only if time is limited and situation does not allow for height/length to be measured]

Group	MUAC	WFH/L	BAZ/BMI	Normal
6 -59 months	SAM < 115mm <11.5cm	≤-3 z-score / <70% and/or +Oedema	<-2	>125mm >12.5cm
6-59 months	MAM >115mm - <125mm >11.5 -<12.5 cm	≥ -3 and < -2 z-score 70-80-%	<-2	Between -2 and +1 z- score
Pregnant Women	Severe 210mm(21.0cm) Moderate 230mm(23.0cm)			
Women	SAM <214mm MAM ≥214mm and ≤221mm		SAM <16mm/m ² (or oedema) MAM ≥16-<17 Mild 17-18.4	>18.4
Men	SAM <224mm MAM ≥224 ≤231mm		SAM <16 MAM ≥16-<17 Mild 17-18.4	>18.4

In pregnant women a MUAC of <230mm (23.0cm) has been associated with growth retardation of the fetus;

Ref: UNHCR, WFP Guidelines for Selective Feeding: The Management of Malnutrition in Emergencies,

January 2011

Appendix C

ESTIMATING WEIGHT

In the presence of edema or ascites, use the table below to correct the weight before completing the Malnutrition Screening Tool.

	Ascites	Peripheral Oedema
Minimal	2.2kg	1.0kg
Moderate	6.0kg	5.0kg
Severe	14.0kg	10.0kg

Estimating weight following amputation

Amputation	Add to the weight	Amputation	Add to the weight
Full leg	15.6%	Full arm	4.9%
Lower leg	4.5%	Hand	0.6%
Foot	1.4%	Forearm	1.6%

Ref:

https://www.nhstaysidecdn.scot.nhs.uk/NHSTaysideWeb/idcplg?IdcService=GET_SECURE_FILE&Rendition=web&RevisionSelectionMethod=LatestReleased&noSaveAs=1&dDocName=prod_217927

Appendix D

Common Medical Complications in Severe Acute Malnutrition

Medical complication	Case definition
Anorexia, poor appetite	Child is unable to drink or breastfeed
Intractable vomiting	Child vomits after every oral intake.
High fever	Child has high body temperature, or axillary temperature $> 38.5^{\circ}\text{C}$, rectal temperature $> 39^{\circ}\text{C}$.
Hypothermia	Child has low body temperature, or axillary temperature $< 35.0^{\circ}\text{C}$, rectal temperature $< 35.5^{\circ}\text{C}$.
Lower respiratory tract infection	Child has a cough with difficult breathing, fast breathing (if child is age 2–12 months: 50 breaths per minute or more; if child is age 12 months to 5 years: 40 breaths per minute or more), or chest in drawing.
Severe anemia	Child has palmar pallor or unusual paleness of the skin (compare the color of the child's palm with your own palm and with the palms of other children).
Skin lesion	Child has broken skin, fissures, flaking of skin.
Unconsciousness	Child does not respond to painful stimuli (for example, injection).
Lethargy, not alert	Child is difficult to wake. Ask the mother if the child is drowsy, shows no interest in what is happening around him or her does not look at the mother or watch your face when talking, is unusually sleepy.
Hypoglycemia	There are often no clinical signs of hypoglycemia. One sign that does occur in a child with SAM is eyelid retraction: child sleeps with eyes slightly open.
Convulsions	During a convulsion, child's arms and legs stiffen because the muscles are contracting. Ask the mother if the child had convulsions during this current illness.
Severe dehydration	Child with SAM has a recent history of diarrhea, vomiting, high fever or sweating, and recent appearance of clinical signs of dehydration as reported by the caregiver.

Ref: *Reproductive, Maternal, Newborn and Child Health: Disease Control Priorities, Third Edition (Volume 2)*.

Appendix E

FOODS TO BE STORED

Dry goods:	Flour (wheat, cassava, breadfruit, banana etc.), Rice, pasta, farine, corn meal, oats, crackers, sugar, iodized salt, powdered milk, Dried peas and beans, nuts and seeds, Dried salted fish, dehydrated root crops
Canned goods:	Condensed milk, evaporated milk, puddings, peanut butter, canned fruit/juices, canned vegetables, fish/meats, peas/beans,
Other foods:	pumpkin, butter nut squash, cabbage, beets, onions, garlic, dried spices, fruit sauces, citrus), yam, tannia, cassava (stored in a cool dry place or in the soil)
Fats	Coconut oil, vegetable oil

Potable Water: A reliable supply of clean and safe water should be made available for consumption.

The National Water and Sewage Authority and the Environmental Health Department of the Ministry of Health will be responsible for ensuring the reliability and safety of the water supply. However, stocks of bottled water should also be stored at the individual, institutional and national levels.

Appendix F

DETERMINING RATIONS

NB: Children under 5, pregnant and women that are breast-feeding and malnourished persons will need micronutrient (vitamin/mineral) supplement in addition to the ration

Daily Ration per person <u>1700- Calories</u> <u>2100</u>			Week's Ration per person	Daily ration for Family of five (5)	Week's Ration Family of five (5)	Daily ration for 1000 persons	Week's Ration per 1000 persons
Items	Metric	Standard	Quantity	Quantity	Quantity		
Rice, Flour, pasta, cornmeal, oats	400g 500 g	<u>14 oz</u> 17 ½ oz	<u>6lbs 3oz</u> 7lbs 11oz	<u>4 lb 7oz</u> 5 ½ lbs	<u>30lbs</u> 38lbs	<u>888lbs</u> 1100lbs	<u>6,216lbs</u> <u>7,700lbs</u>
Dried or canned fish or meat	45g	1 ½ oz	10 ½ oz	7 ½ oz	3 lbs 5oz	94lbs	658lbs
Oil	15g	1Tbsp	7Tbsp	5 Tbsp	2 cups (17fl oz.)	5 gallons (63 cups)	32 gallons
	20g	4 tsp	9.3 Tbsp (½ cup)	6.6Tbsp (~3 ½ oz)	5 ¾ cups (48fl oz.)	5 gallons (83 cups)	35 gallons
Sugar	15g	½ oz.	3 ½ oz.	2 ½ oz.	17 ½ oz.	31 ¼lbs	218 ¾lbs
Salt	5g	1tsp	7 tsp	5tsp	11 ½ Tbsp	73lbs	511lbs
Total Calories	<u>1735</u> <u>2075</u>						
	<u>480g</u> <u>585g</u>						

*Refs: Food and Nutrition in Disasters: Guidelines prepared by the PAHO/WHO Institute of Nutrition of Central America and Panama (INCAP)
WFP's Emergency Field Operations Pocketbook (2002), the five steps to determination composition*

Appendix G

Specifications for Donated Food Items

DONATIONS THAT <u>WILL BE</u> ACCEPTED	DONATIONS THAT <u>WILL NOT BE</u> ACCEPTED
Canned and packaged foods that have more than three (3) months before expiry upon arrival. Canned and packaged foods with an expiration date of less than 3 months should be distributed first and in quantities that allows for consumption within the stated expiration/use by date	Canned and packaged foods that are expired/ reached use by date
Packages/sacks/cans that are not damaged.	Packages/sacks/cans that are damaged, dented, rusted or bulging
Foods with labels and written in English	Foods with labels written in foreign language without translation
Cups without lips and bowls for infant feeding	Sippy cups, Feeding bottles and teats

Ref: Food and Nutrition in Disasters: Guidelines prepared by the PAHO/WHO Institute of Nutrition of Central America and Panama (INCAP)

NB: All donations (to individuals or organizations) of infant formula must be presented for clearance by the NaDMA Relief Management Subcommittee on the advice of the NiEOC.

Appendix H

Food and water Sanitation - Storage

It is essential that the target group mentioned in this action plan not only receives sufficient quantity of ration but also good quality to prevent communicable diseases. Careful transfer of clean water should be provided to the centers which should be kept securely closed until ready-to-use purposes.

Guidelines to safe drinking water and good quality foods:

- Handlers must wear clean clothing; hands properly washed using an anti-bacterial soap and hair covered at all times.
- Ensure kitchen area is free of rodents or any parasites and properly ventilated.
- Counters and floors should be cleaned daily using disinfectant liquids before and after each food preparation.
- Food handlers should have short, clean and non-polished nails; no preparation should be executed by a food handler if he/she has an infected finger unless they are wearing appropriate protective gear.
- Only persons designated for handling food and cooking should be allowed in kitchen area.
- Kitchen utensils must be clean and stored according to types in dry area.
- Canned items should be stored according to expiry date; no expired items should be used.
- Dried ration such as rice, flour and sugar must be kept in a dry storage area and off the floor
- Fresh fruits and vegetables should be properly washed before preparation and/or consumption.
- Bottles containing water should have narrow heads to prevent secondary contamination.
- Buckets or bottles containing water should be covered immediately after use.
- Bottles containing water should be kept on high surface at least 5ft from the ground in flood prone areas.

- Cisterns and water tanks must contain clean water if not, cleaning procedures should be executed.
- Tasting of prepared foods should be used with a separate spoon than the one used in preparation or serving.
- Wash containers for eating and drinking just before food distribution, especially mothers/caregivers and their infants.
- Eating area should be clean throughout length of stay.
- Waste receptacles in close proximity to food preparation areas should be kept covered at all times
- Garbage collection bins should be kept at least 20 feet away from kitchen or housing areas.

Appendix I

SAMPLE PUBLIC SERVICE MESSAGES

Continue breast feeding after an emergency or disaster.

Stop and think. Breast milk is best. Do not substitute infant formula or other milk for breast milk unless advised by your healthcare provider.

Your baby's safety should come first. Use cups without lids for feeding. Improper washing of bottles, nipples and sippy cups can lead to infection if they are not properly sterilized, particularly when there is a scarcity of safe running water for washing and for mixing formula feeds.

Keep on hand, foods that will not require refrigeration or cooking, such as canned meats, milk, packaged biscuits, peanut butter etc.

Make sure foods that need to be frozen are kept at 0°C or 32°F and foods requiring refrigeration at or below 4°C or 40°F

Keep refrigerator closed when there is a power outage, this can help to keep the temperature down and keep foods safe for a few days

When in doubt, throw it out!

Throw away:

Perishable foods that was not properly stored prior to a power outage

Foods that come in contact with flood water

Food that has an unusual odor, colour or texture

Food in damaged/rusted/swollen cans

NB: Unsafe food can make you sick even if it looks and smells normal.

Better safe than sorry

Adapted from Center for Disease Control & US Department of Agriculture

Keep at least a three month supply of medications on hand in a sealed, labeled container

Appendix J

List of Other Essential Items

Anthropometric tools: Scales, Stadiometer, Measuring tapes, Data collection forms

List of vulnerable persons

List of District Disaster Coordinators with their contact information

List of approved shelters

Cooking gears: Gas, Kerosene, Coals, Firewood, Matches, Lighters, Utensils, Trash bags, Coolers, Thermos, Water containers with lids,

Back-up power supply, lanterns, flashlights, batteries

First Aid Kit with emergency medical supplies

VHF Radios

Appendix K

Contact list for Key Nutrition Stakeholders

Stakeholders	Point of Contact	Phone Number	Email Address
GFNC	Executive Secretary	440-2126/7991 416-2126/449-4560	Gfnc08@gmail.com
Physicians	Chief Medical Officer	440-2649	scharles.MOH@outlook.com
Nurses	Chief Community Health Nurse/Chief Nursing Officer	440-2806/2846	cchn@health.gov.gd cno@health.gov.gd
Environmental Health	Chief Environmental Health Officer	440-2955/4955	min-healthgrenada@spiceisle.com amworme2@hotmail.com
Health Promotion	Senior Health Promotion Officer	440-485/4947/9311	shpo@health.gov.gd
Ministry of Agriculture	Permanent Secretary/Senior Administrative Officer	440-3383 440-2708	ps@moa.gov.gd mollandpaul@gmail.com or sao@moa.gov.gd
Marketing and National Importing Board	Chief Executive Officer	440-1791/1792	Elvis.young@mnib.gd
Ministry of Social Development, Housing and Community Empowerment	Permanent Secretary	440-2103/440-1439/ 440-3195	mofhlcd@gov.gd ministrysod@yahoo.com
NaDMA	National Disaster Coordinator	440-8390	nadmapr@gmail.com nadma@spiceisle.com
National Water and Sewage Authority (NAWASA)	General Manager	440-2155/3468 444-4661 442-7417/437-1606	communications@nawasa.gd
Ministry of Trade, Industry, Co-operative and CARICOM Affairs	Permanent Secretary	440-2731/2928	tradegrenada@gov.gd
Ministry of Education	Permanent Secretary/Chief Education Officer	440-2737	Ceo.moehrd@gmail.com

Red Cross	Executive Director		grercs@gmail.com
Faith-Based Organizations	Grenada Conference of Churches/ Grenada Conference of Seventh Day Adventists/ Alliance of Evangelical Churches		info@grenadaadventist.org Churches---perilous5-102@hotmail.com
Academic Institutions	T.A. Marryshow Community College/ St. George's University		Dr. Jeffery Britton britton@tamcc.edu.gd info@tamcc.edu.gd ricchr@sgu.edu
Regional/International bodies (eg. UNICEF)			director@detc.gov.gd
Media	President of Media Association		infoshereannn@gmail.com

Appendix L

Recommendations/Amendments Form

[illegible]

Appendix M

List of Participants

Ministry of Education

Mrs. Deborah Gilchrist

Ministry of Health

Mrs. Agatha Mitchell

Community Health- Nursing

Mrs. Aloma Bain-Street

Health Promotion

Mrs. Leah Charles

Hospital Services- Nutritionist

Ministry of Social Development, Housing and Community Empowerment

Ms. Nakitha Noel

Ministry of Trade, Industry and Consumer Affairs

Mr. Paul Jeremiah

Media Association

Mr. Delroy Louison

Marketing National and Importing Board

Mr. Michael Robertson

National Disaster management Agency

Mr. Simeon Granger

Community Program Officer

Mr. Benedict Peters

Disaster Coordinator

National Water and Sewerage Authority

Mr. Rawle Gabriel

Public Health Department, St. Georges University

Christine Richards

GLOSSARY

- **Anaemia**- Condition where there are not enough healthy red blood cells to carry adequate oxygen around the body; inadequate blood oxygen-carrying capacity and tissue oxygenation
- **Breastfeeding** – a woman feeding a baby with milk from the breast
- **Breastmilk substitutes**- any food marketed or presented as a partial or total replacement for breastmilk
- **Complementary feeding** -Food and liquids needed in addition to breast milk to sufficiently meet the nutritional needs of infants, when breast milk alone is no longer enough.
- **Exclusive Breastfeeding** - provision of only breast milk with no other liquids or solids except medicines, vitamins and minerals
- **Infant** – A child less than one year old
- **Lactating** - Yielding of milk from the mammary glands that leads to breastfeeding
- **Malnutrition**- lack of proper nutrition for growth, development and to maintain health
- **Micronutrients** – chemical elements required in small amounts to support normal growth, development and health
- **Nutrition**- the process of obtaining food to support growth, development and health
- **Nutrition Disaster**–A sudden and unforeseen event that affects the nutritional status of the impacted population to which the country is unable to adequately respond using its own resources and established procedures

- **Nutrition Emergency** – A sudden and unforeseen event that affects the nutritional status of the impacted population to which the country is able to adequately respond using its own resources and established procedures
- **Re-lactation**— re-establishment of lactation after having stopped breastfeeding
- **Undernutrition** -A form of malnutrition; inadequate food intake; weight for age < -2 z-score

DRAFT

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