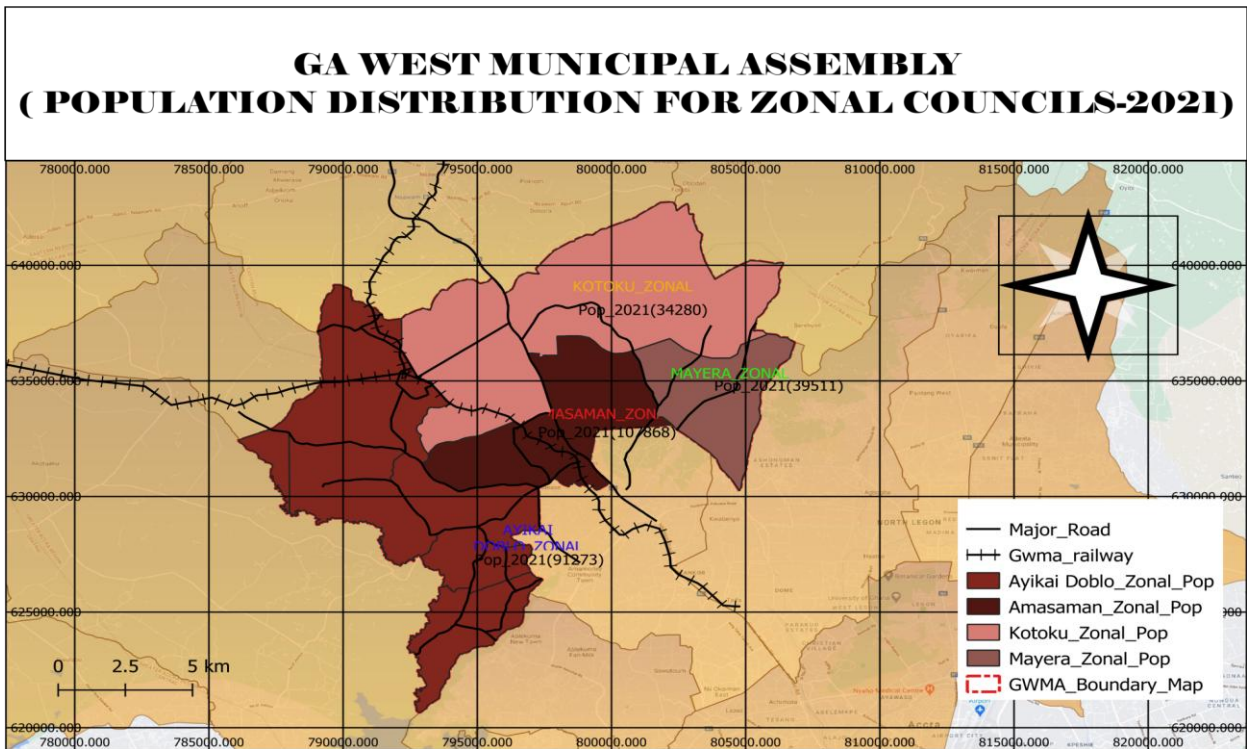
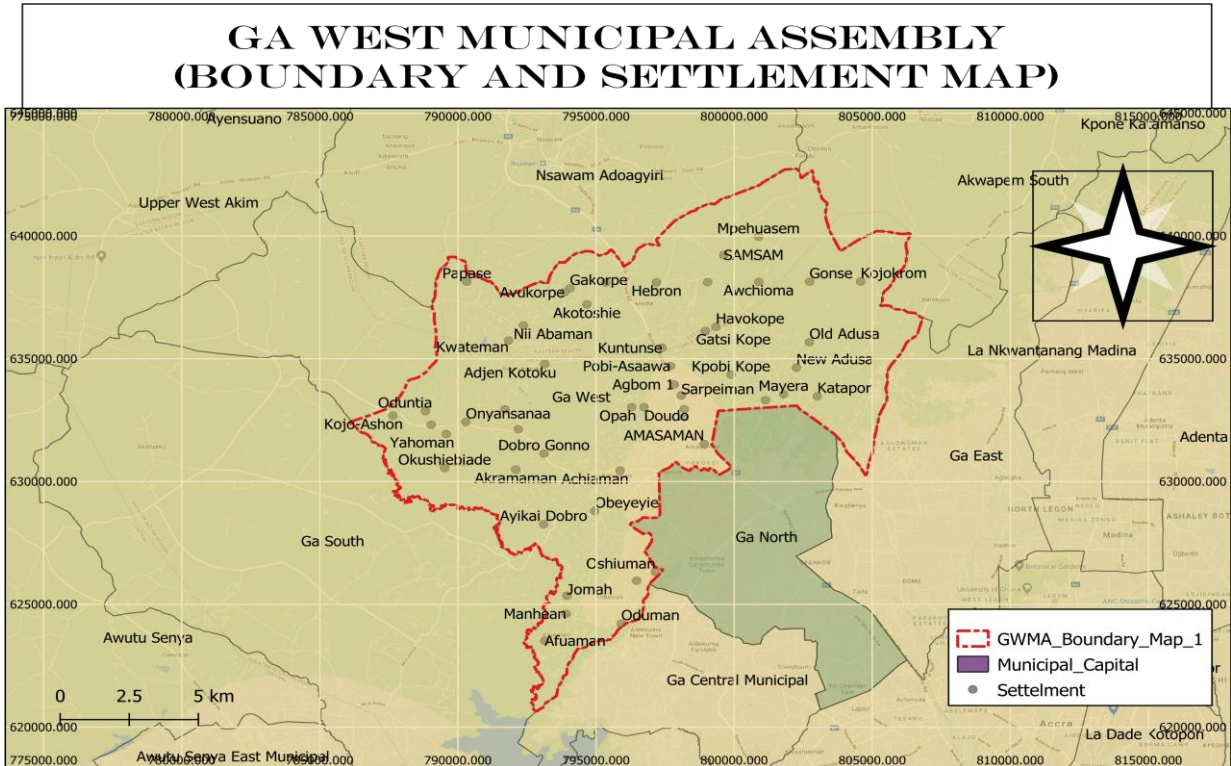


**MUNICIPAL DISASTER MANAGEMENT PLAN
(MDMP)**

**GA WEST MUNICIPAL
ASSEMBLY**

JANUARY 2023

MAP OF GA WEST ADMINISTRATIVE AREA



Source: GWMA MPCU - April 2021

**PROFILE OF GA WEST MUNICIPAL
ADMINISTRATIVE CAPITAL: AMASAMAN**

POPULATION SIZE

Total: 314,299 (2021 Census) **Male:**

162,251 (49.5 %)

Female: 165,529 (50.5%)

Growth rate of 2.9%.

MUNICIPALITY’S PROJECTED POPULATION

District	Base Year	Projected Population			
	2021	2022	2023	2024	2025
GWMA	314,299	323,547	333,067	342,866	352,936

Source: GSS Population Projection and Estimates Unit, 2021

MAIN ECONOMIC ACTIVITIES

Industrial, Artisanship/Construction, Commercial, Transportation,
Services, Agriculture (Fishing, Crop/Livestock Farming)

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EXECUTIVE SUMMARY

By Act 517 of 1996 which established the National Disaster Management Organisation (NADMO), Municipal's are required to develop comprehensive Disaster Management Plans to manage disasters and emergencies that are likely to occur in their area of jurisdiction. The plan should anticipate disasters that could arise from natural and man-made causes and be consistent with the National Disaster Management plan (NDMP). Procedures developed to implement the plan should be consistent with the Standard Operating Procedures (SOP).

Disaster management planning within Ga west is based on risk reduction and emergency response concept.

Risk Reduction covers:

- Identifying and reducing the disaster risks in the Municipal
- Responding to the threat posed by disasters

Emergency response covers responding in a timely and coordinated manner to the consequences of disasters.

The Plan highlights the need to define and redefine the risk environment with changing conditions and perform:

- Hazard identification and analysis;
- Vulnerability analysis and;
- Risk analysis.

Risk treatment options involve ranking risk in a prioritised manner and addressing vulnerability by determining actions that reduce or eliminate risk or by determining mitigation programmes for communities.

Strategies for risk reduction include:

- Advocacy to create awareness among policy makers, decision makers, media and all stakeholders.
- Policy and Planning Reform that takes into account Risk Reduction.
- Education and Training (Capacity Building) of stakeholders.
- Planning frameworks to ensure that development plans accommodate risk reduction and emergency response.

In responding to an emergency/disaster, the response and recovery systems developed in managing the risk environment are activated as needed. Such response may include:

-
- □ Warning Period (Alert and Activation).
- □ Hazard Onset (Response).
- □ Post Hazard Period (Relief, Recovery and Rehabilitation)

This Municipal Disaster Management Plan (MDMP) will be supported by the issuance of contingency plans with a chain of command for responding to emergencies and disasters. The MDMP will be reviewed every two years to respond to changing trends in the risk environment.

The Municipal shall refer to all the geographical area under the jurisdiction of the Ga West Assembly (GWMA).

INTRODUCTION

This Municipal Disaster Management Plan (MDMP) was prepared by the Ga West Municipal Assembly (GWMA) with the assistance of the National Disaster Management Organisation (NADMO) Ga west. It outlines the activities that have to be carried out by various response/stakeholder agencies to ensure effective disaster management within Ga west. The MDMP specifies the tasks to be performed by organisations/institutions and individuals to deal with identified disaster types. These tasks cover all the cycles of disaster management, namely:

- Prevention, Mitigation and Preparedness.
- Emergency Response and Relief.
- Rehabilitation and Reconstruction.

GWMA will make adequate financial allocation in its annual budget to ensure effective execution of planned activities for the management of disasters. The various agencies that provide data/information and collaboration will be adequately trained and resourced to enable them perform assigned functions efficiently and effectively.

Significant landmarks or areas within the Municipal which may be sources of significant hazards are:

- Kuntunse Satellite
- Medie Industrial Area
- Kotoku Onion Market
- Accra Compus and Recycling plant(ACARP)

- Regimanuel Concrete Quarry Pit
- Abandoned Sonitra Quarry Pit at Ga Odumase
- Manbah Gas at Nsakina Peace Village
- Adusa Hills
- Hebron Hills
- The Buffer areas along the Nsokie and Densu rivers

VISION STATEMENT

A reduced occurrence and impact of disasters in the Municipal

MISSION STATEMENT

To reduce the effects of natural and man-made disasters on people, especially the poor and disadvantaged, by co-ordinating the resources in the Municipal (Public and Private) and developing the capacity of communities in disaster Prevention, Mitigation, Preparedness, Risk Reduction, Response and Recovery.

OBJECTIVES OF THE PLAN

The objectives of the Municipal Disaster Management Plan are;

- To strengthen the Institutional capacity of the Municipal Disaster Management Committee (MDMC) and its stakeholders to effectively implement disaster management programmes.
- Pursue the vision, mission and goals of disaster management
- Create a cohesive and well coordinated programming framework incorporating Government Agencies and Departments, Non-Governmental Organizations and the private sector in the Municipal.
- To develop the capacity of communities on Prevention, Mitigation, Risk

Reduction, Preparedness, Response and Recovery from disasters

- Perform appropriate research that will support an effective implementation of the plan and upgrading the scope of the plan to respond to the changing risk environment.

STRATEGIC GOALS OF THE PLAN

The strategic goals of the Plan are:

- Professional approach to disaster management system;
- Mainstreaming risk reduction into the culture of the people and organisations within the Municipal
- Strengthening institutional mechanisms for disaster management
- Empowering communities at risk to manage disasters within their environment
- Strengthening emergency response systems for handling natural and man-made disasters and
- Developing and strengthening partnership and collaboration among stakeholde

HAZARD MAPPING

Hazard mapping in disaster management is a process of identifying and documenting geographic information on hazards and their potential degree of risk. For hazard mapping to be effective, the exercise shall be carried out with the involvement of all stakeholders.

Objectives of Hazard Mapping

The objectives of hazard mapping are:

- To produce maps indicating ecological and geographical locations of hazards that would guide formulation of policies and legislation regarding disaster management in the Municipal.
- It shall also serve as a guide for disaster management, *i.e.* Prevention, Mitigation, Preparedness, Emergency Response, Rehabilitation, Resettlement and Reconstruction.
- To assess risk/vulnerability.
- To map out safe havens.

Risk/ Vulnerability Mapping

The process involves systematic assessment of elements at risk and their degree of vulnerability. These include the following:

- Communities at risk
- Utility Services & Lifeline facilities - (water supply, communication, electricity)
- Stored food, Livestock and Poultry
- Structures and Infrastructure (Roads, Bridges, Railways, Hospitals, Schools, Banks, Police Station)

- Crops

The mapping process shall be extended to cover hazards which may affect life and property.

Mapping of Safe-Havens

This will require the identification of open spaces at vantage and safe points in and around communities which could be used as safe-havens in times of emergencies. Such areas include football parks, church premises, schools, mosques and other open spaces.

Activities here will also include the following:

- Preparation of topographic maps and site plans of reserved open spaces within and around communities.
- Reporting on land ownership and socio-cultural surveys.

Institutional Arrangements for Hazard Mapping

Since disaster management has multi-sectoral and multi-disciplinary factors, it requires an integrated approach in its planning and implementation. The relevant government establishments will be tasked with the responsibility of undertaking and overseeing these activities as specified in Table 1. It shall be ensured that an effective co-operation and networking relationships exist among the respective lead and collaborating agencies.

Table 1: Hazard Mapping Activities, Inputs and Responsible Agencies

Hazard Types	Activity	Inputs	Lead Agency	Collaborating Agencies
Pest & Insect Infestation	Survey on pest and insect Outbreaks	Consultancy Services/Resource Persons	MOFA	MOFA, EPA,
Disease Epidemics	Mapping of geographical areas of high incidence	Consultancy Services/Resource Persons	MOH/GHS	Donor Agencies.

Fires & Lightning	Mapping of high, medium and low fire risk areas	Geographic Information System (GIS)	GNFS	NADMO
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Hazards Type	Activity	Resource	Lead Agency	Collaborating Agency
Hydro-meteorological	1. Mapping of flood prone areas 2. Identification of Safe havens. 3. Vulnerability/Risk mapping 4. Preparation of Flood Insurance Risk Maps (FIRM) 5. Installation of early warning systems	1. Base maps 2. Base maps 3. Consultancy Services 4. Consultancy Services 5. Consultancy Services	NADMO MDMC MDMC MDMC	Town & county Planning, EPA
Geological	1. Preparation of Geological Hazard Maps 2. Monitoring of Geological Hazards	Base maps Seismographs Data Consultancy Services	Geological Survey Department	GWMA, CSIR, NADMO

Hazard Type	Activity	Resource	Lead Agency	Collaborating Agency
<p>Man-made</p> <p>Transport, accidents involving Inflammable and radioactive materials.</p>	<p>Map areas of storage and transport routes of inflammable and radioactive materials</p>	<p>Regulatory Authority Information System data</p>	<p>NADMO</p>	<p>GWMA,EPA, GNFS</p>

EDUCATION AND TRAINING

Appropriate syllabi, education and training materials will be developed and used to educate and train various categories of people to be able to engage in prevention, and response activities related to all type of disasters applicable in the Municipal.

Target Groups for Education and Training

Target Group to be educated	Topics	Inputs	Responsible Agencies
Political Leaders, Decision-Makers, Opinion Leaders and Development Planners, School Teachers/Pupils, NGOs, DVGs, and General Public Especially the Vulnerable Groups.	1.Types of Disasters. 2. Disaster Prevention, and Response 3. Disaster prone areas, 4. Public response to disasters when they occur 5. Roles and responsibilities of Stakeholders, 6. Contingency planning. 7. Legislation and regulations	Educational Materials, Consultants, Facilitators/Resource Persons	NADMO, ISD, GES, GWMA, Security Services, Religious Bodies, GHS, Opinion/Traditional Leaders

Target groups to be trained	Topics	Inputs	Responsible Agencies
<p>Training of Trainers:</p> <p>Agriculturists, Planners, Medical Personnel, Architects, Engineers, Geologists, Seismologists, Security Personnel, Media Practitioners, Selected Members of the Community, School Teachers DVGs, NGOs, etc.</p>	<ol style="list-style-type: none"> 1. Disaster types and their characteristics 2. Risk Reduction and Response 3. Search, Rescue and Evacuation of victims 4. Relief , Recovery and Reconstruction 5. Needs assessment (before, during and after disaster) 6. Establishment of emergency centres 7. Disaster Evaluation and Reporting 8. Restoration of essential services 9. Medical Response 10. Exercises and Drills 	<p>Funding and Logistics, Training materials</p> <p>Consultants, Facilitators/Resource Persons</p>	<p>NADMO, ISD, GES, GWMA, Security Services, Religious Bodies, GHS, Opinion/Traditional Leaders.</p>

EMERGENCY RESPONSE AND RELIEF MANAGEMENT

Emergency Response

These constitute immediate actions that have to be taken to meet the requirements of the victims in the event of man-made and natural disasters. These include the provision of food, water, shelter, clothing, counselling, medical care and security.

There is the need to empower GWMA and Community response teams to undertake prevention, emergency response and recovery activities when the need arises.

First of all, NADMO zonal offices have been created throughout every zone. They are the first point of call. Below are the offices and their contact.

Mayera -0244524299

Kotoku – 0553920994

Amasaman – 0260753415

Ayikai dobro -0558167092

Manhean – 0542609072

Tasks to be performed in an Emergency

	Task/Activities	Resources	Responsible Agencies
Municipal Emergency Operation Centre (MEOC) Emergency Response Teams	1. Establish Municipal Emergency Operation centre for all disasters 2. Establish Emergency Response teams to undertake prevention, emergency response and recovery activities.	Funding and logistics to establish centres	MDMC

Relief Management

General Considerations

The following are to be noted in a food aid programme:

- Food aid is given following disasters which have significant effect on food crops, stocks and marketing systems or the inability of families to prepare food.
- Food aid is provided free of cost to the beneficiary.
- Women, children, the aged, the sick, the wounded and physically challenged are to be given priority attention.

Food Package

The essential food package includes:

- Cereals (rice, maize, *etc*)
- Proteins (beans, fish)
- Supplement (salt, sugar)
- Condiment (pepper, tomatoes).

Ration of Food and Water

The estimated food rations and scales for issuing food items are shown in

Tables 4 and 5 respectively. Water requirements are shown in **Table 6**

Strategy for Distribution of Food Items

Distribution is based on some or all of the following propositions:

- A family/household size on the average is up to eight (8) people.

- Ten (10) families constitute a community.
- Any additional member to the eight (8) people is entitled to family size ration.
- Food items are allocated to each member of the family. A newly born baby is also entitled to a full ration (plus supplementary ration).
- Other condiments are to be provided.

Table 4: Food Rations

Item	Ration per person per month (kg)	Qty for 1,000 per Month	Qty for 1,000 person per month in
Rice	12.5	12,500	250 bags
Maize	12.5	12,500	250 bags
Sorghum	12.5	12,500	250 bags
Beans	1.66 1	1, 660	33.2 bags
Millet	12.5	1,500	250 bags
Groundnut	1.66 1	1, 660	33.2 bags
Sugar	0.25	250	5 bags
Salt	0.25	250	5 bags
Canned Fish	(1.66 tin)	1,660	10 cartons
Cooking oil	0.75 litre	750 litres	83 cartons 4 bottles

Table 5: Scale of issue of Food items

Item	Scale
Cereals	10 – 12 kg/person/month
Beans, groundnut	1.66 kg/person/month
Cooking oil	1.5(<i>ltr</i>)/person/month
Canned/tinned fish	48 tins/person/month

Water Requirements

The distribution of water shall be according to particular situation as outlined in Table 6

Situation /facility	Ration per person per day (litres)	Ration per person per 30days (litres)
(Normal) Household	20	600
Clinic/hospital	30	900
Camp	20	600

Non-Food Items

Non-food items include blankets, mattresses (student size)/mats, cups, cutlery, soap, plastic cups, bowls, buckets, toilet rolls, sanitary pads, *etc.* Their distribution should follow the criteria listed below:

- Each member of the family could be given items such as blankets, plastic cups, plates, spoons; soap, mattress/mats, toilet rolls, clothing and sanitary pads.
- The items below are distributed as follows:
 - Plastic jerry cans (5 gallons) - 1 to a family
 - Cooking utensils - 1 set to a family of at least 3
 - Lantern - 1 to a family
 - Bowl/bucket - 1 each to a family of 3 and above
 - Water tanks (1,200ltr) - 1 to a family
 - Torch light - 1 to a family

- Mosquito net – one to an individual
- Clothing - according to needs and to individuals
- Soap - 2 bars per person per month
- Mattress (student size)/mat - 1 to each member of family.
- Fuel (charcoal, kerosene, firewood) - according to needs
- Dustbin – medium size - 1 to a family
- Dustbin – container - 1 to a community
- Coal pot/stove - 1 to a family
- Bin liner (polythene bag) - 1 per day to a family
- Dry cell battery - 4 pairs per family
- Dustbins – medium size - 1 to a family
- Dustbins – container - 1 to a community
- Coal pot/stove - 1 to a family
- Bin liner (polythene bag) - 1 per day to a family
- Dry cell battery - 4 pairs per family

Institutional Collaboration

Key institutions identified to perform specific duties during emergencies are as indicated in

Table 7

Table 7: Institutional Collaboration

Action to be Taken	Collaborating Institutions	Lead Institution
Identification and registration of victims	NADMO, GWMA	NADMO/MDMC
Provision of cooked food	NADMO	NADMO/MDMC
Counselling	Religious Organisations, NGOs, DSW, GHS.	GHS
Provision of dry rations	NADMO	NADMO/MDMC
Provision of non-food items	NADMO	NADMO/MDMC
Fire fighting	GNFS, NADMO, GWCL	GNFS
Provision of Potable water	GWCL, GWMA, NADMO, GNFS.	GWCL
Provision of mobile water	NADMO, GWMA,	GWMA
Maintenance of sanitation	Private Waste Magt. Companies, NADMO , Env'tal Health & Sanitation, GWMA	GWMA

Construction of toilets	48 Engineers Regiment, TMA, NADMO, Env'tal Health & Sanitation.	GWMA
Training in the construction of field toilets, <i>etc</i>	NADMO, 48 Engineer Regiment, GWMA, Local Communities, World Vision International, Env'tal Health & Sanitation	GWMA
Waste Disposal	Private Waste Management Companies, EPA, NADMO, GWMA Waste Management Dept., Env'tal Health & Sanitation Dept.,	GWMA

Action to be Taken	Collaborating Institutions	Lead Institution
Provision of Warehouse facilities and other storage	GRCS, GWMA, Private Warehouses,	GWMA
Public education & information dissemination	NADMO, GES, ISD, NCCE, Traditional/Opinion Leaders, Dept. of Community Development, Media (Print & Electronic)	MDMC
Provision of first aid/medical care	GHS, Health Institutions, Security Services, Private Health Sector	MOH/GHS
Logistical Support	Bilateral & Multilateral agencies, GWMA, NGOs, NADMO	NADMO
Control of pest & insect	MOFA, GWMA,	MOFA
Protection	Security Agencies	Ghana Police Service
Emergency Sheltering	NADMO, GWMA Religious Bodies, GES,	NADMO
Search, Rescue and Evacuation	Security Agencies, DVGs, GHS, NADMO, GPRTU, GNFS.	GNFS
Iodine prophylaxes	NADMO, GHS	GHS
Food restriction	MOFA, GWMA, NADMO	MOFA
Decontamination	GNFS, GWMA, NADMO, GHS, EPA	GNFS
Relocation and resettlement	NADMO, GWMA, Traditional Authorities	GWMA

REHABILITATION, RESETTLEMENT AND RECONSTRUCTION TO THE CONTINUUM

Introduction

Disasters normally have a long-term effect on the victims and the environment in general. In some instances, the victims become traumatised and helpless. Affected areas might be declared disaster zones because they are vulnerable to future disasters. In such cases, constructing and resettling the affected communities become necessary. In all phases of rehabilitation, resettlement and reconstruction, it is important that:

- The culture of the people is taken into consideration.
- Counselling is considered a vital function.
- Rehabilitation, resettlement and reconstruction are made practicable.

Volunteers at the zonal and community levels as well as all other stakeholders work as a team in applying solutions proposed.

Planning for rehabilitation, resettlement and reconstruction is required for all the disaster types on immediate, medium and long-term bases. These operations would entail the improvement of public utilities and provision of building materials like roofing sheets, plywood and timber for building semi-permanent and/or permanent structures. Heavy-duty equipment and other tools shall be identified during the pre-disaster phase to facilitate timely implementation of constructional projects for the victims.

General Activities

The following services shall be provided:

- Support services such as appropriate technology transfer and access to economic support in aid of the disaster victims.
- Medical services and rehabilitation, resettlement and reconstruction materials.
- Counselling services started in the response period shall continue for several weeks, or even months. Health personnel, religious groups, counsellors and all other known governmental and non-governmental agencies that have the ability and capability to help with rehabilitation, resettlement and reconstruction will also be mobilised to provide services to the victims of the disaster.

Disaster Volunteer Groups (DVGs) and construction personnel of the State Security Agencies, the Public Works Department (PWD), State Housing Company and other state, or private construction companies who are well disposed to undertake this specialised task efficiently will be mobilised to undertake the works.

Plans, guidelines and assessment made by the team of experts shall be taken into consideration or adopted for implementation in the resettlement and reconstruction exercise. Reference should be made to such guidelines in future.

Any reconstruction should be in accordance with the National Building Regulations, and only in places properly zoned for rehabilitation by GWMA.

In cases where resettlement is required, use shall be made of:

- Stockpile of construction materials, food, clothing and medical supplies.
- Transport, communication and infrastructure (e.g. access roads and boats to afford easy accessibility to schools, markets, farms, hospitals, clinics and health centres).

Activities for Specific Disaster Types

Specific disasters, due to their peculiar nature, shall require specific inputs and activities to alleviate their impact on the people and the environment.

Pest and Insect Infestation Disasters

In order to encourage victims to grow their own food as well as keep their livestock during the rehabilitation phase, there should be provision of agricultural package, particularly, for Pest and Insect Infestation disasters. The following inputs are therefore important:

- Planting materials,
- Agrochemicals,
- Farmlands and
- Replacement of lost livestock by providing breeding stock.

In addition, the victims must be educated on the safe use of agro-chemicals.

The Ministry of Food and Agriculture will inspect all the chemicals and other items for restarting farms to ensure that they satisfy the relevant standards. The Environmental Protection Agency (EPA) and other research agencies should also extend their services to such places.

In order to be able to resettle and reconstruct, the following shall be carried out by the relevant ministries and agencies:

- Elimination of diseased animals and plants and their products where necessary.
- Provision of breeding stock to replace the destroyed ones.
- Mobilisation of support for the affected farmers and other members of the community.
- Arrangement for tools and protective clothing for affected farmers.

Disease Epidemic Disasters

Rehabilitation, resettlement and reconstruction in Disease Epidemic Disasters entail the following:

- Management of complications of diseases in the affected individuals.
- Restoration of the environment, disinfection of water bodies and environmental sanitation.
- Construction of facilities in endemic areas to absorb the overflow of patients from the regular health facilities where necessary.
- Re-stocking of medical supplies, equipment and protective clothing.
- Improvement in infrastructure generally, and rationalising the design of architectural structure with the aim of minimising recurrence of such epidemics.
- Equipping regional and district hospitals to manage referred cases.
- Provision of counselling services where needed.
- Ensuring enforcement of bye-laws for the use of approved routes for entering the Municipal.

Fire Disasters

For fire disasters the following actions would be required;

The Ghana Water Company Limited (GWCL), in collaboration with the Ghana National Fire Service (GNFS) shall install as many hydrants as possible and map them out as part of their corporate planning and activities.

The development and use of fire-resistant materials should be encouraged.

Electricity providers must incorporate into their electrical systems equipment which can detect faults and terminate supply automatically.

In the case of fires which may engulf large segments of communities, the rehabilitation, resettlement and reconstruction plan for other disaster types mentioned earlier will apply.

Geological and Hydro-Meteorological Disasters

For Geological and Hydro-Meteorological disasters consequences are severe in terms of deaths, injuries and displacement of persons. Destruction is always in larger geographic areas involving infrastructure and utility services. Reconstruction will be capital intensive and will also require specialised agencies and equipment.

The following actions would be required:

- The relevant agencies should restore expeditiously the facilities mentioned above.
- Disaster managers should liaise with development planners, NGOs, UN agencies and

other relevant agencies in assessing the scale, scope, extent and requirements for the rehabilitation, resettlement and reconstruction of affected communities.

Man-made Disasters

In Man-made disasters, the appropriate agencies will be mobilised to carry out post- disaster programmes.

It is also noted that the solutions mentioned earlier in the various disaster types are usually employed, as appropriate, to solve the problems of Man-made disasters

MONITORING AND EVALUATION

The Municipal Disaster Management Plan is a dynamic document and will be reviewed and evaluated annually to ensure consistency with national initiatives and Government priorities as well as changes in the risk environment.

Key performance indicators will be monitored and reported annually to assess the progress of the implementation of prevention, mitigation, risk reduction, response and recovery and reconstruction activities where applicable. The key indicators will:

- Measure the outcomes of the Plan.
- Set benchmarks.
- Measure the effectiveness of policies, strategies and programmes and inform policy development.
- Identify Agencies and Departments accountable and responsible for each performance indicator.

- Identify opportunities for improvement that leads to enhancement of the Disaster Management System.

The Chief Executive of GWMA will be responsible for monitoring progress of implementation of this Plan.

DISASTERS/HAZARDS IN THE MUNICIPAL

Disasters that may occur in the Municipal include:

- Pest and insect infestation.
- Disease Epidemics
- Fires.
- Hydro-Meteorological
- Geological
- Man-made

GWMA shall ensure that all identified hazards are mapped. Based on available data, the details of major hazard types that occur in the Municipal include the following:

Pest and Insect Infestation Hazards

Hosts which can be affected by pests and insects are:

- | | |
|-------------------------------|-------------------------------------|
| ☐ Crops: | Caterpillar |
| ☐ Livestock and poultry: | Swine Fever, Avian Flu , Rinderpest |
| ☐ Food storage (stored food): | Larger Grain Borer, Grain Weevil |

Disease Epidemic Hazards

The main disease epidemics that have been identified in the Municipal are:

- Cholera
- Seasonal Flu.
- Buruli Ulcer

Table 8 shows areas of high incidence of Cholera and other diseases in the Municipal

Table 8: Geographical Areas of Maximum Incidence of Diseases

Disease type	Areas of maximum occurrence	Period of Occurrence
Cholera	GWMA to undertake continuous monitoring	April-July
Seasonal Flu	GWMA to undertake continuous monitoring	All year round
Buruli Ulcer	GWMA to undertake continuous monitoring	All year round
Bilharzia	GWMA to undertake continuous monitoring	All year round

Fire Hazards

Such disasters include:

- Domestic Fires
- Industrial Fires
- Bush Fires
- Commercial Fires

The degree and type of risks for domestic, commercial and industrial fires are shown below

Table 9: Location of High Risk Fire Hazards

Locations	Source of Risk	Specific Location in the Municipal
Manbah Gas	Gas	Nsakina Peace Village
Hospitals	Volatile chemicals, electrical faults, radioactive materials	Ga west Municipal Hospital, Kemet Hospital, Oduman Polyclinic
Markets	Fires	Amasaman market, Alhaji market etc.

Table 10: Location of Medium Risk Fire Hazards

Location	Source of Risk	Specific Location in the Municipal
Warehouses	Inflammable materials and chemicals, electrical faults.	Medie Ketewaa, Nsakina, Ayikai Doblo, Obeyeyie etc.
Converging centres (e.g. entertainment halls)	Open fires, structures collapsing.	EPA conference centre, Hans Lodge, Lady in red etc
Educational centres/institutions	Chemicals, electrical faults.	Kotoku SHS, Akramaman SHS etc.
Densely populated areas	Electrical faults, open fires	Medie Zongo etc
Residential Areas	Faulty electrical gadgets, gas leakages, Open fires	All Communities

Table 11: Location of Low Risk Fire Hazards

Location	Source of Risk	Specific Location in the Municipal
Special Homes (e.g. Children's Homes)	Electrical faults, open fires	Rafiki, Haven Of Hope, Chance for Children etc.
Offices (e.g. Ministries)	Electrical faults	GWMA, Twellium Industrial Ltd., Voltaic, etc
Household	Electrical faults, gas leakage, open fires	All Communities

Table 12: Bushfire Risk Areas

Location	Period of Occurrence
All farming comm..	November- March

Hydro-Meteorological Hazards

These hazards include:

- Rainfall/runoff flooding
- River flooding
- Man-made flooding (blocking of river courses *etc*)
- Rain/wind storms

Table 13 shows the broad geographical distribution of the major hydro-meteorological disaster areas and periods of occurrence in the Municipal.

Table 13: Geographical Distribution of Hydro-Meteorological Hazards

Hazards Types	Specific Locations in the Municipal	<i>Period of Occurrence</i>
Floods	Medie Ketewaa, Mayera, Adusa quarters, Abaaneke, Oduman, Afuaman, Medie, Manhean and	May- July
Rainfall – runoff floods	Oware dam area, Afuaman, areas along the Nsakyi and Densu rivers	May- July
Man-made floods	Medie Kitiwaa, Abaaneke, Oduman	May- July
Rain/wind storm	Obeyeyie, Abaase, Borkorborkor, Afuaman	April - May

Geological Hazards

The following are the major geological hazards that are of concern in the Municipal:

- Earthquakes
- Mudslide
- Soil erosion

The vulnerable areas of the various geological hazards in GWMA are presented in Table 14.

Table 14: Geographical Distribution of Geological Hazards.

Types of Hazards	Vulnerable Areas in the Municipal
Earthquakes	Deideman, Samsam, Katapor, Mayera, Joma areas
Mudslide	Katapor, Deideman areas
Soil erosion	GWMA to undertake mapping

Man-Made Hazards

- The major types of these hazards are:
- Structural failures including collapse of building and sand winning.
- Industrial accidents
- Transport (motor) accidents
- Pollution (air, water)
- Deforestation/desertification

The vulnerable areas of the various man-made hazards in the Municipal are presented in Table 15.

Table 15: Man-made Hazards

Types of Hazards	Vulnerable Areas in the Metropolis
Structural failures including collapse of building	Adusa, Manhean, Nsakina etc.
Sand Winning	Akramaman, Okushibiade, Yaoman, Kwashikuma, Katapor etc.
Industrial accidents	Kotoku
Transport (motor) Accidents	Amasaman Nsawam Highways, Amasaman Ashalaja road
Pollution (air, water)	Kotoku
Deforestation/desertification	Obeyeyie forest, Ayikai Doblo Obutu forest

Safe Havens Identified in the Municipal

Safe Havens identified in the Municipal are presented in **Table 16**

Table 16: Safe Havens in the Municipal

Place Name	Location
Amasaman School Park	Amasaman
Methodist Church	Amasaman
Kotoku Lorry Park	Kotoku
Akramaman Community	Akramaman
day SHS park	
Medie Pentecost Church	Medie

DISASTER MANAGEMENT SYSTEM IN THE MUNICIPAL

NADMO has the responsibility for coordinating national disaster management efforts in the country. Disaster management system at the District level is based on the legal mandate given to NADMO under Act 517 of 1996.

Figure 1 is the Organisational Chart for Disaster Management in Ghana, and Figure 2 is the Organisational Chart for Disaster Management at the Municipal level.

Figure 1: Organisational Chart for Disaster Management Organisation in Ghana

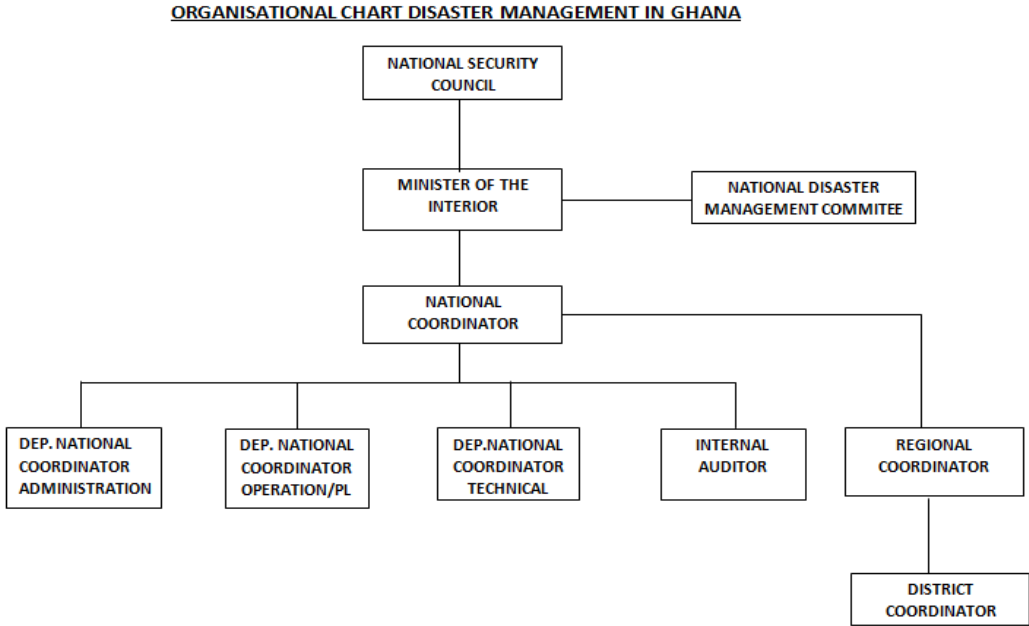
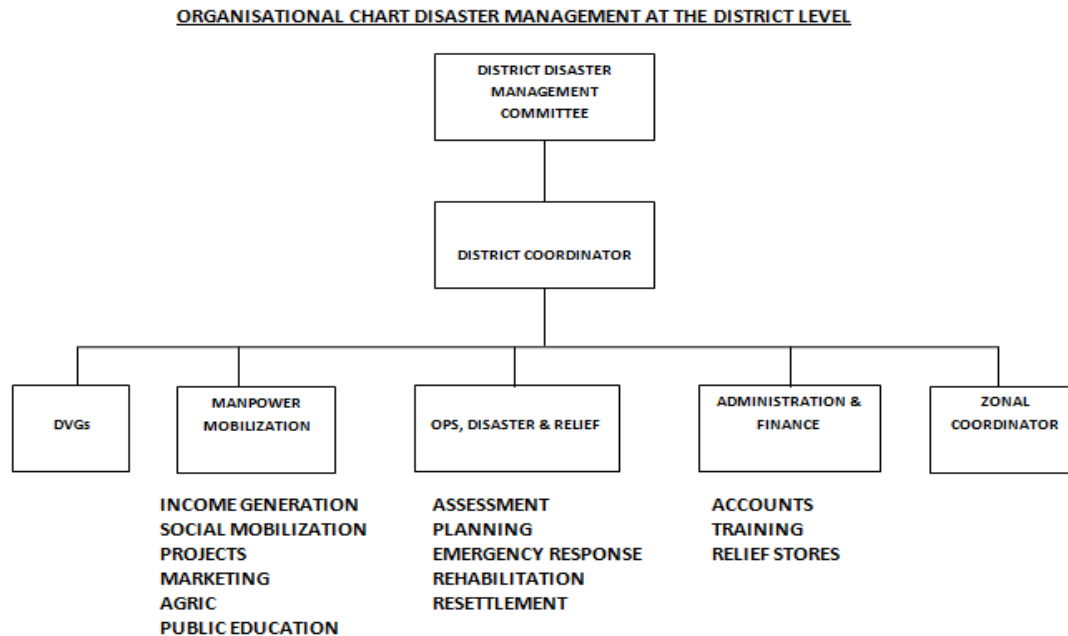


Figure 2: Organisational Chart of Disaster Management Organization at the Municipal Level



In fulfilment of Sections 15 of the Act 517 the Metropolitan Disaster Management Committee (MDMC) has been established with the following composition:

- The Municipal Chief Executive as Chairman.
- Member of Parliament of Ga West.
- The Municipal Director of Health Service.
- The Municipal Information Officer.
- Commander, 1 Garrison.
- The Municipal Police Commanders.
- The Municipal Fire Officer.

- Assembly Member(s) of affected electoral area(s) during a disaster.
- The Municipal Co-ordinator of NADMO as Secretary of the Committee.
- Co-opted Members:
 - Municipal Coordinating Director
 - BNI Director
 - Others as and when needed.

In accordance with Sections 16 of the Act 517 the Municipal Disaster Management Committee shall have the following responsibilities:

- Prepare plans for the Municipal to prevent and mitigate disasters in its area of authority;
- Maintain close liaison with the regional committee in drawing up its plans ;and
- Perform in the Municipal such functions as the National Co-ordinator may direct.

FINANCING OF THE PLAN

The Municipal Disaster Management Plan (MDMP) will be funded from the following sources:

1. Government subvention from the consolidated fund allocated to GWMA.
2. Allocation received from Municipal Assemblies Common Fund.
3. Disaster Management Fund allocated to GWMA.
4. Allocation from the Internally Generated Fund (IGF).
5. Monies received from grants, donation and gifts.
6. Additional resources mobilised by GWMA to support Disaster Management Activities.
(e.g. Private sector support).

DISASTER MANAGEMENT ACTION PLAN

Five year rolling strategic plans will be developed for effective implementation of disaster management strategies. The plans will cover the following thematic areas:

- **Hazard Mapping**
- **Education And Training**
- **Review of the Legal framework for Disaster management in Municipal:** The GWMA will review its disaster management operation to be consistent with legal framework reviews by NADMO.
- **Building/Strengthening Institutional Capacity:** Develop a professional and competent disaster management workforce that demonstrates effective leadership locally. Build local capacity to educate and train stakeholders (decision makers, response organizations, media, etc) as appropriate. Develop a monitoring and evaluation system to measure the effectiveness of education and training strategy.
- **Empowering Communities at Risk to Manage Disasters:** Develop and establish standard assessment procedures to identify community and household risk levels.

Empower community response teams to undertake prevention, mitigation, emergency response and recovery activities.
- **National Level Cooperation:** GWMA will cooperate with other response organizations such as Ghana National Fire Service , Ghana Police Service , Ghana Armed Forces , Ghana Health Service , Ministry of Food and Agriculture (MOFA) ,

Ghana Meteorological Agency (GMet), National Ambulance Service (NAS), Ghana Atomic Energy Commission (GAEC), Council for Scientific and Industrial Research (CSIR), etc. through appropriate MOUs for an effective mitigation, prevention, disaster reduction and emergency response and relief programmes .

- **International Level Cooperation:** GWMA, with assistance from NADMO, will maintain relations with relevant International Organisations (such as UNDP, UNHCR, WHO, ADRA, FEMA etc.) and cooperate and liaise with these organisations on matters of disaster management as and when the need arises.
- **Response Systems:** Response systems for Disaster Management shall cover the following;
 - Establishment of Municipal Emergency Operational Centre (MEOC) with the requisite technical, technological and physical facilities to effectively respond to a declared emergency or disaster;
 - Establishment and operation of Municipal Disaster Information Centres with internet connection networked to all relevant stakeholders;
 - Establishment and operation of effective community alert system
 - Establishment and operation of search and rescue mechanisms

- Development and operation of emergency response plans for all disaster types applicable to the Municipal.
- Development and operation of post disaster recovery and reconstruction mechanisms.

Annexes 1, 2 and 3 provide details needed for the rolling strategic plans. Commensurate budget shall be prepared to support the implementation of the plan. Yearly operational plans shall be prepared with supporting budgets for prioritized activities.

ANNEX 1

REVIEW OF THE LEGAL FRAMEWORK FOR DISASTER MANAGEMENT IN THE MUNICIPAL

The legal frame work will be reviewed in the areas of (i) Legislation (ii) Regulations and (Iii) Guidance Documents

Task	Activities	Resources	Responsible Agencies
Reviewing of Bye Laws to support the implementation of Act 517 of 1996	Drafting Bye Laws	Funding and logistics Legal and Technical Expert	GWMA
Regulations	Advocate enactment of Regulations.	Legal and Technical Expert	GWMA
Guidance documents on best practices for management of disasters in GWMA	Identify and prepare Guidance Documents	Legal and Technical Expert	GWMA
Enforcement of Regulations and Bye-laws.	Establish mechanism for enforcement of regulation and bye-laws relating to disaster management.	GPS, GWMA,	GWMA

ANNEX 2

REGIONAL, NATIONAL AND INTERNATIONAL LEVEL CO-OPERATION

Since GWMA alone cannot manage disasters adequately, the MDMC will cooperate and liaise with Regional, National and International Organizations on matters of disaster management.

Task	Activities	Resources	Responsible Agencies
1. Co-operation with Response Agencies and Stakeholders at the Regional and National Levels	<ol style="list-style-type: none">1. Identify all stakeholders2. Establish effective collaboration with Response and Stakeholder Agencies at the Regional and National Levels through establishment of Disaster Risk Reduction Desks.3. Establish Memoranda of Understanding (MOUs) with Stakeholders Agencies	Funds and logistics	NADMO and Stakeholder Institutions GWMA

<p>2. Establish and maintain relations with relevant International Organisations</p>	<p>1. Establish relations with the relevant international organisations on disaster management and related subjects.</p> <p>2. Comply with all relevant international legal Instruments</p>		<p>NADMO, Ministries of the Interior and Foreign Affairs and Regional Integration</p>
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ANNEX 3

STRENGTHENING INSTITUTIONAL CAPACITY-BUILDING

There is the need to (i) establish Institutional and Communities' Capacity to manage disasters and (ii) establish an effective mechanism for monitoring and evaluation of performance of disaster management programmes

Task	Activities	Resources	Responsible Agencies
To strengthen Disaster Management capacity in the Metropolis	<ol style="list-style-type: none"> 1. Enhance professional competence of staff and the Disaster Management Teams through structured training programmes 2. Organise joint training programmes for stakeholder agencies. 3. Organise seminars on Disaster Risk Reduction for Decision Makers. 4. Organise joint exercises and drills on Emergency Response. 5. Establish and operate Metropolitan Disaster Information Centres 	<p>Funding and logistics</p> <p>Technical Experts to offer training</p> <p>Procedures for conducting exercises and drills</p> <p>Internet links with all communities and stakeholders.</p>	MDMC
Monitoring and Evaluation	Put in place effective monitoring and evaluation mechanism.	Monitoring and evaluation procedures available and used	

GLOSSARY

Accident : Any unintended event, including operating errors, equipment failures or other mishaps, the consequences or potential consequences of which are not negligible from the point of view of human health and safety and or environmental protection.

Climate Change: 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.

Conflicts: Struggle between opposing forces that think or have incompatible goals. It applies both to open fighting between hostile groups and to a struggle between antithetical forces.

Conflict Resolution: A conflict situation intervened and resolved by other forces to prevent and provide solution to volatile situation. *Incubating prejudices and injustices inevitably breed hatred and conflict and leads to predictable instability and disaster.*

Contingency Plan: A deliberative process in which objectives are set for different emergency scenarios in advance according to set or critical thresholds, indicators and conditions. Managerial and technical actions are defined, and potential response systems put in place in order to prevent or better respond to an emergency.

Counselling: The prevention of serious mental health problems through education and short-term treatment.

Disaster:

i. Any occurrence, natural or man-made, that causes damage to life and property, ecological disruption, loss of human lives, deterioration in utility facilities and services on a scale sufficient to warrant a response from outside community ... (-UN).

ii. A serious disruption of the functioning of a community or 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 ...(-ISDR).

Disaster Assessment: An evaluation of loss or expected loss in a given disaster.

Disaster Management:

i: The systematic process of using administrative decisions, organisation, operational skills, capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters

ii: An applied science which seeks by systematic observation and analysis of disasters, to improve measures relating to prevention, mitigation, preparedness, emergency response and recovery.

Disaster Response: Measures taken before, during and immediately after a disaster impact. It is directed to salvage life, protect property and deal with the immediate damage caused by the disaster and assist in restoring life in the community to normalcy.

Disaster Risk Reduction: The conceptual framework of elements considered with the possibilities to minimise vulnerabilities and disaster risks throughout society, to avoid (prevent) or to limit (mitigate) and prepare for the adverse impacts of disasters, within the broad context of sustainable development.

Early Warning: The provision of timely and effective information through identified institutions that allow individuals exposed to hazards to take action, avoid or reduce their risk and prepare for effective response.

Emergency: An extraordinary situation where there are serious and immediate threats to human life as a result of:

- Disaster

- Imminent threat of disaster

- Civil conflict

- Environmental degradation

Emergency Response Operations: Activities undertaken immediately before, during or after an event which help to reduce loss of life, illness or injury to humans, property loss or damage, or damage to the environment. It may include, for example, planning, co-ordination and implementation of measures to lessen the effects of a disaster upon members of the public or to protect any property.

Famine: An extreme collapse of local availability and access to food that causes a widespread rise in mortality from outright starvation or hunger related illnesses.

Food Insecurity: People undernourished due to the physical unavailability of food, their lack of social or economic access, and/or inadequate food utilisation. Food in-secure people are those individuals whose food intake falls below their minimum calorie (energy) requirements, as well as those who exhibit physical symptoms caused by energy and nutrient deficiencies resulting from an inadequate or unbalanced diet, or from inability of the body to use food effectively because of infection of disease.

Food Security: Economic access to buy, produce, obtain or consume sufficient, safe and nutritious food to meet dietary needs and food preferences for a healthy and active life.

Hazard: A potential damaging physical event, phenomenon and /or human activity, which may cause loss of life or injury, damage to property, social and economic disruption or environmental degradation.

Mitigation: Structural and non-structural measures undertaken to limit the adverse impact of natural and technological hazards and environmental degradation.

Needs-Based Assessment: An estimate of the needs or requirements of a disaster affected community.

Public Awareness: The process of informing the general population, increasing levels of consciousness about risks and how people can act to reduce their exposure to hazards.

Preparedness: Activities and measures taken in advance to ensure timely response to an effective mitigation of the impact of disasters, including the issuance of timely and effective early warnings and temporary relocation of people and property from a threatened location.

Prevention: Activities to provide outright avoidance of the adverse impact of hazards and means to minimize related environmental, technological and other disasters.

Relief: Provision of money, food, medicine, shelter, clothes or any other assistance, public or private, provided to people and communities to overcome the effects of a disaster event.

Reconstruction: The process of restoring affected infrastructure to its pre-event condition.

Recovery: Measures that are designed to develop the systems required to support affected communities in the reconstruction of their physical infrastructure and restoration of their emotional, economic and physical well being.

Resilience: The capacity that communities and individuals have developed in their culture to maintain certain structures and functions despite major disturbances. It includes also the capacity to return to a stable equilibrium.

Risk: The measure of the likelihood of harmful consequences arising from the interaction of hazards, vulnerable community elements and the environment.

Risk Reduction: The systematic process of defining and re-defining risk and managing risk

Social Protection: Policies, interventions and mechanisms to support individuals, households and communities to manage risks better, provide assistance to extreme poor, and above all to realise human rights.

Trauma: A mental condition caused by severe shock, especially when a harmful effect lasts for a long time.

Trauma Healing: The method used to remove the effects of a traumatic event on victims and thus permitting the individual or group to return to their state of equilibrium, which existed

before the traumatic event.

Vulnerability: A measurement of community elements at risk that are exposed to specific hazards, both natural and human induced, and that have a low level of resilience to cope with the impacts of that hazard or characteristics of that hazard.

Vulnerability Assessment: An estimate of degree of loss or damage that could result from hazardous event of a given severity, including damage to structures, personal injury, interruption of economic activities, and the normal functions of settlement.

War: A state of widespread conflict between states, organisations, or relatively large groups of people, which is characterised by the use of violent, physical force between combatants or upon civilians and the environment.

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