

VOLUME ONE

**NATIONAL DISASTER
MANAGEMENT PREPAREDNESS
PLAN**

SECTION 1

1.0 INTRODUCTION

The eleven year conflict in Sierra Leone underscores the need for a national disaster management plan with a coordinated and multi-sectoral approach to prevent, mitigate and respond to disasters.

Events in recent times have shown that Sierra Leone is confronted with several hazards. These include weather, climatic, geological, ecological, pest, health, environment and other man-made hazards.

The government of Sierra Leone has developed contingency plans for individual hazards and has harmonised these plans into a national plan through a comprehensive approach with inputs from the United Nations Agencies, Private Sector and other Non-Governmental Organisations. Some of these include the Vulnerability and Capacity Assessments jointly conducted by the Sierra Leone Red Cross Society and the Disaster Management Department and the National Hazard Profile developed by the Disaster Management Department.

In spite of the good intention of government and its development partners to assist disaster victims, yet, it is clear that without a national plan that can be owned up by all the partners, efforts made would not be effective, efficient and comprehensive. Assistance of relief by disaster management experts would be better appreciated by disaster victims if it would be administered in a timely manner. This can only be achieved through a national disaster response plan.

1.1 PURPOSE

The purpose of the National Disaster Preparedness and Response Plan (NDPRP) is to establish a comprehensive all-hazard approach to national incident management spectrum of activities including preparedness, prevention, mitigation, response and recovery. The plan incorporates best practices as shown in other regions of the world.

- The National Response Plan provides a framework of interaction between the State, Non-Governmental Organisations, United Nations Agencies, Private sector, Community-Based Organisations and Youth Groups.
- The plan establishes a mechanism to maximise the integration of incident-related prevention, mitigation, preparedness, response and recovery.
- It provides a focus for inter agency and inter governmental emergency preparedness, planning, training, exercising, coordination and information sharing.
- It spells out the process and methodology for implementing and managing national recovery and mitigation programmes and support / technical services.
- The plan is meant to maximise efficient utilisation of resources needed for effective incident management and critical infrastructure/key resources' protection and restoration.
- It is intended to improve incident management communication links and increase situation awareness across the public, private and Non-Governmental Organisational structures.
- The plan is geared towards an improvement in coordination and integration of national (and international), provincial, district, private sector and Non-Governmental Organisation partners.

- The plan points out the means of central government support in the form of resources to local effort with the view of saving lives and properties and the protection of public health and safety.
- Thus, the plan establishes assumptions, policies, concept of operations, roles and responsibilities of the various stakeholders' institutions.

1.2 STAKEHOLDERS

The National Disaster Management Plan is a working tool that is applicable in addressing major/minor disasters or emergencies. This covers both natural and man-made disasters. It can be used in all circumstances regardless of cause or other occasion or instance for which the National Security Coordinator (NSCoord) will determine the assistance needed to supplement provincial, district or local efforts and capabilities in their response to the disaster at hand. Throughout the National Disaster Preparedness and Response Plan (NDPRP), any reference to major disasters or emergencies generally implies a declaration by the National Security Coordinator.

The NDPRP embrace the full range and constantly changing requirements that serve as a sequel to disasters. It makes room for saving lives, protecting properties and meeting basic human needs (response); restoring the disaster affected areas (recovery); and reducing vulnerability to future disaster (mitigation).

The plan is applicable to all government ministries, departments and agencies (MDAs), the Private Sectors, local and international Non-Governmental Organisations and specialised agencies of the United Nations resident in the country.

The role of the Sierra Leone Red Cross Society and its partners has been fully defined fully in this plan in disaster Preparedness, mitigation, response and recovery.

The central government recognises the importance of an inter agency and community partnership to improve access to disaster assistance.

Even though Heads of Local / District Councils shall request a declaration by the National Security Coordinator of disasters on behalf of their communities, yet agencies subsequently can work directly with the communities within existing structures and resources, to tailor disaster programmes to its unique needs.

1.3 PLANNING ASSUMPTIONS

The NDPRP is based on the following planning assumptions and considerations:

- i. Events of disasters or emergencies have the likelihood of causing injuries and fatalities, property loss, and disruption of normal life support systems. Thus, it is bound to impact on the national economic, physical and social infrastructures of its inhabitants.
- ii. Therefore, top priorities for disaster management are to:
 - Save lives and protect the health, dignity and safety of the public, responders and recovery workers.
 - Ensure security of the affected community.
 - Protect and/or restore critical infrastructures and key resources.

- Protect properties and mitigate damages and impact to individuals, communities and the environment.
 - Facilitate recovery of individuals, families, business, government and the environment.
- iii. Disaster management activities will be initiated and conducted using the principles of combined expertise and capabilities of government at all levels, the private sectors, Non-Governmental Organisations and United Nations Agencies. Efforts of the above will be required to prevent, prepare for, respond to and recover from national disasters.
- iv. National disasters can be declared by the National Security Coordinator or the Chief of Staff in the absence of the NSCoord. The coordination of national emergencies at the strategic level is the major responsibility of the Disaster Management Department in the Office of National Security (ONS) as clearly stipulated in Section 18; subsection iv of the National Security and Central Intelligence Act 2002.
- v. Government ministries, departments and agencies, the Sierra Leone Red Cross Society and its partners, United Nations Agencies, and other Non-Governmental Organisations may be required to deploy in disaster sites at short notice to provide timely and effective mutual aid and/or assistance.
- vi. Large number of casualties, heavy damage to building and basic infrastructure and disruption of essential public services will overwhelm the capacities of the local communities to meet the needs of the communities which will warrant external interventions.
- vii. The degree of national involvement will be determined by the severity and magnitude of the disaster. The most devastating disasters may require government institutions taking the lead and supported by development partners.

1.4 LEVELS OF DISASTERS

All levels of disasters shall march up with levels one, two and three situation as stipulated in the National Security Standard Response Guidelines.

Level One: This refers to minor disasters, i.e., any disaster that is likely to be within the response capabilities of the local government, the community and stakeholders working within the affected community and results in only minimal need for national assistance.

Level Two: This refers to major disaster, i.e., any disaster that would likely exceed local capabilities and require a broad range of national assistance.

Level Three: This refers to an extreme disaster, i.e., any disaster that would require massive national assistance including military involvement and support through outside intervention (or international).

Note: The National Security Coordinator will be notified by the Strategic Situation Group (SSG) based upon recommendations from the Disaster Management Department before the activation of the different levels can be effected.

1.5 NATIONAL DISASTER PREPAREDNESS AND RESPONSE FRAMEWORK

The integrated disaster management authorities, policies, procedures and resources of the central and local government, United Nations Agencies as well as Non-Governmental Organisations, private sectors, local communities and international sources constitute the national disaster response framework for assistance delivery following major disasters.

The framework makes room for central government to assist with human and material resources in support of the affected communities in terms of emergencies.

Under the National Security and Central Intelligence Act 2002, the Office of National Security has been mandated to coordinate national emergencies, preparedness planning, management and disaster assistance function. The Disaster Management Department (DMD) in the Office of National Security has been delegated the responsibility for establishing national disaster policy. In this stewardship role, the DMD has the lead role in developing and maintaining the national disaster preparedness and response plan.

The NDPRP recognises the fact that certain government institutions have their own emergency response plan describing who will do what, when and with what resources. Also, many voluntary, private and international organisations have their contingency / emergency plan.

Much of the NDPRP is directed primarily on operational planning specific to a disaster event. Other forms of planning are crucial to ensuring effective disaster operations. These include contingency planning, action planning and strategic planning.

1.6 ROLES AND RESPONSIBILITIES OF INSTITUTIONS

This section discusses the roles and responsibilities of the Central Government and Local Government Councils, the Disaster Management Department in the Office of National Security, Non-Governmental Organisations, United Nations specialised agencies, the private sector, community-based and Civil Society Organisations.

i. Central Government:

Relevant ministries, departments, and agencies of the Central Government as per the appropriate disaster shall take lead roles and responsibilities in the following:

Weather and climatic disasters, ecological, pest, man-made disasters, civil strife, population movement, child welfare, drug abuse, collapse building, health / epidemic hazards, mining disasters, security and other disasters that have the potential to cause suffering on the population of the affected community.

The enactment of the National Security and Central Intelligence Act 2002 has vested the authority for coordinating national emergencies such as natural and man-made disasters on the Office of National Security; of which the Disaster Management Department is the focal and/or implementing institution.

The Central Government shall be responsible for the following:

- public works and engineering
- transportation
- communication
- fire fighting
- housing, mass care and human services
- resource support
- search and rescue
- hazardous material response
- agriculture and natural resources
- energy
- public safety and security
- long term community recovery and mitigation
- external affairs

ii. Local Government Councils

These councils shall be responsible for coordinating local resources to address the full spectrum of actions to prevent, prepare for, respond to and recover from disasters. In addition, local council authorities provide leadership and play key role in communicating to the public and in helping people, businesses and organisations to cope with the consequences of any disasters within their jurisdiction.

The local government councils shall request the central government and if necessary other Non-Governmental Organisations in situations wherein the councils' capacities and capabilities have been exhausted.

iii. The Disaster Management Department (DMD)

This unit is a directorate that has the responsibility of coordinating all issues related to both natural and man-made disasters. It brings together stakeholders from government departments, non governmental organizations, United Nations specialized agencies, Community Based Organizations, the private sector, media, and the local communities on disasters.

It promotes public awareness and advocates for the incorporation of disaster risk management into development planning.

It organizes joint assessment with the involvement of major players in disaster response.

Gives strategic directives and guidelines to government to take informed decision on national emergencies.

It operates through District and Provincial Disaster Management Committees that are established through out the country.

iv. **Relevant Local and International Non-Governmental Organisations**

They shall collaborate with the first responders, government at all levels, local councils and other agencies and organisations providing relief services to sustain life, reduce physical and psychological stress and promote recovery of disaster victims where assistance is not enough or available from other sources. This shall be done in recognition of their mandates and various institutional contingency plans.

v. **The Sierra Leone Red Cross Society and Partners**

These shall constitute the first group of volunteers to respond to disasters in various communities. They shall assist with first aid, disaster preparedness and response, relief, prevention, surveillance, early warning systems, search and rescue, contingency planning, vulnerability and capacity assessment, and water and sanitation.

In times of war, civil disobedience, riots, and demonstrations, the Sierra Leone Red Cross Society shall render assistance to the sick, wounded and the vulnerable groups. This shall be in accordance with the spirit and conditions of applicable conventions.

They shall assist in the improvement of health, prevention of diseases and the mitigation of suffering country-wide.

They shall train personnel and maintain a permanent organisation to alleviate suffering and distress especially casualties of disasters. When engage in relief work, the Sierra Leone Red Cross Society shall supplement official service where they exist and in particular to be prepared to supply trained auxiliaries for medical services.

In summary, the Sierra Leone Red Cross Society's programme is limited to the provision of the following under mentioned areas:

- First aid
- Food supplies

- Non-food items (NFIs)
- Services for the prevention of epidemics including health education
- Social welfare
- Re-union of families and other emergency assistance
- Collaborate with other stakeholders to conduct joint assessments.
- Information sharing and public education

vi. **Private Sector**

They shall support the NDPRP by sharing information with the government, identifying risks, performing vulnerability assessment, developing emergency response and business continuity plans, enhancing their overall readiness, implementing appropriate prevention and protection programmes and donating or otherwise providing goods and services through contractual arrangements or government purchases to assist in response to and recover from a disaster.

In case of a disaster, private sector organisations are expected to mobilise and employ the resources necessary available in accordance with their plans to address the consequences or impact of disasters of their own facilities or disasters for which they are otherwise responsible.

vii. **Community Leaders (grass root)**

They are responsible (with the support of the government and other partners) for coordinating community resources to address the full spectrum of action to prevent, prepare for, respond to and recover from disasters.

They can provide (in partnership with the government and other partners) leadership and play a key role in communication to the local community and in helping community people; business and organisations cope with the impact of disasters.

They shall work with other stakeholder institutions in addressing disaster risk reduction and management of their communities.

They shall mobilise community volunteers to serve as first responders to disasters.

viii. **Civil Society Movement**

Strong partnership with citizen groups and coalition provides foundation for disaster prevention, preparedness, response, recovery and mitigation.

The civil societies constitute a strong pillar for the dissemination of education and training and volunteer services to help make communities safe, strong and better prepared to address threats of disasters. They shall therefore constitute a strong advocacy group for disaster risk reduction.

The civil societies shall ensure that communities are safe or offer volunteer services opportunities to support first responders, disaster relief activities and community safety.

ix. **Specialise Agencies of the United Nations (United Nations Country Team)**

All bodies of the United Nations Country Team or specialised organisations shall support the central government, local government and communities in disaster preparedness, mitigation, response and recovery. The discharge of these roles shall be in line with their mandate and the broader objective of the United Nations.

SECTION 2

2.0 THE SIERRA LEONE ENVIRONMENT

2.1 GEOGRAPHICAL FEATURES AND AREA

Sierra Leone is a small country located on the West Coast of Africa and lies between latitude $6^{\circ} 00'$ N, and longitude $10^{\circ} 16'$ W and $13^{\circ} 18'$ W. The country has a north-south distance of 331 km. It is bounded on the West by the Atlantic Ocean, where it stretches along the coastline for approximately 400 km, by Guinea on the North and North-East, and by Liberia on the South-East.

The country is divided into four administrative regions: Eastern, Northern and southern Provinces, and the Western Area, which is the peninsular on which the capital, Freetown, is situated.

2.2 CLIMATE

The climate is essentially tropical, showing distinct dry and rainy seasons. Rainfall is the most important climate element in Sierra Leone. It varies both in space and time. Mean annual variability is about 20%. The average rainfall decreases from 5000 mm in the Freetown Peninsular to about 3000 mm in the south-east, which are the lowland and escarpment regions down to about 2500 mm in the drier areas of the north –west to the north -east. The mean annual rainfall in this region is 4000 mm, with some months recording virtually no rain. The rainfall pattern is unimodal with most of the rain falling between late April and early November. July and August are the wettest months in most areas. Due to heavy rainfall in the wet season, discharges and runoff are high and ranges from 20% to 40% of total annual rainfall. Rivers overflow their banks during this period.

However, there is pronounced dry season from November to March when flows may be sufficiently reduced to be a constraint.

The whole country experiences a hot and humid climate throughout, except for the wet season and the Hamattan period (December to February). Diurnal temperatures vary from 25°C to 34°C although they could be as low as 16°C at night during the hamattan. Relative humidity is usually about 90 % but drops to about 20% during the hamattan. . Normal wind speed throughout the year averages 8 knots. Sunshine is plentiful and varies substantially with the amount of cloudiness. During the dry season (November to March) mean monthly solar radiation is high, 380 cal.cm⁻² day⁻¹ (480 lux); mean hours of sunshine varies from 7-9, and pan evaporation is about 4.5 mm per day. The wet season is generally dull and cloudy with a mean monthly solar radiation of 280 cal cm⁻² day⁻¹, mean hours of sunshine is 3 hours day⁻¹ in July and August, and pan evaporation generally less than 2.0mm day⁻¹, due to high diurnal humidity.

2.3 RELIEF

Sierra Leone covers a geographical area of 72, 300 Km². The country is divided into four main physical regions: coastal plains, interior plains, interior plateaux, and hills and mountains (Table 1).

The coastline or coastal plain is relatively gentle and comprises of estuarine swamps, terraces, alluvial plains and beach ridges (Allan 1990). The interior lowland plains extend from the coastal terraces in the west to the east of Sierra Leone, occupying approximately 43% of the land area. At the edge of the lowland plains are the interior plateau, made up of granite that run from the northeast of the country to the southeast. They seldom rise above 700m and are comprised of alluvial ironstone gravel in the south-eastern region, while the northern end is comprised of weathered outcrops of granite rocks. In the north and east of the country are found two of the highest mountains, with

the Loma Mountains being the highest in West Africa, west of Mount Cameroon. The highest peak on the Loma Mountains is Bintumani, which rises to 1945 m, while Sankan Biriwa on the Tingi Hills, rises to 1853m. West of these two mountains, is the Freetown Peninsula, which is also made up of dissected peaks, with the two highest peaks being Sugar Loaf (760m) and Picket Hills (888m). The hills on the Freetown peninsula are unique to this region, and found nowhere else in the sub-region.

TABLE 1: SIERRA LEONE’S MAIN PHYSICAL REGIONS TOTAL LAND AREA

| REGIONS | SUBREGIONS | AREA (KM ²) | PROPORTION (%) |
|------------------------|--------------------------------------|----------------------------|-------------------|
| 1. COASTAL PLAINS | Estuarine Swamps | 2,347 | 3.2 |
| | Beach Ridges | 1,433 | 2.0 |
| | Alluvial Plains | 1,404 | 1.9 |
| | Coastal Terraces | 5,260 | 7.3 |
| | SUBTOTAL | 10,444 | 14.4 |
| 2. INTERIOR PLAINS | Boliland | 3,136 | 4.3 |
| | Undulating Plains | 27,601 | 38.2 |
| | Low Plateau | 681 | 0.9 |
| | SUBTOTAL | 31,418 | 43.4 |
| 3. PLATEAUX | Undulating High-Lying | 4,533 | |
| | Plains | 3,131 | 10.6 |
| | Rolling Plains Hills | 5,595 | 7.7 |
| | Hills | 2,455 | 3.4 |
| | SUBTOTAL | 15,714 | 21.8 |
| 4. HILLS AND MOUNTAINS | Hills on Basic and Ultra Basic Rocks | 3,131 | 43 |
| | Hills on Acid Rocks | | 16.0 |
| | SUBTOTAL | 14,723 | 20.4 |
| | TOTAL | 72,300 | 100 |

SOURCE: LWDD/MANR

2.4 LAND RESOURCES

Of the total land area of 72,300 km², some 60,650 km² are upland and 11,650 Km² are lowlands. 53,620 km² (5.36 million ha) has been estimated as suitable for crop production, about 74.2% of the total land area. Non-arable land which includes hills, rocky land, roads, towns, rivers and creeks account for the remaining 18,860 km² (25.8 %) of the country (Table 2).

TABLE 2: SUMMARY OF AREA OCCUPIED BY VARIOUS LAND TYPES

| LAND TYPE | AREA (KM ²) | AREA (ha) | PROPORTION (%) |
|------------------------------------|----------------------------|------------------|-------------------|
| Total Land Area | 72,300 | 7,300,000 | 100.0 |
| Uplands | 60,650 | 6,065,000 | 83.9 |
| Hills | 17,350 | 1,735,000 | 24.0 |
| Undulating Plains | 40,000 | 4,000,000 | 55.3 |
| Beach Plains | 1,000 | 100,000 | 1.4 |
| Terraces | 2,300 | 230,000 | 3.2 |
| Lowlands | 11,650 | 1,165,000 | 16.1 |
| Major Flood Plains | 1,300 | 130,000 | 1.8 |
| Minor Flood Plains & valley Swamps | 6,900 | 690,000 | 9.5 |
| Drainage Depressions (Bolilands) | 1,450 | 145,000 | 2.0 |
| Tidal Swamps | 2,000 | 200,000 | 3.2 |
| Arable Upland | 43,020 | 4,302,000 | 59.5 |
| Non-Arable Upland | 17,630 | 1,763,000 | 24.4 |
| Arable Lowland | 10,600 | 1,060,000 | 14.7 |
| Non-Arable Lowland | 1,050 | 105,000 | 1.4 |
| Total Arable Land | 53,620 | 5,362,000 | 74.2 |
| Total Non-Arable Land | 18,680 | 1,868,000 | 25.8 |

SOURCE: FAO/MANR AGRIC. REVIEW MISSION REPORT, AUGUST, 1992

According to Koroma (1980), land in Sierra Leone is divided into agricultural (60 per cent), pastoral (18 per cent), mangrove and Inland swamps (8 per cent), forest under the protection and management of the Forestry Division (4.5 per cent) and others (9.75 per cent). About 6,570,000 ha (90 per cent) are privately owned by families; 360,000ha (6

per cent) are owned by communities or families and only 285,000ha (4 per cent) are held by the government in the form of Forest reserves (Tejwani, 1988).

Of the about 5.36 million ha of cultivated land, 4.2 million ha are upland of relatively low soil fertility, and 1.16 million ha are more fertile swamps with considerable potentials for increased cultivation if proper farm management techniques are applied. The lowlands comprise 0.69 million ha of Inland Valley Swamps (IVS), 0.14 million ha Boliland, 0.2 million ha of Mangroves and 0.13 million ha of Riverain Grasslands.

2.5 WATER RESOURCES

There is an abundant water resource in the country, but the supply of fresh water is limited in the dry season. At present adequate and safe drinking water is only available in Freetown and even this is now coming under threat. In most of the urban areas the potable water supply systems have broken down. Rural areas depend on untreated wells, rivers and streams for water supply.

There are nine major rivers system flowing through the country generally in a North-East to South-West direction. Great Scarcies, Little Scarcies and Moa are shared with Guinea. Moa and Mano are also shared with Liberia. There are in addition three minor water resource areas – Western, Sherbro and Ribbi-Thauka. Table 3 shows the areas of the watersheds and water resource areas.

All the major rivers empty into the Atlantic Ocean through the coastal plain region which has a complex drainage pattern with a significant proportion, flooded at high tide during the rainy season, resulting in vast areas of mangroves.

Groundwater resources of the country have not been extensively studied and utilised, although in some areas, they are being exploited by sinking wells etc. A significant percentage of the rural population obtains water from surface sources including streams and pools.

Because of the favourable climate and water resources in Sierra Leone, monitoring of these resources for efficient use has not been accorded the priority it deserves.

2.6 SOILS

The Land and Water Development Division (LWDD) have grouped soils in Sierra Leone into 12 soil associations. Each soil association has different attributes. Most soils in Sierra Leone are acid (pH 4-5). The soils are ferralitic and excessively leached as a result of the humid tropical conditions. This is particularly true for the upland soils. Organic matter content is low, making the soils less suitable for cropping. **The soils of the uplands are generally infertile and there is lack of proper management practices.**

TABLE 3: AREAS OF WATER AND WATER RESOURCES

| NO | WATERSHED | LENGTH (KM) | AREA (KM ²) |
|----|-----------------|-------------|-------------------------|
| 1. | Great Scarcies | 129 | 3,050 |
| 2. | Little Scarcies | 161 | 13,150 |
| 3. | Moa | 266 | 8,690 |
| 4. | Mano | 105 | 2,290 |
| 5. | Loko | | 1,500 |
| 6. | Rokel | 290 | 8,500 |
| 7. | Gbangbaia | | 2,880 |
| 8. | Jong | 97 | 8,350 |
| 9. | Sewa | 209 | 19,000 |

| | <u>Water Resource Areas</u> | | |
|----|-----------------------------|--|-------|
| 1. | Western | | 260 |
| 2. | Ribbi-Thauka | | 3,780 |
| 3. | Sherbro | | 550 |

2.7 VEGETATION

The vegetation of Sierra Leone is constantly being altered by the influence of man. The major part of Sierra Leone lies within the moist forest zone of West Africa. At low altitude it is thought to be the climax vegetation of Sierra Leone. A smaller part of the country lies within the moist savannah woodland zone and except in the south, there is a small mangrove zone along the coast. Within these zones, the vegetation varies considerably in composition depending on the edaphic conditions and to the degree of disturbance it has experienced due to human activity. Only limited areas of the country still have pure climax vegetation. Most of the country is a mosaic of forest regrowth, secondary forest and derived savannah which now covers much of the upland areas of the country and Inland swamp plant communities which occur in the moist forest zone and the forest savannah mosaic zone and moist savannah woodlands zone. In the coastal and inland swamps, specific vegetation patterns have developed due to the influence of tidal and fresh water inundation respectively. Considerable modifications have also occurred in this vegetation type, primarily due to rice cultivation (Birchall et al. 1979; Gordon et al. 1979)

Broadly classified, there are 6 vegetation types, and these include tropical closed forests (moist evergreen rainforest and moist semi-deciduous), Forest re-growth (farm bush), Swamp forests (wetlands – mangroves, inland valley swamps, fringing and gallery forests), savannah, and tropical grasslands (riverhine, bolilands and montane) and plantations and wastelands. Farm-bush arises from slash-and-burn agriculture and is

becoming the dominant vegetation type in Sierra Leone. The savannah is restricted to the northern parts of the country and is increasingly being subjected to frequent fires. Most of the moist and semi-deciduous forests are located within protected areas, often on mountain tops and slopes.

The six broad classes are further subdivided into 19 plant communities as described by Cole (1968). A summary of the various plant communities is given in Table 4 below.

TABLE 4: VEGETATION TYPES AND PLANT COMMUNITIES IN SIERRA LEONE

| | VEGETATION TYPE | PLANT COMMUNITY | AREA (Km²) | PERCENT OF COUNTRY |
|---|---|---|----------------------------------|--|
| A | Tropical Closed Forests | Rain Forests) Moist evergreen) Moist semi-deciduous) Secondary forests | 358,700 | 5% 3.6% |
| B | Forest Regrowth | - Farm bush | | 52.2% |
| C | Swamp forests (Wetlands) | Mangrove swamps Inland Valley Swamp Fringing Forests Raphia Swamp Gallery forests | | 2.4% 1.5% 0.4% 0.5% |
| D | Savannah woodlands | Moist, closed, Guinea savannah woodlands Mixed-tree, open, Sudan savannah woodland Lophira tree savannah Coastal Park savannah woodland Tall grass (3m) savannah | | 8.6 10.1% 3.7% 1.5% 3.5% |
| E | Tropical Grassland (Seasonal wetlands) | Riverain grassland + grassland (1- 3m tall) Boliland swamp + grassland (1m tall) Montane grassland (1m short) | | 2.5% |

| | | | | |
|---|------------------------------------|---|--|--------------|
| | | Lateritic pan grassland (very short) | | 0.1% |
| F | Plantations, farmland and wetlands | Rubber Oil Palm Coffee and cacao Fuel wood Forest trees | | 0.1% 2.3% |
| | | | | |

2.8 FOREST ESTATE

Sierra Leone is essentially a forest country as the climatic conditions can support closed high forest in about 80 percent of the country. Historical evidence indicated that at the turn of the 20th century, 70 -80 percent of the country was covered with tropical closed forests on the lowland and escarpment area and savannah woodland in the northern plateau region [Unwin (1922), Savill and Fox (1967), Cole (1968), Mann (1990)], and the remaining area consisted of 9 percent swamp, and 16 percent open savanna, h forest re-growth and crop fields. Human impact on the vegetation, largely due to the rapid increase in population, demand for forest products (timber, fuel wood and building poles) and slash-and-burn agriculture, wild bush fires and urbanisation has been so severe to the extent that, nowadays, the original forest cover has been decimated with just under 4 per cent of the country under mature forest, another 4 per cent is secondary forest and 52 per cent is in various stages of re-growth (Gordon et al. 1979).

Table 5: FOREST TYPES AND SIZE

| Forest Type | Area (ha) | Percentage of Total | Percentage of National Area |
|-----------------------|------------------|----------------------------|------------------------------------|
| Closed High Forest | 365,200 | 5.8 | 5.1 |
| Secondary Forest | 261,000 | 4.1 | 3.6 |
| Forest Re-growth | 3,774,400 | 59.9 | 52.7 |
| Savannah Woodland | 622,600 | 9.9 | 8.7 |
| Mixed Tree Savannah | 732,600 | 11.6 | 10.2 |
| Lophira Tree Savannah | 264,600 | 4.2 | 3.7 |
| Coastal Woodland | 50,000 | 0.8 | 0.7 |
| Mangrove | 171,600 | 2.7 | 2.4 |
| Fringing Swamp Forest | 28,800 | 0.4 | 0.4 |
| Raphia Swamp Forest | 35,500 | 0.6 | 0.5 |
| TOTAL | 6,305,800 | 100.0 | 88.0 |

SOURCE: Koroma, 1988 without percentages

The Forest estate as at 1985 was 325,205 hectares or 5.6 percent of the forested area and 88 per cent of the national area (Koroma, 1988). This was made up as follows:

- Gazetted Reserves (285,229ha) fully under the protection and management of the Forestry Division. They are made up of different categories of woody vegetation, 83 per cent in the closed high forest zones, 14 per cent in the savannah woodlands and 3 per cent in open areas and tall grasslands (Kingston, 1986).
- Proposed Reserves (33,953 ha) fully under protection and control of the Forestry Division but not yet legally constituted.
- Protected Forest (33,023) on chieftom lands. These protected forests are now known as community forests.
- Game Reserves (76,500ha) mainly in savannah woodlands.

- Plantations (about 9,800) are mainly in small plots of both cash crop trees (rubber, oil palm, coffee, cocoa) and forest trees species, scattered throughout the country scattered all over country. This figure is now very questionable as a good number of the forest plantations are being cleared for farming after timber extraction and firewood collection by the communities.

The coastal Mangrove forests in addition protect the coastal and river banks against erosion and are an important natural habitat and breeding grounds for various aquatic lives and sanctuary for migratory birds.

2.9 WILDLIFE

Philipson (1978) listed 102 large and small mammals of which 23 species were antelopes, gazelles and buffaloes (Bovidae), 7 species of large cats (Felidae) and 18 species of primates (monkeys, chimps and gorillas). A more recent survey by Stuart and Adams (1990) for the whole of sub-Saharan African Countries, gave Sierra Leone a total of 178 species of animals of which 15 were primates and 18 species were in the antelope class. The same survey recorded 614 species of birds in Sierra Leone, of these six forest interior birds are threatened with extinction (IUCN, 1992), whilst the number of amphibians and reptiles was stated as unknown. Lebbie (2002) listed 25 species of amphibians and 17 species of reptiles.

2.10 POPULATION

Sierra Leone has had three national population censuses since independence in 1961. The first census was in 1963 and it showed that there were 2,118,355 persons in the country. The 1974 census put the population at 2,735,159 and the 1985 census indicated that there were 3.51581 million persons in Sierra Leone. Current population is estimated at about 5.2 million.

Population figures generally show that there are more women than men in the world. In Sierra Leone there are about 98 males to every 100 females countrywide. In terms of age structure, about 41 percent of the population are under 15 years of age, 53 percent between 15 and 59 years, and 6 percent are 60 years and over.

The population is not evenly spread across the country. About 68 per cent of the population live in the rural areas and over 80 per cent live close to the forest or forest re-growth and depend on it for their livelihood. The national average population density increased from 38 persons per km² in 1974 to 49 per km² in 1985 and in 1992 it increased to about 58. It was projected to increase to 80 per km² by the year 2000, if the population increase continued at the observed trend. The national average density varies considerably among the districts, chiefdoms and towns. Generally those regions which have important economic activities tend to have larger (dense) populations. According to ESCG (1988) areas with high population of above 80 persons per km² are mostly those which contain diamond mines or are mainly engaged in rice cultivation and other economic activities. These regions include Kono, Kenema and Bo (diamond, trading, etc.) and Freetown (capital city and main industrial town). Areas with medium density (between 50 –80 persons per km²) are mainly found in the arable alluvial soils and are centres for rice, coffee and cocoa production. Areas with low density (below 30 persons per km², are mainly in the north, the southern coastal areas and the east. These areas like Pujehun, Bonthe, and Koinadugu Districts have fewer arable lands and or no economic minerals and generally have a high, closed forest cover.

SECTION 3

3.0 HAZARD MAPPING

Hazard mapping in disaster prevention, mitigation and response is perceived as a process of identifying and documenting geographical information on all hazards and their degree of risks.

To effectively and efficiently conduct hazards mapping, the overall process should be conducted with the holistic approach. The mapping shall not be limited to specific hazard types but must cover or encapsulate vulnerability mapping, risk mapping, risk indexing and mapping of safe haven.

3.1 OBJECTIVES

The main objective is to produce maps that indicate ecological and geographical locations of hazards that would be used to guide and direct the formulation of policies and legislations regarding disaster management nation-wide and to serve as a guide for disaster response. This covers planning, preparation, mitigation, emergency response, resettlement and reconstruction.

3.2 TYPES OF HAZARDS

Sierra Leone is vulnerable to hazards which are categorised into natural and man-made disasters. These disasters in question and the areas where they are most likely to occur in the country are shown below.

3.3 NATURAL HAZARDS

3.3.1 WEATHER AND CLIMATIC HAZARDS

In recent years, there have been climatic uncertainties. The rainfall patterns for instance have been erratic and this has disrupted the farming season in Sierra Leone wherein about 99% of farmers depend on natural irrigation through rainfall. As a result of this, farm sites burnt too early become bushy at ploughing time. Also farmers, who anticipate dry spells later in the season after unexpected early rains, are disappointed and unsuccessful in the farm site burning operations. At times, farmers could not burn the sites and therefore give up. The overall impact of weather and climatic uncertainty is low productivity, hence, a blow to food security. This climatic uncertainty affects the country.

3.3.2 DROUGHT / WATER SHORTAGE

There is no drought in Sierra Leone. What is becoming prevalent in Sierra Leone is meteorological and agricultural draughts (green draught) as seen in the rainfall patterns. Rainfall is below normal expectations (average) in a number of areas for an extended period especially in the extreme north, notable Kabala. Drought like conditions prevails in such areas at the peak of the dry season between February and March. During this period, the water table becomes very low and moisture deficit can be experienced in the first 100-120cm.

3.3.3 TROPICAL STORMS, THUNDER AND LIGHTNING

The occurrences of tropical storms are annual events during the rainy seasons. Records show that the most devastating tropical storm with a wind speed of over 120km per hr blew over Freetown on 21st June 1976. The main island of Bonthe had a harsh experience of wind storm disaster on the 4th September 2006. The wind storm which lasted for just

ten minutes destroyed over 200 dwelling houses with dire consequences upon the habitants.

Disasters caused by thunder and lightning are common occurrences in Sierra Leone. Potentially, disastrous thunder and lightning normally occur at the start (April / May) and at the end (September / October) of the raining season.

In recent times, death due to lightning have been recorded in the following areas: Rogbane Forest reserve in Port Loko in 1988. There was a thunderbolt disaster at Torma Bum in the Pujehun District, southern Sierra Leone in 2004, thunder and lightning claimed several lives in the Koinadugu District.

3.3.4 **FLOODING**

There is a lack of data on the flood patterns in Sierra Leone. The primary cause of flooding in Sierra Leone is tropical rains and block drainages in urban areas and big towns. Areas affected by seasonally flooding annually include: Kroo and Susan's Bays, Newton catchments areas, Lumley areas, Torma Bum and Gbondapi in the Pujehun district and New London in Bo City.

Flooding generally occur every year between July and September. These floods can occur any time during the raining season after heavy and torrential downpours. Most of the floods are transient with the water receding, sometimes less than an hour after the rains but in some cases, it can take up to a week or more. Flooding along the coastal area is not uncommon. Notable areas include the Sewa and Wanje Rivers and the coastal beaches of the Western Area Peninsular. This is an annual event caused by run offs from different surroundings.

3.4 GEOLOGICAL HAZARDS

Sierra Leone lies within the West African Craton, where interpolate disturbances are rare. Geologically, the country is very stable. There are no faults or weak zones. There is no evidence of threat of earthquake or tremors.

3.4.1 COASTAL EROSION

Coastal erosion poses a threat to the lives and livelihood of many coastal communities. Coastal erosion is mainly a result of illegal land reclamations and sand mining along the coast. In the Krim areas in the southern region, about 11-12ft of the river banks has been eroded on either side in recent years. At Conakride, the sea has moved about 100m in land over the last 15years. At Shenge, the coastline has moved over 50m inland. Plantain Katta and Bounce Islands are all under severe threat of subsidence as a result of sea level rise. At Mahera beach and along the Bullom Shores, Moa Wharf, Man of War Bay and other coastal areas where there is a high cliff, the cliff face is severely eroded either by wave action or by man's activities.

Te extraction of sand from beaches is very worrisome, and this activity might accelerate the rate of coastal erosion.

3.4.2 UPLAND EROSION

The combined efforts of poor farming practices and high population pressures have largely been the cause of erosion. Soil erosion is taking place at all water sheds throughout the country. In the Western Ares and the provinces, human activities such as urbanisation, industrialisation, fuel wood, charcoal production, tree cutting from timber

and poles have led to deforestation, thus exposing the fragile, very shallow soils to severe soil deterioration and erosion.

3.4.3 LANDSLIDES / MUDSLIDES / ROCKFALL

These are not common occurrences; however, the potential for them to occur is possible especially when the vegetation cover on slopes continue to be removed unabated. A classical example of landslide that is often cited occurred in Charlotte Village in the 1950s. The landslide displaced the entire village and claimed lives and properties and it was attributed to heavy rains that acted on denuded land leading to slope instability.

Mudslide and rock falls are as a result of land cover removal that goes along with proliferation of illegal makeshift construction on hilltops (notably the western area peninsular forest area) and slums. Rock fall recently claimed the lives of some people at Kissy Brook, Cline Town, Hill Cot Road, Leicester and Falcon Bridge.

Mudslides are more common occurrence than landslides. Like landslide, the spate of mudslides is expected to increase in the wake of the current onslaught on the forest and the hill sides.

3.5 ECOLOGICAL HAZARDS

3.5.1 WILD FIRE

Bush fire is one of the biggest causes of forest destruction and land degradation especially in the northern region. Wild bush fires rage annually particularly in the north, devastating large tracts of land and devouring flora and fauna. Wild fire is more common

in the dry season (November – March); it peaks between February and March. The estimated area prone to wild fire ranges between 90,000-100,000 hectares. The areas under the current bush fire mainly in the savannah grasslands are found in the following districts in the Northern Province: Makeni, Port Loko, Kambia, Tonkolili, Bombali and Koinadugu. Wild fire though prevalent in the north is not uncommon in the south and eastern provinces which are forested areas.

3.5.2 DEFORESTATION

Deforestation is very widespread throughout the country. However, the rate and intensity as well as the expanse vary between and within regions and chiefdoms. Current rate of deforestation is not precisely known. Estimates based on aerial photographs give the deforestation rate of 5,700 hectares per year within and 4000 hectares per year around the forest reserves.

The current rate of deforestation has increased considerably due to shifting cultivation and its related rotational bush fallow and other inappropriate agricultural practices, mining, socio-economic and other factors, increase demand on and for forest products, urbanisation, all of which are intrinsically linked with high population density.

3.5.3 POLLUTION (AIR, WATER AND SOIL)

▼ AIR POLLUTION:

Air pollution include carbon mono-oxide from incomplete burnt hydro-carbons, nitrogen-oxides, solid particles and component of elements such as lead and phosphorous. Air pollutants lead to breathing difficulties and eventually to severe irritation. With the

proliferation of private generators for domestic uses, especially in the urban areas, air pollutants are becoming a major concern for public health.

✓ WATER AND SOIL POLLUTION:

Pollution of water bodies and soils poses a great threat to humans than that posed by air pollution in Sierra Leone. Toxic chemicals applied in agriculture to control pests and improved crop yields could find their way into the crops and bio-accumulate in the food chain, especially ending in man where they may cause health hazards or even death.

Sewage disposal into coastal waters is another potential threat to human health. The discharge of raw (untreated) sewage into coastal water (especially in semi-closed water bodies) could lead to environmental problems like eutrophication, oxygen depletion and destruction of amenities. If discharged on important fishery ground, pathogenic contaminations could render the fishery products unfit for human consumption.

Water pollution, especially drinking water is a serious problem in Sierra Leone. The country is inadequately supplied with pipe borne water. Spring and dry wells which are common sources of drinking water are not well protected. Hence seepage from surrounding pollutants and the nearby toilets are common.

3.6 PEST HAZARDS

Almost all the pests common to tropical West Africa are found in Sierra Leone. Pests reduce agricultural yields and hence the available food to the nation. This implies that pests may stifle the target for food security.

The following table shows well known pests in Sierra Leone, their level and time of infestation and target organisations.

TABLE 6: ANIMAL AND PESTS INFESTATIONS.

| PEST | INCIDENCE | AREA AFFECTED | CROPS AFFECTED | LEVEL |
|--------------------|---|--|--|---|
| INSECTS | | | | |
| Grasshopper | Annual (between September and March) | Nation wide | All crops, especially vegetables | Serious |
| Army worm | | Rice growing areas | Rice | Serious at time of infestation. Not a threat now |
| Cotton Stainer Bug | 2004 | Isolated cases in some parts of Kambia District, especially in Madina. | new variety of ginger (imported) | Not yet a serious problem |
| Termites | Annual | Nation wide | coconut plant and vegetables, wooden structures | not as serious as that of grasshopper |
| Weevils | Annual | | Common menace on stored food products such as cowpea seed, beans, rice, flour and maize. | |
| Borers | Annual | | Widespread on cereals (maize, sugarcane and rice). | Not a serious problem at the moment |
| Locust | | | Can consume any vegetable matter | Not yet a problem in Sierra Leone. But was a serious problem during its outbreak in the 1930s |
| Cassava Mealy Bug | | Kambia District | local variety of cassava | Not serious |
| Mango Mealy Bug | | Lunsar | Mango, fruit trees and ornamentals | Serious in Lunsar in the early 1990s |
| Rice Gall Midge: | The first incidence was recorded in 1991(suspected to have come from Guinea). | isolated Rice Gall Midge infestations | were reported for part of the western Area and Kambia | Not serious |
| Green Spider Mites | | | mild pest of cassava. | Not a serious threat. |
| Monkeys | | | mostly at the reproductive | Serious incidences were |

| | | | | |
|--|--|--|---|--|
| | | | stages of the crop. They cause damage to fruits. | reported for cocoa plantations in Eastern Province |
| Rodents, Cane rat and grass cutters, Squirrels | | | cereals (rice, maize and sorghum) they are most destructive at the early growth stages of the crop. Squirrels cause serious damage to rice, groundnuts and newly transplanted oil palms | Mild |
| Wild Animals | | | Hippopotamus consume tons of rice in swamps | Mild |
| Birds | | | cereals (rice, millet, sorghum) and fruits. | Can be very serious |
| Cattle and other ruminants | | | Forage on farms and vegetable gardens | Not a threat, but can lead to conflict |
| Potential new pests | | | There is a proliferation of second hand goods in the country. These goods have the potential to harbour pests and diseases which might lead to problems | Not yet a problem |

3.7 LIVESTOCK DISEASE

Veterinary services and statistics on livestock are rare. However, records show that there are several diseases affecting livestock in Sierra Leone, some of which have the potential of reaching epidemic proportions. There has not been any serious threat of epidemic proportions since the late 1960s when there was a regional outbreak of Rinder-pest disease which also affects cattle in Sierra Leone.

The following are reported sporadic cases of pest infestation on livestock:

TABLE 7: AREAS OF REPORTED INCIDENCES OF LIVESTOCK DISEASES

| DISEASE TYPE | TARGET ORGANISM | AREAS OF OCCURENCE | PERIOD OF OCCURRENCE |
|---|---------------------------------------|--|---------------------------------------|
| New Castle Disease | Chicken | Country-wide | Yearly |
| Small Ruminant Pest (Pest Petit Ruminant) PPR | Small Ruminant | Northern Province (Koinadagu district) | Seasonal |
| Black Quarter BQ | Large Ruminants (Cattle, Sheep, Goat) | " | Sporadic |
| Anthrax | " | " | Seasonal (April – June) |
| Hemorrhagic Septicemia | " | " | Sporadic |
| Sleeping Sickness | Cattle & Ruminants | " | Seasonal (Start of rains, Apr – June) |
| Reindeer Pest Disease | Cattle | " | " |

3.8 MAN MADE DISASTERS

3.8.1 ROAD TRAFFIC ACCIDENTS

Accidents especially on the highways of Sierra Leone are not as frequent as in the more industrialised countries. The per capita car ownership is nearly 100 persons per car. Today there are about 50,000 vehicles plying the roads of Sierra Leone. The road accident prone areas in the western area are along the Freetown-Waterloo Highway between Ferry Junction and Palm Kernel Oil Mill Junction at Wellington, between Allen Town and Orugu Bridge, between Hastings Airfield and Waterloo and between Lumpa and Masiaka and in the west end of Freetown; between the Peace Bridge and Congo Cross Roundabout.

Other accident prone areas in the country are: between Bo-Taiama highway, Koribondo and Senehun, Bo-Pujehun highway and Shell Mingo/Police Barracks along the Bo-Kenema highway.

Some of the causes of road traffic accidents are over speeding, human error, over loading, carrying excess passengers, careless and reckless driving, poor maintenance of vehicles, overtaking at the wrong side of the road and unsafe roads and bridges.

3.8.2 MARITIME ACCIDENTS

Sea accidents are common place in the Sierra Leone territorial waters. Most of the sea accidents are said to be caused by bad weather and submerge rocks and obstacles and human factors that include engine failure, lack of fuel, over loading etc. It is very common for passenger boats to carry twice it registered capacities of passengers and goods.

3.8.3 AIR ACCIDENTS

Sierra Leone has a limited number of air strips and one international airport. Most of the air strips are not functioning at the moment. Air accidents do not normally occur in Sierra Leone, and if they do, it is very few and far in between. The potential for an air accident however exist. One such potential cause is birds flying around the air routed, and most recently the use of unsafe helicopters. The most vulnerable period is during land and takeoff of aeroplanes.

3.8.4 DOMESTIC FIRE ACCIDENT

Fire accidents occur all over the country. There are various categories of fire accidents: house, car, industrial, bush etc. The most common and prevalent of the types of fire is house fire (domestic fire). Most of the fires in the provinces are caused by wild bush fires which get out of control and in the process burn down villages. The other causes of fire in the provincial cities are electricity and naked candles or hurricane lamps. In private homes, fire accidents are largely due to the overcrowded living conditions and poor maintenance of utilities, and carelessness. Fires by other means are not common.

3.9 CIVIL STRIFES (RIOTS, STRIKES AND DEMONSTRATIONS)

Disasters are common phenomena among fast growing population especially in the developing countries. These disasters can be in the form of civil disturbances such as riots, demonstrations and strikes. These civil disturbances are connected with socio-economic and political problems of developing countries. For quite too long the country suffered from bad governance. Such continuous abuse has left the populace with little or no option but to engage in civil strives. National elections had also been marred with violence and thuggery. These elections including paramount chieftaincy are characterised by disgruntleness, dissatisfaction, acrimony and tension among the populace. Over the years, workers have gone on strikes over conditions of services, students for increase in fee, in football competitions, traders against the police over business centres.

3.10 POPULATION MOVEMENT

Sierra Leone has experienced two types of population movement. These are refugee moving into Sierra Leone from Liberia fleeing their war and Sierra Leoneans moving into Guinea fleeing the civil war. The second class of population movement are the internally displaced persons who left their homes for safer haven especially when the conflict escalates in their localities.

However, there exist the potential for Sierra Leone to get refugees from Guinea and/or Liberia in the case of possible political deteriorating situations that may arise in the Mano-River Basin. Sierra Leone has identified camp sites for refugees in the case of population movement and they are located in Jembe, Jimmy Bagbo, Gondama, Taiama and Bandajuma all in the Bo District and there is one in Yele in the Tonkolili District.

3.11 CHILD ABUSE

During the civil conflict, children were used, misused and abused. Most of these children have been reintegrated back to society through the Disarmament, Demobilisation and Reintegration Programmes. Some of them have lost their parent and relatives. There are at present programmes and agencies which care for these children, providing them with education etc. How sustainable these programmes are and how are they going to run is a matter of concern.

The street children and children in the street are an important group of vulnerable class whose plight poses future potential problems. Most of them live like beggars or accompanying adults to beg in the street. These children do not go to school. What is the future for such children? This situation has the potential to breed dissatisfaction and disgruntlement by these children when they grow into adulthood and cannot compete with their educated counterparts. Street children are mainly found in the urban areas.

3.12 **DRUG ABUSE**

This is very common among youths especially in the urban centres. This is more prevalent in the ghettos which serve as an avenue for harbouring school drop-outs. During the civil conflict, most of the combatants in the ranks of the Revolutionary United Front (RUF) were addicted to taking drugs. This in fact could have been one of the reasons for the sort of destruction and mayhem inflicted on the civil populace. Some of the effects of drug abuse include delinquency, brain damage, serious liver and kidney failure and eventually death.

3.13 **DELAPIDATED / CHAOTIC / UNPLANNED BUILDINGS**

Most of the problems connected to dilapidated buildings are due to poor construction, and maintenance. This is associated with poor quality of building materials. Some of the buildings are constructed with local materials which have the tendency to wear out too quickly. Sometimes structures are composed of poor engineering materials such as low quality cement, very few or no iron rods, too much sand and poor quality board. Dilapidated buildings are found country-wide especially in areas along the coastal communities like Bonthe, Pujehun, Moyamba, Kambia, Port Loko and some peninsular settlements in the western area, where they are non-resistance to salination and/or erosion.

3.14 **HEALTH / EPIDEMIC HAZARDS**

Most of the tropical diseases common in West Africa are also common in Sierra Leone. Malaria remains the number one killer disease in the country. In recent times, typhoid and cholera/diarrhoea has assumed a prominent position on the map of diseases. Other

prevalent diseases are dysentery, lassa fever, sexually transmitted infections (STIs) and tuberculosis.

The exact number and proportion of the people infected or living with HIV/AIDS is not known but is said to be on the increase. However, the disease has not yet reached epidemic proportion in the country.

Respiratory infections range from common flu, cough, to emphysema, pneumonia, bronchitis. There are also vaccine preventable infections like neonatal tetanus, yellow fever, diphtheria, polio and other less common like meningitis account for 20% of the reported cases.

While some of the diseases are common throughout the country, some are limited to specific geographical locations. An example is lassa fever that is limited to the Kenema District in the Eastern Province.

3.15 WASTE AND SOLID DUMPING

Sierra Leone is faced with complex problems of disposing the huge mountains of solid waste generated on a daily basis. Types of waste in Sierra Leone are domestic waste from houses and settlements, industrial waste and clinical waste.

The management of solid waste is posing serious problems in the country where services are deficient. This is very pronounced in cities and towns with many areas in the urban centres receiving very little attention.

Rapid urban growth within the decades has reduced service coverage and steadily diminished the quality of service offered. Urban solid waste management services have consistently failed to keep pace with demand and the insidious social and health effect of this neglect is greatly among the poor sectors of the urban population. Only a small fraction of waste that is collected is disposed off in an environmentally friendly manner. In most rural communities waste disposal is not much of a problem. Waste management

in the municipality of Freetown is drawing increasing attention as the people observe too much refuse lies uncollected, causing inconvenience and environmental pollution and a public health risk.

3.16 MINING HAZARDS

Mining is carried out in some of the regions within the country. Four major mineral are mined in Sierra Leone: bauxite, rutile, diamond and gold. Open cast or surface mining is the most dominant form of mining undertaken by miners in the country.

The environmental impact resulting from mining operations includes:

- ▼ Flooding of lands and the surrounding villages and the subsequent creation of lakes, water reservoirs, (both as a result of leakages from dams surrounding the dredging of ponds and during the movement of the dredge from place to place).
- ▼ Siltations in tidal creeks
- ▼ Degradation of vast expanse of land
- ▼ Dislocation of villages.

SECTION FOUR

4.0 EDUCATION AND TRAINING FOR DISASTER PREPAREDNESS AND MITIGATION

It is crystal clear that some disasters are natural and their occurrences cannot be prevented or stopped. On the other hand, there are disasters which depend on human activities and are predictable. Such disasters can be prevented or to a large extent be minimized. Information becomes vital since the public may accept rumours, hearsay, and half truth information that can cause confusion. A continuous flow of accurate and timely information is necessary to provide full knowledge of disaster prone areas, conditions and relief services available.

4.1.0 EDUCATION

The following topics are considered vital for disaster preparedness and mitigation.

1. Types of disaster, causes, effects, prevention and mitigation.
2. Information on disaster prone areas. The types and seasons they occur.
3. Public response to disaster when they occur.
4. Disaster management including the roles of volunteer groups, institutions, affected communities and the use of contingency plans.
5. Legislation on human settlements in disaster prone areas.

Ø Target groups for disaster preparedness and mitigation in the form of education shall incorporate the following under mentioned:

- i. Political leaders
- ii. Heads of key governmental parastatals
- iii. Decision makers
- iv. Development partners

- v. Education institutions
- vi. Civil societies / Advocacy groups
- vii. Non-Governmental Organisations and Government Auxiliaries
- viii. Community people

4.1.1 PUBLIC INFORMATION, MEDIA RELATIONS, PUBLIC AWARENESS AND EDUCATION STRATEGY

In an attempt to better educate and inform the public of protective action before disaster occurs, public information is crucial for saving lives and reducing property damage. Certain responsibilities exist for public information when emergency management plans are implemented.

The following methods of information dissemination and public education shall be adopted.

- i. Seminars / Workshops
- ii. Conferences
- iii. Outreach Programmes (schools and communities)
- iv. Distribution of newsletters, bulletins, books and leaflets
- v. Audio-visual aids
- vi. Drama
- vii. Flyers, poster etc
- viii. Print and electronic media
- ix. Integration of disaster management into formal school curriculum

4.1.2 INSTITUTIONS RESPONSIBLE FOR DISEMMINATING INFORMATION

- i. The Ministry of Information and Broadcasting
- ii. Print and Electronic Media Houses (Private and State owned)
- iii. Ministry of Health and Sanitation (Health Education Unit)
- iv. Office of National Security (Disaster Management Department)
- v. Ministry of Education, Youths and Sports
- vi. Ministry of Agriculture, Forestry and Food Security
- vii. Ministry of Lands, Housing and Country Planning
- viii. Ministry of Tourism and Culture
- ix. The Security Sector
- x. Emergency Services (National Fire Force)
- xi. Government Auxiliary Bodies (Sierra Leone Red Cross Society)
- xii. Specialised Agencies of the United Nations and Non-Governmental Organisations
- xiii. Coalition of Civil Society and Youth Groups
- xiv. Religious Bodies
- xv. Community-Based Organisations
- xvi. Local Government Bodies and Community leaders
- xvii. Any institutions that may be deemed relevant for information sharing can be invited to do so.

4.1.3 COORDINATION, CONTROL AND MEDIUM OF COMMUNICATION

It must be emphasised that dissemination of information and public education should be carried out in pre-disaster, disaster and post-disaster periods.

In pursuance of the mandate given to the Office of National Security, the Disaster Management Department shall set the standards in the coordination and control of disaster education and be supported by its development partners. In respect of the above, and for the sake of efficiency and effectiveness, education on disaster preparedness and mitigation shall be coordinated and controlled at different levels (national, regional, district and community)

All information, counselling and training must reach the target groups using the means of communication most common to them and in the language they can best understand.

4.2.0 TRAINING

Training shall be done or conducted on both natural and man-made disasters. For the sake of effectiveness and expediency, training shall take two forms: training of trainers and training of trainees.

4.2.1 TRAINING OF TRAINERS

This covers the training of a national body of trainers who will in turn train identifiable groups of individuals at district, regional and community levels. Appropriate resource persons for such assignment of training shall include: media practitioners, environmentalists, security personnel, engineers, agriculturists, architects, development planners, geologists, estate planners, disaster managers, and other professionals.

Target groups for training shall include: traditional, religious, political and opinions leaders, churches, mosques, schools, Ministry of Social Welfare, Gender and Children's Affairs, civil societies, voluntary organisations and other identifiable bodies shall be used at regional and district levels.

4.2.2 **KEY AREAS FOR TRAINING**

- i. Natural and man-made disasters and their characteristics.
- ii. Disaster mitigation
- iii. Search and rescue
- iv. First aid
- v. Camp sitting and building
- vi. Damage assessment
- vii. Needs assessment (before, during and after disasters)
- viii. Evacuation drills
- ix. Contact, tracing and matching
- x. Reporting
- xi. Counselling
- xii. Safety and security
- xiii. Establishing emergency centres
- xiv. Identification of communication facilities
- xv. Relief administration
- xvi. Restoration of essential services
- xvii. Handling of critically wounded and traumatised persons
- xviii. Any other relevant skills and training requires

4.2.3 **TRAINING FACILITIES**

Existing facilities within the security sector, public and private health institutions and other government auxiliary bodies such as the Sierra Leone Red Cross Society, National Fire Force and other Non-Governmental Organisations, Specialised Agencies of the United Nations and other stakeholders shall be deployed for training.

Important to note here is that appropriate or exact training materials shall be used for specific types of disasters.

4.2.4 **GENERAL STATE OF PREPAREDNESS**

- i. Identification and location of telecommunication facilities, coverage, and functioning state of other radio communication at community, district and regional levels.
- ii. Establishment of an early warning system by linking traditional with modern early warning system to keep the public alert of slow or sudden onset disasters.
- iii. Establishment of information centres country-wide.
- iv. Establishment of surveillance mechanism to keep track of disaster types and occurrence at community, district and regional levels.

4.2.5 **VULNERABILITY AND CAPACITY ASSESSMENT (RESEARCH)**

Continuous research is conducted on various types of disaster with the view of assessing their socio-economic effects. It can also be used to update the entire public on events of disaster in the country.

The bodies responsible for research shall include:

- i. Meteorological Department
- ii. Geological Survey Department
- iii. Health Research Unit
- iv. Association of Engineers
- v. Security Sector
- vi. University of Sierra Leone
- vii. Ministry of Agriculture Forestry & Food Security
- viii. Ministry of Education, Science and Technology
- ix. Any other institutions or organisations that display vested interest in the findings of disasters.

Constant monitoring of all projects and activities involved with disaster prevention, education and training, emergency response operation, reconstruction and resettlement is very vital for achieving overall education and training in disaster mitigation and preparedness.

4.3.0 SPECIFIC HAZARDS

The need to examine specific disasters cannot be overemphasised. As each disaster requires specific education, training, resources and action, therefore, specific techniques and management plans vary from one disaster to the other.

4.3.1.0 WEATHER AND CLIMATIC HAZARDS

This area examines specific hazards that are connected to poor climatic or inclement weather condition. Awareness raising should cover tropical storm, thunder and lightning, drought and flooding.

4.3.1.1 TOPICS FOR EDUCATION ON CLIMATIC HAZARDS

The general population, institutions and organisations should be educated on the following under mentioned issues:

- i. Types and characteristics of weather and climatic hazards
- ii. General causes for climatic and weather hazards
- iii. Socio-Economic impacts of climatic and weather hazards

- iv. The conditions that constitute weather and climatic hazards
- v. Possible methods of averting climate change
- vi. The responsibility of the National Meteorological Department
- vii. Roles of International Organisations
- viii. Effects of climatic and weather hazards on agriculture
- ix. Swimming lessons
- x. Immediate action drills
- xi. Techniques of crossing turbulent streams
- xii. Use of life jackets
- xiii. Life saving techniques
- xiv. Preservation of equipment
- xv. Water safety measures
- xvi. Construction of raft, rope bridge, life buoys and boat with local materials where appropriate.

4.3.2.0 EDUCATION STRATEGY

The education of the general public on weather and climatic hazards for disaster management shall be conducted at community, district and regional level. This will depend on the types of hazards and/or disasters that are prevalent in the country.

4.3.2.1 EDUCATION TEAM

- i. Meteorological Department
- ii. Office of National Security
- iii. University of Sierra Leone
- iv. Ministry of Energy and Power
- v. Guma Valley Water Company
- vi. Water Supply Division

- vii. Sierra Leone Water Company (SALWACO)
- viii. Ministry of Health and Sanitation
- ix. Sierra Leone Red Cross Society
- x. Relevant Non-Governmental Organisations
- xi. Sierra Leone Ports Authority
- xii. UNICEF
- xiii. Civil Society
- xiv. District Councils
- xv. Security Sector
- xvi. National Commission for the Environment and Forestry (NaCEF)
- xvii. Joint Maritime Administration
- xviii. Sierra Leone Boat Owners Association
- xix. Ministry of Agriculture Forestry and Food Security

4.3.3 GOALS OF TRAINING

To create awareness raising through education to prevent and mitigate extreme climatic conditions

4.3.4 EARLY WARNING SYSTEM

The general public should be educated and informed early to take precautionary measures to prevent and mitigate climatic and weather hazards. This shall be achieved through constant monitoring and warning of weather and climate by the Meteorological Services through the media especially, the radio and television.

In addition, the Hydrological Services Department shall record the level of water through the acquisition and installation of water and river level recorders.

Local people shall utilise traditional early warning systems. E.g. in the coastal communities or in riverine areas, local people shall immerse long stick into streams to determine increase or decrease in the volume or level of water.

4.3.5 **PREPAREDNESS**

For good state of preparedness to ensure the mitigation and prevention of weather and climatic hazards, the following under mentioned state shall be ensured:

- i. Education and training at all levels of government towards the acquisition and use of life jackets, life boats and life buoys for search and rescue and evacuation operations and relief.
- ii. Compliance with no go orders in respect to flood plains.
- iii. Building legislation and regulations should be adhered to especially in flood prone areas.
- iv. Construction and widening of drainages and the dredging of natural drains such as lagoons.
- v. Planting of trees to reduce risks and vulnerabilities to draughts and minimise wind storm disasters.
- vi. Deployment of security forces at water catchments areas to prevent deforestation.
- vii. Deployment of forest guards to protect the forest reserves from loggers and charcoal burning.

4.4.0 GEOLOGICAL HAZARDS

Vigorous educational programmes must be effected with the view of enlightening the public on the nature, types and effects of geological hazards.

Resource persons for this education exercise must involve geologists, seismologists, researchers, planners, architects, engineers, media, disaster managers, traditional and religious leaders, local authorities, the Sierra Leone Red Cross Society, UN- Habitat and other relevant institutions.

4.4.1 OBJECTIVES

To educate the public especially inhabitants of disaster prone areas on what preventive or mitigative measure to undertake before, during and after geological disasters have occurred.

4.4.2 TOPICS OF EDUCATION

- i. Types of geological hazards and/or disasters such as coastal and land erosions, land and mud slides, rock falls (boulders) and tremors.
- ii. Precautionary measures to be observe before, during and after geological hazards/disasters.
- iii. Causes and effects of geological hazards/disasters.
- iv. Respect for building and construction standards in disaster prone areas.

4.4.3 **EARLY WARNING SYSTEMS**

- i. Detection of signs of geological hazards is considered pertinent for vulnerability and risk reduction of coastal and upland erosions, land tremor, land and mud slides and rock fall.
- ii. Continuous monitoring seismic activities.

4.4.4 **TRAINING**

Main areas for training in geological disasters cover:

- i. Knowledge of geological disasters, types and their characteristics.
- ii. Establishing and monitoring channels for reporting signs to higher authorities and receiving instructions and guidelines as well as alerting the affected communities.
- iii. Search and rescue
- iv. First aid applications and counselling of traumatised persons.
- v. Needs assessment.
- vi. Up and down cascade of information.

4.4.5 **PRPAREDNESS FOR GEOLOGICAL DISASTERS**

- i. The national, regional, district and individual capacity to prepare to mitigate geological hazards.
- ii. Buildings are constructed with strong engineering efforts.
- iii. Willingness of private, official and industrial planners to build and construct in accordance with building coders and approved standards.
- iv. Availability of equipment for skilled personnel to undertake search and rescue, evacuation, relief, rehabilitation and resettlement of victims.

- v. Establishment of safe havens
- vi. Taking an inventory of construction equipments country-wide.

4.4.6 MONITORING

- i. There is a strong need to continuously monitor flooding environment, erosion of beaches, cracks on buildings, strange or unusual behaviours and movement of animals.
- ii. Seismic recordings, the effects of human activities such as mining and quarrying and any other unusual movement in the disaster prone areas.

4.5.0 ECOLOGICAL HAZARDS

TOPICS FOR EDUCATION

Awareness should be raised in topics in ecological disasters such as wild bush fire, deforestation, water, and air and soil pollution. The entire population, institution, industrial set up and organisation should be educated on.

- i. Natural and man-made causes of ecological disasters.
- ii. The socio-economic effects of bush, domestic and industrial fires.
- iii. The effects of water, air and soil pollutions on human and plants.
- iv. The role of the National Fire Force
- v. Causes and effects of deforestation
- vi. Re-forestation as a solution to deforestation.
- vii. Use of fire hydrants and fire extinguishers.
- viii. Role of media in preventing and mitigating ecological hazards.
- ix. Responsibility of individuals towards fire prevention.
- x. Ecological consequences of bush fire and lightning.

4.5.1 EDUCATION STRATEGY

The general populace should be educated on ecological disaster management at all levels (community, district and regional) in the country.

4.5.2 EDUCATION TEAM

- i. Office of National Security (Disaster Management Department)
- ii. National Fire Force
- iii. National Commission for the Environment and Forestry (NaCEF)
- iv. Sierra Leone Police
- v. Republic of Sierra Leone Armed Forces
- vi. Guma Valley Water Company
- vii. Ministry of Health and Sanitation
- viii. Ministry of Education, Youths and Sports
- ix. Civil Society Movement
- x. Environmental Foundation for Africa
- xi. Ministry of Agriculture, Forestry and Food Security
- xii. Conservation Society
- xiii. Sierra Leone Red Cross Society
- xiv. Specialised Agencies of the United Nations
- xv. District and Local Councils
- xvi. Community-Based Organisations

4.5.3 TRAINING OBJECTIVES

- i. Promotion of culture of maintenance and servicing of electrical installations and gadgets and safe storage of explosive and inflammable materials

- ii. Promote the use of fire proof materials in building and construction, and to apply fire safety belt during burning of farms
- iii. To educate the public on the need to obtain planning and building permits and assistance from appropriate agencies in terms of fire safety considerations before the commencement of any building and construction projects.
- iv. To educate the public to seek assistance from workers or licensed contractors from National Power Authority and from tertiary institutions / technical vocational institutions as part of the effort to prevent fire at home, office, industry and commercial places.
- v. Educate the public on the need for tree planting and the use of alternative energy source instead of felling of trees for fuel wood fire.
- vi. Protection of soil to facilitate good agricultural practices with the view of achieving food security.
- vii. To educate the public on air pollution.

4.5.4 **EARLY WARNING**

The media publications, telephone and traditional methods of communication should be used to inform and alert the people and authorities about fire outbreaks (wild, domestic fires), deforestation and pollutions.

The general public should know the hotline telephone number for reporting fire to the Disaster Management Department in the Office of National Security or to the National Fire Force.

Number: Disaster Management Department, Office of National Security
+232 22 224949, 229974

Number: National Fire Force: 019 from all mobile companies except Celtel.

4.5.5 **PREPAREDNESS**

- i. Industries, business companies, institutions, offices and other places of work should establish efficient and effective fire prevention mechanisms if they can afford.
- ii. National Fire Force should open its offices in all districts and equipped them with personnel and fire fighting implements.
- iii. National Commission for the Environment and Forestry to deploy forest guards in all forest reserves to prevent illegal logging.
- iv. Volunteers should be trained at all levels
- v. Hydrants established in all the districts.
- vi. Enforce building and construction regulations.
- vii. Appropriate and enough fire equipment be established in all homes, schools, colleges, offices and industrial buildings.
- viii. Provision of helipads and lightning arrestors on all high rise buildings.
- ix. Adoption of more fire proof materials in building and construction.
- x. Constant maintenance and replacement of electrical installation in all premises.
- xi. Knowledge about what to do before, during and after fire disasters.
- xii. Establishment of health centres in all the chiefdoms in the country.
- xiii. Regulation on the sale of dangerous chemicals by unauthorised persons by the police.
- xiv. Water quality testing by the Water Supply Division on a routine basis.
- xv. Joint simulation exercise among the public and the fire fighting agencies.
- xvi. Provision and storage of water and food at homes.

4.5.6 **TRAINING**

The training will cover the following:

- i. Types and characteristics of fire

- ii. Handling of fire extinguishers on all premises
- iii. First aid application to all victims
- iv. Evacuation of fire disaster victims
- v. Monitoring and surveillance of fire hazards
- vi. Reporting of fire hazards
- vii. Relationship between deforestation, climate change and water shortage.

4.6.0 PEST HAZARDS

4.6.1 EDUCATION

The main focus of education is to develop farmers' knowledge, understanding and teaching them new techniques in dealing with pest hazards. It shall also include recognition and life cycle of key pests, the concept of integrated pest management, awareness of new ideas, products and practices. This aspect of education shall endeavour to cover the giving of timely information to help make immediate decision on all issues connected with threats from pest hazards.

The following shall be considered for storage of information for future decision making in pest hazards.

- i. Literature on types and use of equipment.
- ii. List of recommended chemicals and their safe uses
- iii. Current infestation incidence in the area.
- iv. Precautionary measure before, during and after outbreak.

4.6.2 TRAINING OF TRAINERS

It is important and pertinent for correct training design schedules to be conducted for trainers to enable them train core volunteers in their respective communities.

It is frequently believed that an initial approach to the training of trainers will create room for attitudinal and behaviour change so as to improve interaction among individual farmers, extension agents and researchers. Training content schedules should include the identification of pests, the handling and use of chemicals such as pesticides, pest control equipment and applications of decision making tools.

4.6.3 TRAINING FOR FARMERS

Courses designed for farmers must be devoted towards what farmers need to know if they are to carry out good management of particular pest.

Next, farmers' survey should be conducted to determine the extent of farmers' knowledge for training to be focused on those areas where the information gap is greatest.

4.6.4 AGENCIES FOR EDUCATION TRAINING, MONITORING AND RESEARCH

- i. Ministry of Agriculture, Forestry and Food Security
- ii. Njala University
- iii. Food and Agricultural Organisation (FAO)
- iv. Agricultural Extension Services
- v. Veterinary Services Department
- vi. Ministry of Health and Sanitation
- vii. Ministry of Education, Science and Technology
- viii. National Fire Force
- ix. Environmental Protection Agency

4.6.5 **VULNERABILITY AND RISK REDUCTION EDUCATION**

In addition to adequate education, training and the introduction of a state of preparedness, farmers and volunteer groups should be further educated to undertake certain immediate, medium and long term measures to ensure vulnerability and risk reduction.

SHORT TERM

- i. Farmers and volunteer corps should be educated and trained.
- ii. To use healthy and uninfected seeds and improved breed
- iii. Ensure hygienic and sanitary condition on farms.

MEDIUM TERM

- i. Educate farmers to identify and accept the introduction of diseases insect resistant breeds and varieties.
- ii. Educate agricultural officers to regulate the use of exotic biological control agents (plants and animals introduced in any part of the country for specific purposes).

4.6.6 **PREPAREDNESS**

- i. Farmers should be educated and trained to identify conditions that serve as signs and symptoms of impending pest and insect infestation for early warning.
- ii. Train and educate volunteers and farmers to establish and be conversant with the channel for reporting to the appropriate authorities of any suspected cases of pest and insect infestation, unusual condition of livestock and poultry, timber, wood, agricultural crops and produce.

4.7.0 **EPIDEMIC (DISEASE) DISASTER**

4.7.1 **GOALS OF TRAINING**

- i. Education of the populace and training to be done with various target groups in skill acquisition to prevent epidemic or reduce their impact if they occur.
- ii. All persons including those in the most remote villages should know about the epidemic prone disasters and how to prevent themselves and their communities from contracting and spreading them.
- iii. Where they are unable to prevent them, they should know what to do to mitigate their effects.
- iv. At the end of the training session, all target groups should:
 - a. Be fully aware of the prevailing conditions that constitute threats to certain epidemic breaks.
 - b. Know all the diseases that have epidemic potential in their areas.
 - c. Be equipped with the skills for the prevention and control of these diseases.
 - d. Be equipped with community mobilisation skills.

4.7.2 **OBJECTIVES FOR EDUCATION**

Specific education objectives for disease (epidemic) prevention are:

- i. To increase coverage and quality of immunisation of vaccine preventable diseases.
- ii. To identify health education for disease prevention.
- iii. To strengthen disease surveillance at all levels of health delivery systems.
- iv. To provide technical guidelines for diseases of public health importance for use at the national, regional, district and community levels.

4.7.3 TOPICS FOR EPIDEMIC (DISEASE) DISASTER EDUCATION

- i. Identification of the major epidemic diseases (malaria, yellow fever, fever, typhoid, cholera, lasser fever, meningitis, sexually transmitted diseases, HIV/AIDS, acute respiratory infections, diarrhoea, tuberculosis and other vaccine preventable infections)
- ii. Causes, effects and preventative measures
- iii. The need for mobilisation of human and materials resources for the prevention and control of epidemic diseases.

4.7.4 STRATEGIES AND TARGET GROUPS FOR TRAINING

Training of core trainers will be undertaken and they will serve as resource persons for training others. Training will be done by a group of specialists assembled to form the national core trainers and monitoring team. Training will be done at all levels. It shall comprise Disease Surveillance and Control Officers, Non-Governmental Organisations' representatives, Regional Health Officers, District Director of Health Services, District Disease Control Officers, laboratory technicians, District Health Superintendents, Public Health Nurses, members of all District Disaster Management Committees, Senior Medical Officers from the Sierra Leone Red Cross Society, private health workers, National Disaster Management Officers, and Community Health Workers.

4.7.5 TRAINING FOR COMMUNITY LEVEL

- i. Compilation of community registers.
- ii. Identification of environmental and other conditions that may lead to epidemics.
- iii. How to recognise systems of epidemics.
- iv. Behaviour, attitude and practices of communities.

- v. Community mobilisation for health promotion and disease prevention and control activities, such as immunisation, environmental sanitation.
- vi. Data collection.
- vii. Effective reporting and feed back systems.

4.7.6 EARLY WARNING

To ensure early detection for early warning and risk vulnerability reduction, educate, train and motivate;

- i. Volunteers in all vulnerable communities should adopt and establish epidemic disease surveillance mechanisms in their own area of residence as well in the neighbouring communities.
- ii. Volunteers and others should quickly report all suspected cases to the nearest medical centre for prompt and appropriate intervention.

4.7.7 DISEASE (EPIDEMIC) DISASTER PREPAREDNESS

For epidemic prevention, it is necessary to educate the public to be alive with their responsibilities in ensuring that the following under mentioned conditions exist.

- i. Good environmental sanitation including pest and rodent control.
- ii. Safe water supplies.
- iii. Good nutrition.
- iv. Periodic immunisation against epidemics.
- v. Good human settlements which include good housing and proper layout and good drainage systems.

- vi. Good personal hygiene and environmental sanitation to reduce vulnerability and risk.
- vii. Regular sanitary inspection of premises.
- viii. Good health education that is necessary to equip the population with knowledge and skills to adopt life styles which will promote good health.
- ix. General public should know their responsibility before, during and after epidemic disasters.
- x. Enact appropriate bye-laws which should be strictly enforced. District Council should be encouraged to provide basic facilities such as toilets and urinals.

4.7.8 **MONITORING**

Reported and index cases should be studied to establish diagnosis. All reported cases should be strictly monitored to ensure effective control and/or checking of the spread of the disease. The health authorities should improve on surveillance activities.

4.8 **MAN-MADE DISASTER**

Man's social and economic activities are crucial for survival and development of his society. However, the methods or technologies applied in farming, mining, quarrying, building and construction, transportation, as well as manufacturing activities to provide man's need and waste disposal, result in the creation of man-made hazards which if not properly managed could lead to disasters.

It must be stressed however, that human activities can also accelerate and aggravate natural disasters. Increase in population and land use, migration, the convergence of diverse tradition and culture, religious intolerance are sources of social conflicts and strives which may have disastrous consequences. It is therefore, very necessary to continuously educate, trained and monitor public and individual preparedness against such activities.

4.8.1 **EDUCATION**

Specific areas of concern should include types of man-made disasters.

- i. Waste management
- ii. Mining
- iii. Road traffic accident
- iv. Air accident
- v. Maritime accident
- vi. Pollution
- vii. Population movement
- viii. Drug abuse
- ix. Terrorist attacks
- x. Collapsed building
- xi. Riots, strikes, and demonstration
- xii. Child welfare.

Efforts should be made to study their characteristics. On the other and, good analysis should be made on the causes, signs, and effects of man-made disasters. Also there should be effective effort to examine precautionary measures.

4.8.2 **TARGET GROUPS**

The target group will cover the whole population especially politicians, industrialists, traditional rulers, religious leaders, youth groups, women's group and student associations groups. It shall also encompass ethnic groups, district councils and the grassroot

4.8.3 **TRAINING**

Training group should cover the following: National Disaster Management Department Officers, District Disaster Management Committees, Industrialists, Non-governmental Organisations, Sierra Leone Red Cross Society, volunteers, construction companies, private sectors, District Councils, the Security Agencies and other groups. They should be trained to:

- i. Identify the types, sources and causes of man-made disasters in their places of residence and work.
- ii. Search and rescue
- iii. Evacuation
- iv. Control of displaced people
- v. Application of first aid and assist disaster victims
- vi. Assessment of damage needs
- vii. Establish and operate a mechanism for communication and reporting
- viii. Trauma counselling
- ix. Provide civil defence.

4.8.4 **PREPAREDNESS**

- i. The availability of resources, materials and equipment for search and rescue, to provide relief, rehabilitation, and reconstruction in the case of industrial disasters.
- ii. The readiness of individual and groups to comply with safety regulations and orders.
- iii. The recognition and adoption of peaceful ways of seeking redress should be encouraged.
- iv. The culture of maintenance of installation, building and machinery should be promoted.
- v. Life jackets to be available on boats patrolling the sea and rivers.
- vi. Constant maintenance of roads, vehicles and good road traffic management.

4.8.5 **EARLY WARNING**

To ensure that disasters are detected early enough to effect vulnerability, risk reduction and prevention, there should be education and training on:

- i. Surveillance of man-made disasters.
- ii. Establishment of effective monitoring systems of man-made disasters in communities.
- iii. To make early report on social tensions in the communities which have the potential to become disasters.

4.8.6 **INSTITUTIONS**

- i. Disaster Management Department (ONS)
- ii. Republic of Sierra Leone Armed Forces (RSLAF)
- iii. Sierra Leone Police (SLP)
- iv. Media
- v. Ministry of Lands, Housing and Country Planning
- vi. Ministry of Health and Sanitation
- vii. Ministry of Education, Youths and Sports
- viii. Ministry of Agriculture, Forestry and Food Security
- ix. Ministry of Transport and Aviation
- x. Ministry of Information and Communication
- xi. All telecommunication mobile companies
- xii. National Fire Force
- xiii. All Non-Governmental Organisation
- xiv. Sierra Leone Red Cross Society
- xv. Sierra Leone Ports Authority
- xvi. Sierra Leone Maritime Administration
- xvii. Civil Society Movement
- xviii. United Nations Specialised Agencies

xix. Sierra Leone Airport Authority.

VOLUME TWO

**NATIONAL DISASTER
MANAGEMENT RESPONSE PLAN**

SECTION FIVE

5.0 RESPONSE

5.1.1 INTRODUCTION

This section describes the national coordinating structures, processes and protocols employed in management of disasters of national significance. These coordinating structures and processes are designed to enable the execution of the responsibilities of the president through the appropriate government department (Disaster Management department in the Office of National Security), line ministries and agencies and to integrate national, international non-governmental organisations, specialised agencies of the United Nations and the private sectors' efforts into a comprehensive national approach to disaster management in Sierra Leone.

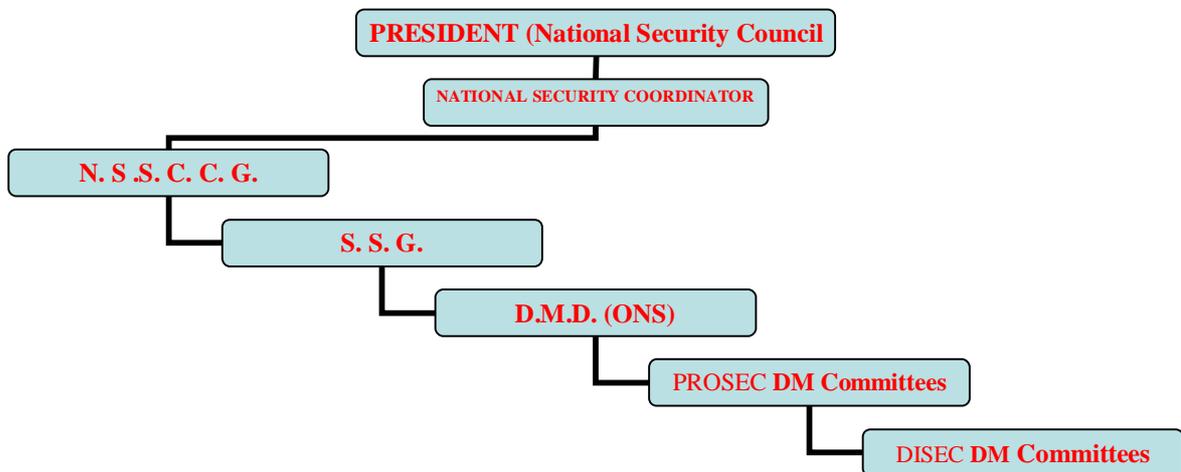
5.1.2 GENERAL MEASURES FOR DISASTER RESPONSE

When a disaster strikes, the following under mentioned general measures and approach shall be adopted.

- i. Stakeholder emergency meeting
- ii. Formulation of Sectoral Task Forces (STFs) to execute specific duties
- iii. Activation of Disaster Management Committee Emergency Operation Centres (DMCEOCs)
 - The Operation Centres(OCs) in each district shall be manned by the District Security Coordinator (DISEC)

- All OCs at provincial level shall be manned by the Provincial Security Coordinator (PROSEC).
- At the national level, Emergency Centre (Strategic Situation Room SSG) can be activated and manned by personnel of the Office of National Security, supervised by the Chief of Staff (COS) of the Office of National Security.

For information flow see the table below: The table shows the way information cascade from top to bottom or from bottom to top in times of emergencies. This is applicable to all types of disasters that affect the country.



- iv. Joint Assessment and registration of victims to be carried out by Provincial / District Disaster Management Committee and related agencies such as non-governmental organisations, community leaders, volunteers, government auxiliaries and United Nations Agencies. Initial assessment shall cover;
- Location of target groups
 - Sex and age distribution

- Total target population
 - Number of household heads
 - Number of dependants
 - Immediate damage / loss
 - Number of disabled persons
 - Needs of the victims
 - Identification of storage facilities for use by the community.
- v. Mobilisation of volunteers and other organised groups such as
- Republic of Sierra Leone Armed Forces
 - Sierra Leone Police
 - National Fire Force
 - Sierra Leone Red Cross Society
 - Non-Governmental Organisations
 - Ministry of Health and Sanitation
 - Association of Engineers
 - Any other co-opted institutions depending on the type, nature and impact of the disaster to perform the following functions:
 - a. Search and rescue
 - b. Evacuation of victims to safe havens
 - c. Medical care to the wounded and counselling for the traumatised shall be given simultaneously as search and rescue is conducted.
 - d. Assessment of emergency supplies
 - Medical supplies
 - Flood and water
 - Equipment
 - e) Provision of basic human needs such as water, food, shelter and clothing for victims with special priority given to the most vulnerable groups like:
 - Children

- Pregnant and lactating mothers
 - Aged
 - Physically disabled
- f) Institution of effective follow up mechanisms to ensure proper implementation of relief operation.
- g) Assessment of damage to the environment.
- vi. Maintenance of law and order by the security agencies.
- vii. Restoration of essential services such as electricity, telecommunications, roads and bridges etc.
- viii. Appropriate disposal of dead bodies and the chlorination of wells.

5.1.3 NOTIFICATION

Upon indication of an imminent or actual disaster, the District Authorities (District Councils, community leaders and any other citizen or inhabitant within the district) notifies the District Security Coordinator through the District Disaster Management Committee. The District Security Coordinator then immediately notifies the Provincial Security Coordinator, where applicable, in accordance with the Standard Operation Procedures (SOPs) of the Office of National Security.

The Provincial Security Coordinator notifies key Office of National Security / Disaster Management Department headquarter staff and other key stakeholders through the various Regional Desk Officers (RDOs) in the Disaster Management Department.

An advisory notice is issued to provide an early warning that a possible event being monitored may result in activation. The advisory notices are for information only and require no formal action.

An alert notice is issued when an imminent or actual event is likely to result in activation. This puts responders on notice that they need to be ready for immediate deployment for action

A cancellation indicates that no further action is required or that an activation is been terminated.

Stakeholders may be notified to convene at the Office of National Security Headquarters for an initial meeting depending on the nature of the disaster.

5.1.4 ACTIVATION

In case of an outbreak of major emergency, the District Disaster Management Committee or Regional Disaster Management Committee shall deploy personnel at the disaster site to assess the impact of the situation, collect damage information, and determine requirement. If the district or regional resources appeared to be overwhelmed or in an event having potentially significant consequences, then the National Disaster Management office in the office of National Security shall be requested through the District or Provincial Security Coordinator to coordinate the disaster.

Under the circumstance, the National Security Coordinator shall through the Chief of Staff instruct for the activation of the Strategic Situation Room. This shall depend upon the nature and the level of the disaster as stipulated in the Standard Response Guidelines (Levels One, Two and Three).

With approval by the president upon the recommendation of the National Security Council Coordinating Group, the National Security Coordinator shall declare the affected region as a disaster zone.

With the activation of the Strategic Situation Room at the Office of National Security, communication shall be on a 24hour basis. The room shall be manned by personnel of the Office of National Security but supervised by Line Directors. The affected region shall then be legible to receive assistance.

Concurrently, the activation of the plan shall be done in consonance with the activation of institutional plans that will gear toward addressing the disaster in question.

5.2 SPECIFIC MEASURES

Response to every disaster shall be treated at three levels. These are the national, regional and district levels. There shall be lead institution for each hazard and will be supported by agencies from government departments, United Nations specialised agencies, non-governmental organisations and private institutions.

5.2.1 ECOLOGICAL HAZARDS

Main areas of concern to be treated under this aspect shall include wild bush fire / domestic fire, deforestation, pollution (water, soil and air).

| | Type of disaster | | Action to be taken | Lead institutions | | Support institutions |
|---|-------------------------|---|--|---|---|--|
| 1 | Wild Bush Fire | 1 | Deployment of fire fighters and equipment to fight the fire. | 1. National Fire Force (N.F.F) 2. Office of National Security (O.N.S) | 1 | S.L.P.A |
| | | 2 | Search, rescue and evacuation | | 2 | SLRCS |
| | Domestic Fire | 3 | Securities | | 3 | G.V.W. Co |
| | | 4 | Communication and information sharing | | 4 | Youth Groups |
| | | 5 | First aid and counselling | | 5 | MoHS |
| | | 6 | Medical care | | 6 | Sierratel |
| | | 7 | Joint assessment | | 7 | Private mobile companies |
| | | 8 | Emergency relief response | | 8 | C. C. S. L, and Others |
| | Type of disaster | | Action to be taken | Lead institutions | | Support institutions |
| 2 | Deforestation | 1 | Tree planting | 1. Ministry of Agriculture, Forestry and Food Security 2. National Commission for the Environment and Forestry (NaCEF) | 1 | S.L.P. |
| | | 2 | Awareness raising | | 2 | R.S.L.A.F. |
| | | 3 | Protection of forest reserves | | 3 | Conservation Society |
| | | 4 | Appropriate building permit | | 4 | Local Community |
| | | 5 | Enforcement of forestry legislation | | 5 | Environmental Non-Governmental Organisations |
| | | 6 | | | 6 | Ministry of Lands |
| | | 7 | | | 7 | Media |

| | Type of disaster | | Action to be taken | Lead institutions | | Support institutions |
|---|----------------------------------|---|--|--------------------------------------|---|---|
| 3 | Pollution (Air, Water, and Soil) | 1 | Enforce legislation for use of toxic waste | 1. Sierra Leone Standards Bureau | 1 | SLMA |
| | | 2 | Search, rescue and evacuation | | 2 | SLRCS |
| | | 3 | Chlorination of water wells and streams | | 3 | RSLAF |
| | | 4 | Assessment of damage | 2. Ministry of Health and Sanitation | 4 | SLP |
| | | 5 | Sensitisation | | 5 | Relevant Non Governmental Organizations |
| | | 6 | Effective monitoring of dumping waste | | 6 | Ministry of Transport and Communication |
| | | 7 | | | 7 | Media |

5.2.2 EMERGENCY RESPONSE COMMITTEE (TEAM) FOR ECOLOGICAL DISASTER

5.2.3 NATIONAL LEVEL

- i. Office of National Security
- ii. National Fire Force
- iii. Ministry of Health and Sanitation
- iv. Security Agencies (SLP, RSLAF)
- v. Ministry of Agriculture, Forestry and Food Security
- vi. Guma Valley Water Company
- vii. Sierra Leone Red Cross Society
- viii. Ministry of Information and Communication
- ix. Sierra Leone Ports Authority
- x. Sierra Leone Standards Bureau
- xi. Ministry of Lands, Housing and Country Planning

- xii. Relevant Non-Governmental Organisations
- xiii. Conservation Society
- xiv. Sierratel and other private mobile telecommunications companies
- xv. Sierra Leone Maritime Administration
- xvi. Media
- xvii. National Power Authority
- xviii. Freetown City Council
- xix. Specialised Agencies of the United Nations
- xx. NaCSA

5.2.4 **REGIONAL LEVEL**

- i. Office of National Security
- ii. Members of the Provincial Disaster Management Committee
- iii. Security Agencies (SLP/ RSLAF)
- iv. Sierra Leone Water Company
- v. Regional Medical Officers
- vi. Sierra Leone Red Cross Society
- vii. Regional Office of the Fire Force
- viii. Ministry of Agriculture, Forestry and Food Security
- ix. Private and State owned Media Houses
- x. Civil Society Movement
- xi. Local Council
- xii. Relevant Non-Governmental Organisations
- xiii. Specialised Agencies of the United Nations
- xiv. Conservation Society
- xv. Traditional Leaders

5.2.5 **DISTRICT LEVELS**

- i. Office of the District Security Coordinator
- ii. District Disaster Management Committees
- iii. District Medical Officer
- iv. Security Agencies (SLP/RSLAF)
- v. District Fire Force
- vi. Volunteer Corps
- vii. Traditional Rulers
- viii. District Councils
- ix. Private and State owned Media Houses
- x. Sierra Leone Red Cross Society
- xi. UN Agencies
- xii. Agriculture Extension Workers

5.2.6 **INSTITUTIONS RESPONSIBLE AT THE NATIONAL LEVEL**

- i. Ministry of Energy and Power
- ii. Ministry of Health and Sanitation
- iii. UNICEF
- iv. Security Agencies (SLP / RSLAF)
- v. Media
- vi. Sierra Leone Red Cross Society
- vii. NaCSA
- viii. Meteorological Department
- ix. State and Private owned telecommunication companies
- x. World Health Organisation
- xi. Non-Governmental Organisations
- xii. Sierra Leone Maritime Administration
- xiii. National Power Authority
- xiv. Guma Valley Water Company

- xv. Sierra Leone Water Company (SALWACO)
- xvi. Freetown City Council
- xvii. Volunteer Corps
- xviii. Sierra Leone Boat Owners Association
- xix. World Food Programme
- xx. Water Supply Division
- xxi. National Fire Force
- xxii. Mobile telecommunication companies
- xxiii. Ministry of Finance and Economic Planning

| Types of Disaster | | Action to be taken | | Lead Institution | Support Institutions | |
|-------------------|-------------------------------|--------------------|--|---|----------------------|------------|
| 1 | Drought / water shortage | 1 | Drilling of boreholes and water wells | 1. Ministry of Energy and Power | 1 | SALWACO |
| | | 2 | Chlorination of existing water wells and streams | | 2 | G.V.W.C |
| | | 3 | Rationing the limited available water | | 3 | SLRCS |
| | | 4 | Supply of water to the most vulnerable | | 4 | NGO |
| | | 5 | Sensitisation of the public on water management | | 5 | WHO |
| | | 6 | Price control on sale of water to prevent exploitation of the public | 2. Ministry of Health and Sanitation | 6 | MOHS |
| | | 7 | Supply of cholera kits | | 7 | Media |
| Types of Disaster | | Action to be taken | | Lead Institution | Support Institutions | |
| 2 | Tropical Storms and lightning | 1 | Search, rescue, evacuation and relocation of victims | 1. Ministry of Lands and Housing and Country Planning | 1 | Media |
| | | 2 | Joint Assessment | | 2 | UN Habitat |
| | | 3 | Emergency Relief Response | | 3 | SLP |
| | | 4 | Medical Care | | 4 | RSLAF |
| | | 5 | Counselling | | 5 | SLMA |

| | | | | | | |
|--------------------------|----------|---------------------------|--|--|-----------------------------|---------------------|
| | | 6 | Sensitisation | 2. Ministry of Health and Sanitation | 6 | SLRCS |
| | | 7 | Provision of temporary shelter | | 7 | NGO |
| | | 8 | Recovery and disposal of dead bodies | | 8 | NaCSA |
| | | | | | 9 | NPA |
| | | | | | 10 | Meteorological Dept |
| | | | | 11 | Telecommunication co. | |
| Types of Disaster | | Action to be taken | | Lead Institution | Support Institutions | |
| 3 | Flooding | 1 | Notification of appropriate Agencies | 1. Ministry of Transport and Communication | 1 | SLMA |
| | | 2 | Search, rescue and evacuation | | 2 | SLPA |
| | | 3 | Security and Safety | | 3 | SLRCS |
| | | 4 | Identification and activation to safe havens | | 4 | NaCSA |
| | | 5 | Monitoring and reporting of flood levels | | 5 | UNICEF |
| | | 6 | Assessment of damages and needs | | 6 | NGO |
| | | 7 | Emergency relief | | 7 | SLP |
| | | 8 | Counselling | | 8 | RSLAF |
| | | 9 | Compilation of reports | | 9 | WHO |
| | | 10 | Information sharing | | 10 | MOHS |
| | | | | 11 | GVWC | |
| | | | | 12 | WSD | |
| | | | | 13 | SALWACO | |
| | | | | 14 | Ministry of Finance | |
| | | | | 15 | Media | |
| | | | | 16 | Volunteer Corps | |
| | | | | 17 | CCSL and Philanthropists | |

5.2.7 REGIONAL INSTITUTIONS

- i. Office of the Regional(provincial) Security Coordinator
- ii. Disaster Management Department
- iii. Regional Medical Officer
- iv. Republic of Sierra Leone Armed Forces
- v. Sierra Leone Police
- vi. Sierra Leone Red Cross Society
- vii. Non-Governmental Organisations
- viii. Specialised Agencies within the United Nations
- ix. Volunteer Corps
- x. Local Councils
- xi. State owned and Private Media Houses
- xii. Regional Fire Force
- xiii. NaCSA
- xiv. Telecommunication companies

5.2.8 INSTITUTIONS AT DISTRICT LEVEL

- i. Office of the District Security Coordinator
- ii. District Disaster Management Committee
- iii. District medical Officer
- iv. Council of Chiefs
- v. Sierra Leone Red Cross Society
- vi. Non-Governmental Organisations within the district
- vii. Volunteer Corps
- viii. Sierra Leone Police
- ix. Republic of Sierra Leone Armed Forces
- x. NaCSA

5.3.0 GEOLOGICAL DISASTERS

| Types of Disaster | | Action to be taken | | Lead Institution | Support Institutions |
|-------------------|---|--------------------|---|---|-------------------------------|
| 1 | Coastal and Upland Erosion | 1 | Declared eroded lands as disaster prone | 1. Ministry of Lands Housing and Country Planning | Conservation Society |
| | | 2 | Control Measures against illegal sand mining | | Geological Dept. U.S.L |
| | | 3 | Regulate farming method | | M.A.F.F. |
| | | 4 | Awareness raising | | Ngo |
| | | 5 | Planting of trees | | SLP |
| | | | | | RSLAF |
| | | | | | NACEF |
| | | | | | Volunteer Corps |
| | | | | | Media |
| | | | | | SLRA |
| Types of Disaster | | Action to be taken | | Lead Institution | Support Institutions |
| 2 | Land Slide, Mud Slide and Rock Falls (Boulders) | 1 | Declare the area as disaster prone | Ministry of Lands Housing and Country Planning | 1 Association of SL Engineers |
| | | 2 | Enforce building and construction regulations | | 2 Geologists |
| | | 3 | Search, rescue and evacuation | | 3 Surveyors |
| | | 4 | Assess the damage | | 4 MOHS |
| | | 5 | First aid treatment | | 5 SLRCS |
| | | 6 | Medical care | | 6 SLPA |
| | | 7 | Emergency relief supply | | 7 NFF |
| | | 8 | Security | | 8 Security Agencies |
| | | 9 | Maintenance of law and order | | |
| | | 10 | Provision of temporal shelter | | |
| | | 11 | Recovery and disposal of dead bodies | | |

| | | | | | | |
|--|--|----|-----------------------------------|--|--|--|
| | | 12 | Information sharing with partners | | | |
|--|--|----|-----------------------------------|--|--|--|

5.3.1 INSTITUTIONS RESPONSIBLE AT THE NATIONAL LEVEL

- i. Ministry of Lands Housing and Country Planning
- ii. Ministry of Agriculture Forestry and Food Security
- iii. Association of Civil Engineers
- iv. Security Agencies
- v. Ministry of Health and Sanitation
- vi. Geological Dept. of the University of Sierra Leone
- vii. Relevant NGOs
- viii. Sierra Leone Red Cross Society
- ix. Sierra Leone Ports Authority
- x. National Fire Force
- xi. Sierra Leone Roads Authority
- xii. Civil Society Movement
- xiii. Media
- xiv. Telecommunication companies
- xv. Specialised Agencies of the United Nations
- xvi. Ministry of Finance and Economic Planning

5.3.2 INSTITUTIONS RESPONSIBLE AT THE REGIONAL LEVEL

- i. Office of the Provincial Security Coordinator
- ii. Regional Disaster Management Committee
- iii. SLP
- iv. RSLAF
- v. Regional Medical Officer
- vi. Sierra Leone Red Cross Society
- vii. Council of Chiefs
- viii. Local Councils

- ix. Sierra Leone Association of Engineers
- x. Sierra Leone Association of Geologists
- xi. Volunteer Corps
- xii. Relevant NGOs within the region
- xiii. Civil Society Movement
- xiv. Relevant Community-Based Organisations

5.3.3 INSTITUTIONS RESPONSIBLE AT THE DISTRICT LEVEL

- i. Office of the District Security Coordinator
- ii. District Disaster Management Committee
- iii. District Councils
- iv. District Medical Officer
- v. Sierra Leone Red Cross Society
- vi. Council of Chiefs
- vii. Relevant NGOs within the district
- viii. Volunteer Corps
- ix. Community-Based Organisations
- x. Civil Society Movements
- xi. Specialised Agencies within the United Nations

5.4.0 PEST AND INSECT INFESTATION DISASTERS

| Types of Disasters | | Action to be taken | | Lead Institutions | | Support Institutions | |
|--------------------|--------------------------------------|--------------------|--------------------------|---|---|----------------------|--|
| 1 | Pest and insect infestation disaster | 1 | Assessment of damage | 1. Ministry of Agriculture Forestry and Food Security | 1 | MOHS | |
| | | 2 | Examine area of damage | | 2 | Standards Bureau | |
| | | 3 | Ensure effective control | | 3 | Njala University | |
| | | 4 | Provide pesticide | | 4 | Min. of Information | |
| | | 5 | Provide equipment and | | 5 | FAO | |

| | | | | |
|--|---|--|--|------------------------|
| | | technicians | | |
| | 6 | Ban movement of animals and plants and their product to and fro the affected areas | | 6 Conservation Society |
| | 7 | Provide vaccines, drugs, equipments and technical advice | | 7 Ministry of Finance |
| | 8 | Confirm diagnostic results at national and international laboratories' levels | | 8 Security Agencies |
| | | | | 9 NGOs |
| | | | | 10 Farmers |
| | | | | 11 UNICEF |
| | | | | 12 Volunteer Corpse |
| | | | | 13 WHO |

5.4.1 INSTITUTIONS RESPONSIBLE AT THE NATIONAL LEVEL

- i. Ministry of Agriculture, Forestry and Food Security
- ii. Ministry of Health and Sanitation
- iii. Sierra Leone Standards Bureau
- iv. Ministry of Information and Communication
- v. UN-Food and Agricultural Organisation (FAO)
- vi. World Health Organisation (WHO)
- vii. Security Agencies
- viii. Relevant Non-Governmental Organisations
- ix. Farmers
- x. UNICEF
- xi. Conservation Society
- xii. Civil Society Movement
- xiii. Volunteer Corps
- xiv. Ministry of Finance and Economic Planning

5.4.2 INSTITUTIONS RESPONSIBLE AT THE REGIONAL LEVEL

- i. Office of the Provincial Security Coordinator
- ii. Regional Medical Officer
- iii. Veterinary Services
- iv. Forestry Services
- v. Security Agencies
- vi. Relevant Non-Governmental Organisations in the region
- vii. Environmental Protection Agencies
- viii. Private and State owned Media Houses
- ix. UN Agencies
- x. Farmers of the affected region
- xi. Agriculture Extension Workers

5.4.3 INSTITUTIONS RESPONSIBLE AT THE DISTRICT LEVEL

- i. Office of the District Security Coordinator
- ii. District Disaster Management Committee
- iii. District Council
- iv. Council of Chiefs
- v. Volunteer Corps
- vi. Farmers of the affected area
- vii. Veterinary Services
- viii. Agriculture Officer
- ix. District Medical Officer
- x. Livestock Division
- xi. Conversation Society
- xii. Media
- xiii. Community-Based Organisations

5.5.0 WASTE AND SOLID DUMPING

| Type of Disaster | | Action to be taken | | Lead Institution | Support Institution | |
|------------------|---|--------------------|---|---|---------------------|------------------------|
| 1 | Waste Management a. Solid b. Human c. Clinical | 1 | Identification of waste disposal sites and assessment | 1. Ministry of Local Government. 2. Ministry of Youths and Sports 3. Local Councils 4. Ministry of Health and Sanitation | 1 | SLRA |
| | | 2 | Provision of trash cans | | 2 | MOHS |
| | | 3 | Identification of common transit disposal sites | | 3 | Construction companies |
| | | 4 | Transportation | | 4 | Civil Society |
| | | 5 | Sensitisation | | 5 | CBOs |
| | | 6 | Cleaning of garbage from drainages | | 6 | Min. Youths and Sports |
| | | 7 | Washing of contaminated sites | | 7 | Min. of Finance |
| | | 8 | Provision of disinfectants | | 8 | NGOs |
| | | 9 | Waste recycling for backyard gardening | | 9 | Volunteer Corps |
| | | 10 | Provision of security | | 10 | NFF |
| | | | 11 | SLP | | |
| | | | 12 | RSLAF | | |
| | | | 13 | Prisons Service | | |
| | | | 14 | UNDP | | |
| | | | 15 | Media | | |

5.5.1 INSTITUTIONS RESPONSIBLE AT THE NATIONAL LEVEL

- i. Ministry of Local Government
- ii. Ministry of Education, Youths and Sports
- iii. Sierra Leone Roads Authority
- iv. Local Councils

- v. Non-Governmental Organisations
- vi. Civil Society
- vii. Construction Companies
- viii. National Fire Force
- ix. Republic of Sierra Leone Armed Forces
- x. Sierra Leone Police
- xi. Sierra Leone Prisons Services
- xii. Sierra Leone Red Cross Society
- xiii. Ministry of Finance and Economic Planning

5.5.2 INSTITUTIONS RESPONSIBLE AT THE REGIONAL LEVEL

- i. Office of the Provincial Security Coordinator
- ii. Regional Disaster Management Committee
- iii. Regional Medical Officer
- iv. Volunteer Corps
- v. Local Government Councils
- vi. Relevant Non-Governmental Organisations in the area
- vii. Republic of Sierra Leone Armed Forces
- viii. Sierra Leone Police
- ix. Sierra Leone Prisons Services
- x. Regional Fire Force
- xi. Community-Based Organisations
- xii. Construction Companies
- xiii. Civil Society

5.5.3 INSTITUTIONS RESPONSIBLE AT THE DISTRICT LEVEL

- i. Office of the District Security Coordinator
- ii. District Disaster Management Committee
- iii. District Council

- iv. Community-Based Organisations
- v. Sierra Leone Police
- vi. Republic of Sierra Leone Armed Forces
- vii. Volunteer Corps
- viii. District Medical Officer
- ix. Sierra Leone Red Cross Society
- x. Private and State owned Media Houses

5.6.0 EPIDEMIC DISASTER

| Type of Disaster | | Action to be taken | | Lead Institution | Support Institution | |
|------------------|--------------------|--------------------|---|-----------------------------------|---------------------|---|
| 1 | Epidemic Disasters | 1 | Mobilisation of human, material and financial resources for disaster prevention and control | Ministry of Health and Sanitation | 1 | Ministry of Finance |
| | | 2 | Coordination of implementation of activities at all levels | | 2 | Ministry of development and Economic Planning |
| | | 3 | Monitoring and report on disease | | 3 | UN Agencies |
| | | 4 | Assigning specific responsibilities for disease epidemic detection and response | | 4 | Min. of Education, Science and Technology |
| | | 5 | Education for health care personnel and the public in the affected community | | 5 | Min. of Social Welfare |
| | | 6 | Coordinate assistance for disaster prevention and control from various partners | | 6 | Local Government |
| | | 7 | Establishment of common | | 7 | Min. of |

| | | | | | |
|--|--|--|---|----|------------------------------|
| | | | communication channel for partners on disease or epidemic disasters | | Information and Broadcasting |
| | | | | 8 | NGOs |
| | | | | 9 | SLRCS |
| | | | | 10 | Private Sector |
| | | | | 11 | Health Service Providers |

5.6.1 INSTITUTIONS RESPONSIBLE AT THE NATIONAL LEVEL

- i. Ministry of Health and Sanitation
- ii. Ministry of Finance
- iii. Ministry of Local Government
- iv. Sierra Leone Red Cross Society
- v. Ministry of Finance and Economic Planning
- vi. UN Agencies
- vii. Relevant NGOs
- viii. Ministry of Information and Communication
- ix. Ministry of Education, Youths and Sports
- x. Security Agencies
- xi. Civil Society

5.6.2 INSTITUTIONS RESPONSIBLE AT THE REGIONAL LEVEL

- i. Office of the Provincial Security Coordinator
- ii. Regional Disaster Management Committee
- iii. Civil Society
- iv. Republic of Sierra Leone Armed Forces
- v. Sierra Leone Police
- vi. Local Government Council

- vii. World Health Organisations
- viii. Private Sector Health Service Providers
- ix. Local Council
- x. Regional Health Officer
- xi. Sierra Leone Red Cross Society
- xii. Relevant Non-Government Organisations
- xiii. Volunteer Corps

5.6.3 INSTITUTIONS RESPONSIBLE AT THE DISTRICT LEVEL

- i. Office of the District Security Coordinator
- ii. District Disaster Management Committee
- iii. District Council
- iv. Sierra Leone Red Cross Society
- v. Sierra Leone Police
- vi. Republic of Sierra Leone Armed Forces
- vii. District Medical Officer
- viii. Council of Chief
- ix. Community-Based Organisations
- x. Volunteer Corps
- xi. Non-Governmental Organisations in the area
- xii. Private Health officers

5.7.0 ACCIDENTS

| Type of disaster | | Action to be taken | | Lead institutions | Support Institutions |
|------------------|-----------|--------------------|-------------------------------|-------------------------|----------------------|
| 1 | Accidents | 1 | First aid | 1. Sierra Leone | 1 SLP |
| | | 2 | Search, rescue and evacuation | Maritime Administration | 2 RSLAF |

| | | | | | | |
|--|---------------------------|----|--|---|----|---|
| | a. Road Traffic | 3 | Assessment of damage | 2. Sierra Leone Airport Authority 3. SLRTC (Road Accidents) 4. Min. of Lands Housing and Country Planning (collapsed buildings) | 3 | MOHS |
| | | 4 | Medical care | | 4 | Oil Companies |
| | | 5 | Emergency relief | | 5 | NFF |
| | b. Air | 6 | Security | | 6 | SLPA |
| | | 7 | Communication and information sharing | | 7 | SLAPA |
| | c. Maritime | 8 | Recovery and proper disposal of dead bodies | | 8 | Civil Society |
| | | 9 | Transportation | | 9 | Media |
| | d. Collapsed buildings | 10 | Immediate deployment of fire fighters in cases of fire accidents | | 10 | Min. of Transport and Communication |
| | | 11 | Shoreline cleaning after oil spillages | | 11 | Association of Civil Engineers |
| | | 12 | Collection and handling of spilled oil sample | | 12 | S/ Leone Boat Owners Association |
| | e. Oil Spillage | 13 | Transport and disposal of recovered oil | | 13 | SLRCS |
| | | 14 | Provision and deployment if equipment | | 14 | NGOs |
| | | 15 | Continuous monitoring if affected areas. | | 15 | UN Agencies |

5.7.1 INSTITUTIONS RESPONSIBLE AT THE NATIONAL LEVEL

- i. Sierra Leone Maritime Authority
- ii. Sierra Leone Airport Authority
- iii. Sierra Leone Road Transport Cooperation
- iv. Sierra Leone Ports Authority
- v. Ministry of Lands Housing and Country Planning
- vi. Ministry of Finance and Economic Planning
- vii. Sierra Leone Police

- viii. RSLAF (Navy and Air Force)
- ix. Association of Civil Engineers
 - x. State and Private owned Media Houses
- xi. Sierra Leone Boat Owners Association
- xii. Motor Drivers Union
- xiii. Sierra Leone Red Cross Society
- xiv. Relevant NGOs
- xv. UN Agencies

5.7.2 INSTITUTIONS RESPONSIBLE AT THE REGIONAL LEVEL

- i. Office of the Provincial Security Coordinator
- ii. Provincial Disaster Management Committee
- iii. Regional Medical Officer
- iv. Sierra Leone Road Transport Authority
 - v. Local Government Authority
- vi. Sierra Leone Red Cross Society
- vii. Sierra Leone Police
- viii. Republic of Sierra Leone Armed Forces
- ix. Regional Fire Force
- x. Media
- xi. Civil Society
- xii. Relevant NGOs
- xiii. Motor Drivers Union
- xiv. Sierra Leone Boat Owners Association

5.7.3 INSTITUTIONS RESPONSIBLE AT THE DISTRICT LEVEL

- i. Office of the District Security Coordinator
- ii. District Disaster Management Committee

- iii. District Medical Officer
- iv. Drivers Union
- v. District Council
- vi. Sierra Leone Police
- vii. Republic of Sierra Leone Armed Forces
- viii. Sierra Leone Red Cross Society
- ix. Sierra Leone Road transport Authority
- x. State and Private owned Media Houses
- xi. Community-Base Organisations
- xii. Specialised UN Agencies
- xiii. Relevant NGOs
- xiv. Council of Chiefs
- xv. Volunteer Corps

5.8.0 RIOTS, DEMONSTRATIONS AND TERRORIST ATTACKS

| Type of Disaster | | Actions to be taken | | Lead Institutions | | Support Institutions | |
|------------------|---------------------------------------|---------------------|--------------------------------------|--|---|---|--|
| 1 | Riots | 1 | Search, rescue and evacuation | 1. Sierra Leone Police | 1 | MOHS | |
| 2 | Strikes | 2 | First aid | | 2 | SLRCS | |
| 3 | Demonstrations | 3 | Security | | 3 | NGOs | |
| 4 | Terrorist attacks | 4 | Transportation | 2. Republic of Sierra Leone Armed Forces | 4 | Media | |
| | | 5 | Medical care | | 5 | Civil Society | |
| | | 6 | Recovery and disposal of dead bodies | | 6 | UN Agencies | |
| | | 7 | Media coverage | 3. Intelligence Agencies | 7 | Private and State owned telecommunication companies | |
| 8 | Communication and information sharing | 8 | Others | | | | |

| | | | | | | |
|--|--|---|---|--|--|--|
| | | 9 | Continuous monitoring and reporting of events | | | |
|--|--|---|---|--|--|--|

5.8.1 INSTITUTIONS RESPONSIBLE AT THE NATIONAL LEVEL

- i. Sierra Leone Police
- ii. Republic of Sierra Leone Armed Forces
- iii. Intelligence Agencies
- iv. Serious Organised Crimes Coordinating Group, (SOCCG)/ONS
- v. Ministry of health and Sanitation
- vi. Sierra Leone Red Cross Society
- vii. Civil Society
- viii. Media
- ix. State and private owned telecommunication companies
- x. UN Agencies
- xi. Relevant NGOs

5.8.2 INSTITUTIONS RESPONSIBLE AT THE REGIONAL LEVEL

- i. Office of the Provincial Security Coordinator
- ii. Provincial Disaster Management Committee
- iii. Regional Medical Officer
- iv. Local Government Authority
- v. Sierra Leone Red Cross Society
- vi. Sierra Leone Police
- vii. Republic of Sierra Leone Armed Forces
- viii. Media
- ix. Civil Society
- x. Mobile telecommunication companies

5.8.3 INSTITUTIONS RESPONSIBLE AT THE DISTRICT LEVEL

- i. Office of the District Security Coordinator
- ii. District Disaster Management Committee
- iii. District Council
- iv. Sierra Leone Police
- v. Republic of Sierra Leone Armed Forces
- vi. Sierra Leone Red Cross Society
- vii. State and Private owned Media Houses
- viii. Community-Base Organisations
- ix. Specialised UN Agencies
- x. Relevant NGOs
- xi. Council of Chiefs
- xii. Volunteer Corps

5.9.0 POPULATION MOVEMENT

| Type of disaster | | Action to be taken | | Lead Institutions | | Support Institutions |
|------------------|---|--------------------|--|-------------------|---|--------------------------|
| 1 | Population Movement (Refugees and Internally Displaced People) | 1 | Continuous monitoring of movement of people | 1. NaCSA | 1 | SLP |
| | | 2 | Identification of entering points | | 2 | RSLAF |
| | | 3 | Establishment of reception centres | | 3 | NGOs |
| | | 4 | Security | 2. UNHCR | 4 | SLRCS |
| | | 5 | Ensure proper screening and separation of incoming groups in line with humanitarian principles | | 5 | MOHS |
| | | 6 | Establishment of transit sites | | 6 | Min. of Energy and Power |

| | | | | | | |
|--|--|----|---|--|----|---|
| | | 7 | Identification and selection of possible camp and interment sites | | 7 | Min. of Foreign Affairs and Int'l Cooperation |
| | | 8 | camp establishment and management | | 8 | Host Communities |
| | | 9 | Transportation | | 8 | Min. of Lands Housing and Country Planning |
| | | 12 | Emergency relief | | 9 | Min. of Finance |
| | | 11 | Environmental Action Plan | | 10 | Min. of Dev and Economic Planning |
| | | | | | 11 | Civil Society |
| | | | | | 12 | Displaced Persons |
| | | | | | 13 | UN Agencies |

5.9.1 INSTITUTIONS RESPONSIBLE AT THE NATIONAL LEVEL

- i. NaCSA
- ii. UNHCR
- iii. UN Agencies
- iv. NGOs
- v. SLP
- vi. RSLAF
- vii. Sierra Leone Red Cross Society
- viii. Ministry of Health and Sanitation
- ix. Ministry of Foreign Affairs and International Cooperation
- x. Ministry of Energy and Power
- xi. Ministry of Finance and Economic Planning

- xii. Ministry of Lands Housing and Country Planning
- xiii. Host Communities
- xiv. Civil Society

5.9.2 INSTITUTIONS RESPONSIBLE AT THE REGIONAL LEVEL

- i. Office of the Provincial Security Coordinator
- ii. Provincial Disaster Management Committee
- iii. Regional Medical Officer
- iv. NGOs
- v. Specialised UN Agencies
- vi. Civil Society
- vii. SALWACO
- viii. Sierra Leone Police
- ix. Republic of Sierra Leone Armed Forces
- x. Ministry of Lands Housing and Country Planning
- xi. Local Government Authorities
- xii. Host Communities

5.9.3 INSTITUTIONS RESPONSIBLE AT THE DISTRICT LEVEL

- i. Office of the District Security Coordinator
- ii. District Disaster Management Committee
- iii. District Council
- iv. Sierra Leone Red Cross Society
- v. Sierra Leone Police
- vi. Republic of Sierra Leone Armed Forces
- vii. District Medical Officer
- viii. Council of Chiefs
- ix. Community-Based Organisations
- x. Volunteer Corps

- xi. Non-Governmental Organisations in the area
- xii. Private Health officers

5.10.0 DRUG ABUSE

| Type of Disaster | | Actions to be taken | | Lead Institutions | Supported Institutions | |
|------------------|------------|---------------------|---|--------------------------------------|------------------------|---|
| 1 | Drug Abuse | 1 | Monitoring of drug cartels | 1. Ministry of Health and Sanitation | 1 | Min. of Youths and Sports |
| | | 2 | Enforce regulations on drug smuggling | | 2 | Min. of Development and economic Planning |
| | | 3 | Closure of ghettos | | 3 | Min. of Finance |
| | | 4 | Counselling | 2. National Drugs Control Agency | 4 | S/Leone Prisons Service |
| | | 5 | Transportation of victims to mental homes | | 5 | Republic of S/L Armed Forces |
| | | 6 | Medical care | | 6 | SLP |
| | | 7 | First aid | | 7 | SLRCS |
| | | 8 | Security | | 8 | Civil Society |
| | | 9 | Deployment of specialists and equipment to enhance response | | 9 | Mobile telecommunication companies |
| | | 10 | Emergency relief | | 10 | UN Agencies |
| | | 11 | Sensitisation | | 11 | NGOs |
| | | 12 | Joint Assessment | | 12 | Media |

5.10.1 INSTITUTIONS RESPONSIBLE AT THE NATIONAL LEVEL

- i. National Drug Control Agencies
- ii. Ministry of Health and Sanitation
- iii. SOCCG/ONS
- iv. Ministry of Finance and Economic Planning
- v. Sierra Leone Police

- vi. Republic of Sierra Leone Armed Forces
- vii. Sierra Leone Prison services
- viii. Ministry of Education, Youths and Sports
- ix. UN Agencies
- x. NGOs
- xi. Civil Society
- xii. Media
- xiii. Mobile telecommunication companies

5.10.2 INSTITUTIONS RESPONSIBLE AT THE REGIONAL LEVEL

- i. Office of the Provincial Security Coordinator
- ii. Provincial Disaster Management Committee
- iii. Regional Medical Officer
- iv. Sierra Leone Police
- v. Republic of Sierra Leone Armed Forces
- vi. Specialised UN Agencies
- vii. Local Government Authorities
- viii. Civil Society
- ix. NGOs
- x. Media

5.9.4 INSTITUTIONS RESPONSIBLE AT THE DISTRICT LEVEL

- i. Office of the District Security Coordinator
- ii. District Disaster Management Committee
- iii. District Council
- iv. Sierra Leone Red Cross Society
- v. Sierra Leone Police
- vi. Republic of Sierra Leone Armed Forces

- vii. District Medical Officer
- viii. Council of Paramount Chiefs
- ix. Community-Based Organisations
- x. Volunteer Corps
- xi. Non-Governmental Organisations in the area
- xii. Religious Institutions (mosques and churches)
- xiii. Media

SECTION SIX

ASSESSMENT

6.0 REHABILITATION, RESETTLEMENT AND RECONSTRUCTION

6.1 INTRODUCTION

This section establishes a detailed framework for the required support by government and its development partners in restoring essential public and social services, following a disaster. Much of this support will involve the coordination and administration of government and non-governmental assistance. Thus, this section outline government's procedure for assessing the requirement for applying and administering national emergency assistance programmes.

In respect of the above, stakeholder institutions are required to closely monitor response activities and to obtain valuable data regarding the severity and intensity of the event, the affected geographical area and the potential unsatisfied critical needs of the affected population.

6.2 PURPOSE

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, and this will involve rehabilitating and in some cases resettling the affected communities and further undertaking new construction in different areas for resettlement.

Rehabilitation, resettlement and reconstruction programmes are required in all disaster types. Though the disasters may differ in gravity, therefore, operations would have to be on immediate, medium and long term basis and construction work would involve semi-permanent and permanent structures, helping individuals to rehabilitate, resettle and

reconstruct their lives. These operations would entail the improvement of public utilities and provision of building materials.

6.3 DAMAGE ASSESSMENT

6.3.1 COORDINATION OF DAMAGE ASSESSMENT

The moment an emergency condition subsides, rapid and thorough assessment is to be conducted to know the overall damage to critical public facilities, homes, businesses and other services within the affected area(s); and to determine whether those damages are sufficient to warrant national emergency assistance.

In a catastrophic disaster (level three), when damage assessment has been conducted, information and data on damages must also be compiled for the attention of the National Security Coordinator and other stakeholders involved in the planning for additional resources and prioritising recovery efforts.

The decision to deploy joint assessment teams shall be done in collaboration with the Disaster Management Committee and the District Council within the affected area. The assessment teams are to report the following information to the Disaster Management Department in the Office of National Security for further action.

- Boundaries of the disaster(s).
- Access point(s) to the disaster area(s).
- Status of the transportation system.
- Status of communication system
- Disaster casualty information
- Status of medical systems
- Shelter / mass care information
- Damage to utility system
- Status of critical facilities
- Major resource needs shortfalls

- Status of security within the affected area(s)
- Information on the humanitarian organisations within the area(s)

6.3.2 CONDUCTING DAMAGE ASSESSMENT

Damage assessment activities are to be generally conducted in one of the following ways depending on the circumstances.

- **FLY-OVER:** This method can be utilised when there may be no other way to access the area; when the affected area is so large that this method provides the best opportunity to identify specific areas to be surveyed by the damage assessment team; or when the damage is so extensive and catastrophic that the need for a detailed assessment may not be considered necessary.
- **WALK-THROUGH METHOD:** This is the most thorough and time consuming method for damage assessment. This method may be used when the assessment must be very detailed and specific.

NOTE: Any other method agreed by the team members can be used to conduct damage assessment.

6.3.3 INDIVIDUAL DAMAGE ASSESSMENT

When assessing damage to individual homes, information on the extent of damage in terms of both human and material is to be recorded. This becomes necessary if assistance is to be rendered.

6.3.4 PUBLIC DAMAGE ASSESSMENT

When assessing damage to the public facilities, information on the extent of damage is to be recorded. Damage assessment teams are to assess and record damages to the following public facilities and services.

- Damage to road, streets and bridges.
- Damage to water control facilities such as drainage system, water channel etc.
- Damage to public buildings and equipments.
- Damage to public utilities.
- Damage to parks and recreational sites.
- Cost to clear debris.
- Cost of personnel, materials, equipment etc used in responding in emergency.

6.4 RECONSTRUCTION

Long term recovery efforts must focus on redeveloping and restoring the socio-economic viability of the disaster area(s). The reconstruction phase requires a substantial commitment of time and resources by government and non-governmental organisations. Important to note here is that much of this commitment would be beyond the scope of traditional emergency management activity programmes. The activities involved would most often be the result of a catastrophic event that has caused substantial, long term damage over a very large area. These efforts include:

- § Long term reconstruction of public infrastructures and social services damaged by the disaster.
- § Re-establishment of adequate housing to replace that which has been destroyed.
- § Restoration of jobs that were lost.
- § Restoration of the economic base of the disaster area(s) through NaCSA in collaboration with other stakeholders.

6.4.1 COORDINATION OF RECONSTRUCTION

The National Commission for Social Action (NaCSA) shall be accountable to the Disaster Management Department in the Office of National Security on all reconstruction activities in the form of updates within the disaster area(s). In addition, it shall establish and maintain linkages with key stakeholders from central and local government officials, non-governmental organisations, affected communities, United Nations' specialised agencies and the public sector, to ensure effective communication, technical assistance and problem solving.

6.5 CLOSE OUT / STAND DOWN

When recovery efforts have progress to a point where public infrastructure and social services damaged by the disaster have been restored, adequate housing facilities are at the disposal of the victims, and the socio-economic base of the disaster area(s) have been restored, the Commissioner of NaCSA can recommend to the National Security Coordinator through the Disaster Management Department in the Office of National Security that the reconstruction exercise is complete for the attention of other stakeholders along with the government and non-governmental organisations.

6.6 RESPONSIBILITIES

Recovery efforts require the coordination at several levels of government and stakeholder institutions which have specific responsibilities.

6.6.1 CENTRAL GOVERNMENT

The central government would be required to:

- i. Take the lead in all reconstruction activities.
- ii. To provide staff and equipment and administer national disaster assistance programmes.
- iii. Support national and local public information outreach efforts.
- iv. Coordinate with various stakeholders regarding the solicitation and management of donated resources and volunteer labour.
- v. Coordinate with various stakeholders to promptly resolve recovery issues.

6.6.2 LOCAL GOVERNMENT

Local government is to:

- i. Participate in and support damage assessment operations.
- ii. Provide relevant data regarding the severity of the disaster and assessment of individual needs.
- iii. Participate in and support public information and education programmes regarding recovery effort and available central government assistance.
- iv. Coordinate with the central government officials regarding location of reconstruction office and sites for other coordinated assistance locations.
- v. Support central government recovery efforts.

6.6.3 NON-GOVERNMENTAL ORGANISATIONS AND SPECIALISED UNITED NATIONS AGENCIES

They shall participate in the following:

- i. Joint assessment
- ii. Support government effort in reconstruction process especially in so far as their mandate requires them.
- iii. Provide technical support to reconstruction and recovery efforts.

- iv. Assist the government in public information.

6.6.4 PRIVATE SECTOR

They shall assist in the following:

- i. Technical support.
- ii. Assist in reconstruction effort.
- iii. Take responsibility for their reconstruction of the damaged infrastructures and equipments.
- iv. Donate financial support to reconstruction efforts.

6.7 SIMULATION EXERCISE

This shall be done on an annual basis through the participation of all relevant stakeholders from government institutions and non-governmental institutions. Scenarios for such exercises shall be developed through the participation of key stakeholders. The overall input from members of the Strategic Situation Group led by the Chief of Staff and the Director of the Disaster Management Department should not be over emphasised.

Scenarios from simulation exercise shall be based upon natural and man-made events that affect the lives of people in the country.

6.8 REVIEW OF THE PLAN

The Disaster Management Plan shall be reviewed every year. This is done against the background of the fact that human being and the society in which we live is dynamic. Events happen frequently and very often affect the lives of people. Many people including key stakeholders can easily change their address due to the socio- economic dynamics of our society. It is in this respect that key stakeholders shall review this

document by updating the relevant information and data contained therein and ensuring that it is a working tool that can be use in emergency situations on modern times.

6.9 COMMON COMMUNICATION CHANNEL FOR DISASTERS

Though it is crystal clear that institutions have individual and independent communication channel they use during emergencies, yet, the need for a common communication channel that is accessible by key stakeholder institutions is very paramount.

Government with support from private sector especially telecommunication mobile companies shall play central role in ensuring that a single communication line with specific number designed to be used by all in times of emergencies is established. As of now, notification for disaster can be done on the following lines:

| | |
|----------|--------|
| +232 22 | 224949 |
| +232 76 | 615840 |
| +232 33 | 547368 |
| + 232 33 | 822286 |
| +232 33 | 350506 |

6.10 COMMAND AND CONTROL

The moment notification signals are given, followed by activation of the strategic Situation Room, the responsibility for command and control at the strategic level will be in the hands of the Chief of Staff in the Office of National Security.

However, command changes structure when operation based on sectoral approach is done. At this time, the lead institution for each sector shall take control of command

depending on the type of disaster that has taken place. For example, everything about internal security and the maintenance of law and order shall be left to the command structure of the Sierra Leone Police. This is against the background that they have the primacy for security. For health related issues, the Ministry of Health and Sanitation shall have command and control over all forms of epidemic disasters that might face the country. The same is applicable for fire disaster in which the National Fire Force shall take control of command in emergencies associated with fire disasters.