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ACRONYMS

ADRA	-	Adventist Development and Relief Agency
AESL	-	Architectural and Engineering Services Limited
BNI	-	Bureau of National Investigations
CAP	-	Consolidated Appeal Process
Care Int.	-	Care International
CBO's	-	Community Based Organizations
CERF	-	Central Emergency Response Fund
CEPS	-	Custom Excise and Preventive Service
CRS	-	Catholic Relief Services
CSO	-	Civil Society Organization
DOVVSU	-	Domestic Violence and Victim Support Unit
DVGs	-	Disaster Volunteer Groups
ERC	-	Emergency Relief Coordinator
EPA	-	Environmental Protection Agency
FOSDA	-	Foundation for Security and Development in Africa
FPSO	-	Floating Production, Storage and Offloading
GAEC/RPI	-	Ghana Atomic Energy Commission/
GAF	-	Ghana Armed Forces
GMO	-	Ghana Maritime Office
GCCA	-	Ghana Civil Aviation Authority
GES	-	Ghana Education Service
GHS	-	Ghana Health Service
GNA	-	Ghana News Agency
GG	-	Government of Ghana
GNFS	-	Ghana National Fire Service
GPRTU	-	Ghana Private Road Transport
GWCL	-	Ghana Water Company Limited
GMET	-	Ghana Metrological Agency Department
HoA	-	Head of Agency
HCT	-	Humanitarian Coordination Team
IAA	-	Inter – Agency Agreement
IDPs	-	Internally Displaced Persons
IHL	-	Human Right and Refugee Law
MDA's	-	Ministries, Departments and Agencies

MMDA	-	Metropolitan, Municipal and District Assemblies
MOFA	-	Ministry of Food & Agriculture
MOWAC	-	Ministry of Women and Children Affairs
NAS	-	National Ambulance Service
NCC	-	National Coordinating Committee
NCP	-	National Contingency Plan
NFIs	-	Non-Food Items
NGO	-	Non Governmental Organization
NMIMR	-	National Monitory of Information Management and Research
NOSCP	-	National Oil Spill Contingency Plan
NSC	-	National Security Council
NTCC	-	National Technical Coordinating Committee
NTRR	-	National Technical Committee on Relief and Reconstruction
OCHA	-	Office for the Coordination of Humanitarian Affairs
PHO	-	Private Health Organization
PLAN Int.	-	PLAN International
RC	-	Resident Coordinator
SPHERE	-	The Humanitarian Charter and Minimum Standards in Disaster Response
UNCT	-	United Nations Country Team
UNDAC	-	United Nations Disaster Assessment and Coordination Team
UNFPA	-	United Nations Population Fund
UNDP	-	United Nations Development Programme
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
UNHCR	-	United Nations High Commission for Refugees
UNHRD	-	United Nations Humanitarian Response Depot
UNICEF	-	United Nations Children's Funds
UNIFEM	-	United Nations Development Fund for Women
USD	-	United States Dollar
VET	-	Veterinary Service
WASH	-	Water and Sanitation Health
WFP	-	World Food Programme

PREFACE

Disasters in whatever form they occur be it natural or man-made are no new phenomenon. However, the severe impact of disasters on the human being, property, infrastructure and the environment is alarming and , therefore, needs critical preparedness for mitigation and, where possible, prevention.

Globally, it is recognized that the degree of damage to property and loss of lives in the aftermath of disasters could be directly linked to the level of development. Disaster management is important in ensuring that disasters on the victims are mitigated and assistance programmes implemented for early recovery. In disaster prone countries, it is imperative that governments and the humanitarian community maintain a level of capacity to respond quickly and effectively to emergencies. This is particularly true for protection concerns since the fundamental human rights of victims are exposed in the aftermath of disasters and other emergency events.

Over the past two decades, the world has suffered an increasing number of natural disasters affecting more than 2.5billion, killing about 500,000 and causing economic losses of about US\$700 billion. Factors that worsen vulnerability and make the impact of disasters worse and severe include: increased population densities, environmental degradation and global warming due to climatic change as well as poverty.

During these disasters, infrastructure which has taken several years to build, and huge amounts of both human and material resources are wiped out leaving the affected communities poorer and more vulnerable

It is against this background that the National Disaster Management Organization (NADMO) in collaboration with the United Nations Country Team, Ghana Red Cross Society, Government , Non Governmental Agencies and other key stakeholders have developed the National Contingency Plan (NCP) in order to be better prepared to respond to possible emergencies.

The 2008 National Contingency Plan (NCP) covered preparedness for Floods, Earthquakes, and Post Election/Ethnic Conflicts.

This reviewed 2010 NCP is aimed at responding to Floods, Earthquakes, Oil Spill and Pandemic Influenza.

The NCP would provide the basis for each stakeholder organization to carry out its role effectively in order to prepare and respond to various disasters.

1.0 INTRODUCTION

1.1 PRINCIPLES, OVERALL OBJECTIVE AND STRATEGIES

1.1.1 Principles

Humanitarian assistance will be organized by observing the principles of independence, humanity, neutrality and impartiality. The independent assessment of the needs will ensure that the designed response is equal to the needs and will target the most vulnerable. The Internally Displaced Persons (IDPs) Guiding Principles, IHL Human Rights and Refugee law will be the reference strategic and legal framework. To ensure that a rights based approach is adapted, “The Humanitarian Charter and Minimum Standards in Disaster Response” (SPHERE Project) will serve as the operational basis for need assessments and humanitarian assistance delivery. The humanitarian intervention is essentially meant to save lives and protect civilians, safeguard livelihood and ensure early recovery. The emergency operation will be as short as possible to give space for early recovery interventions.

To maintain a highly focused operation during the first stage of the emergency response, a rapid inter-agency assessment of critical needs of the most vulnerable populations in the domains of food security, shelter, health and nutrition, water and sanitation, protection and education will be conducted. The National Technical Committee on Relief and Reconstruction (NTRR) will consolidate the results and make the operational plans to assist the internally displaced and the affected populations.

This plan is based on the premise that the above constitute basic human rights and these rights should be ensured in an emergency and post-emergency situation.

1.1.2 Overall Objective

The overall objective of the National Contingency Plan (NCP) is to mount a timely, consistent, effective and coordinated response to floods, earthquake, pandemic influenza, and oil spill disasters in order to minimize the potential humanitarian, economic and environmental consequences.

1.1.3 Strategies

Key strategic areas identified in the Contingency Plan are:

- Development of National, Regional and District Contingency Plans for emergency preparedness and response.
- Development of Sectoral Plans
- Pre-positioning of emergency supplies
- Surveillance and monitoring of key emergency indicators
- Intensification of service delivery to minimize the impact
- Awareness creation for prevention of natural disaster risks and gender issues
- Promotion and protection of women’s rights to ensure gender sensitivity in interventions
- Advocacy on issues of protection and health
- Integration of Disaster risk reduction measures in early recovery interventions

The National Contingency Plan for emergency preparedness and response will build on existing activities, develop partnerships through programmes of cooperation (Government, UN Agencies and NGOs) and enhance community mobilization and participation. Through this developed network of partnerships, NADMO/NTRR) will monitor emergency situations and potential threats in an attempt to ensure early warning and response. During an emergency situation, additional programmes shall be developed as needed to support humanitarian action such as post-incident rehabilitation and recovery efforts within the respective sector responsibilities.

To ensure a rapid response in the event of an emergency at the time of occurrence, NADMO/NTRR will maintain standing readiness to provide initial relief assistance according to respective core agency commitments. In the event of an emergency which exceeds the government's capacity, the United Nations System /OCHA will support government.

2.0 FLOOD

2.1 CONTEXT ANALYSIS

In Ghana, flood occurrence has become an annual phenomenon affecting many parts of the country during the major rainy season. Flood prone areas are located along river banks, beaches and dam sites. Additionally, urban and metropolitan areas like Accra, Kumasi, Tema, Cape Coast and Sekondi Takoradi are usually affected due to poor drainage systems. Furthermore, dam spills from Burkina Faso are now causing annual floods in the Northern parts of Ghana, thus worsening the situation.

The year 2007 saw intense rainfall which affected large parts of Northern Ghana. The rains followed two months of below average rainfall that had already impacted on farming activities in the Northern part of the country. Regions most badly affected by the floods were the Upper West, Upper East and the Northern Regions. The heavy flood came as a result of more than thirty (30) millimeters of rainfall in August and the consequences were severe flooding in valleys and low laying areas. The situation was further aggravated by spillage from the Bagre and Kompienga Dams in Burkina Faso. Further, parts of Western and Central regions were also affected as a result of intense rainfall and floods. The result was a humanitarian crisis.

According to Government figures, about two hundred and sixty thousand (260,000) people were directly affected by the floods, with the Northern Region being the most affected with numbers estimated as about two hundred and twenty seven thousand eight hundred and seventeen (227, 817) people. The damage caused by the floods included the destruction of homes, disruption to water supply systems, loss of livelihoods through damage to cropped farms and livestock, damage to infrastructure including the collapse of nine Bridges, damage to road networks and schools.

The 2009 floods affected over fifty two thousand (52,000) persons in the Southern parts of the country and over one hundred and twenty one thousand (121, 000) persons in the Northern Regions.

Notably, most of the worst affected areas are also the most economically disadvantaged in the country. The floods compounded the already existing vulnerabilities and magnified the need for not only

humanitarian assistance but also more medium and long term strategies to better address the different concerns in the region.

Measures that have been put in place to prevent the perennial flooding in Ghana include enhancing early warning systems, public education channel improvement and infrastructural development.

2.2 PLANNING SCENARIOS AND ASSUMPTIONS - FLOODS (CONTINGENCY 1)

2.2.1 Table 1: SCENARIOS - FLOODS

Contingency 1: Floods	
Best case scenario	Normal seasonal flooding, with no loss of lives
Most probable scenario	Floods affecting 50,000
Worst case scenario	Flood affecting 1,000,000

2.2.2 Table 2 : PLANNING ASSUMPTIONS - FLOODS

Type of Hazard	Floods
Probability of occurrence	Almost certain (based on the meteorological information and the information from Burkina Faso of releasing excess water from dams – July/August)
Impact	<ul style="list-style-type: none"> ▪ 300,000 people likely to be affected ▪ Road networks destroyed ▪ Bridges washed off ▪ Farmlands flooded: (acreage?) ▪ Loss of livestock ▪ Destruction of infrastructure (schools, houses, health facilities) ▪ Pollution of water sources ▪ Disease epidemics (100,000 people)-Cholera, Oncho, skin diseases etc. ▪ Overall reduction in national productivity ▪ Food insecurity ▪ Regional migration (north-south) ▪ Inter- regional and international trade ▪ Loss of livelihoods
Location and geographical area	<ul style="list-style-type: none"> - Northern, upper East and Upper West - Districts along the White and Black Voltas and communities along River Oti - Western, Volta, Greater-Accra ,Central Regions <p>Location of most communities in low-lying /flood prone areas makes this projection a reality.</p>

2.3 LEVELS OF PREPAREDNESS REQUIRED – FLOODS

2.3.1 Table 3: LEVELS OF PREPAREDNESS REQUIRED - FLOODS

Triggers	Early warning monitoring indicators	Responsible for early warning	Preventive and mitigating measures
Heavy rains	<ol style="list-style-type: none"> 1) Weather forecasts 2) Information flow on the rainy season 3) Observation of the rise of the river level 	<ol style="list-style-type: none"> 1) Gmet 2) Ministry of Information 3) NADMO 	<ol style="list-style-type: none"> 1) Use of media 2) Desilting of drainage systems 3) Clearing of waterways 4) Timely evacuation of population 5) Timely information flow on the rainy season
Opening of dams	<ol style="list-style-type: none"> 1) Alert warning from Burkina Faso on the opening of dams 2) Rise of the water level in Burkina Faso 	<ol style="list-style-type: none"> 1) Volta River Authority 2) Ministry of Information 3) Ministry of Foreign Affairs 4) Ministry of Interior 5) NADMO 6) District Municipal and Metropolitan Assemblies 	<ol style="list-style-type: none"> 1) Timely flow of information on the opening of dams 2) Use of media 3) Use of voluntary groups by NADMO and Red Cross 4) Evacuation plans and identification of safer places
Choked drainage systems	<ol style="list-style-type: none"> 1) Increment in human activities due to population increase resulting in unplanned settlements 2) No existing waste disposal sites 	<ol style="list-style-type: none"> 1) EPA 2) District and Metropolitan Assemblies 3) Ministry of Works and Housing 	<ol style="list-style-type: none"> 1) Establishment of an authority in charge of waste management 2) Clean up of drainage systems by District Assemblies
Construction along waterways	<ol style="list-style-type: none"> 1) Existence of constructions along waterways 	<ol style="list-style-type: none"> 1) EPA 2) Ministry of Works & housing 	<ol style="list-style-type: none"> 1) Demolition of construction 2) Education and awareness (Eg. through chiefs and religious groups) 1) Protection of wetlands 2) Enforcement of the existing Regulatory Building Code
Poor planning resulting in no drainage construction	<ol style="list-style-type: none"> 1) No drainage construction in many areas of the country 	<ol style="list-style-type: none"> 1) EPA 2) Ministry of Works & Housing 	<ol style="list-style-type: none"> 1) Urbanization planning 2) Building in places without it.
Settlement in low-lying areas	Poor planning resulting in bad settlements in terms of vulnerability of floods	<ol style="list-style-type: none"> 1) EPA 2) Ministry of Works & Housing 	<ol style="list-style-type: none"> 1) Urbanization planning 2) Enforce policies about urbanization
Narrow drainage system	Poor planning resulting in inappropriate drainage system	<ol style="list-style-type: none"> 1) EPA 2) Ministry of Works & Housing 	<ol style="list-style-type: none"> 1) Urbanization planning 2) Improve drainage were necessary.

3.0 EARTHQUAKE

3.1 CONTEXT ANALYSIS

Although major earthquakes are rare in Ghana as a whole, southern Ghana, particularly Accra and its environs have in the past been subjected to earthquakes, major ones having occurred in 1615, 1636, 1862, 1906, and 1939 as well as medium-sized ones in 1858, 1863, 1883, 1907, 1911, 1918-19, 1923, 1925, 1930, and 1933-35. In more recent years, earthquakes of magnitudes up to 4.9 have occurred in 1964, 1969, 1979, 1985 and 1995. In addition slight tremors are often felt by people in places like Kasoa, Weija, Nyanyanu and Gomoah Feteh. (Appendix 1)

By far, the most widely studied earthquake in Ghana is the one which occurred on 22nd June, 1939 at about 7:20 p.m. It was reported to have attained magnitude 6.5 on the Richter scale and the shock lasted for 20-30 seconds in Accra. The earthquake was felt over an area of approximately 300,000 square miles, and at places more than 500 miles from Accra. (Appendix 1)

On 8th January, 14th February, and 6th March, 1997, earthquakes of magnitude 3.8, 4.1 and 4.8 respectively hit Southern Ghana. These earthquakes, each lasting between 5 and 15 seconds were centered west and north-west of Accra. The first was only felt by people in Accra and surrounding villages and a few places in the Central Region. The latter two were felt in most parts of southern Ghana.

These earthquake events were significant because they awakened the whole country to the reality of the seismic hazard in the country and the total lack of preparedness for a major earthquake on the part of scientists, geologists, decision makers and the general public.

In view of the fact that earthquakes pose a great threat to the country, a major educational campaign should be mounted to bring awareness to all sections of society with respect to what to do before, during and after a major earthquake. Additionally, the public should be made aware of environmental and other practices that could aggravate the effects of any major earthquake event.

3.2 PLANNING SCENARIOS AND ASSUMPTIONS – EARTHQUAKE (CONTINGENCY 2)

3.2.1 Table 4: SCENARIOS - EARTHQUAKE (CONTINGENCY 2)

Contingency 2: Earthquake	
Best case scenario	Local in an area with limited casualties, destruction and poverty.
Most probable scenario	Accra and parts of Eastern and Central regions with less than 500 casualties
Worst case scenario	Covering 6 regions - GR, ER, WR, CR, Volta, and Ashanti with casualties estimated at 1,500,000.

3.2.2 PLANNING ASSUMPTIONS –EARTHQUAKE

3.2.2 Table: 5 PLANNING ASSUMPTIONS - EARTHQUAKE

Type of Hazard	Earthquake
Probability of occurrence	Likely (geographical evidence available from previous data recorded, minor tremors recorded daily, tsunamis likely to follow especially along the coast.)
Impact	<p>1,500,000 IDPs</p> <p>Destruction of socio-economic infrastructure – Akosombo dam, Weija dam, electricity, pollution of water etc)</p> <p>100,000 housing infrastructures will be affected (poor design of house-non-earth quake resistance</p> <p>Disease epidemics,</p> <p>Destruction of education and health infrastructure</p> <p>Roads and bridges</p> <p>Large numbers of fatalities and injuries</p> <p>Oil spill and destruction of marine life, loss of livelihoods</p>
Location and Geographical Area	Greater Accra, Central, Volta, Eastern, Western and Ashanti regions.

3.3 LEVELS OF PREPAREDNESS REQUIRED - EARTHQUAKE

3.3.1 Table 6: LEVELS OF PREPAREDNESS - EARTHQUAKE

Triggers	Early warning monitoring indicators	Responsible for early warning	Preventive and mitigating measures
Earth movement	Monitoring of seismic activity. Increased frequency of earth tremors	Geological Survey Department, Department of Earth Sciences, University of Ghana and NADMO	Public Education and enforcement of building regulation
High explosions underground	Increased frequency of earth tremors	Geological Survey Department, Department of Earth Sciences, University of Ghana and NADMO	Public Education and enforcement of building regulation

4.0 OIL SPILL

4.1 CONTEXT ANALYSIS

This National Contingency Plan (NCP) makes reference to the National Oil Spill Contingency Plan (NOSCP) prepared by the Environmental Protection Agency. (EPA) The NOSCP which sets out the roles and responsibilities of the major stakeholders, as provided in an Inter-Agency Agreement (IAA). has been in operation since 1986, the latest revision being in 2009. Details in the IAA agreement include access to national equipment and the management and control of funds.

As stated in the NOSCP, “the intensity of marine traffic, especially oil tankers, in close proximity to the coast and offshore petroleum exploration and production activities presents a fairly high risk of marine pollution from blowouts, collisions, stranding and other marine accidents. Such pollution can threaten amenity beaches, the tourist industry, sea birds, and marine life in the inter-tidal zones, coastal installations and fisheries with subsequent loss of revenue and protein sources.

Furthermore, even a small oil spill on the inland waterways, in particular the river Volta and its tributaries, may cause a serious threat to the rich wildlife, the local fishing industry and the waterways which serve as sources of fresh water for the surrounding populated areas.”

The threat has increased with the recent discovery of Oil and Gas: In June and September 2007, a consortium of companies namely: Kosmos Energy Ghana (Kosmos), Tullow Ghana Limited (Tullow) Anadarko Petroleum Corporation, Sabre Oil and Gas Limited and the E.O Group in conjunction with the Ghana National Petroleum Corporation (GNPC) announced discoveries of significant quantities of oil and gas offshore in the Deepwater Tano/Cape Three Points Basins. Since the announcement the jubilee Field development has been progressing fast and with close monitoring and guidance from GNPC. It is expected that the country will see its first oil from the field by the last quarter of 2010. Major accidents that could occur include process fire and explosions, major oil spill, riser/pipeline releases, structural failure, dropped objects, helicopter crash, and ship collision. The Floating Production, Storage and Offloading (FPSO) vessel has 1.6 million barrels storage. Production capacity is 120,000 barrels of oil per day; 160 million SCF gas per day; 232,000 barrels of water per day; 140 million per day injection. There are seventeen (17) Wells in Jubilee phase one development: nine (9) producers, six (6) water injectors, and two (2) gas injectors. The Jubilee Phase one (1) development concept includes pliant wave flexible pipe riser system.

The aim of the NCP is to bring together the combined resources of the nation, the oil and shipping industries to provide a level of preparedness to enhance response to any threat posed to the environment by oil and chemical spills.

The primary aims of an oil spill response are: protecting human health and securing their safety; minimizing environmental impacts; and restoring the environment, as near as is practicable, to pre-spill conditions. However, the highest priority should be placed on the prevention of spills.

4.2 PLANNING SCENARIOS ASSUMPTIONS - OIL SPIL (CONTINGENCY 3)

Emergency preparedness and response shall follow a three- tiered approach which is in line with international practice.

- Tier 1 - Local/Industry response
- Tier2 - Regional and National response
- Tier 3 - National Emergency

4.3 Table 7: LEVELS OF PREPAREDNESS REQUIRED - OIL SPILL

Triggers	Early warning monitoring indicators	Responsible for early warning	Preventive and mitigating measures
Accidents due to equipment failure, human error, inappropriate or non functioning of navigational aids, bad weather	Sheen of oil Alert by the responsible Operators Process safety systems put in place	Ghana NAVY, Operators, , GMA, Military Airplane, Navy Ships at Sea, Civil Ships at Sea,, Coast Radio Station, Local Harbour (Master)Civil Ships in Port , Pleasure Craft, International or Regional Co-operation, Civil Aircraft, Civil Traffic Control Centre, Private Individuals, Organizations, and Authorities, Local Community, or Police, Duty Officer(EPA) National Oil Spill Response Centre,	Responsible Operators(Tier 1 emergency response plans) National Contingency Plan(EPA-Revised 2009) Wildlife Management Monitoring System in Place to warn of, detect and fight oil spillage Ghana is party to International Conventions Community Volunteers in place along the coast National Contingency plan in place for humanitarian response

4.4 CO-ORDINATION AND MANAGEMENT FOR OIL SPILL

The EPA is the lead agency charged to co-ordinate and to provide technical advice, logistic and maintenance support, materials and equipment technical and training as prescribed in the EPA National Oil Spill Contingency Plan (NOSCP) 2009 for national Oil Spill response. Additionally, the NOSCP mandates EPA and the industries to explore entering into an agreement for mutual assistance and access to the response equipment stockpile.

NADMO is the main government institution responsible for the overall coordination of all emergencies.

5.0 CO-ORDINATION AND MANAGEMENT ARRANGEMENTS BY SECTOR FOR FLOOD, EARTHQUAKE AND OIL SPILL EMERGENCIES

5.1 Table 8: COORDINATION AND MANAGEMENT ARRANGEMENTS BY SECTOR FOR FLOOD, EARTHQUAKE AND OIL SPILL EMERGENCIES

Sector	Responsibility	Task/Responsibilities
Coordination	EPA/NADMO (Oil Spill) NADMO, UN RC	<ul style="list-style-type: none"> • Activate National Contingency Plans • Ensure liaison with the local incident management systems • Provide briefing for National Emergency Operations staff • Coordinate emergency or disaster operations • Assess emergency or disaster situations • Prepare and disseminate situations reports • Receive and process requests for assistance from local government proclamations executive orders and directives • Establish a joint Information Centre to authorize and provide emergency and disaster related information • Utilize as appropriate memorandums of understanding among the National Regional District and private agencies • Coordinate all sector initiatives • Co-ordinate international response
Protection	Maritime Operators,	<ul style="list-style-type: none"> • Activate sectoral plan • Provide advice relating to intervention powers, ship safety, and stability of marine casualties..

	<p>GMA, Ghana Navy, GPHA,GNPC</p> <p>Maritime Operators, GMA, Ghana Navy, GPHA,GNPC</p> <p>EPA/Wildlife, Department of Oceanography and Fisheries, University of Ghana</p> <p>National Security Council Ghana Police Service Ghana National Fire Service Ghana Navy Ghana Armed Forces, Bureau of National Investigations, Oil industry operators</p>	<ul style="list-style-type: none"> • Provide advice relating to rescue and saving life. • Provide drift calculations and advice on offshore currents. • Provide On-Scene Commander or incident controller during oil spill situations • Advice on matters relating to sea dumping • Coordinate search and rescue support , including the permitting and dumping of material at sea. • Advice on potential impacts of oil spills on threatened marine and migratory species. • Grant request for a place of refuge • Provide for the protection of life and property and the maintenance of law and order during emergency or disaster situations • Provide for the protection and support of women and children and other vulnerable groups from sexual and gender based violence • Coordinate law enforcement support resources • Support public safety by providing emergency signs, regulations devices barricades and alternative traffic routes
Logistics	<p>NADMO,GAF, Industries, ,NGOs, Religious Bodies, Ghana Water Company Limited, Ghana Health Service Ghana Red Cross society, WFP,UNICEF, OCHA, UNHCR, UNFPA, IOM</p>	<ul style="list-style-type: none"> • Activate sectoral plan • Assist conducting damage assessment • Ensure budget allocation budgetary allocation for National Emergencies • Establish a Disaster Management Fund • Review as appropriate ,memorandums of understanding among National, Regional and District and Private agencies • Provide transportation resources for movement of emergency personnel supplies and equipment • Provide transport to relocate the affected communities as necessary
Emergency Telecommunication	<p>National Communication Authority, Vodafone, National Security</p>	<ul style="list-style-type: none"> • Activate sectoral plan • Provide a communication network for receiving and transmitting emergency on disaster information among all levels of government

	Council, Ministry of Information, National Media Commission	<ul style="list-style-type: none"> • Provide communication between the emergency Disaster scene and the National Operations Centre
Agriculture	MOFA ADRA Wildlife Division, Forestry Commission, FAO WFP	<ul style="list-style-type: none"> • Activate sectoral plan • Assist in conducting damage assessment • Coordinate and disseminate information regarding disaster and emergency disaster and emergency agriculture relief programmes • Coordinate animal health, environmental medical response and recovery
Water/Sanitation	GWCL Water Resources Commission Community Water and Sanitation Agency, ECG UNICEF, NGOs	<ul style="list-style-type: none"> • Activate sectoral plan • Provide technical assistance to ensure safe public and private drinking water supplies and water disposal • Private potable water
Emergency Shelter	UNHCR/NADMO	<ul style="list-style-type: none"> • Activate sectoral plan • Assist in conducting damage assessment • Provide support for a temporary housing programme
Health	Ministry of Health/ Ghana Health Service, ,Ministry of Local Government Rural Development, Ministry of Science and Environment, Dept. of Social Welfare, Ghana Armed Forces & Police Medical Directorates, Ghana Red Cross Society, Private Medical Institutions, Veterinary Services Dept., Private Medical Institutions, National Ambulance Service, WHO, UNFPA, UNICEF, WARA	<ul style="list-style-type: none"> • Activate sectoral plan • Assist in conducting needs assessment • Coordinate health, environment and medical support during an emergency or disaster situation • Provide technical assistance to control human communicable diseases • Provide technical assistance to ensure reproductive health needs are met. • Provide maternal and child health care and Emergency Obstetric care services to affected women and children. • Provide technical assistance to ensure safe public and private drinking waste water disposal • Identify the need for and manage vector control operations • Coordinate crisis – counseling support • Dispatch emergency medical transportation resources • Coordinate emergency morgue facilities • Provide health, environmental and medical related public information through the National Emergency Operations Centre. • Coordinate emergency medical support resources

Education	Ministry of Education WFP UNICEF	<ul style="list-style-type: none"> • Activate sectoral plan • Provide information related to emergency and disaster to the public
Camp Coordination and Camp Management	NADMO, Ghana Red Cross Society, Ghana National Fire Service , UNHCR	<ul style="list-style-type: none"> • Activate sectoral plan • Assist in coordinating damage assessment • Prepare and submit hazard mitigation recommendations • Provide disaster victims with services necessary to meet basic and special needs • Endure liaison with private relief agencies • Coordination crisis counseling support • Provide law enforcement resources to include law and order security • Provide fir support resources
Early Recovery	NADMO, Ghana Red Cross Society, WVI, WFP,OCHA, UNDP,UNFPA, NGOs	<ul style="list-style-type: none"> • Activate sectoral plan • Provide a system for assessing private and property damage resulting from emergency disaster situations • Coordinate a temporary housing programme • Provide emergency or disaster victims with services necessary to meet basic and special needs • Coordinate employment and employment and unemployment assistance programmes for disaster victims • Provide individual and family assistance related information through the National Emergency Operations Centers • Provide assistance to local schools displaced students
Food & Nutrition	MOFA,NADMO, WFP,FDB, MMDAS,OCHA, UNICEF,CARE, WORLD VISION, Ministry of Health	<ul style="list-style-type: none"> • Activate Sectorial Plan • Conduct a joint initial rapid assessment • Based on the need identified, decide on an immediate foods intervention • Timely and adequately distribute general food aid (emergency ration) to the affected general population and vulnerable groups (children, women, aged, etc.) • Work closely with reproductive health and shelter clusters to establish ‘safe haven ‘for pregnant and lactating women with access to water and food for them. • Distribute simple messages to promote continued breast feeding • Distribute safe drinking water

6.0 PANDEMIC INFLUENZA

6.1 CONTEXT ANALYSIS

Since April 2009 there have been reported outbreaks of Pandemic Influenza in certain parts of the world. The disease which started in Mexico has spread as far as to Africa. Presently, Ghana has reported confirmed cases of Pandemic Influenza, H1N1. It has been confirmed that transmission in humans, especially in crowded places, can be rapid, hence the need to educate everyone to facilitate prevention and control.

Taking into consideration Ghana's present population of approximately 24 million, even the most conservative model/scenario (attack rate =15%.case fatality rate =0.6%) shows the potential for significant mortality (21,600 deaths in the face of the influenza A H1N1 Pandemic.)

In a worst case scenario, the health service will not have the capacity to provide necessary care and treatment to individuals. Again the overload of severe cases will strongly compromise the ability of the health system to provide care to patients with other serious illnesses resulting in higher than normal rates of mortality

Medical records for the Gold Coast from 1918 to 1920 reveal that several thousand natives and Europeans died of Influenza throughout the coastal and northern territories

Since August 2009 when the first case was confirmed in Ghana, more than 700 cases have been confirmed with one death.

The first step in enhancing a country's resilience is to identify the essential services that always need to function also during emergencies. Disruption in essential services will not only have implications for the health sector but affect the well being of the population at large. The providers of essential services also rely on goods and services of other players in order to sustain their operations. Each provider of essential services such as the water sector, energy, food, pharmaceuticals, transport and finance needs to map out these critical interdependencies and plan to address possible disruptions in the supply of goods and services through the preparation of Business Continuity Plans. Government's role is to provide guidance and facilitate the process.

No single agency can prepare for a pandemic influenza on its own.

6.2 SCENARIOS AND PLANNING ASSUMPTIONS: PANDEMIC INFLUENZA -

(CONTINGENCY 4)

6.2.1 Table 9: ESTIMATED NUMBER OF CLINICAL CASES IN GHANA-WORST CASE SCENARIO (GHS)

Population	GROSS ATTACK RATE					
	0.15	0.2	0.25	0.3	0.35	0.4
1,000	150	200	250	300	350	400
100,000	15,000	20,000	25,000	30,000	35,000	40,000
1,000,000	150,000	200,000	250,000	300,000	350,000	400,000
10,000,000	1,500,000	2,000,000	2,500,000	3,000,000	3,500,000	4,000,000
21,000,000	3,150,000	4,200,000	5,250,000	6,300,000	7,350,000	8,400,000

6.2.2 Table 10: ESTIMATED NUMBER OF CLINICAL CASES IN GHANA - WORST CASE SCENARIO (GHS)

CFR	0.15	0.2	0.25	0.3	0.35	0.4
0.60%	18,900	25,200	31,500	37,800	44,100	50,400
0.70%	22,050	29,400	36,750	44,100	51,450	58,800
0.80%	25,200	33,600	42,000	50,400	58,800	67,200
0.90%	28,350	37,800	47,200	56,700	66,150	75,600
1.00%	31,500	42,000	52,500	63,000	73,500	84,000
1.50%	47,250	63,000	78,750	94,500	110,250	126,000

6.3 TABLE 11: LEVELS OF PREPAREDNESS REQUIRED – PANDEMIC INFLUENZA

6.3.1 Table 11: LEVELS OF PREPAREDNESS REQUIRED - PANDEMIC INFLUENZA

Triggers	Early warning monitoring indicators	Responsible for early warning	Preventive and mitigating measures
Poor sanitation/hygiene	Increased case reporting at health facilities. Absenteeism at work and at school. More than 2 -3 people from a closely related unit (workplace, home) reporting sick. Significant levels of reported mortality	NADMO, GHS, Disease Surveillance Unit NADMO, GHS, Disease Surveillance Unit	Improvement upon personal/environmental hygiene. Sensitization of citizenry on specific health issue at stake Improvement of waste management throughout the country Avoidance of over crowding by ensuring adequate ventilation at communal settings and minimizing social gatherings during disease outbreaks
Co-habitation with animals in the same compound		NADMO, GHS, Disease Surveillance Unit	Increase bio- security and safety
Emigration and migration of people and animals		NADMO, GHS, Disease Surveillance Unit	Step up surveillance at ports of entry by PORTSHEALTH, Immigration and Customs services. Procure/acquire state of the art surveillance equipment to monitor the situation. Increase the number of Disease Surveillance Sites (few sites established by GHS/NMRI). Cross Boarder collaboration with neighboring countries.

6.4 CO-ORDINATION AND MANAGEMENT FOR PANDEMIC INFLUENZA

NADMO is the recognized agency charged with the multi-sectoral co-ordination and management of response to all disasters, including Pandemics.

This National Contingency Plan for Pandemic Influenza preparedness and response makes reference to the National Integrated Strategic Plan for Pandemic Influenza 2009-2013 which is organized into five key thematic areas:

- Planning and Coordination
- Surveillance and situation Monitoring
- Prevention, containment and management
- Social mitigation
- Humanitarian Response

6.5 CO-ORDINATION AND MANAGEMENT ARRANGEMENTS – PANDEMIC INFLUENZA

6.5. 1 Table 12: CO-ORDINATION AND MANAGEMENT ARRANGEMENTS - PANDEMIC INFLUENZA

Task	Objective	Responsibility	Lead Agency	Activities
<p>Planning and Co-ordination</p> <p>(1)</p> <p>National Co-coordinating Committee (NCC)</p>	<p>To promote national and regional capacity to respond to early reports of pandemic.</p>	<p>NADMO, All Relevant MDAs and development partners e.g. Ministry of Health, MOFA, Aviation, Security agencies, Ministry of Information, Ghana Red Cross Society etc.</p>	<p>NADMO / Ministry of the Interior.</p>	<ul style="list-style-type: none"> • Overall planning, Mobilization and Co-ordination of Preparedness and response to pandemic threat. • Provide policy and strategic direction. • Ensure accountability from all sectors. • Provide enabling environment and resources for effective implementation of preparedness plan. • Provide high level political support.
<p>Planning and Co-ordination</p> <p>(2)</p> <p>National Technical Co-ordination Committee (NTCC)</p>	<p>To provide technical backup to NCC</p>	<p>All Relevant MDAs and development partners e.g. Ministry of Health, MOFA, Aviation, Security agencies, Ministry of Information, Ghana Red Cross Society etc.</p>	<p>Ministry of Health</p>	<ul style="list-style-type: none"> • Provide technical backup to NCC • Plan and execute technical preparedness and response actions, surveillance, prevention / containment / health systems response and communication • Monitor and evaluate performance
<p>Surveillance, Situation monitoring and assessment</p>	<p>To put in place a sensitive surveillance system at all levels for early detection, reporting and appropriate response for humans and animals</p>	<p>MOH / GHS DVGs, CBOs MMDA NMIMR WHO VET</p>	<p>Department of Public Health Division, PHO, GHS</p>	<ul style="list-style-type: none"> • Identify cases, report cases, analyze and interpret data • Investigate and confirm cases. • Provide feedback ,evaluate and improve on the system

Prevention containment and management	<p>To ensure that if human infections occur, they will be quickly recognized and that the health system will respond and manage appropriately to limit spread and mortality.</p> <p>To develop strategy for containment</p>	<p>MOH / GHS NMIMR National Surveillance unit / GHS</p> <p>Public, private, Missions, Red Cross Society, Security, Health care providers</p> <p>Korle-bu and Komfo Anokye Teaching Hospitals, All reagents District Hospital Military and Police Hospital</p>	MOH / GHS	<ul style="list-style-type: none"> • Develop a strategy to ensure access to antiviral vaccines, laboratory reagents etc. for rapid National deployment. • Ensure procedures for specimen collection, transportation, rapid analysis and sharing of specimens or isolates for virus characterization and development of diagnostic and vaccines
Communication	To ensure co-ordinate and consistent routine and emergency communication between authorities in all sectors, within and between Government agencies with other organizations and with the public	Information Services Department NCCE MOH / GHS NADMO / WHO	Ministry of information	<p>Establish formal communication channels with WHO and other partners on outbreak information and co-ordination of all communications strategies</p> <p>Develop co-ordinated multi-sectoral feedback mechanisms to identify public knowledge about pandemic influenza, address rumours and correct misinformation</p>
Humanitarian Response	To ensure timely and effective response	UN Agencies , Ghana Red Cross Society NGOs, Ghana Immigration Service GHAPOHA Customs Services	NADMO/OCHA	<ul style="list-style-type: none"> • Activate Sectoral Plans • Convene meetings of NCC and NTCC • Intensify public education • Intensify surveillance • Collection and transportation of samples of suspected cases to the NIC • Activate pandemic influenza communication strategy

7.0 EMERGENCY PHASES

7.1 Table 13: ACTIVITIES TO BE TAKEN BEFORE AN EMERGENCY

Activities	By whom	When
Inventory of equipment and supplies	All Sectors/ Agencies	1 month
Logistics capacity assessment	All Sectors/Agencies	1 month
Operational plan	All Sectors/Agencies members	1 month
Pre-positioning of all required documents such as Situational reports, (Sit Rep) field assessment documents, registration material, and emergency supplies , etc.,	All Emergency Responders	2 Months in advance
Meeting with Customs to clarify clearance procedures and time frame for special clearance window	NADMO	Preliminary talks now
Re-confirm emergency stock levels that are pre-positioned in country and regions	All Sectors/ Agencies to report to NADMO	June 2010
Pre-check- contacts of emergency roster personnel to confirm the potential for availability	All cluster participants to report to WFP/UNHRD once contact ascertained	Now
Pre-check on local arrangements and commitments of organizations/government bodies to ensure timely preparedness to assist on humanitarian response (Ghana Armed Forces, Police, Fire Service, etc)	GG to HCT for International Assistance	When Emergency declaration likely

7.2 Activities to be undertaken during an emergency: within 24 hours

7.2.1 Table 14: ACTIVITIES TO BE UNDERTAKEN DURING AN EMERGENCY: WITHIN 24 HOURS

Activities	By whom
Declare the emergency, convene meeting with partners for information and mobilization	Government
Convene a meeting with National Disaster Management Committee	Ministry of the Interior & Chairman of the National Disaster Management Committee
Appeal for International Aid where necessary	Government
Activate National Contingency Plan	National Coordinator (NADMO)
Convene meeting of NTCRR	NADMO
Deploy a joint rapid needs assessment mission to affected areas	NADMO/NTCRR
Start emergency relief based on rapid assessment	NADMO/NTCRR
Share information/situation report with members of the National Disaster Management Committee	NADMO/NTCRR
Implement a communication plan targeting affected populations and media	NADMO/NTCRR

7.3 Activities to be undertaken during an emergency: within 48 hours

7.3.1 Table 15: ACTIVITIES TO BE UNDERTAKEN DURING AN EMERGENCY: WITHIN 48 HOURS

Activities	By whom
Mobilize emergency funds/stocks available	NADMO/NTCRR
Decide on resource mobilization options: Request presented to the Ministry of Finance for additional fund allocation	NADMO/National Disaster Management Committee
Share /present rapid needs assessment (draft) result with members of National Disaster Management Committee	NADMO/NTCRR
Revise the strategic, agency and sectoral plans and the division of roles and responsibilities	Sectors
Convene NTCRR meetings	NADMO
Initiate deployment of logistics and pre-positioned emergency supplies	National Coordinator, NADMO/National Disaster Management Committee
Deploy required additional staff	NADMO
Implement Sector response according to identified priorities	National Authorities/NADMO
Suspend, if necessary ongoing non priority/essential programmes	NADMO/National Disaster Management Committee
Collect and consolidate data for information bulletins (Situational Reports, needs analysis) and share with National Disaster Management Committee	NADMO/NTCRR
Pursue information strategy aimed at populations	Ministry of Information/NADMO
Evaluate the security situation and act as appropriate	NADMO//National Security Council
Propose post-traumatic counseling emergency evacuation of medical or other vulnerable cases if needed	NADMO/ /Ministry of Health
Identify the reception sites for the affected populations	NADMO/NTCRR

7.4 Activities to be undertaken during an emergency: First 2 weeks

7.4.1 Table 16: ACTIVITIES TO BE UNDERTAKEN DURING AN EMERGENCY: FIRST 2 WEEKS

Activities	By whom
Consolidate information Who does, What, Where (3Ws), analyze gaps and material assistance flow	NADMO/NTCEPR
Conduct thorough evaluation and plan 6 months intervention, identification of immediate consequences and induced effects	National Authorities, UN RC/HCT
Initiate weekly sector meetings	NADMO/National Disaster Management Committee, UN RC/HCT
Issue periodic media briefing and press releases	National Authorities, NADMO, National Disaster Management Committee
Facilitate administrative procedures for the procurement/order of humanitarian equipment. supplies	National Authorities, NADMO, National Disaster Management Committee

7.5 Activities to be undertaken after an emergency: within one (1) month

7.5.1 Table 17: ACTIVITIES TO BE UNDERTAKEN AFTER AN EMERGENCY: WITHIN ONE (1) MONTH

Activities	By whom
Take inventory of all surplus/gaps in stock in all locations /Agree on what to do with surplus stock balances (including this for re use such as good quality tents, water tanks, pumps, filters, plants etc)	NADMO/Sector leads
Take action to address identifies gaps in supplies to identified population	NADMO/Sector leads
Liaise with Custom Excise and Preventive Service (CEPS) regarding any emergency supplies that are yet to arrive to NADMO/ WFP i.e. logistics from lead agency	NADMO
Present consolidated letter to Custom Excise and Preventive Service	NADMO
Re-assess pre-positioning strategy/required supply quantities for new emergencies in the light of surplus materials carried over from the emergency	NADMO/Sector leads
Convey lessons learned /retreat for all partners that supported the response.	NADMO,UN RC/HCT
Ensure all transporter bills/warehouse rents etc, are paid by concerned agencies/organizations to avoid carry over problems in any future emergencies	NADMO/HCT

8.0 RESOURCE MOBILIZATION

At the onset of an emergency, NADMO will have several possible funding sources and tools for resource mobilization, and are encouraged to also undertake joint resource mobilization.

Some key sources of funding are:

- Government budget/funding
- Donor funding
- In-country UN resource (emergency resources)
- Regional Offices of the UN and partner Organizations
- UN emergency resource mobilization(CAP, Flash Appeal, CERF)
- NGO Funding
- Other sources: Private sector/Civil society, etc. Funding collaboration efforts

8.1 Resource Mobilization Tools

8.2 The Consolidated Appeals Process (CAP)

For 2010, humanitarian partners in West Africa have elaborated a joint appeal for a 6-month sub regional response in line with a common humanitarian action plan. The plan focuses on the following key themes: Food Security and Nutrition, Rapid Response to Health Emergencies, Protection and Population Movements; Natural Disaster Preparedness and WASH.

8.3 Flash Appeal

The Flash Appeal is an emergency resource mobilization process led by the Resident Coordinator/Humanitarian Coordinator and the Humanitarian community at the country level. Based on evaluated needs, the Flash Appeal, including project sheets (CAP template) for immediate response activities is launched globally by the Emergency Relief Coordinator (ERC) and presented to the donor community.

8.4 The Central Emergency Response Fund (CERF)

As one of the 4 pillars of the humanitarian reform, CERF is an emergency fund administered by OCHA. It counts 500 million USD a year, available under the Rapid Responses or Under Funded Emergencies windows. At the sudden onset of an emergency, the UN RC along with the humanitarian community may prepare an application package based on evaluated needs and with projects/activities that are in line with the “life saving” funding criteria.

9.0 CO-ORDINATION ARRANGEMENTS FOR NADMO

The National Coordinator of NADMO shall be responsible for the effective, efficient and timely implementation of the National Contingency Plan (NCP). To fulfill this task, the National Technical Committee for Relief and Reconstruction (NTRR) which is chaired by the National Coordinator of NADMO will constantly monitor the situation over the next six months. Upon the ignition of the crisis and after confirmation of its magnitude, the National Coordinator will make recommendations to the National Disaster Management Committee. If appropriate, a STATE of EMERGENCY will be recommended. The NADMO/NTRR will also maintain the responsibility for co-ordination with the technical support of the lead sector agencies. Operational Coordination at the sectoral level shall be ensured by the sector lead. In the event of an emergency, the safety of the personnel as well as communication and information management is important.

10.0 PREPAREDNESS ACTIONS

- Development of sectoral Plans
- Development of Resource Inventory
- Monitoring of Early warning indicators
- Modernization and expansion of seismograph network
- Detailed engineering study shall be undertaken of major state and lifeline buildings.
- Baseline assessment/field visit
- Training of staff
- Capacity training in emergency response activities
- UNDAC
- Training in emergency fund raising e.g. CERT, Flash Appeal, ECHO-EU
- Training in the SPHERE standards
- Other identified areas based on the training needs assessment
- Development of initial assessment format
- Standby Agreements to be prepared (Government, NGO's)

11.0 ANNEXES

11.1 ANNEX 1: MAJOR EARTHQUAKE EVENTS IN GHANA

11.1.1 Table 18: MAJOR EARTHQUAKE EVENTS IN GHANA

Date	Epicenter	Cause	Magnitude (M)	Effects and felt areas
1615	Near Cape Coast			Damage to Fort St. George in Elmina
1858				First reported earthquake known to have shaken Accra strongly. Caused panic but probably little or no damage.
1812/1636	Near Axim		5.7	The Axim district was badly shaken. The buildings and underground workings of the Portuguese gold mine at Aboasi, which was situated near the Duma River, north-east of Axim, collapsed and many of the workers were buried. Damage along Axim coast, Fort St Antonio at Axim was cracked
1862				Commercial activity stopped for many months in Accra. Widely felt in Togo, Benin, Burkina Faso and Mali, was perceptible in Sierra Leone and Senegal
28/07/1862	Near Accra		6.5	Ruined much of the coastal area of Ghana and Togo, and inland areas of Akwapim and Ashanti: 3 people were killed,; every stone building in Accra was razed to the ground, many houses almost totally destroyed; some public buildings, Fort St. James, Usher Fort and Christiansborg Castle were rendered uninhabitable and evacuated. Large cracks in rocks near Fort St. James
1871			4.6	Severe shocks felt in Accra, caused panic
15/04/1872			4.9	Several violent shocks occurred in Accra, considerable damage, many houses destroyed, few serious but no fatal accidents occurred
1883			4.6	Felt along the coast, walls of Christiansborg Castle and nearby houses cracked, cause panic in Accra and Winneba, felt in Cape Coast
20/11/1906	Near Ho	Akwapim Fault	5.0	Greatest damage in Ho area, some government buildings were badly damaged or partly destroyed, many house badly cracked and uninhabitable. In Accra Castle, James and Ussher Fort suffered much damage, some houses cracked but none seriously. Abnormal fluctuation of sea level

				observed in Togo, coast flooded a number of times but no damage.
14/02/1907	Weija	Akwapim fault	4.1	Kasoa, Botianor, Malam, Ashaiman, Legon, Cape Coast, Koforidua, Cracks were noticed in buildings west of McCarthy Hill and Botianor, and one building in the Adweso Estate, Koforidua.
08/01/1907	Weija	Akwapim Fault	3.8	Felt in McCarthy Hill, Aplaku, Madina, West Legon, Kasoa, Tema. Panic , no injuries
06/03/1907	Weija	Akwapim Fault	4.8	Felt in Cape Coast, Apam, Akwapim Ridge towns, Ho, Koforidua, Obuasi. Stampede at national theatre, fire outbreak Kaneshie North Industrial area, cracks in some buildings in Accra
11/02/1907				Fairly strong shock, felt at Lome and other places
09/02/1909	8km South of Tema	Coastal fault	4.9	Felt in Accra and Tema
22/06/1939	Offshore, 40km south-south east of Accra		6.5	Felt in many parts of West Africa, caused great damage (worth about £1million) in Accra area, 22 people died, about 133, injured many houses collapsed, 1500 houses had to be demolished, over 600 had to be repaired to make them habitable, isolated foundation failures due to liquefaction around Sakumo lagoon and along the coast, ground rapture over distance of 20km between Weija and Fetteh
05/09/1978	8km North of Weija	Akwapim Fault	4.7	Felt seriously in Accra, MacCarthy Hill, Oblogo, Tem
08/01/1997	Weija	Akwapim Fault	3.8	Felt in McCarthy Hill, Aplaku, Madina, West Legon, Kasoa, and Tema. Panic , no injuries

11.2 ANNEX 2: NATIONAL CONTINGENCY PLAN WORKSHOP PARTICIPANTS - 21ST -22ND APRIL 2010

11.2.1 Table 19: NATIONAL CONTINGENCY PLAN WORKSHOP PARTICIPANTS

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GLOSSARY

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 for victory or supremacy. It applies both to open fighting between hostile groups and to a struggle between antithetical forces.

Contingency Plan: A deliberative process in which objectives are set, food security outcome scenarios are classified in advance according to set 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.

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 the community. (UN)

ii. A serious disruption of the functioning of a community or society causing widespread human, material economic or environment loss which exceed the ability of the affected community or society to cope using its own resources. (ISDR)

Disaster Management: i. The systematic process of using administrative decisions, organization, 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 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 possibility to minimize vulnerabilities and disaster risks throughout society, to avoid (prevent) or to limit (mitigate and prepare for) the adverse impacts of hazards, 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 reduce 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 (hazard)
- Civil conflict
- Environmental degradation

Food Insecurity: Food insecurity exists when people are undernourished due to the physical unavailability of food, their lack of social or economic access, and or inadequate food utilization.

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 inability of the body to use food effectively because of infection of disease.

(World Food Summit, 1996)

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.

Flash Appeal: An emergency resource mobilization process led by the Resident Coordinator/Humanitarian Coordinator and the Humanitarian community at the country level. Based on evaluated needs, the Flash Appeal including project sheets (CAP template) for immediate response activities is launched globally by the Emergency Relief Coordinator (ERC) and presented to the donor community.

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

Multi-Jurisdictional: Two or more local governmental units participating in the development of a single comprehensive plan that covers the jurisdiction of those local governmental agreements, jurisdictional authority or area of responsibility and the issues and opportunities facing communities. Activities for this planning effort include:

- i. An advisory committee with representative of participating committee.
- ii. Regular meeting to update progress, brainstorm ideas, analyze data, identify and work through important regional issues.
- iii. Jointly identify important regional issues.
- iv. Share time and expertise of all stakeholders
- v. Coordinate to collect data and mapping information

Multi-Organizational: As a management process with a clearly defined tasked responsibilities and resource allocations involving stakeholders and risk scenarios to cope effectively and efficiently with disasters. The process requires a continuous effort, including periodic identification, analyses and assessments of the critical stages along the risk circle, thus considering prevention, intervention and recovery.

Preparedness : Activities and measures taken in advance to ensure timely response to and effective mitigation of the impact of hazards including the issuance of timely and effective early warnings and temporary removal 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 and other disasters.

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.

Sphere Project: The Humanitarian Charter and Minimum standards in Disaster Response.

State of Emergency: As a temporary system of rules to deal with an extremely dangerous or difficult situation.

The Central Emergency response Fund (CERF): As one of the four pillars of the humanitarian reform, CERF is an emergency fund administered by OCHA. It amounts to 500 USD a year under the rapid response or under Funded Emergency Windows. At the sudden onset of an emergency, the UNRC along with the humanitarian community may prepare an application package based on evaluated need and with projects/activities that are in line with saving funding criteria.

The Consolidated Mobilization Tools: A humanitarian action plan that focuses on the following key themes: Food Security and Nutrition, Rapid Response to Health emergencies, Protection and Population Movements; National Disaster Preparedness and WASH.