



# SIERRA LEONE

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## NATIONAL DISASTER PREPAREDNESS BASELINE ASSESSMENT

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**A DATA-DRIVEN  
TOOL FOR ASSESSING RISK  
AND BUILDING  
LASTING RESILIENCE**





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- Bo District Council
- Bo District Disaster Management Committee
- Concern Worldwide
- Environmental Protection Agency
- Freetown Mayor's Office
- Integrated Geo-Information and Environmental Management Services
- International Organization for Migration
- Ministry of Health and Sanitation
- Ministry of Social Welfare, Gender & Children's Affairs
- Ministry of Transport and Aviation
- National Civil Registration Authority
- National Commission for Social Action
- National Fire Force
- National Police
- Office of National Security
- Public Health National Emergency Operations Center
- Republic of Sierra Leone Armed Forces
- Save the Children
- Sierra Leone Meteorological Agency
- Sierra Leone Red Cross Society
- Sierra Leone Urban Research Centre
- Statistics Sierra Leone
- The United States Agency for International Development
- UN Women
- United Nations Development Program
- United Nations Office for Project Services
- United Nations World Food Programme
- United States Centers for Disease Control
- United States Embassy Freetown
- University of Sierra Leone

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# LIST OF ACRONYMS

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**ACLED** = Armed Conflict Location & Event Data Project

**ACMAD** = African Centre of Meteorological Applications for Development

**AU** = African Union

**CC** = Coping Capacity

**CCA** = Climate Change Adaptation Platform

**CIDMEWS** = Climate Information, Disaster Management and Early Warning Systems

**CERT** = Community Emergency Response Team

**COG** = Continuity of Government

**CONOPS** = Concept of Operations

**COOP** = Continuity of Operations

**COP** = Common Operating Picture

**DDMC** = District Disaster Management Committee

**DHSE** = Directorate of Health Security and Emergencies

**DISEC** = District Security Committee

**DM** = Disaster Management

**DMA** = Disaster Management Analysis

**DMD** = Disaster Management Department

**DRM** = Disaster Risk Management

**DRR** = Disaster Risk Reduction

**DSTI** = Directorate of Science, Technology, and Innovation.

**ECOWAS** = Economic Community of West African States

**EOC** = Emergency Operations Center

**EPA-SL** = Sierra Leone Environmental Protection Agency

**EVD** = Ebola Virus Disease

**GFDRR** = Global Facility for Disaster Reduction and Recovery

**GoSL** = Government of Sierra Leone

**HARPIS-SL** = Hazard and Risk Profile Information System - Sierra Leone

**ICS** = The Incident Command System

**IERP** = All-Hazards Public Health Incident & Emergency Response Plan

**INGO** = International Non-governmental Organization

**INTEGEMS** = Integrated Geo-information and Environmental Management Services

**IOM** = International Organization for Migration

**IGO** = Intergovernmental organization

**KAIPTC** = Kofi Annan International Peacekeeping Training Centre

**MACA** = Military Aid to Civil Authorities

**MAFFS** = Ministry of Agriculture, Forestry & Food Security

**MDA** = Ministry, Department, or Agency

**Met-SL** = Sierra Leone Meteorological Agency

**MIC** = Ministry of Information & Communication

**MIRA** = Multi-Cluster/Sector Initial Rapid Assessment

**MLGRD** = Ministry of Local Government and Rural Development

**MoFED** = Ministry of Finance and Economic Development

**MoPED** = Ministry of Planning and Economic Development

**MoHS** = Ministry of Health and Sanitation

**MoWR** = Ministry of Water Resources

**MSWGCA** = Ministry of Social Welfare, Gender & Children's Affairs

**MTA** = Ministry of Transport & Aviation

**NaCSA** = National Commission for Social Action

**NSCOORD** = National Security Coordinator

**NFF** = National Fire Force

**NGO** = Non-Governmental Organization

**NPDRR** = National Platform for Disaster Risk Reduction

**NSC** = National Security Council

**NSSCG** = National Security Council Coordinating Group

**NSSG** = National Strategic Situation Group

**ONS** = Office of National Security

**PHDEOC** = Public Health District Emergency Operations Center

**PHNEOC** = Public Health National Emergency Operations Center

**PROSECS** = Provincial Security Committees

**PIO** = Public Information Officer

**PPP** = Public Private Partnerships

**RSLAF** = Republic of Sierra Leone Armed Forces

**RVA** = Risk and Vulnerability Assessment

**SAR** = Search and Rescue

**SD** = Sustainable Development

**SDG** = Sustainable Development Goals

**SLANGO** = Sierra Leone Association of NGOs

**SLP** = Sierra Leone Police

**SLRC** = Sierra Leone Red Cross Society

**SLURC** = Sierra Leone Urban Research Centre

**SOP** = Standard Operating Procedures

**SSL** = Statistics Sierra Leone

**UNDP** = United Nations Development Programme

**UNDRR** = United Nations Office for Disaster Risk Reduction

**UNEP** = United Nations Environment Programme

**UNHCR** = United Nations High Commissioner for Refugees

**UNICEF** = United Nations Children's Fund

**UNOCHA** = United Nations Office for the Coordination of Humanitarian Affairs

**WFP** = World Food Programme

**WHO** = World Health Organization

**WMO** = World Meteorological Organization

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**NDPBA**

# **EXECUTIVE SUMMARY**

**SIERRA LEONE**

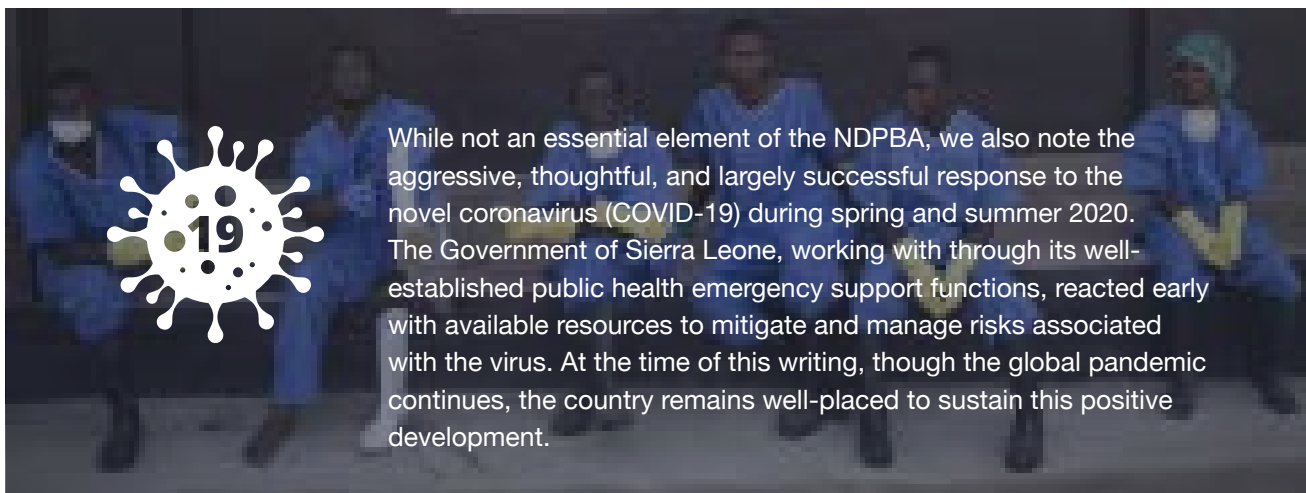


## OVERVIEW

The Pacific Disaster Center (PDC), in close partnership with the Office of National Security Disaster Management Department (ONS-DMD), researched and analyzed the hazard-based risks, vulnerabilities, resilience, and disaster management capabilities of Sierra Leone. The following represents the culmination of the 2019-20 project and includes both the completed analysis and recommendations for enhancing the disaster management posture of the Government of Sierra Leone and contributing stakeholders internal and external to the country. The National Disaster Preparedness Baseline Assessment (NDPBA) described below uses analytical tools, scientific data, and evidence-based practices to provide critical risk information to practitioners to effectively reduce disaster risk and support response. The methodology and associated recommendations are in alignment with United Nations Development Goals and the Sendai Framework for Disaster Risk Reduction 2015-2030.

The NDPBA was funded by the United States Government through the US Africa Command and was conducted in coordination with US Embassy Freetown. In addition to ONS-DMD, PDC developed relationships and data-sharing agreements with multiple Sierra Leone Government and non-governmental agencies. Additional partners spanned the breadth of the country's disaster management capabilities. A complete list of PDC's valued partners in the NDPBA effort are included in the introduction below.

**The full report presents the data collected, the results of our modeling, analysis of these results, and recommendations for closer alignment with the Sendai Framework. The paragraphs and points to follow summarize these findings for executive review.**



# SUMMARY

## OF FINDINGS

We find that despite the setbacks of many years of conflict and a deadly disease outbreak, Sierra Leone has made good progress in understanding its risk and building the beginnings of the necessary disaster risk-reduction structures and capabilities. Challenges remain, however, and much work is left to be done.

Sierra Leone has a tropical climate, alternating between dry and dusty periods (December to April) and rainy season (May to November) monsoons with torrential rains and flooding. The climate and geography of Sierra Leone leave the population exposed to multiple natural hazards, particularly sea-level rise and coastal erosion, tropical storms, heavy rain, winds, flooding, landslides, fire, and drought.

Exposure to natural hazards in Sierra Leone is compounded by extreme socioeconomic vulnerability, with over half the population living in poverty and a national economy that is still recovering from both the Sierra Leone Civil War (1991-2002) and the Ebola crisis (2014-2016) (World Bank, 2020). While epidemics are rare in Sierra Leone, they have the highest effect on the country's human and economic resources. In recent years, the government's greatest disaster management focus has been on developing its ability to prevent, mitigate, and respond to epidemics, and recover from their aftermath.

## NATURAL HAZARD EXPOSURE

**43,000** **1,150**

people affected by natural disasters (2010 - 2019)

lives claimed by natural disasters (2010 - 2019)



Sea-level rise / coastal erosion



Tropical storms



Heavy rain



Landslides



Flooding



Drought



Winds



Fire



Exposure to natural hazards in Sierra Leone is compounded by **extreme socioeconomic vulnerability, with over half the population living in poverty** and a national economy that is still recovering from both the Sierra Leone Civil War (1991-2002) and the Ebola crisis (2014-2016) (World Bank, 2020).



Government of Sierra Leone has taken many steps to provide for the safety of its citizens. The country's **greatest disaster management focus has been on developing its ability to prevent, mitigate, and respond to epidemics**, and recover from their aftermath.



Consequently, Sierra Leone is at increased risk of disaster from natural hazards. From 2010 to 2019, natural disasters affected roughly 43.7 thousand people and claimed over 1,150 lives in Sierra Leone (EM-DAT, 2020). Recent major disasters are linked to episodes of heavy rain, including 2019 flash floods in Freetown and the 2017 flood and Sugar Loaf landslide in the Western Area. Total economic losses of the 2017 landslide are estimated at USD 31.65 million, while the preliminary cost of resilient recovery is estimated at USD 82.41 million (World Bank, 2017).

In the face of these challenges, we found that the Government of Sierra Leone has taken many steps to provide for the safety of its citizens. In the decades following the end of Sierra Leone's civil war, the national government has shown considerable desire to improve its disaster management structure, has adopted internationally recognized standards and practices (notably the Sendai Framework), and has collaborated with international disaster management partners. The Government made disaster management its priority by creating a proactive disaster management system aimed at prevention and mitigation.

## RECENT MAJOR DISASTERS

### 2019

Freetown flash  
floods

### 2017

Western area flood  
and Sugar Loaf  
Landslide

### \$ 31.65 million

Total economic losses of the 2017 landslide

### \$ 82.41 million

Preliminary cost of resilient recovery (World Bank, 2017).

# RECOMMENDATIONS

## SIERRA LEONE

The ONS-DMD serves as the lead agency for disaster risk reduction and response and has been advising the Government on all disaster-related issues. It runs the National Strategic Situation Group during emergencies, issues annual disaster risk-assessment reports, and coordinates the duties related to all-hazards crises and disasters. At the local level, the decentralization of the disaster management system through the Local Councils and Chiefdom Councils provides efficiency and effectiveness to disaster response and relief of the victims.

Although the 2014 Ebola outbreak presented major challenges and resulted in setbacks, the Government has been back on the path to strengthening its disaster management institutions, including listing this area as a focus in its 2018 budget. The passage of the 2020 Disaster Management Act has further signified the commitment of the Government of Sierra Leone to establish a standalone agency that will have dedicated resources for dealing with calamities effectively.

While a great deal of work has been accomplished, and much progress has been made, many additional actions can be taken by the Government of Sierra Leone and its partners to further build capacity for disaster resilience and response.

These recommendations are included in greater detail in the body of the report. Our hope is that the Government of Sierra Leone and key development and disaster management partners will leverage the results of this comprehensive assessment to enable a more robust and sustainable disaster risk-reduction effort in Sierra Leone that will contribute to saving lives and property.

In light of our findings, PDC makes the following recommendations:

- ✓ **Establish a Comprehensive Legal Framework** to Support a Coordinated Culture for Disaster Preparedness and Prevention in Sierra Leone
- ✓ **Develop Budget Arrangements** Specifically for Disaster Management (DM) and Disaster Response and Recovery (DRR) Activities Nationwide
- ✓ **Refine Financial Support Mechanisms** for DRR
- ✓ **Develop Plans and Procedures** for All Phases of DM
- ✓ **Fully Engage Non-Governmental Stakeholders and Non-traditional Partners** including the Private sector into Government Disaster Risk Management (DRM) Framework
- ✓ **Develop and Implement an Expedited Mechanism** for Leveraging National Resources and Assets to Meet the Needs of Local Communities Impacted by Disaster
- ✓ **Formalize Incident Coordination** and Emergency Operations
- ✓ **Enhance the Capacity** of the National Fire Force
- ✓ **Enhance Mass Care Capacity**
- ✓ **Establish National Emergency Evacuation and Sheltering Procedures**
- ✓ **Establish a National Exercise Program**
- ✓ **Advance the Professionalization** of the DM Field
- ✓ **Institutionalize** Multi-Hazard Mapping and Risk and Vulnerability Assessment for Evidence-Based Decision Making
- ✓ **Strengthen Multi-Hazard Monitoring** and Early Warning Capabilities
- ✓ **Promote Data Collection**, Management, and Sharing
- ✓ **Modernize** Post-Disaster Registration and Assessment Capabilities
- ✓ **Institutionalize Risk Awareness** and Disaster-Monitoring Capacity at Subnational Levels
- ✓ **Reduce Disparities** in Infrastructure to Increase Resilience Nationwide
- ✓ **Reassess Progress** Made Toward DRR and Resilience Goals



# AN --- **INTRODUCTION** ---

## **TO PDC'S NATIONAL DISASTER PREPAREDNESS BASELINE ASSESSMENT (NDPBA)**

Using a collaborative, stakeholder-driven approach, PDC worked to integrate national priorities and stakeholder feedback throughout every step of the process. The NDPBA for Sierra Leone included a Risk and Vulnerability Assessment (RVA), which examined several components of risk, including exposure to hazards, vulnerability, coping capacity, and existing disaster management capabilities. The findings of the RVA were further reviewed through the lens of PDC's unique Disaster Management Analysis (DMA). The DMA contextualizes the RVA and guides recommendations designed to increase resilience and reduce disaster risk. Findings of this analysis were compiled into a Disaster Risk Reduction (DRR) Plan offering practical actions to be taken over a five-year period.

To receive access to the findings, recommendations, and data (tabular and spatial) used to conduct the Sierra Leone NDPBA analysis, please visit the Pacific Disaster Center's DisasterAWARE platform and request access at <https://emops.pdc.org>.





# SIERRA LEONE NDPBA

## APPLYING ASSESSMENT RESULTS

The Pacific Disaster Center's (PDC) National Disaster Preparedness Baseline Assessment (NDPBA) is more than just an assessment; it is a sustainable system for accessing, understanding, updating, and applying critical risk information in decision making. The NDPBA provides the necessary tools, scientific data, and evidence-based practices to effectively reduce disaster risk—informing decisions at the national, subnational, and local levels.



### STRENGTHEN PARTNERSHIPS

- + Use the NDPBA as a decision-support tool to create a transparent and efficient process for disaster risk reduction efforts within the context of Sierra Leone.
- + Provides necessary tools and data for disaster monitoring to promote risk-informed decision making and sustainable development.
- + Allows team members to conceptualize risk as a function of data, measuring the social, cultural, and economic drivers of risk.



### SUPPORT SENDAI COMMITMENTS

By participating in the NDPBA process, Sierra Leone significantly enhances its capacity to meet Sendai Framework commitments under each of these Priority Areas:

- + **Priority 1** - Understanding Disaster Risk
- + **Priority 2** - Strengthening Disaster Risk Governance to Manage Disaster Risk
- + **Priority 3** - Investing in Disaster Risk Reduction for Resilience
- + **Priority 4** - Enhancing Disaster Preparedness for Effective Response and to “Build Back Better” in Recovery, Rehabilitation and Reconstruction



### INCREASE RESILIENCE

- + Align in areas where partner capacity development efforts overlap.
- + Improve resilience at the subnational level and reduce potential impacts to the population.
- + Rely on trusted and proven data-driven tools.



**NDPBA**

# **METHODOLOGY AND OBJECTIVES**

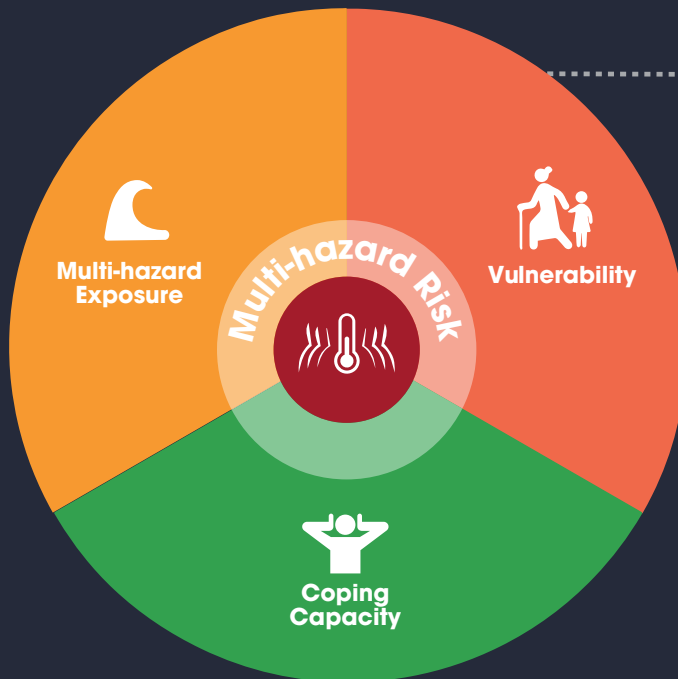
**OVERVIEW**










# RVA METHODOLOGY

## MEASURING RISK

### COMPONENTS OF RISK



### Subcomponents

-  Population Pressures
-  Gender Inequality
-  Economic Constraints
-  Information Access
-  Clean Water Access
-  Health Status
-  Environmental Stress

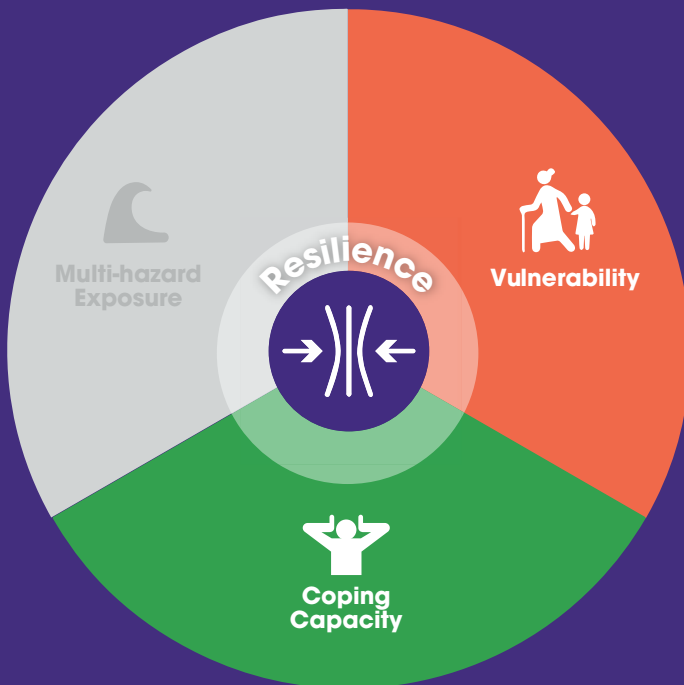
## OBJECTIVE

Form a foundation for long-term data sharing and monitoring to support disaster risk reduction. Enhance decision making through improved access to temporal and spatial data.

The NDPBA methodology is based on a composite index approach and investigates the underlying conditions that lead to increased risk. The assessment combines several components of risk which include multi-hazard exposure, coping capacity, and vulnerability. Individual components are comprised of subcomponents used to assess the status of thematic areas either as a sum or individually. Additional information on the assessment methodology can be found at: <https://pdc.org/methodology>.

# RVA METHODOLOGY MEASURING RESILIENCE

## RESILIENCE



## Hazard Independent



Components of resilience are independent of natural hazard exposure. This type of measure helps rank countries based on their likelihood of experiencing a disruption outside of a naturally occurring event. The measure of resilience includes vulnerability and coping capacity components, including their subcomponents.

## OBJECTIVES

Use vulnerability and coping capacity indicators to determine initiatives and engagements that will decrease vulnerability and reduce disaster risk by increasing the resiliency of the population.

# RVA METHODOLOGY

## KEY CONCEPTS

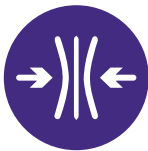
### EXAMPLES AND DEFINITIONS



**VULNERABILITY:** Provides visibility into the underlying socioeconomic and societal factors that predispose areas to disasters. A vulnerability analysis measures the physical, environmental, social, and economic conditions and processes that increase susceptibility of communities and systems to the damaging effects of hazards. Multiple factors influencing disaster outcomes, including those linked to poverty and development, are considered in the analysis.



**COPING CAPACITY:** Provides visibility into the status of governance and capacity within each district. A coping capacity analysis measures the systems, means, and abilities of people and societies to absorb and respond to disruptions in normal function. It considers a range of factors that contribute to the ability of an impacted population to limit the likelihood or severity of the damaging effects of hazards and to manage disruptions that do arise.

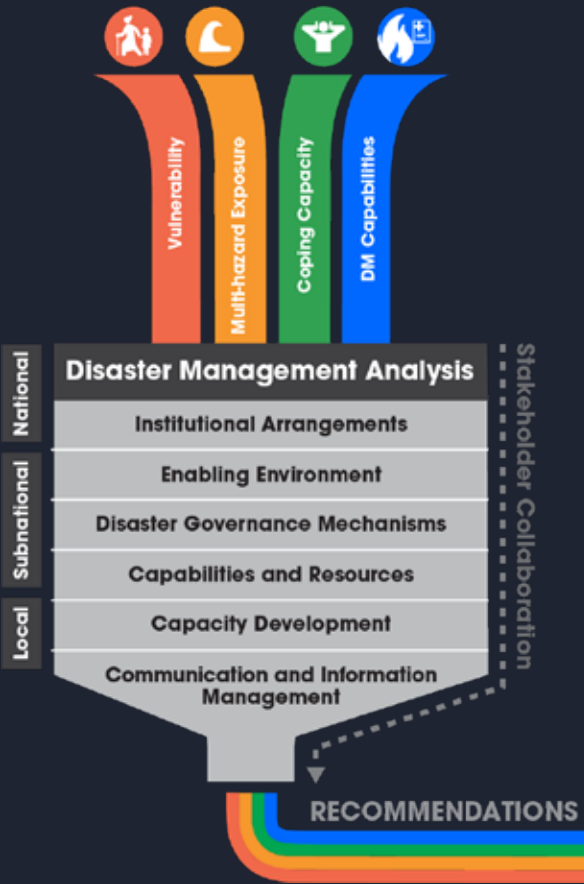


**RESILIENCE:** Provides an overall measure of the ability of a district to withstand shocks and disruptions to normal function. For instance, districts with lower resilience may also exhibit a decrease in the ability of a population to mitigate the negative impacts of a disaster and return to normal function. This measure is the combination of the vulnerability and coping capacity components.

# DMA METHODOLOGY

## DISASTER MANAGEMENT ANALYSIS

### RISK AND VULNERABILITY RESULTS



### ANALYSIS OBJECTIVE

Increase resilience and reduce disaster risk through disaster management capacity development initiatives.

The Disaster Management Analysis (DMA) identifies, codifies, and characterizes capacity implementation needs given risks identified in the RVA and a country's risk reduction goals. The analysis looks at the capabilities, resources, and systems that have been developed or implemented to reduce disaster

risk, to address unmet needs that arise from a subsequent disaster event, and to facilitate long-term recovery of people, economies, and societies.



# DISASTER MANAGEMENT THEMES

The DMA aims not only to limit hazard risk as assessed, but also address the anticipated response and recovery needs of hazard-exposed populations, economies, and societies. The manner in which unmet capacity is identified, qualified, and quantified supports a sharper focus on cost-effective investment planning. It also helps support long-term development in a manner that directly reflects the Sendai Framework and Sustainable Development Goals. The analysis considers needs in relation to multi-hazard risk, and is based on sector-defined capacity standards. Associated themes are listed below with examples of the data and information that help to inform the analysis.



**Institutional  
Arrangements**



**Enabling  
Environment**



**Disaster Governance  
Mechanisms**



**Capabilities  
and Resources**



**Capacity  
Development**



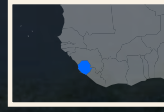
**Communication and  
Information Management**

# COUNTRY OVERVIEW

## SIERRA LEONE

### GEOGRAPHY

**Location:** Framed by the Northern Atlantic Ocean along its coastline, the Republic of Sierra Leone is located in West Africa, with Guinea and Liberia. In addition to striking mountains, the country's diverse terrain includes plateaus, mangrove forests, tropical rainforests, woodland, savannahs and mangrove swamps.



**71,740 sq km**

Total Area: ~27,699 sq mi

**402 km**

Coastline: ~250 mi

**1,093 km**

Land boundaries: (~679 mi)

#### Major regions

- Interior Plateau and Mountain region
- Coastal Swamp region
- Interior Plains (IP) region
- Western Area Peninsula

**4**

Administrative Provinces

**1**

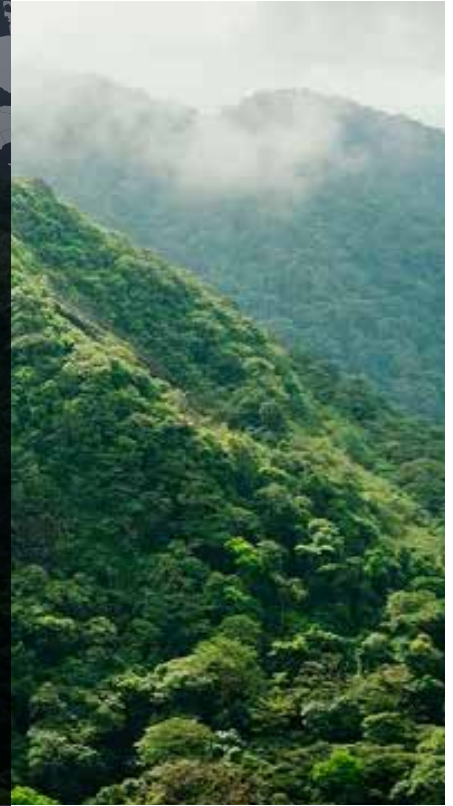
Western Area

#### Neighboring countries

Guinea and Liberia

#### Land Boundaries

- Land boundaries: 1,093 km (~679 mi)
- Guinea: 794 km (~493 mi)
- Liberia: 299 km (~186 mi)



### GEOLOGY AND CLIMATE

**Geology and Hydrology:** The country lies on the West African Craton of the African Plate is highly prone to flooding, landslides, coastal erosion, tropical storms and hazards from sea level rise. Flooding and landslide hazards are major concerns in the Western Area (the most densely populated administrative area) as a result of high slope susceptibility and heavy precipitation. Tropical storms and the threat of sea level rise are also major concerns in the Western Area and along the coastline.



**2.6 million (39.8%)**

Landslides



**642,400 (10.6%)**

Inland Flood



**2 million (31.5%)**

Wildfire



**104,000 (1.6%)**

Coastal Flood



**1.2 million (18.8%)**

Drought

**Climate:** Sierra Leone's climate is tropical, with a rainy and dry season. The rainy season lasts from May to October with an average rainfall of 3,000 mm. The dry season lasts from November to April. Key climate change risks for the region include an increase in:



Floods



Landslides



Severe storms



Sea level rise



Water borne diseases



Extreme temperature



Drought



Food Insecurity







## DEMOGRAPHICS

**7.1 million**

Total population

**16th Highest**

Socioeconomic vulnerability in the world

**3.2%**

Avg annual population growth



**Age 51.5**

Average life expectancy



**56**

Infant Deaths per 1,000 live births



**51%**

Adult Literacy



**0.46**

Doctors per 10,000 people



**4.4**

Nurses per 10,000 people



**12**

Hospital beds per 10,000 people



## ECONOMY

**\$3.4 billion (USD)**

Gross domestic product (GDP) 2019

**5.4%**

Average annual growth in GDP

**56.8%**

People living below national poverty line



**Statement on Economic Impacts of COVID-19:**

Due to the global pandemic of the coronavirus (COVID 19) spreading across the world and in Sierra Leone, it is expected that the global economic outlook will slow down in 2020. Before COVID-19 reached Sierra Leone, the provisional GDP for 2020 was estimated to grow at 4.5 percent. This has now been revised and expected to contract to -negative 2.2 percent in 2020 due to COVID-19.

### Key exports



Diesel powered and dump trucks



Iron ore, diamonds and rutile



Coniferous wood



Cocoa and coffee



Fish

### Major industries (% of GDP)

**55.2%**

Agriculture, Forestry and Fishing

**10%**

Industry

**39.8%**

Services



## (COUNTRY OVERVIEW CONTINUED)

# SIERRA LEONE

## KEY INFRASTRUCTURE

Population pressures and unmanaged urban growth in Freetown drives stark disparities in infrastructure and service availability (i.e. transportation, communications, energy, water, emergency services), which drop considerably in less-populated districts outside the Western Area. The draw of these amenities, as well as increased livelihood opportunities, continues to attract a burgeoning population to Freetown.

### Transportation



### Emergency services



## DISASTER MANAGEMENT

### Major capacity improvements / milestones (past 10 yrs)

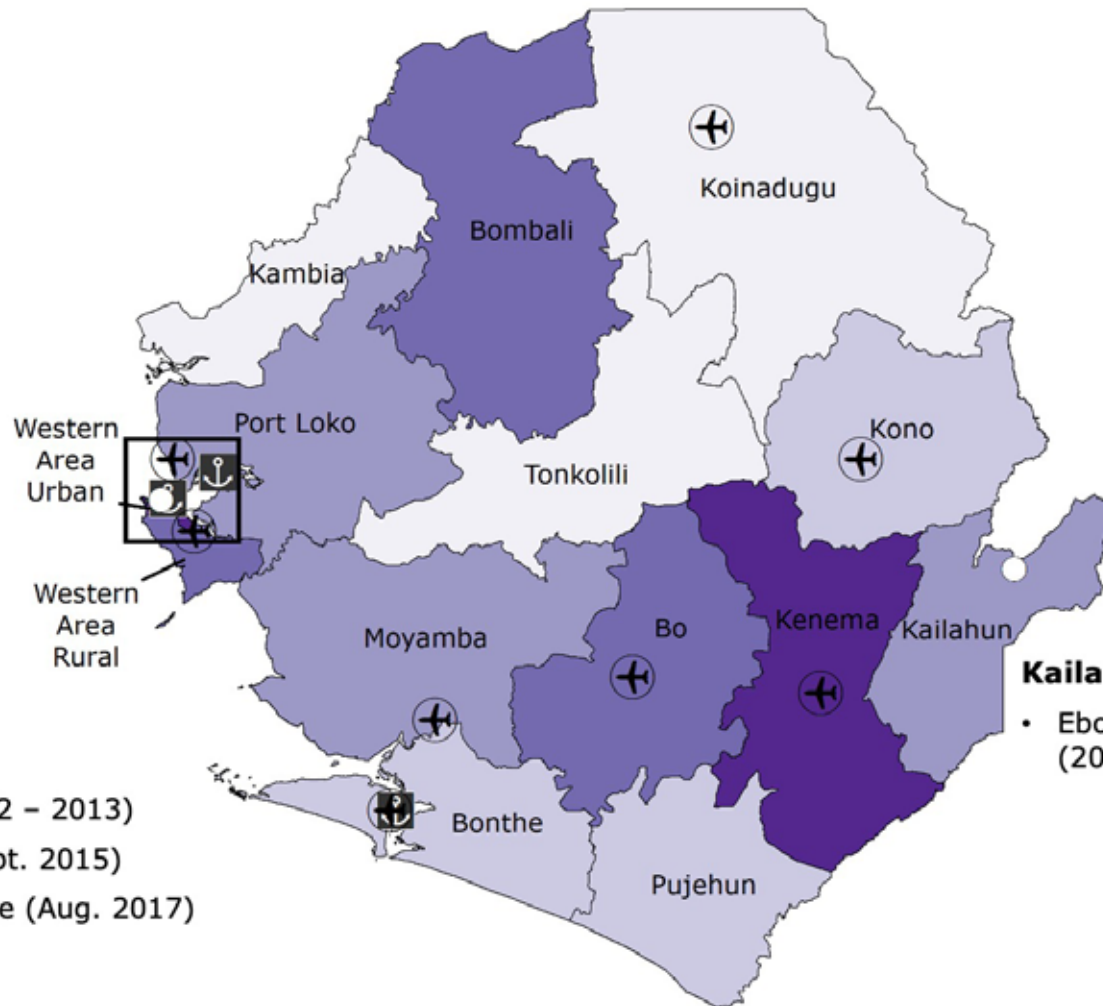
- Early adoption of Sendai Framework for DRR
- Ongoing progress with decentralization of DM through Local and Chiefdom Councils providing efficiency to disaster response and relief
- Applying lessons learned from Ebola:
  - Strengthening of DM institutions after Ebola by listing DM as a focus in 2018 budget.
  - Increased attention to developing government ability to prevent, mitigate, and respond to epidemics, and recover from their aftermath.
  - Early reaction and rapid response capacity to the novel coronavirus (COVID-19) during spring and summer 2020.
- Commitment to the goal to establish a standalone DM agency via DMA Act 2020

### Major disaster impacts (2010-2020)



# KEY INFRASTRUCTURE AND MAJOR DISASTER IMPACTS

## Resilience Index



## Freetown & Western Area

- Cholera Outbreak Origin (2012 - 2013)
- Torrential Rain and Flood (Sept. 2015)
- Floods and Sugarloaf Landslide (Aug. 2017)
- Flash Floods (2019)

## Kailahun

- Ebola Outbreak Origin (2012 - 2013)





Photo Credit: Coco Rioko

THE RVA

# RISK AND VULNERABILITY

ASSESSMENT RESULTS



# THE RVA

## RISK AND VULNERABILITY ASSESSMENT RESULTS

Provided in this section are the results of the Risk and Vulnerability Assessment (RVA) conducted by the Pacific Disaster Center as part of the Sierra Leone National Disaster Preparedness Baseline Assessment.

For details on the methodology and data sets used see Appendix A.

### SIERRA LEONE DISTRICTS



### SIERRA LEONE BACKGROUND

Sierra Leone is divided into four provinces – Eastern, Northern, Northwest, and Southern – and one Western Area comprised of the Freetown Peninsula. The 2017 update to national administrative boundaries further subdivided the country into 16 districts (see map below), including the new districts of Falaba (previously eastern Koinadugu) and Karene (previously northern Bombali, with parts of Port Loko and Koinadugu).

While the RVA compares risk at the district level, data availability for these newly established administrative units was limited at the time of analysis, with roughly 60% of the required data unavailable for Falaba and Karene Districts. Consequently, the scale of this assessment represents the official district boundaries (14 in total) in the 2015 Population and Housing Census of Sierra Leone, matching those used by the Government of Sierra Leone and UN agencies to report the majority of statistics leveraged for analysis. PDC will update the RVA to reflect the revised 2017 administrative boundaries when the data are available.

### COMPONENTS OF RISK



**Vulnerability**



**Coping Capacity**



**Multi-hazard Exposure**



Photo Credit: World at 1°C

# THE RVA

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# MULTI-HAZARD EXPOSURE

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## RESULTS BREAKDOWN

## THE RVA

# MULTI-HAZARD EXPOSURE

Sierra Leone has a tropical climate characterized by year-round high temperatures with two distinct seasons. The dry season, from December to April, is subject to dusty northeast trade winds, while the rainy season (May to November) brings torrential rain from the African monsoon. Annual rainfall tends to be highest in the coastal zone, which spans over 450 km of coastline (UNDP, 2020). The climate and geography of Sierra Leone leave the population exposed to multiple natural hazards, particularly heavy rain, winds, flooding, landslides, fire, and drought. From 2010 to 2019, natural disasters affected roughly 43.7 thousand people and claimed over 1,150 lives in Sierra Leone (EM-DAT, 2020). Recent major disasters are linked to episodes of heavy rain, including 2019 flash floods in Freetown and the 2017 flood and Sugar Loaf landslide in the Western Area. Total economic losses of the 2017 landslide are estimated at USD 31.65 million, while the preliminary cost of resilient recovery is estimated at USD 82.41 million (World Bank, 2017).

Exposure to natural hazards in Sierra Leone is compounded by extreme socioeconomic vulnerability, with over half the population living in poverty and a national economy that is still recovering from the Sierra Leone Civil War (1991-2002) and the Ebola crisis (2014-2016) (World Bank, 2020). Consequently, Sierra Leone is at increased risk of disaster from natural hazards.

### Global Multi-Hazard Exposure Rank

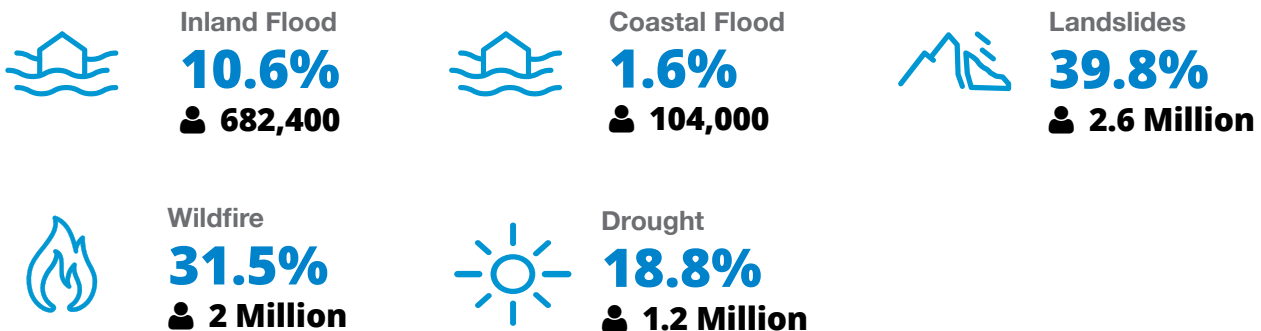
**144** OF 207 COUNTRIES

### Sierra Leone's Rank among West African Countries

**6** OF 16 COUNTRIES

## SIERRA LEONE ESTIMATED POPULATION AND CAPITAL EXPOSURE

Multi-hazard exposure at the district level in Sierra Leone was assessed by combining components of inland flood, coastal flood, landslides, wildfire, and drought.



## MULTI-HAZARD EXPOSURE BY DISTRICT

	RANK	DISTRICT	INDEX SCORE
VERY HIGH	1	Koinadugu	0.858
	2	Western Area Urban	0.849
HIGH	3	Kono	0.757
	4	Kailahun	0.619
	5	Bombali	0.510
MEDIUM	6	Western Area Rural	0.485
	7	Tonkolili	0.422
	8	Kenema	0.403
LOW	9	Kambia	0.250
	10	Pujehun	0.240
	11	Port Loko	0.229
VERY LOW	12	Bo	0.158
	13	Moyamba	0.140
	14	Bonthe	0.053



### MULTI-HAZARD EXPOSURE BY DISTRICT

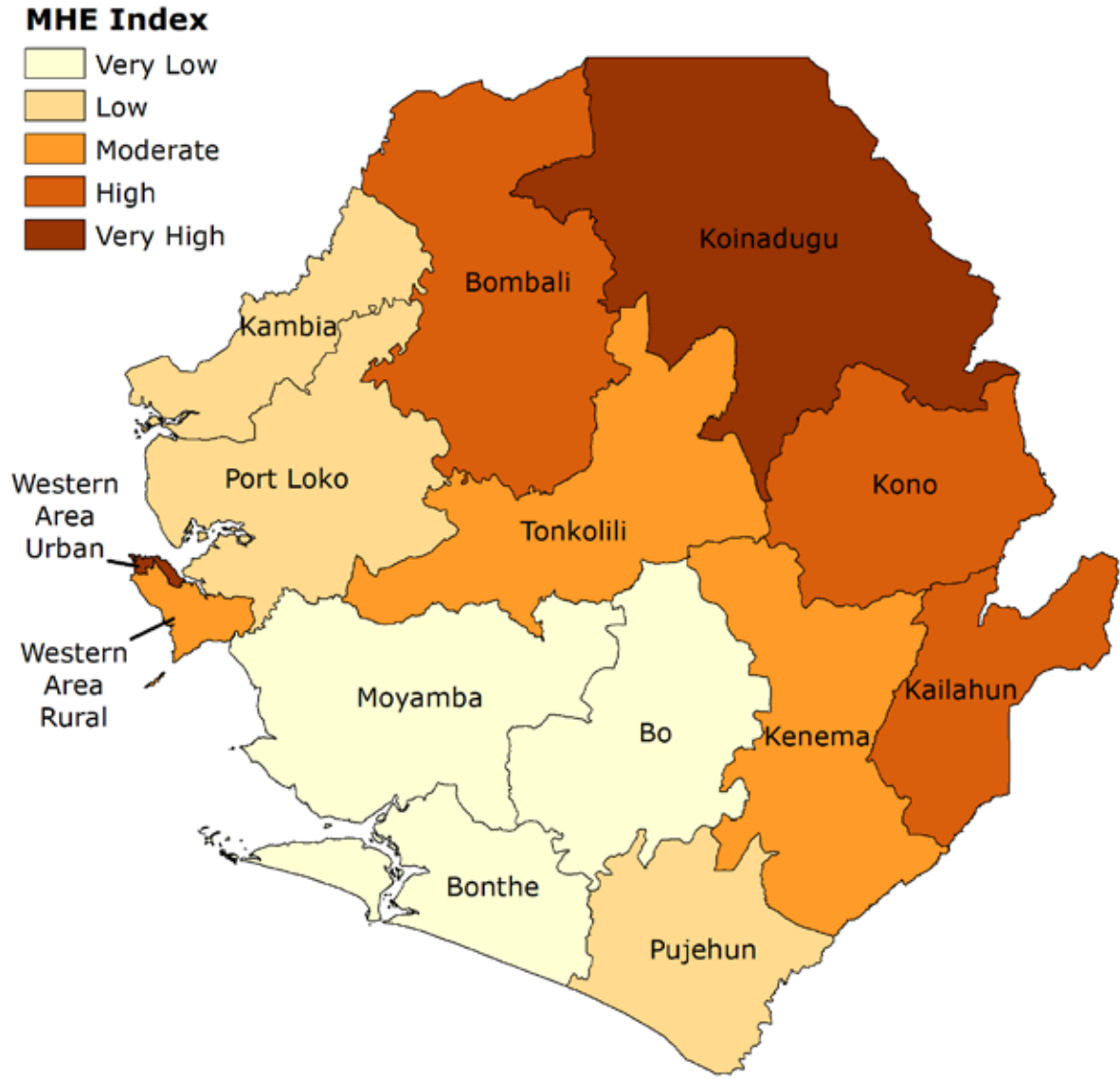




Photo Credit: DFID, Flickr

# THE RVA

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# VULNERABILITY

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## RESULTS BREAKDOWN



## THE RVA

# VULNERABILITY

Vulnerability measures the physical, environmental, social, and economic conditions and processes that increase the susceptibility of communities and systems to the damaging effects of hazards. Vulnerability data are designed to capture the multi-dimensional nature of poverty, the inequality in access to resources due to gender, and the ability of a given area to adequately support the population. Breaking down each vulnerability subcomponent to the indicator level allows users to identify the key drivers of vulnerability to support risk-reduction efforts and policy decisions. In coordination with stakeholders, the following indicators were selected to measure vulnerability subcomponents in Sierra Leone:

### Global Vulnerability Rank

**16** OF 160 COUNTRIES

### Sierra Leone's Rank among West African Countries

**5** OF 16 COUNTRIES

## VULNERABILITY SUBCOMPONENTS AND INDICATORS



#### Population Pressures

- Average Annual Population Change
- Average Annual Urban Population Change
- Net Migration Rate
- Food Insecurity
- Youth Bulge



#### Gender Inequality

- Female to Male Land Ownership
- Female to Male Home Ownership
- Female to Male Labor Participation
- Female to Male Secondary Education Enrollment
- Female Seats in Local Council



#### Information Access Vulnerability

- Illiteracy Rate (Age 10 and Older)
- Primary School Attendance Rate
- Secondary School Completion Rate
- Households with Internet
- Households with Television
- Households with Radio



#### Economic Constraints

- Economic Dependency Ratio
- Population in Poorest Wealth Quintile
- Income Inequality (GINI)
- Child Labor Participation (Age 10-14)



#### Vulnerable Health Status

- Life Expectancy
- Infant Mortality Rate
- Maternal Mortality Ratio
- Acute Malnutrition (Children <5)
- Disability
- Tuberculosis Incidence
- Malaria Prevalence in Children
- HIV Prevalence



#### Clean Water Access Vulnerability

- Access to Improved Water
- Access to Improved Sanitation
- Population at High Risk of E. Coli Contamination of Drinking Water
- Water Source > 30 Minutes from Home



#### Environmental Stress

- Average Annual Forest Loss
- Livestock Density
- Erosion Potential
- Ecological Change
- Area Affected by Mining

## VULNERABILITY BY DISTRICT

	RANK	DISTRICT	INDEX SCORE
VERY HIGH	1	Tonkolili	0.715
	2	Koinadugu	0.618
HIGH	3	Pujehun	0.584
	4	Kono	0.577
	5	Bonthe	0.559
MEDIUM	6	Moyamba	0.556
	7	Kambia	0.538
	8	Kailahun	0.534
LOW	9	Port Loko	0.531
	10	Bombali	0.491
	11	Bo	0.442
VERY LOW	12	Western Area Rural	0.427
	13	Kenema	0.335
	14	Western Area Urban	0.312

## VULNERABILITY BY DISTRICT

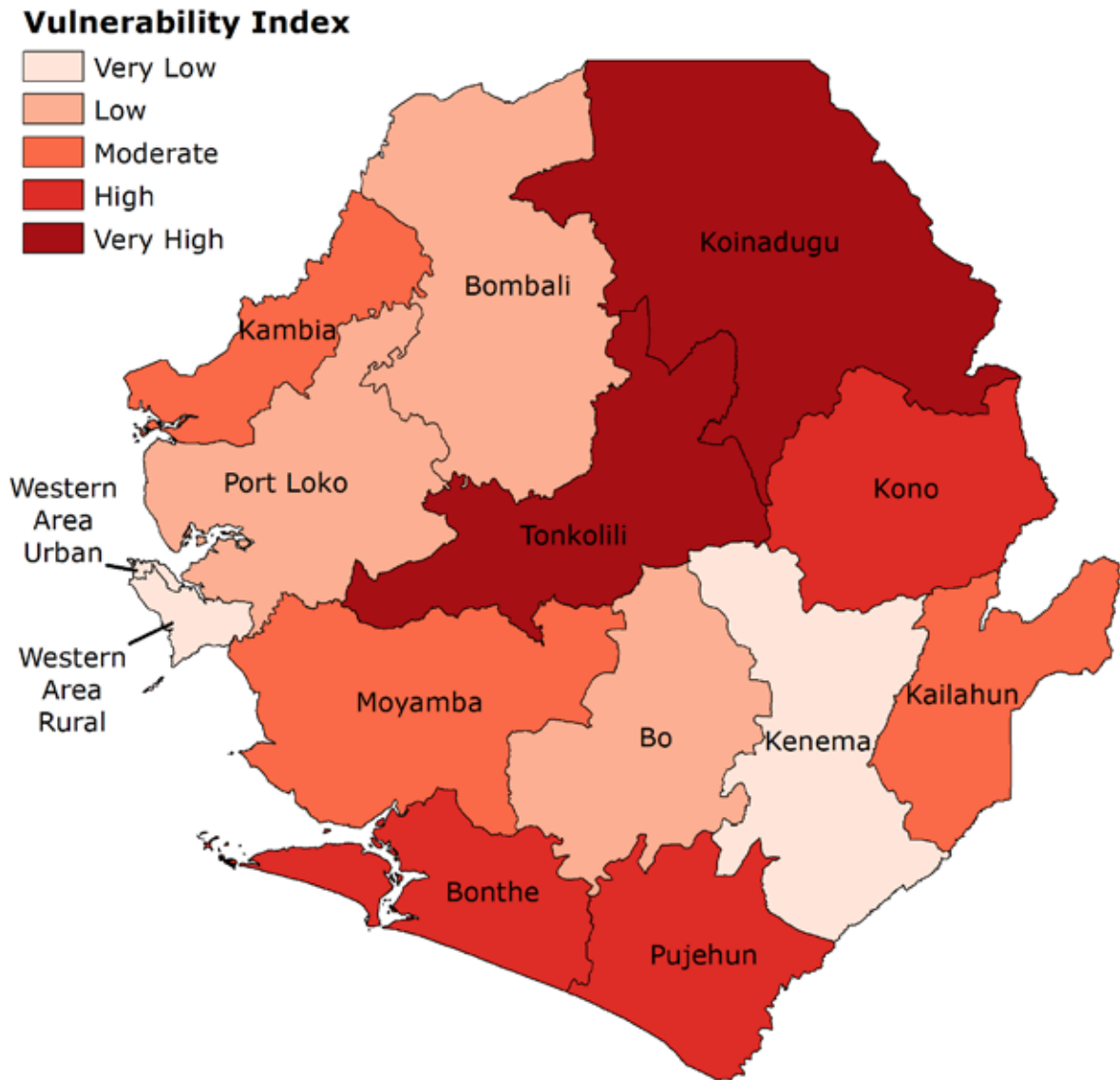




Photo Credit: Anadolu Agency

# THE RVA

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# COPING CAPACITY

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## RESULTS BREAKDOWN



## THE RVA

# COPING CAPACITY

Coping Capacity describes the ability of people, organizations, and systems, using available skills and resources, to face and manage adverse conditions, emergencies, or disasters.

In coordination with stakeholders, the following indicators were selected to measure coping capacity subcomponents in Sierra Leone. Breaking down each coping capacity subcomponent to the indicator level allows users to identify the key drivers of coping capacity to support risk-reduction efforts and policy decisions.

### Global Coping Capacity Rank

**157** OF 176 COUNTRIES

### Sierra Leone's Rank among West African Countries

**10** OF 16 COUNTRIES

## COPING CAPACITY SUBCOMPONENTS AND INDICATORS



#### Economic Capacity

Household with Bank Account  
Employment  
Population in the Highest Wealth Quintile  
Financial Institutions per 100,000 Persons



#### Governance

Conflict  
Voter Participation



#### Environmental Capacity

Protected Areas



#### Healthcare Capacity

Hospital Beds per 10,000 People  
Physicians per 10,000 People  
Nurses per 10,000 People  
Average Distance to Nearest Hospital  
Vaccination Coverage  
Health Service Readiness



#### Transportation Capacity

Road Density  
Average Distance to Port or Airport



#### Communications Capacity

Households with Mobile Phone  
Cellular Towers per 100,000 Persons



#### Energy Capacity

Households Connected to Electric Grid  
Fuel Stations per 100,000 Persons



#### Emergency Service Capacity

Firefighters per 100,000 Persons  
Search and Rescue Teams per 100,000 Persons  
Fire Vehicles per 100,000 Persons



## COPING CAPACITY BY DISTRICT

	RANK	DISTRICT	INDEX SCORE
VERY HIGH	1	Western Area Rural	0.685
	2	Western Area Urban	0.677
HIGH	3	Kenema	0.666
	4	Bo	0.65
	5	Bombali	0.622
MEDIUM	6	Port Loko	0.506
	7	Moyamba	0.454
	8	Tonkolili	0.414
LOW	9	Kailahun	0.393
	10	Kono	0.391
	11	Bonthe	0.375
VERY LOW	12	Pujehun	0.354
	13	Koinadugu	0.31
	14	Kambia	0.245

### COPING CAPACITY BY DISTRICT

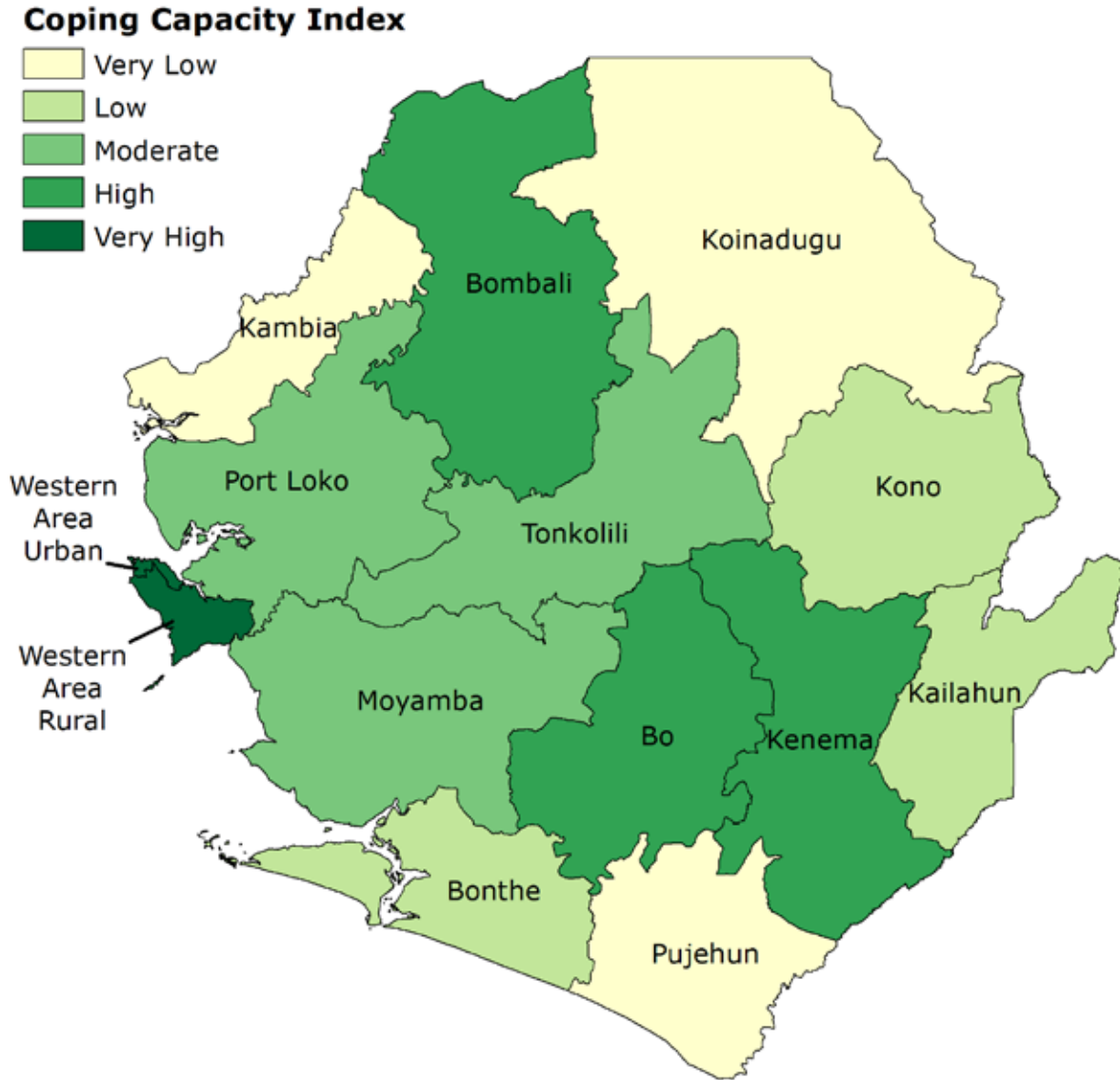




Photo Credit: Red Cross

THE RVA

# RESILIENCE

## RESULTS BREAKDOWN

## THE RVA

# RESILIENCE

Resilience represents the combination of susceptibility to impact with the relative ability to absorb, respond to, and recover from short-term disaster impacts. Resilience provides an indication of current socio-economic and disaster management conditions on the ground, independent of hazard exposure.

### Global Resilience Rank






**149** OF 155 COUNTRIES

### Sierra Leone's Rank among West African Countries

**14** OF 16 COUNTRIES

## APPLYING RESILIENCE DATA

### Resilience data can be used to:

-  Prioritize response and recovery efforts during hazard events.
-  Identify the social, cultural, and economic factors that influence disaster risk and vulnerability.
-  Provide the necessary justification to support policy decisions that will protect lives and reduce losses resulting from disasters.
-  Establish a provincial-level foundation for monitoring risk and vulnerability over time.
-  Enhance decision making for disaster risk reduction initiatives.

## RESILIENCE COMPONENTS

Resilience in Sierra Leone was calculated by averaging Vulnerability and Coping Capacity. Results are displayed across each district below, while the four main drivers of resilience with detailed recommendations are provided in the individual district profiles.



### Vulnerability



### Coping Capacity

## RESILIENCE BY DISTRICT

	RANK	DISTRICT	INDEX SCORE
VERY HIGH	1	Western Area Urban	0.682
	2	Kenema	0.666
HIGH	3	Western Area Rural	0.629
	4	Bo	0.604
	5	Bombali	0.565
MEDIUM	6	Port Loko	0.487
	7	Moyamba	0.449
	8	Kailahun	0.429
LOW	9	Bonthe	0.408
	10	Kono	0.407
	11	Pujehun	0.385
VERY LOW	12	Kambia	0.353
	13	Tonkolili	0.349
	14	Koinadugu	0.346



### RESILIENCE BY DISTRICT

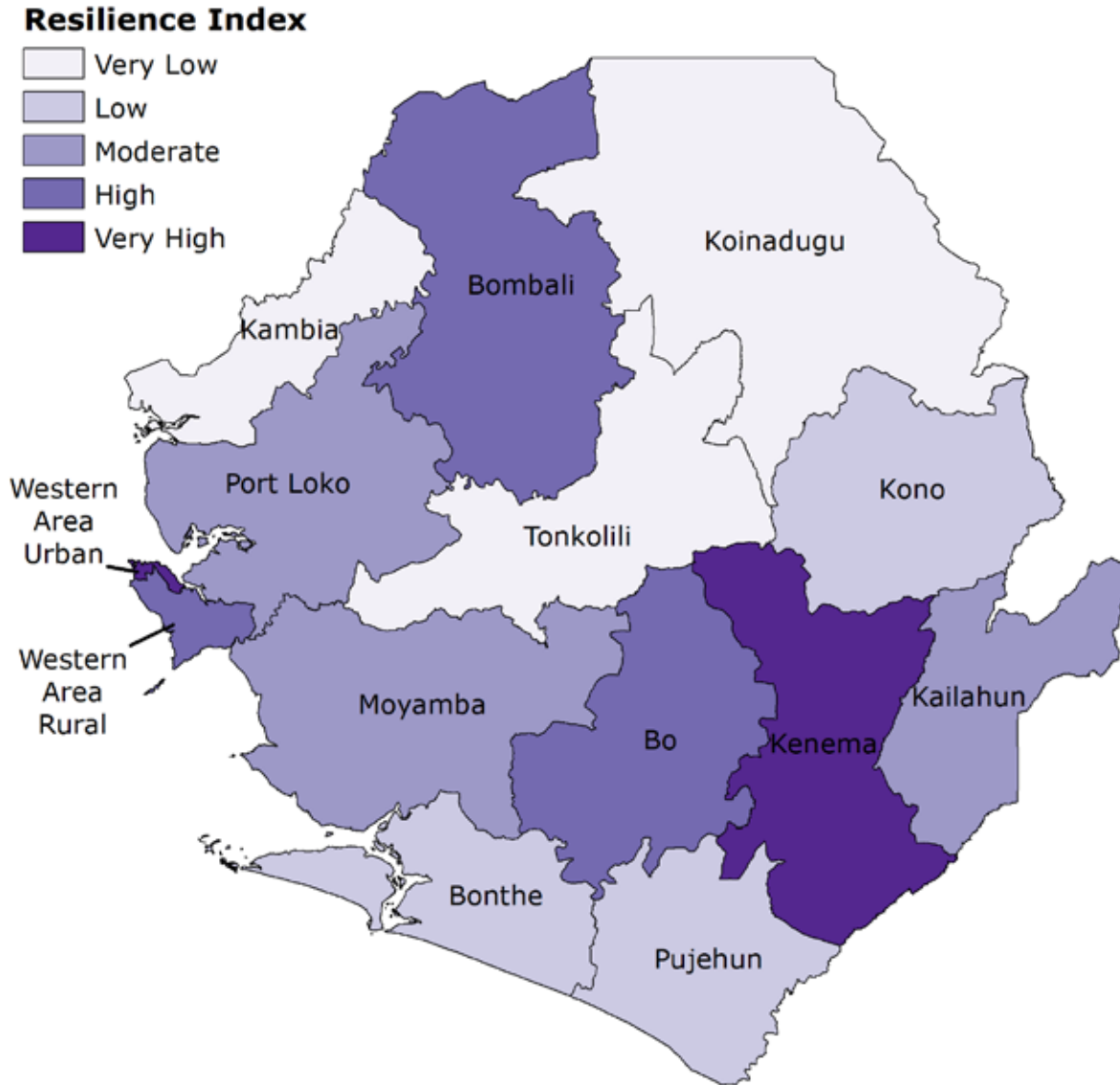




Photo Credit: Red Cross

**THE RVA**

# **HAZARD-SPECIFIC RISK**

**RESULTS BREAKDOWN**

## THE RVA

# HAZARD SPECIFIC RISK

Hazard-Specific Risk examines individual hazard exposure in combination with a district's resilience to provide a clear understanding of risk drivers for each hazard type. Hazard-Specific Risk provides a tool for disaster managers to anticipate, plan for, and mitigate outcomes of specific hazard events across Sierra Leone.

### APPLYING HAZARD SPECIFIC RISK DATA

Hazard-Specific Risk data can be used to:

- + Examine socioeconomic and cultural factors that make certain populations more susceptible to negative outcomes from a specific hazard.
- + Anticipate potential impacts of a specific hazard on a district's population.
- + Enhance national and subnational multi-hazard planning.
- + Prioritize national and district-level hazard-specific mitigation actions.
- + Provide necessary justification to enhance hazard monitoring and implement early warning systems.

### HAZARD RISK COMPARED



Coastal Flood



Inland Flood



Drought



Landslide

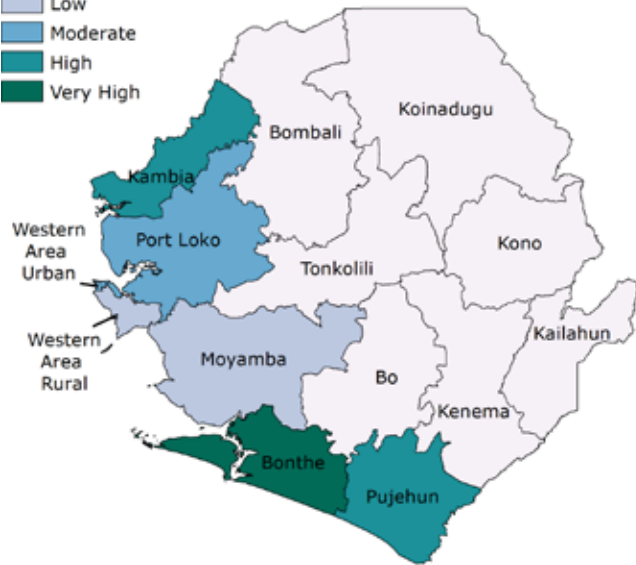


Wildfire

### COASTAL FLOODING RISK

**Coastal Flood Risk Index**

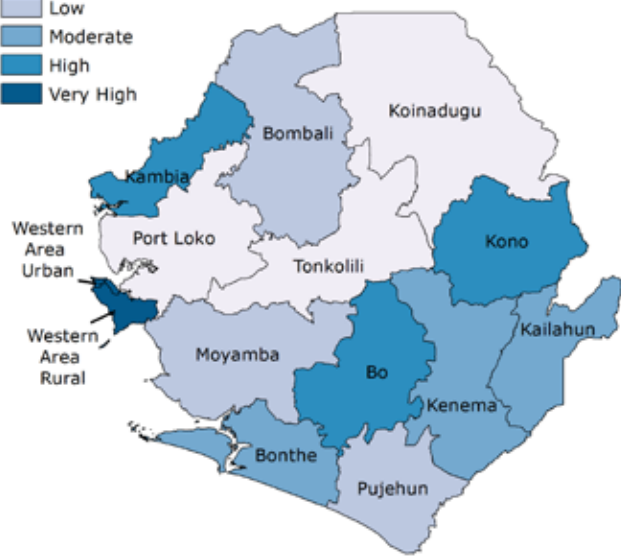
- Very Low
- Low
- Moderate
- High
- Very High



### INLAND FLOODING RISK

**Inland Flood Risk**

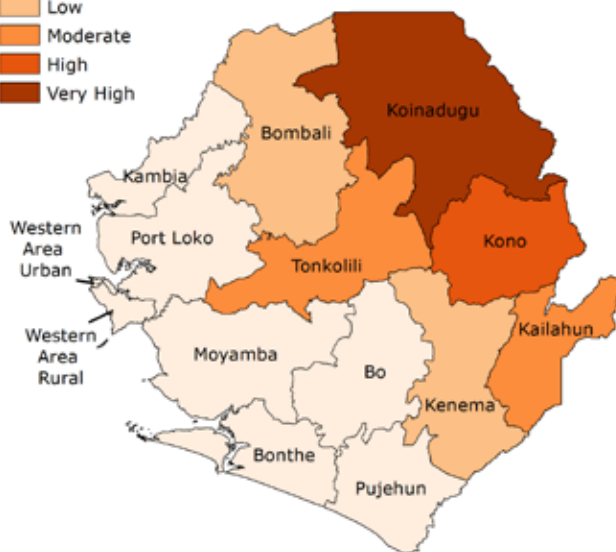
- Very Low
- Low
- Moderate
- High
- Very High



### DROUGHT

**Drought Risk Index**

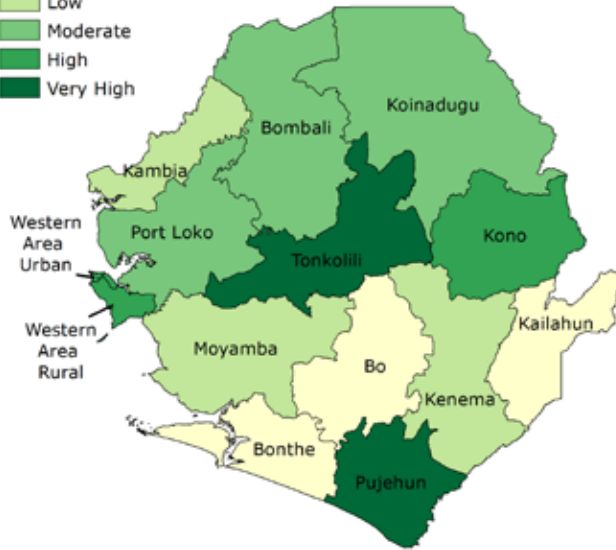
- Very Low
- Low
- Moderate
- High
- Very High



### LANDSLIDE RISK

#### Landslide Risk Index

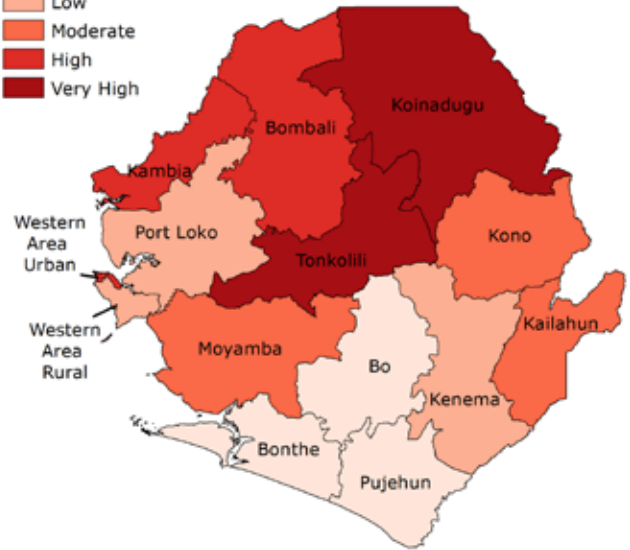
- Very Low
- Low
- Moderate
- High
- Very High



### WILDFIRE RISK

#### Wildfire Risk Index

- Very Low
- Low
- Moderate
- High
- Very High







THE RVA

# MULTI-HAZARD RISK

RESULTS BREAKDOWN

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# MULTI-HAZARD RISK

Multi-hazard Risk combines hazard exposure, susceptibility to impact, the relative ability to absorb negative disaster impacts to provide a collective measure of how each district may be affected by hazard and disasters as a whole over time. Analyzing risk information throughout all phases of disaster management - mitigation, preparedness, response, recovery - improves operations and promotes efficient resource allocation.

Applying a repeatable methodology and identifying provincial risk provides a baseline for conducting temporal analysis and a better understanding of the potential impact of climate change. Analyzing trends in risk allows decision-makers to determine effective disaster risk reduction initiatives and implement evidence-based policy.

### Global Multi-hazard Risk Rank

**63** OF 155 COUNTRIES

### Sierra Leone's Rank among West African Countries

**3** OF 16 COUNTRIES

## MULTI-HAZARD RISK COMPONENTS

Multi-hazard Risk in Sierra Leone was calculated by averaging Multi-hazard Exposure, Vulnerability and Coping Capacity. Results are displayed across each district below, while additional detail on district-level risk is provided in the individual district profiles.



**Multi-hazard Exposure**



**Vulnerability**

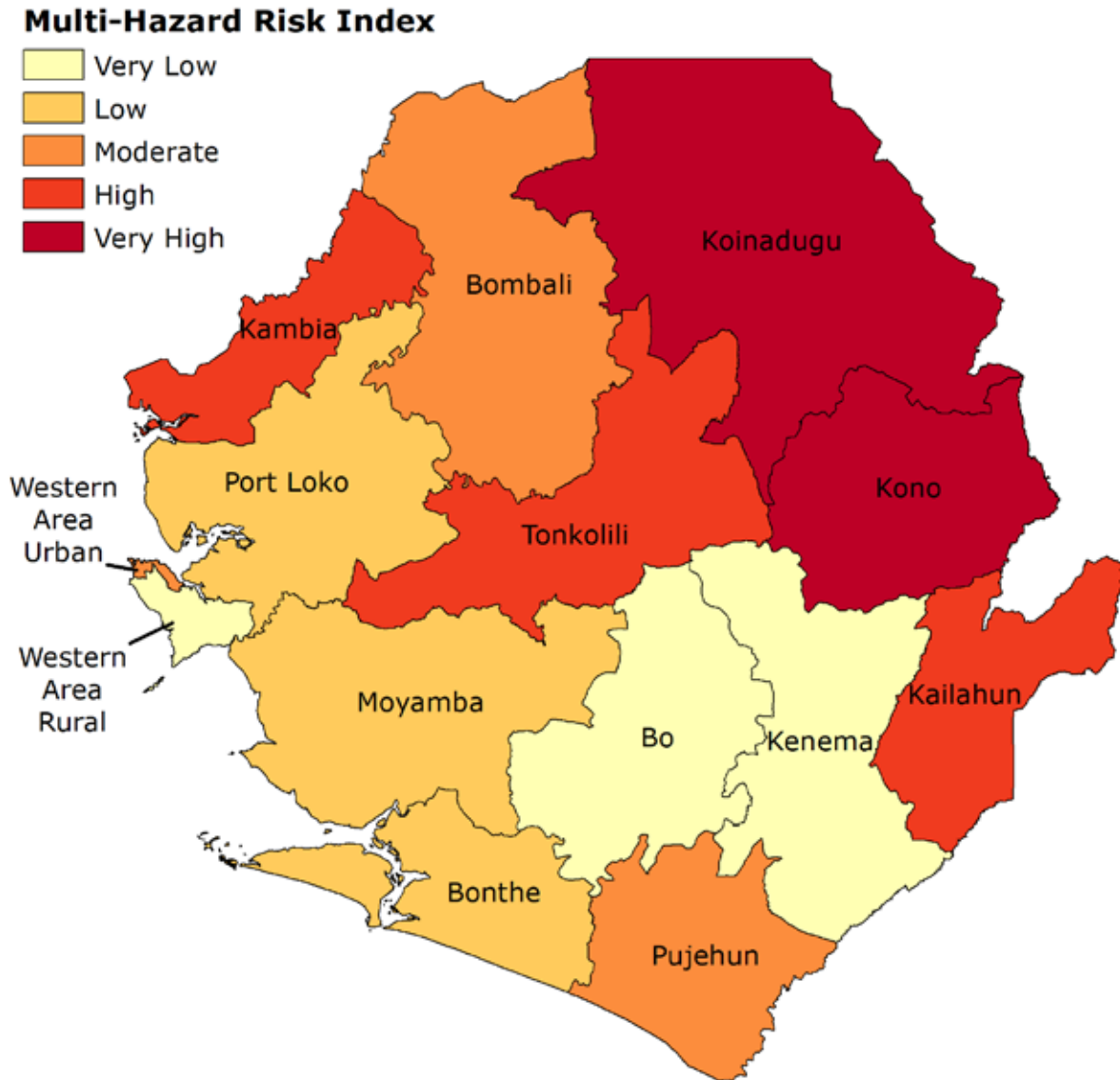


**Coping Capacity**

## MULTI-HAZARD RISK BY DISTRICT

	RANK	DISTRICT	INDEX SCORE
VERY HIGH	1	Koinadugu	0.722
	2	Kono	0.648
HIGH	3	Kailahun	0.586
	4	Tonkolili	0.574
	5	Kambia	0.514
MEDIUM	6	Western Area Urban	0.495
	7	Pujehun	0.49
LOW	8	Bombali	0.46
	9	Port Loko	0.418
	10	Moyamba	0.414
VERY LOW	11	Bonthe	0.412
	12	Western Area Rural	0.409
	13	Kenema	0.357
	14	Bo	0.317

### MULTI-HAZARD RISK BY DISTRICT







THE DMA

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# DISASTER MANAGEMENT ANALYSIS

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FINDINGS AND RECOMMENDATIONS

# THE DMA

## DISASTER MANAGEMENT ANALYSIS FINDINGS AND RECOMMENDATIONS

Provided in this section are the results of the Disaster Management Analysis (DMA) that was conducted as part of the Sierra Leone National Disaster Preparedness Baseline Assessment. The outcome of the DMA enables more effective prioritization of risk-reduction and resilience-building initiatives. Considering diverse community needs, operational successes and barriers, the DMA results enable and communities to prioritize actions for disaster risk reduction and disaster governance at all levels. The following section summarizes key findings in six broad areas of analysis: Institutional Arrangements; Enabling Environment; Disaster Governance Mechanisms; Capabilities and Resources; Capacities; and Communications and Information Management. For details on the DMA methodology and data see Appendix B.

### DISASTER MANAGEMENT ANALYSIS THEMES AND SUBTHEMES



#### **Institutional Arrangements**

- Organizational Structures
- Leadership Arrangements
- Mechanisms for Stakeholder Engagement



#### **Capacity Development**

- Capacity Development Plans and Strategies
- Training and Education Programs and Facilities
- Monitoring and Evaluation Processes and Systems



#### **Enabling Environment**

- Legal Foundations
- Financial Resources
- Strategies
- Public Confidence
- Political Support
- Attitudes and Experience



#### **Capabilities and Resources**

- Dedicated Facilities and Equipment
- Human Resources
- Inventory of Commodities and Supplies
- Targeted Functional Capabilities



#### **Disaster Governance Mechanisms**

- Plans and Processes
- Command, Control, and Coordination Systems
- Governance Infrastructure



#### **Communication and Information Management**

- Hazard and Risk Analysis Systems
- Disaster Assessment
- Media and Public Affairs
- Information Collection, Management, and Distribution

# THE DMA SUMMARY OF FINDINGS



## INSTITUTIONAL ARRANGEMENTS

- Limited or No Capacity
- Early Capacity Development
- Achievement with Significant Limitations
- Substantial Progress with Some Limitation
- Advanced Capacity

### CURRENT STATUS

### CURRENT SUB-THEME STATUS



Organizational Structures



Leadership



Stakeholder Engagement

Sierra Leone’s national disaster management institutions have evolved around national security concerns. The National Security and Central Intelligence Act (NSCIA) of 2002 mandates the Office of National Security (ONS) to coordinate national emergencies emanating from all- hazards. The Disaster Management Department (DMD) that was created in 2004 within the ONS carries out those duties. However, DMD’s role has been limited to response operations. Although Sierra Leone maintains a DM structure that delineates the roles to participating ministries, departments, and agencies (MDAs), challenges remain primarily due to the lack of legislative action and budgetary commitment. Through this structure, District Disaster Management Committees (DDMCs) were established to serve as first responders at the regional level. Recent disasters highlighted those gaps in the existing institutions and the need for an independent Disaster Management Agency, which aligns with Sierra Leone’s formal commitment to the Disaster Risk Reduction and Climate Change Action. The Republic of Sierra Leone Armed Forces (RSLAF) and the Sierra Leone Red Cross are two major players in DM activities. The private sector’s involvement is on an ad hoc and voluntary basis. The higher education institutions do not have a significant role in either generating or applying the knowledge to DM.





## ORGANIZATIONAL STRUCTURES

- Organization of Government DM Functions: Sierra Leone has a dedicated disaster management agency that is part of the Office of National Security.** The Disaster Management Department (DMD) was formally established under the Office of National Security in 2004. The Government of Sierra Leone enacted the National Security and Central Intelligence Act in 2002 (section 18, subsection IV) which mandated ONS to coordinate the management of national emergencies both natural and man-made. (National Security and Central Intelligence Act, 2002.)
- Development of DM Organizational Structure: A defined national disaster management structure and organizational arrangement exist, but the implementation of the structure has not yet been fully operationalized.** There is a defined national disaster management structure in Sierra Leone, which operates in both steady-state and during times of crisis; however implementation challenges still exist, especially in the clarity of command and coordination structures. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Sierra Leone ONS-DMD National Emergency Coordination Pillars Terms of Reference (ToR) (n.d.); DMD Overview presentation at NDPBA kickoff, Oct. 2018; Interviews with ONS-DMD, Dec. 2019.)
- Bi/Multilateral Engagement: Sierra Leone does not maintain an office or entity dedicated exclusively to the promotion and engagement with bilateral, international, and other humanitarian actors.** ONS-DMD maintains responsibility for bilateral and international coordination with humanitarian partners. However, the current structure maintained by the agency has not assigned coordination duties to an exclusive staff position. (Interviews with ONS-DMD, May & Dec. 2019.)
- Regionalized Capacity: Regional DM offices exist in Sierra Leone but have limited operational functions.** The national security structure is decentralized through Provincial Security Committees (PROSECs) and District Security Committees (DISECs). It is through this structure that District Disaster Management Committees (DDMCs) were established to serve as first responders at the regional level. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015). The implementation of the above structure is not fully operational (Interviews with ONS-DMD, Dec. 2019).
- Disaster Risk Reduction (DRR) Platform: Plans exist to establish a DRR platform, but implementation is not complete, or platform is not functioning at ideal capacity.** The 2018 National Disaster Risk Management Policy (not yet ratified) acknowledges the Sendai Framework as one of the mechanisms to address specific issues of the National Poverty Reduction Strategy and to aid in meeting sustainable development goals. (Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018.) Challenges remain with gathering the data and necessary information to track Sendai targets due to the absence of government-wide coordination mechanisms (Interviews with ONS-DMD, Dec. 2019).
- Climate Change Adaptation (CCA) Platform: Plans exist to establish a DRR platform, but implementation is not complete, or platform is not functioning at ideal capacity.** Sierra Leone has



established the National Climate Change Secretariat within the Environmental Protection Agency as the primary national government agency for climate change response. The 2014 and 2018 (not yet ratified) National Disaster Risk Management Policies acknowledge CCA as one of 11 Focus Areas of national priority. (Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018.) A new National Adaptation Plan, which was scheduled for 2020 release, remains under development. (Interviews with ONS-DMD, Dec. 2019.)

- Sustainable Development (SD) Platform: Plans exist to establish a sustainable development platform, but implementation is not complete, or platform is not functioning at ideal capacity.** The Government of Sierra Leone manages the implementation of the Sustainable Development Goals (SDG) 2030 Agenda through a dedicated parliamentary committee, which regularly engages the Ministry of Planning and Economic Development (MoPED), the Ministry of Foreign Affairs & International Cooperation, and the Supreme Audit Service to ensure effective tracking and implementation of the SDGs. However, the sector MDAs see the multiple reporting requirements on national- and global-development agendas as a burden. (Sierra Leone’s Medium-Term National Development Plan: 2019-2023; Interviews with ONS-DMD, Dec. 2019.)
- Integration of DRR, CCA, and SD: Some integration exists, or integration is planned.** DRR, CCA, and SDG have been identified as priorities for Sierra Leone and are included in the conceptualization of a new disaster management agency being planned under the 2018 National Disaster Risk Management Policy. (Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Interviews with ONS-DMD, Dec. 2019.)
- Military Engagement: The military is formally integrated into the Disaster Management structure of Sierra Leone.** Under its Military Aid to Civil Authorities (MACA), the Republic of Sierra Leone Armed Forces (RSLAF), i.e., the military, can expand beyond logistics and allow for the utilization of military resources to support mitigation efforts, recovery of deceased persons, and policing efforts, including control of population movements. To facilitate efficient coordination of military support into the civilian-led disaster management structure, a RSLAF liaison officer is assigned full time to ONS-DMD and is co-located in the DMD office. (Sierra Leone MACA, 2014; Interviews with ONS-DMD, May & Dec. 2019.)



## LEADERSHIP

- Emergency Management Leadership Arrangement: Functional leadership positions (e.g., preparedness, operations, recovery) exist within the existing DMD structure and chain of command.** The current national disaster management structure falls under the National Security Council (NSC) headed by the President, or in his absence the Vice President and the National Security Council Coordinating Group (NSCCG). The national security structure has decentralized representatives at the province and district levels through Provincial Security Committees (PROSECs) and District Security Committees (DISECs), in which Disaster Management Committees were established to serve as “first responders.” (Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Interviews with ONS-DMD, May & Dec. 2019.)

- **Leadership Positions Filled: All leadership positions are filled.** All appointed senior-leadership positions at DMD are currently filled. However, there are currently technical staff vacancies. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Job-specific Competencies of Leadership Positions: Not established.** The current DMD-ONS leaders have the appropriate experience and skills accumulated over a decade, including leading major preparedness and response-and-recovery efforts. However, for appointed positions, job-specific competencies for DMD leadership have not been institutionalized. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Political Access of DM Leadership: DM leadership reports to the highest level of government through an intermediary position.** At an operational level, the Director of the DMD reports to the Office of National Security (ONS), specifically to the National Security Coordinator (NSCOORD). (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, Dec. 2019.)
- **Proxy Leadership Arrangements: Appointment of proxy leaders is possible, formal procedures exist, and systems to support this arrangement are fully implemented.** The National Security and Central Intelligence Act of 2002 provides the authority for DM leadership to appoint or otherwise ensure incident-specific proxy leadership during major disaster events such that centralized leadership is maintained during concurrent incidents. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; National Flood Preparedness Response Plan for Sierra Leone, 2016.)
- **Special Decision-Making Committees for Response and Recovery: Policies and plans call for such committees and/or structures, but implementation is not yet complete.** The National Platform for Disaster Risk Reduction (NPDRR) is the highest strategic/advisory or supervisory body in the Sierra Leone national DM system. NPDRR, although rarely convened and not fully functional, is responsible for the direction and creation of national policy and strategic guidance. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, May & Dec. 2019.)
- **Special Disaster Risk Management Policy-Making Committees: Special disaster risk management policy-making structures are in place.** Although rarely convened, National Platform for Disaster Risk Reduction (NPDRR) is the highest strategic/advisory or supervisory body in the Sierra Leone national disaster management system. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, May & Dec. 2019.)
- **Multi-Stakeholder Participation in Decision-Making Committees: Stakeholders are included, but have limited operational or decision-making responsibilities.** Both the NPDRR and NSSG include a broad range of stakeholders from Sierra Leone ministries, departments, and agencies. Also, the functionally grouped Pillar system has designated functional leads (e.g., logistics) with co-leads including international partners. However, not all are effectively integrated into the decision-making process. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; National Flood Preparedness Response Plan for Sierra Leone, 2016; Sierra Leone ONS-DMD National Emergency Coordination Pillars Terms of Reference (ToR), n.d.; Interviews with ONS-DMD, Dec. 2019.)



## STAKEHOLDER ENGAGEMENT

- Non-governmental Stakeholder Representation in Government DM Structures: Disaster management organizational arrangements recognize the role of non-governmental organizations (NGOs) in the Sierra Leone official DM and DRR structures using general terms.** NGOs are mentioned in disaster preparedness and response plans and provide broad areas of support, and each functional Pillar has a government lead and several partner organizations from the international community. (Sierra Leone ONS-DMD National Emergency Coordination Pillars Terms of Reference (ToR), n.d; Interviews with ONS-DMD, May & Dec. 2019.)
- NGO and Private-Sector Inventory: An inventory and registry exist with DMD but lacks information on capabilities and resources, which limits the operational and planning utility of the information.** The Sierra Leone Association of NGOs (SLANGO) is a consortium of NGOs, both local and foreign, that seeks to build the capacity of civil society organizations for increased participation in governance and reduce the duplication of their efforts. Membership in SLANGO has become a requirement for NGOs before commencing operations in the country. However, they are not as active as they once were. (Non-Governmental Organizations (NGOs) Survey for National Accounts Compilation, 2013; Interviews with ONS-DMD, May & Dec. 2019.)
- Private-sector Engagement: Businesses have the capacity to support DM efforts but are not currently formally engaged.** During response operations, the private sector contributes by providing financial support and in-kind donations of goods and services. However, no formal policies or arrangements exist to guide the participation of private entities in disaster management in Sierra Leone. (Interviews with ONS-DMD, Dec. 2019.)
- NGO Organizational Arrangements: NGOs with DM program areas or missions coordinate through informal networks on both pre- and post-disaster issues.** Although legally the NGOs must register with SLANGO, it does not appear that there are the necessary mechanisms to support this effort and ensure that it is fully operationalized. (Interviews with ONS-DMD, Dec. 2019.)
- Public Private Partnerships (PPPs): Sierra Leone does not have a formal public-private arrangement to support disaster operations.** During response operations, the private sector does contribute financial and goods/service donations; however, these are typically ad hoc and not formalized. (Interviews with ONS-DMD, Dec. 2019.)
- Nature of Multi-Stakeholder Engagement: Plans and/or strategies call for direct engagement with non-governmental stakeholders, but implementation challenges remain.** Non-governmental organizations focused on disaster management are most actively engaged in community-based disaster risk-management efforts, notably the SLRCS, WFP, and UNDP. Challenges remain with subnational capacity in isolated and underserved areas. (Interviews with ONS-DMD, Dec. 2019.)

- **Academia Involvement in Government DM: Academia supports DM efforts but has no official association with government structures.** The University of Sierra Leone has noted the need for, and begun discussions to, increase national preparedness by developing a national curriculum for primary, secondary, and tertiary schools. (Interview with University of Sierra Leone, May 2019.)
- **National Government Engagement in Regional and Global Efforts: Government involvement with global and regional DM organizations is typically limited to that of a support recipient.** Sierra Leone is a member of the African Union and has been the beneficiary of projects and activities implemented by them. Most notable is the joint multi-year regional program for DRR conducted through ECOWAS, UNDRR and the World Bank-GFDRR. (World Bank-GFDRR, Building Disaster Resilience in Sub-Saharan Africa Program 2014-2016.)



# THE DMA SUMMARY OF FINDINGS



## ENABLING ENVIRONMENT

- Limited or No Capacity
- Early Capacity Development
- Achievement with Significant Limitations
- Substantial Progress with Some Limitation
- Advanced Capacity

**CURRENT STATUS**



**CURRENT SUB-THEME STATUS**



**Legal Foundation**



**Financial Resources**



**Clear and Comprehensive Strategies**



**Public Confidence and Political Support**



**Attitudes, Engagement, Expertise**

The NSCIA 2002 is the sole statutory basis for Sierra Leone’s national DM system. There is no provision for an independent disaster management institution/ agency under NSCIA 2002. The DMD operates under ONS with limited staff and resources. However, the Disaster Management Agency Act 2020 was signed into law and is expected to lead to the establishment of an independent National DM Organization with a budget and other resources. Although the draft National Disaster Risk Management Policy of 2018 proposes a more comprehensive DM approach, it has not been formalized yet. While the President has the authority to declare a State of Public Emergency under existing law, the legislation that formalizes DM structures and arrangements at lower levels of government is still lacking. The Military Aid to Civil Authorities (MACA) policy allows the RSLAF to support the disaster operations. Sierra Leone relies on external funding from international donors for disaster risk management and response activities. There is a significant shortage of funding for capacity development efforts at the subnational level, and there are no mechanisms such as disaster insurance, catastrophic risk insurance markets, low-interest loan programs or microfinancing credit schemes to support recovery, or formal disaster relief disbursement systems.





## LEGAL FOUNDATION

- Legal Arrangements Address DM Requirements: Disaster Management legislation has a limited focus on response.** The National Security and Central Intelligence Act of 2002 is the single existing law referencing disaster management in Sierra Leone. Although the NPDRR propose a more comprehensive DM approach, to date, the DM Policies described above have not been translated into parliamentary action of formal legislation. (National Security and Central Intelligence Act, 2002; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2006/2014/2018; Interviews with ONS-DMD, May & Dec. 2019.)
- Scope of Legislation: Existing disaster management legislation currently has a limited focus on response.** The National Security and Central Intelligence Act of 2002 does not address specific disaster phases. The ratification of the 2018 National Disaster Risk Management Policy is needed to ensure all phases of the disaster management cycle are considered. (National Security and Central Intelligence Act, 2002; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2014/2018.)
- Basis of the Legislative Process: Disaster management legislation has an all-hazards basis but is largely reactionary.** Legislation is rooted in national security and is primarily a reaction to specific hazard events. The new National Disaster Management Agency Bill or the National Disaster Management Act 2020 was ratified and signed into law with amendments on March 27, 2020. This act is a major step in the establishment of the National Disaster Management Agency. (National Security and Central Intelligence Act, 2002; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2014/2018; Interviews with ONS-DMD, May & Dec. 2019; NightWatch SL, National Disaster Management Agency Act Ratified, March 27, 2020.)
- Implementation Schedules in Legislation: No strategic requirements for the implementation of DM legal provisions, and/or implementation has not occurred.** Existing legislation does not address implementation schedules. (National Security and Central Intelligence Act, 2002; Interviews with ONS-DMD, May & Dec. 2019.)
- Legislation and Institutions: Disaster Management legislation makes no provisions for DM Institutions.** Under the 2002 National Security and Central Intelligence Act, there is no provision for an independent DM institution/agency. (National Security and Central Intelligence Act, 2002; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2006/2014/2018; Interviews with ONS-DMD, May & Dec. 2019.)
- Legislation and Budgets: Disaster Management legislation makes no provisions for DM budgets.** The budget for DMD is allocated from the ONS and covers core DMD staff and limited internal resources. Supplemental funding for disaster preparedness and response is not included and must be requested from the central government or non-governmental stakeholders (partners) on an “as needed” basis. (Interviews with ONS-DMD, May & Dec. 2019.)

- **Disaster management legislation is not socialized.** The National Security and Central Intelligence Act of 2002 is the single piece of legislation and does not clarify the role of GoSL MDAs in disaster risk management or response. (National Security and Central Intelligence Act, 2002; Interviews with ONS-DMD, May & Dec. 2019.)
- **Declarations Process, Vertical Cooperation, and Resource Requisition: Legislation does not formalize declarations processes, vertical cooperation mechanisms, or a means to conduct requisition of human and material resources during disaster events.** The national level authorities at ONS-DMD remain the main focal point and responder for disasters in all parts of the country. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Emergency Powers: Some provisions exist under existing legislation to curtail activities during a state of emergency, such as evacuations, curfews, and price-fixing.** Section 29 of the 1991 Sierra Leone Constitution allows the President to declare a State of Public Emergency. (Constitution of Sierra Leone, 1991; Interviews with ONS-DMD, May & Dec. 2019.)
- **DM Structures and Arrangements of Sub-jurisdictions: Some provisions exist to support the disaster management structures at a subnational level.** Legislation does not formalize DM structures and arrangements at lower levels of government. The national-level authorities at ONS-DMD remain the main focal point and responder for disasters in all parts of the country. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Guidance for DRR Activities and Requirements: Existing legislation does not guide DRR activities and requirements, such as code enforcement, land use regulations, and sustainable-development practices.** As illustrated during the 2017 landslide, “Disaster risk reduction is yet to be effectively institutionalized in Sierra Leone. The ONS budget for disaster risk management is not adequately funded. Partners, donors, international financial institutions, and non-governmental institutions fund most national activities. In general, development partners support preparedness and response, not disaster risk reduction.” (Rapid Damage and Loss Assessment of August 14th, 2017 Landslides and Flood in the Western Area, World Bank; Interviews with ONS-DMD, Dec. 2019.)
- **Facilitation of Military Support: Existing legislation enables and facilitates military support for disaster management with comprehensive provisions that allow for military resources to be fully integrated.** The MACA Policy document provides the legal basis, rooted in the 1991 Constitution of Sierra Leone and The National Security and Central Intelligence Act of 2002, which obligates the RSLAF to guard and secure the nation and preserve the safety and territorial integrity of the state. (National Security and Central Intelligence Act, 2002; Military Aid to Civil Authorities (MACA), 2014; Interviews with ONS-DMD, Dec. 2019.)
- **Facilitation of International & Cross-Border Activities (Facilitation and Provision): Pre-event facilitation is extremely limited and is not formalized.** Existing plans do not facilitate the participation of regional or international stakeholders in disaster management. During response operations, ONS and DMD work with national and international partners on an ad hoc basis for needs assessments and resource support. (Interviews with ONS-DMD, Dec. 2019.)



## FINANCIAL RESOURCES

- DM Budget Arrangement: DM Budget exists as a sub-component of an agency-level budget, and not as a general budget line item.** DMD funding is provided as part of the main ONS budget and covers core staff and limited material resources. The average direct DRR budget for the 16 African countries was 1%; Sierra Leone's budget of 0.4% is less than half of the average. (Sierra Leone National Disaster Risk Management Policy – DRAFT, 2014/2018; Ministry of Finance Original Budget Profile 2018-2020; Ministry of Finance Enacted 2019-2021 GoSL Budget; Interviews with ONS-DMD, Dec. 2019; UNDRR, Disaster Risk Reduction Investments in Africa- Evidence from 16 Risk-sensitive Budget Reviews, 2020.)
- DM Budget Funded at Targeted Levels: Legislation does not provide recommendations for funding targets.** Under the existing 2002 National Security and Central Intelligence Act, recommendations for funding targets are not designated. The 2018 DRM Policy (not yet ratified) includes guidance on disaster risk-management financing and the need for adequate funding mechanisms to implement disaster preparedness, response, recovery, and mitigation activities. (National Security and Central Intelligence Act, 2002; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2014/2018; Interviews with ONS-DMD, Dec. 2019.)
- Scope of DM Budget: The Disaster Management budget covers only operational staffing and facilities costs, existing as a subcomponent of the ONS agency-level budget, and not as a general budget line item.** The DMD budget comes from the main ONS budget and covers core staff and limited internal resources (supplies). (Interviews with ONS-DMD, Dec. 2019.)
- DRM Grant Programs: Grant programs exist, but are not often recurring or are limited in scope.** Grant programs operate in a limited scope and are provided by outside agencies. No GoSL-funded or managed DRM grant programs currently exist.
- Budget Supports Training, Education, and Research & Development: The current budget from ONS-DMD does not support training, education, or research and development.** These capacity-building efforts are typically supported by donors, such as UNDP, Red Cross, US Embassy, or other organizations. (Interviews with ONS-DMD, Dec. 2019.)
- National Budget Supports Sub-jurisdictions: The current budget does not support capacity development efforts at the subnational level.** There are no budget provisions in support of DRM at the regional or district levels. (Interviews with ONS-DMD, Dec. 2019.)
- Dedicated Emergency or Contingency Fund Exists: A dedicated national emergency or contingency fund does not exist.** At the national level, the process has typically involved a donor organization providing funds, which are then distributed to disaster victims in cooperation with ONS and DMD. At the subnational level funds however are ad hoc and have not seen regular contributions. (Interviews with ONS-DMD, Dec. 2019.)



- **Existence of and Public Support for Catastrophe Risk Transfer: There is no established catastrophic risk insurance market in Sierra Leone.** (Interviews with ONS-DMD, Dec. 2019.)
- **Insurance Industry Oversight: There is no catastrophic risk insurance market.** (Interviews with ONS-DMD, Dec. 2019.)
- **Availability of Low-interest Loans to Support Recovery: Low-interest loan programs to support recovery do not exist.** (Interviews with ONS-DMD, Dec. 2019.)
- **Availability of Microfinance Credit Schemes: Microfinancing does not exist.** (Interviews with ONS-DMD, Dec. 2019.)
- **Guidelines for Disaster Relief Disbursement: There were no formal mechanisms identified for the provision of disaster relief funds to disaster-impacted jurisdictions at the national level.** However, the Sierra Leone Red Cross Society (SLRCS) that supports the National Disaster Management Office, as its role was delineated in the 2012 Sierra Leone Red Cross Society Act, has been actively involved in disaster relief-fund disbursement and coordination. (Sierra Leone Red Cross Society Act, 2012; Interviews with ONS-DMD, Dec. 2019.)



## STRATEGIES

- **Strategic Plans and Policies: DM and DRR strategies and policies exist but as components of other policy instruments.** A National Disaster Risk Management Policy has been drafted, with revisions in 2006, 2014, and 2018. However, the 2018 policy document has not been ratified by the GoSL and consequently remains of limited value for stakeholder planning and action. (Sierra Leone National Disaster Risk Management Policy – DRAFT, 2006/2014/2018; Interviews with ONS-DMD, Dec. 2019.)
- **Stakeholder Engagement: There is no evidence that stakeholders are formally addressed in DM and DRR strategic plans.** Development of the draft National DRM Policy has required external (non-GoSL) support; the document remains unratified; and national and subnational stakeholder input is not included. The Pillar system, while informal, supports stakeholder engagement in some sectors. (Sierra Leone National Disaster Risk Management Policy – DRAFT, 2006/2014/2018; Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Sierra Leone ONS-DMD National Emergency Coordination Pillars Terms of Reference (ToR), n.d; Interviews with ONS-DMD, Dec. 2019.)
- **Stakeholder Guidance: Stakeholder guidance and direction are provided through the Standard Operating Procedures for District Disaster Management Committees and direct guidance from the national emergency operations center during times of disaster.** Building on this, hazard-specific plans are available for flooding and Ebola. These plans present a sometimes inconsistent response structure

for these hazards. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; The National Ebola Response Plan for Sierra Leone, 2016; The National Flood Preparedness Response Plan for Sierra Leone, 2016; Interviews with ONS-DMD, Dec. 2019.)

- **Policy Support of DRR Integration: Disaster Risk Reduction (DRR) and Disaster Management (DM) policies are not formally coordinated with Climate Change Adaptation (CCA) or Sustainable Development (SD) policies and goals.** With limited resources, the GoSL necessarily focuses on emergent response needs, leading to limited institutionalization of DRR in both policy and practice. The draft 2018 National DRM Policy identified an uncoordinated implementation of a DRR framework with a common vision for the entire country considering all levels, areas, and sectors as a major challenge. (Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018.)
- **DRR and DM Policy Integration Progress: DM and DRR policy instruments are limited to DM-relevant agencies.** In the absence of an approved policy, the GoSL and non-governmental DM partners, including those at the subnational level, develop independent plans and policies, which may not be consistent with national priorities and procedures. This has been noted as a major challenge and identified as a priority action item for the new disaster management agency once established. (Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Interviews with ONS-DMD, Dec. 2019.)
- **Mitigation Mandates in DRR Policies: No existing mandates were identified in established DRR Policies.** Mitigation planning is included in the 2018 update to the National Disaster Risk Management Policy, which has been drafted but not yet ratified or implemented by the GoSL. The policy prioritizes mitigation in Focus Area 6: Disaster Risk Prevention and Mitigation. (Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018.)
- **Consideration of Gender and Vulnerable Groups in Strategies and Policies: Existing strategies and policies do not currently address gender issues and vulnerable groups.** The not-yet ratified 2018 National DRM Policy includes “Promoting Gender as a cross-cutting issue including equity” as a guiding principle. (Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018.)



## PUBLIC CONFIDENCE & POLITICAL SUPPORT

- **Support from Top Government Officials: The offices of the President and Vice-President become engaged in response-related activities, but only when large-scale events have occurred.** Support for preparedness, long-term recovery, or mitigation activities was not clearly identified. There is a defined national disaster management structure in Sierra Leone, which operates both pre- and post-disaster. If a disaster event is deemed a threat to national security, the NPDRR Chair may elevate the situation to the National Security Council, chaired by the President of Sierra Leone. This ensures the highest level of coordination among GoSL MDAs. However, DRR is not mainstreamed or functional in SL. Most resources, plans, and policies are focused on response. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015.)

- **Support of the Legislature: There are no standing legislative or other advisory committees with a central focus on DM and/or DRR issues; however, there does exist one or more standing committees that include DM and/or DRR issues in their portfolio.** The responsibilities are dispersed across advisory committees. Although DM and DRR fall under the responsibility of DMD, a whole-of-government approach does not currently exist.
- **Interagency and Multi-stakeholder Input in the Legislative Process: Committees do not actively facilitate interagency and multi-stakeholder input in the legislative process.** Currently, there are no formal documented committees operating with the mission to facilitate interagency and multi-stakeholder input in the legislative process.
- **Public Confidence in Governmental DM: The public lacks confidence in the capabilities and capacities of DM agencies.** There is high public expectation of the role of DMD to manage hazards and prevent events from becoming disasters. Limited staff and budget prevent DMD from focusing on disaster preparedness and subnational efforts. Noting these challenges, the GoSL seeks to create an autonomous disaster management agency to apply a whole-of-government approach to disaster risk management, preparedness, and response. (National Security and Central Intelligence Act, 2002; Interviews with ONS-DMD, May & Dec. 2019.)
- **Political Approval Ratings: Approval ratings are not collected and/or public support for political figures is not measured.** Several opinion polls/surveys have been completed in Sierra Leone by international partners, including the Afrobarometer and Sierra Leone Public Opinion Survey. While the instruments did not focus on DM-specific issues, general comments on GoSL support to the public were included. The limited DM data from these surveys are not formally integrated into DRR decision making. (Interviews with ONS-DMD, Dec. 2019.)



## ATTITUDES, ENGAGEMENT, AND EXPERIENCE

- **Practical Experience of the Jurisdiction: Sierra Leone experiences approximately one major disaster requiring interagency and extra-jurisdictional coordination every 1 to 3 years.** The 2017 hazard assessment conducted by INTEGEMS and funded through the UNDP Sierra Leone Country Office describes the country as highly prone to flood, landslide and coastal erosion, tropical storms, and sea-level rise hazards. Adding to that the high frequency of urban and wildland fires, the number of ONS response efforts numbered 391 from 2006-2017. Infectious diseases, like the Ebola outbreak in 2014 and the COVID-19 outbreak in 2020, have required a national response. (INTEGEMS Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, 2017; Interviews with ONS-DMD, May & Dec. 2019.)
- **Practical Experience of the Lead DM Official: Lead disaster management official coordinates multiple major disasters requiring extra-jurisdictional assistance each year and has held that position for at least 3 years.** Mr. John Vandy Rogers, the DMD director, has over 15 years of disaster

management experience. He has held previous posts within DMD (deputy) and other directorates within ONS, and has been involved with DMD and disaster management for most of his career (Interviews with ONS-DMD, May & Dec. 2019.)

- **Public Engagement in DM: There is little to no public engagement in disaster management efforts.** Because Sierra Leone is still progressing in its social and economic development after many years of civil conflict, there is no public attention directed to the DM and DRR goals. ONS and DMD offers community-engagement activities to inform the general public on DRR efforts.
- **Private-Sector Engagement in DM: Little to no disaster planning reported by the business community, and little to no business community participation in community emergency-management efforts.** Private-sector engagement in DRR and preparedness has been noted as a major DM gap area. While no formal policies or arrangements exist to guide the participation of private entities in DM, during response operations the private sector contributes by providing financial support and/or goods and services. However, these efforts are ad hoc and not formalized or coordinated broadly with other stakeholders. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Household Preparedness: No assessments or surveys of household or individual disaster preparedness are conducted, or if they are, less than 25% of households report adequate preparedness.** DMD and SLRC have the capability to utilize volunteer networks at the district level to gain insight into preparedness levels of communities, though there is no national, coordinated methodology to conduct regular assessments. (Interviews with ONS-DMD, Dec. 2019.)



# THE DMA SUMMARY OF FINDINGS



## DISASTER GOVERNANCE MECHANISMS

- Limited or No Capacity
- Early Capacity Development
- Achievement with Significant Limitations
- Substantial Progress with Some Limitation
- Advanced Capacity

### CURRENT STATUS



### CURRENT SUB-THEME STATUS



Plans and Processes



Command, Control and Coordination



Governance Infrastructure

The Standard Operating Procedures for District Disaster Management Committees is the governing plan document that provides guidance to DM stakeholders, outlines the national and subnational response framework with standard procedures, including incident command, control, coordination, and the role of various institutions in the response phase of a disaster. The National Platform for Disaster Risk Reduction (NPDRR - known locally as the Platinum level) chaired by the Vice President, is the high-level strategic and advisory body for the coordination of national disaster management activities. The National Strategic Situation Group (NSSG - Gold level) is the central coordination body during national-level disaster emergencies. At the operational level, known as the Silver level, Pillar leads (functional groups) coordinate on functional areas of support (WASH, logistics, etc.). Each of the 10 Pillars has a designated lead government agency with supportive MDAs and international partners. Disaster management activities at the local level lie with the District Disaster Management Committees (DDMCs) in each of the 14 districts. Since most subnational jurisdictions lack resources, they also lack authority. As a result, the national government has control over local response in most disasters. The Ministry of Health and Sanitation (MoHS) All-Hazards Public Health Incident and Emergency Response Plan (IERP) has references to multiple phases of the DM cycle.





## PLANS & PROCESSES

- DM Phases Addressed in Plans: Existing disaster management plans and Standard Operating Procedures (SOPs) focus primarily on the response phase.** References to planning, preparation, recovery, and mitigation are limited, and plans do not assign roles, responsibilities, or resources in these phases of disaster management. SOPs for District Disaster Management Committees, the key document that provides guidance to DM stakeholders, outlines the national and subnational response framework with standard procedures, including command and control and the role of various institutions in the response phase of a disaster. Ministry of Health and Sanitation (MoHS) All-Hazards Public Health Incident and Emergency Response Plan (IERP) has references to multiple phases of the DM cycle. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; All Hazards Public Health Incident & Emergency Response Plan (IERP), n.d.; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019; National Ebola Response Plan for Sierra Leone, 2016.)
- Coordination of Government Disaster Plans: DM agencies have unique plans, but they are coordinated in structure and function.** Using the SOPs for District Disaster Management Committees (2015) as the baseline document, the two hazard-specific plans most recently activated (2016 National Ebola Response Plan and 2016 Flood Preparedness Response Plan) follow a similar response command-and-control structure presented by DMD and NSSG. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019; National Ebola Response Plan for Sierra Leone, 2016.)
- Continuity of Operations (COOP) and Continuity of Government (COG): No guidance or structure is provided for government COOP or COG.** Evidence suggests that no formal structure has been put in place to support COOP or COG planning at the national or subnational level.
- Roles and Responsibilities Defined by Plans: Plans and SOPs identify roles and responsibilities for each level of government.** Four plans were reviewed for this assessment outlining the roles and responsibilities of various GoSL MDAs in response to an emergency at each level of government (local, regional, national). Many challenges have been identified as a priority for the establishment of a new disaster management agency currently being planned. (ONS-UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; MoHS All-Hazards Public Health Incident & Emergency Response Plan, n.d.; National Ebola Response Plan, 2016; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019.)
- Definition of the Declarations Process: Declaration process exists in DM plans, SOPs, and other official documentation, but in practice the process remains ad hoc and not fully operationalized.** The national command architecture for disaster and emergency management is outlined in the SOPs for District Disaster Management Committees (2015), where the SOP is automatically initiated upon a declaration of a disaster by the President. Although three levels of criteria have been developed for Level 1/2/3 disasters, there are no criteria for defining a disaster and reporting structure. (ONS-UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; MoHS All-Hazards Public Health Incident & Emergency Response Plan, n.d.; National Ebola Response Plan, 2016; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019; Interviews with ONS-DMD, May & Dec. 2019.)

- **Accessibility of Plans and Processes: Some but not all plans and processes are publicly accessible.** Plans and SOPs are accessible upon formal request to the managing agency. The use of the internet for open sharing of information related to Disaster Management is limited in Sierra Leone. The limited availability of plans and standard operating procedures provides challenges to the effective coordination and implementation of policy.
- **Coordination of Government and Stakeholder Plans: The government provides basic DM planning guidance to stakeholders but does not actively promote or require plan coordination.** Top-down guidance for the development of community plans is not implemented across the country, leaving the planning to be driven by districts and communities in coordination with non-governmental partners. For example, Sierra Leone Red Cross has worked in six districts to help communities develop village-level disaster management plans. (Interviews with Sierra Leone Red Cross Society, Dec. 2019.)
- **Mutual Aid Agreements: Mutual aid agreements exist, but are informal, unwritten, or unsigned.** Mutual aid support within GoSL is facilitated by ONS-DMD without the use of formal agreements on account of the highly centralized government structure. National resources are authorized by the NPDRR and NSSG to support all levels of disaster response as needed. Pre-disaster agreements for the sharing of resources are not developed. Mutual aid agreements with the private sector are not present pre-disaster. (Interviews with ONS-DMD, May & Dec. 2019.)
- **International Mutual Aid Agreements: No formalized international mutual aid agreements currently exist.** Sierra Leone is a member of ECOWAS and the African Union, which supports DM capacity-building projects; however, disaster-response mutual aid support has not been included. In recent Level 3 emergencies, international donor countries and organizations have responded with resources voluntarily or via informal requests to individual embassies or organizations. There appears to be no formal mechanism in place with the GoSL to make official requests. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Protocols for the Use of External Disaster Assistance: Processing of external resources is facilitated, but not streamlined during disasters.** Management of external assistance is conducted informally by DMD during disasters. Implantation challenges have prevented efficient use of external disaster assistance despite the existence of protocols and procedures. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Volunteer and Donations Management Capacity: Volunteers and donated goods are managed on an ad hoc basis.** The utilization of donated goods and volunteer resources is managed through informal processes. (Interviews with ONS-DMD, May & Dec. 2019.)



## COMMAND, CONTROL, AND COORDINATION STRUCTURES

- Incident Command Systems: The incident command system has been incorporated as a formal component of disaster-response operations but has only been operationalized during large-scale events.** Incident Command System training has been provided to Sierra Leone. The concept is identified in existing SOPs although not fully operationalized at all levels of government. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, May & Dec. 2019.)
- Incident Coordination Systems: Incident management procedures or protocols are often used to coordinate vertical and horizontal interagency and stakeholder engagement, but there is no standard system in the area of assessment.** The National Strategic Situation Group (NSSG) is activated during Level 2 or 3 emergencies to coordinate and provide national-level support to the affected area(s). The NSSG is the primary national-level entity responsible for command, control, and coordination. Disaster management at subnational levels (district and below) is not yet fully operational, thus ONS-DMD plays an active role at all levels within the country. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, May & Dec. 2019.)
- Legal Basis of Command and Coordination Structures: Incident command systems and structures, including decision-making authority, are not fully operationalized in Sierra Leone.** An incident command system has not been fully operationalized throughout the country, but planning and SOP development related to the hazard-specific plans, including the 2016 Ebola and Flood, do provide a solid foundation for the application of an incident-command system for all hazards. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, May & Dec. 2019.)
- Command and Coordination by Function: Plans and procedures delineate leadership and coordination for disaster and emergency support functional areas (Logistics, Search and Rescue (SAR); Public Health, Shelter, etc.).** Sierra Leone leverages the National Emergency Coordination Pillar System during national disasters. The functional areas of support, or Pillars, are led by GoSL (Coordination; Health and Burial; Logistics; Social Mobilization and Communication; Registration; Water, Sanitation, and Hygiene (WASH); Protection and Psychosocial; Food and Nutrition; Security and Safety; Shelter) and are clearly defined. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; National Emergency Coordination Pillars Terms of Reference (ToR), n.d.)
- Facilitation of Interagency Coordination: Interagency coordination is facilitated or supported using informal mechanisms.** Interagency coordination is not fully developed in Sierra Leone. The coordination leverages the framework of established functional areas and responsible agencies, but is often operationalized using informal or ad hoc mechanisms. DMD would benefit from established implementation guidelines and procedures. (Sierra Leone ONS-DMD & UNDP Standard Operating

Procedures for District Disaster Management Committees, 2015; National Emergency Coordination Pillars Terms of Reference (ToR), n.d.; National Ebola Response Plan, 2016; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019.)



## GOVERNANCE INFRASTRUCTURE

- Emergency Operations Center: Sierra Leone does not maintain a sole-use, all-hazard emergency operations center (EOC).** ONS-DMD has a dual-use space to coordinate national-response operations with known and identified limitations. The Ministry of Health does have a designated and functioning operations center known as the Public Health National EOC (PHNEOC), which was originally established in response to the Ebola crisis and remains in operation for the coordination of public health emergencies. (National Ebola Response Plan, 2016; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019; Interviews with ONS-DMD, May & Dec. 2019; Site Tour, Dec. 2019.)
- Dedicated EOC Facility: The EOC is in a dedicated facility.** ONS does not have a purpose-built EOC but has a National Situation Room (NSR) on the second floor of the ONS headquarters building, Tower Hill. (Interviews with ONS-DMD, May & Dec. 2019; Site Tour, Dec. 2019.)
- EOC Resilience: The EOC/NSR is physically protected from the most common hazards in Sierra Leone.** The EOC/NSR in Tower Hill is an area of high security due to its location within the primary site for major GoSL infrastructure. (Interviews with ONS-DMD, May & Dec. 2019; Site Tour, Dec. 2019.)
- EOC Resources: The EOC/NSR is equipped for minor incidents but needs additional equipment and resources to effectively respond to large-scale events.** The room is equipped with approximately 20 laptops networked to one server, four mobile and several landline phones, a printer, and a projector for briefings. (Interviews with ONS-DMD, May & Dec. 2019; Site Tour, Dec. 2019.)
- EOC Activation Readiness: The EOC/NSR is capable of no-notice activation.** The existing EOC can be activated quickly to support quick-onset or no-notice events. The EOC is maintained in a ready state and is available for immediate use as necessary.
- EOC Activation Duration: EOC/NSR is staffed and equipped to ensure continuous operations.** For large-scale emergencies, the NPDRR and NSSG ensures that staffing resources are available to support event response as necessary. Directed by the Vice President and senior leaders, the NPDRR is able to designate available resources to meet needs and also request additional support from non-government partners. (Interviews with ONS-DMD, May & Dec. 2019; Site Tour, Dec. 2019.)
- EOC Accessibility: The EOC/NSR is easily accessible for key government officials.** Access is restricted to those on official business. Procedures for non-GoSL partners to enter ONS have not been formalized, and DMD would benefit from establishing protocols to support clear enforcement and remove potential barriers from needed assistance reaching during operations. (Interviews with ONS-DMD, May & Dec. 2019.)



- **Backup EOC: No capacity exists to stand up a backup EOC facility.** The Public Health National EOC (PHNEOC) may not be available should the NSR be compromised. (Interviews with ONS-DMD, May & Dec. 2019; Site Tour, Dec. 2019.)
- **Field-Level Coordination Centers: DMD has basic capabilities and resources to establish a field-level coordination center.** During major disasters, DMD would augment the local structure of the national architecture for disaster and emergency management to support the activation of a District Emergency Response Center in the local impacted area. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; National Ebola Response Plan, 2016; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019.)
- **Long-Term Community Recovery Facilitation Capacity: Jurisdiction does not have the plans, procedures, or resources to support long-term recovery.** Long-term recovery is not yet included in national policies, plans, or procedures, and resources are not pre-allocated.
- **Communications Interoperability: Partial and limited communications and interoperability exists in Sierra Leone.** Communications during national-level events are managed using off-the-shelf technologies. Communications between the EOC and response agencies are conducted via mobile (voice and text) and landline telephone, limiting some common interoperability issues. At the district level, communications are managed similarly, with voice and text as the primary means of sharing information. (ONS NDPBA kickoff presentation, Oct. 2018).
- **Responder Credentialing: No national-level disaster or emergency-management credentialing exists.** Responder agencies, such as the National Fire Force, National Police, and the RSLAF, maintain agency-specific credentialing processes.

# THE DMA SUMMARY OF FINDINGS



## CAPABILITIES AND RESOURCES

- █ Limited or No Capacity
- █ Early Capacity Development
- █ Achievement with Significant Limitations
- █ Substantial Progress with Some Limitation
- █ Advanced Capacity

### CURRENT STATUS



### CURRENT SUB-THEME STATUS



Facilities and Equipment



Commodity and Supply Inventory



Human Resources



Functional Capabilities

Sierra Leone does not have a dedicated National Emergency Operations Center (EOC) building but has a dedicated office space within ONS with the capacity and equipment to direct response operations. Emergency services capacity, however, is extremely limited with only 10 fire stations nationally, leaving a large portion of the country underserved. The mechanisms for securing DM resources, including stockpiles and equipment, are based on ad hoc arrangements, typically with international NGOs with limited warehousing capacity. There is very limited shelter capacity and no formalized sheltering system. During an emergency, where there is a need to shelter affected populations, DMD coordinates primarily with International Organization for Migration (IOM) and United Nations High Commissioner for Refugees (UNHCR) to provide tents, in addition to working with community leaders to identify spaces and buildings to serve as temporary community shelter areas. Sierra Leone’s public health and medical facilities, including its hospitals and medical personnel, are not formally integrated into the DM system. Rosters of trained professionals to support disaster needs are not adequately kept, and pre-existing contracts for procuring resources are largely missing. Evacuation plans and search-and-rescue capabilities are also lacking.





## FACILITIES AND EQUIPMENT

- **Emergency Services Facilities Capacity: Fewer than one fire station per 100,000 people; fewer than one fire station per 50 square miles.** Emergency-services capacity in Sierra Leone is extremely limited. The National Fire Force (NFF), as the principal national emergency service and first responder, maintains 10 fire stations within the country, all of which are located in the seven urban environments, namely Freetown (4), Makeni, Bo, Kambia, Kenema, Moyomba, and Kono. (NFF statistics, 2019.)
- **Material Resources Available for DM: Material resources designated for DM are maintained at inconsistent levels (less than 50%) across the jurisdiction.** There is one DMD-managed, GoSL-owned warehouse located in MacDonald Town, approximately 40 kilometers southeast of Freetown. Material resources designated for emergency management are for general-response use. and inventory is not maintained at levels matching anticipated needs. (Interviews with ONS-DMD, Dec. 2019; Site Visit, Dec. 2019.)
- **Supplemental DM Resources: Ad hoc arrangements are in place to secure supplemental disaster management resources and equipment.** Supplemental disaster management resources and equipment are generally met through ad hoc arrangements with international partners and private entities during response operations. No formal arrangements or agreements are currently in place during steady-state, non-emergency operations. (Interviews with ONS-DMD, May & Dec. 2019.)
- **DM Equipment Inventories: Accurate and up-to-date inventories of disaster-relevant equipment are maintained.** Inventories of EOC equipment as well as supplies and equipment in the MacDonald Town warehouse are maintained through DMD. Partner agencies (Red Cross, World Food Programme, and United Nations Children Educational Fund) all reported keeping inventories of equipment and supplies. (Interviews with ONS-DMD, Dec.2019.)
- **Shelter Capacity: Emergency shelters have not been identified or exist at levels that meet less than 50% of anticipated needs.** Designated emergency shelters are not pre-identified or properly equipped. During an emergency, where there is a need to shelter affected populations, DMD and community leaders work to identify schools and churches to be used by communities for temporary sheltering. (Interviews with ONS-DMD, Oct. 2018 & Dec. 2019; Site Tour, Dec. 2019.)
- **Shelter Suitability Assessments: Shelters have not been assessed for suitability.** No formal system exists to assess suitability. Designated emergency shelters are not pre-identified or specially equipped. (Interviews with ONS-DMD, Oct. 2018.)
- **Shelter Equipment: Less than half of all shelters are specially equipped for disaster use.** As shelters are not pre-identified, there is no advance placement of shelter equipment during steady-state, non-emergency operations. (Interviews with ONS-DMD, Oct. 2018.)
- **Warehousing Capacity: One purpose-built warehouse and staging facilities exist to meet logistics operations requirements in a major disaster event.** The GoSL has inventory available for

general-purpose use during a disaster. In addition to the MacDonald Town warehouse, several disaster management stakeholders maintain facilities throughout the country. (Site visit, Oct. 2018.)

- **Public Health and Medical Facilities: Sierra Leone’s public health and medical facilities are not fully integrated components of the nation’s disaster management system.** The integration of public health into disaster management is still informal. Integration efforts are underway following the Ebola response to have a more holistic and all-hazards approach to disaster management.



## HUMAN RESOURCES

- **Emergency Services Staff: Fewer than one firefighter per 5,000 population.** Among the 10 NFF fire stations within the country, there are 288 firefighters to provide services to a total population of approximately 7.1 million. Most firefighters (193) are located in the Freetown urban area, with several districts having no access to any type of emergency services. (NFF statistics, 2019.)
- **Planning Staff: DMD supports basic national-level disaster planning efforts but no dedicated planning staff exist at the district level.** DMD staff have dedicated job functions, with planning elements specific to their roles. However, DMD does not have the resources to assign staff to a full-time position as a DM planner. Districts do not provide or fund designated disaster management positions at the local level to focus on planning. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, Oct. 2018 & Dec. 2019.)
- **Surg-Staff Documentation and Procedures: Surge-staffing needs are formally addressed in the jurisdiction’s disaster plans and procedures, but the adequacy of staffing resources has not been verified or is not at desired levels.** Surge-staffing needs are met through formal requests from DMD to ONS. At ONS, all staff are cross-trained and available to support DMD if needed during a large-scale event. Staff may be pulled from other departments to support as necessary. (Military Aid to Civil Authorities (MACA), 2014; Interviews with ONS-DMD, Oct. 2018 & Dec. 2019.)
- **Surge-Staff Source: Surge-capacity staff are drawn from throughout the disaster management stakeholder community, including NGOs, the private sector, and other government agencies.** For large-scale events, additional mechanisms are in place to facilitate staff from other government agencies (MDAs), NGOs, and the private sector. Surge staffing beyond ONS is utilized in the most extreme situations. (Military Aid to Civil Authorities (MACA), 2014; Interviews with ONS-DMD, Oct. 2018 & Dec. 2019.)
- **Rosters of Trained Professionals: DMD does not maintain a roster of trained professionals to support critical post-disaster needs (e.g., building inspectors, engineers) and recovery efforts.** ONS and DMD do not have a formal resource registry of trained professionals for critical response-and-recovery needs. (Interviews with ONS-DMD, Dec. 2019.)



- **City Pairing or Similar Technical Staffing Partnerships: City-pairing arrangements, secondment schemes, or other similar mechanisms to address disaster-related technical staffing requirements do not exist in Sierra Leone.** Currently, surge-staffing requirements are met internally by ONS, the military, and the existing Pillar system. Some support from international partners is provided but is focused primarily on response efforts. (Interviews with ONS-DMD, Dec. 2019.)



## COMMODITY & SUPPLY INVENTORY

- **Generating Estimates of Post-Disaster Commodity Needs: Estimates are not maintained.** DMD, with support from Pillar partners, conducts damage and needs assessments for large-scale disasters. While post-disaster commodity needs are not pre-estimated, in the recovery phase for events requiring extended support to communities, DMD tasks the Registration Pillar to begin the process of documenting impacted persons and infrastructure. (Interviews with ONS-DMD, Dec. 2019.)
- **Commodity Stockpile Quantities: Basic levels of commodity stockpiles are maintained at the GoSL warehouse; however, the existing supply does not meet estimated or anticipated needs.** While GoSL maintains a supply-warehousing capability as noted above, material resources designated for response and recovery are not held at levels based on anticipated needs for specific hazards. (Interviews with ONS-DMD & SLRC, Dec. 2019.)
- **Location of Commodity Stockpiles: Government commodity stockpiles are kept in a single location that enables access to most major population centers within 24-48 hours during rapid-onset disaster events, but not to remote or rural locations.** The GoSL maintains a single disaster management warehouse in MacDonald Town. Limited government stockpiles are supplemented by the NGO community and partner nations. (Interviews with ONS-DMD & US Embassy, May & Dec. 2019.)
- **Basis of Commodity Stockpile Distribution: Commodity distribution is based primarily on proximity to the warehouse facility leaving large areas of the country underserved.** Supply distribution from stockpile locations is managed by DMD, based on location, post-impact needs assessments, and ability to deliver by the RSLAF, Logistics Lead. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Commodity Contracts: Contracts with commodity providers do not exist.** Ad hoc arrangements are formed during the response phase during the Pillar coordination meetings and managed by DMD. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Frequency of Resource and Supply Inventory Updates: There is no formal requirement by law or policy to update inventories on a regular schedule.** Inventories are reviewed and updated on an as-needed basis and dependent on available staff resourcing and funding. (Interviews with ONS-DMD, May & Dec. 2019.)

- **Hosting of Resource and Supply Inventories: Accurate, up-to-date inventories are maintained by DMD.** Current inventories for the MacDonald warehouse are kept by DMD and inventories for other partner-maintained warehouses are maintained and kept by the respective partners. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Disaster Logistics Program: The development of a national logistics capability is underway, but challenges remain.** National level logistics are managed through the military. The development of subnational and local logistics capabilities is supported through general guidance but is limited by funding and access.



## FUNCTIONAL CAPABILITIES

- **Psychosocial Recovery Capability: National-level support for psychosocial recovery exists, but implementation challenges remain.** Ministry of Social Welfare and Children's Affairs (MSWGCA) Emergency Plan guides the Ministry's support to emergency response. Psychosocial support covered under Pillar #7 – Protection and Psychosocial led by the MSWGCA. (Interviews with MSWGCA, Dec. 2019.)
- **Evacuation Functional Capability: Sierra Leone cannot currently support evacuations.** No formal disaster management-based evacuation plans exist at the national level. Should a mass evacuation be necessary, it would be led by the RSLAF per the general process outlined in the MACA. (Military Aid to Civil Authorities (MACA), 2014; Interviews with ONS-DMD & SLRC, May & Dec. 2019.)
- **Post-Disaster Waster, Sanitation, and Hygiene (WASH) Functional Capability: WASH is addressed in plans and policies, but implementation challenges remain.** WASH is covered by Pillar #6, which is led by the Ministry of Water Resources (MoWR). Although well-defined roles and responsibilities of the Pillar are outlined, the standard operating procedures for activation, coordination, and command & control are not documented in plans or procedures. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Safety and Security of Disaster-affected Populations: Safety and security is a defined disaster management function, and responsibilities are defined and assigned to the Sierra Leone Police.** Security and Safety is managed by Pillar #9, which is led by the Sierra Leone Police. As defined in the RSLAF Policy 26 – Military Aid to Civil Authorities (MACA), the RSLAF may be called upon to provide additional support as necessary. (Interviews with ONS-DMD, May & Dec. 2019.)
- **National Hazardous Materials (HAZMAT) Response Capability: Sierra Leone does not have national-level HAZMAT capabilities.** No centralized or national HAZMAT response capability exists within the country.

- **Search-and-Rescue Functional Capability: Limited centralized or national search-and-rescue team or resources exist.** The development of subnational and local SAR capabilities is supported through community-level training when funding is available. Training of SLRC teams has been provided by the RSLAF and National Fire Force as requested. (NFF statistics, 2019; Interviews with SLRC & MAJ Prince, May 2019.)

# THE DMA SUMMARY OF FINDINGS



## CAPACITY DEVELOPMENT

- Limited or No Capacity
- Early Capacity Development
- Achievement with Significant Limitations
- Substantial Progress with Some Limitation
- Advanced Capacity

### CURRENT STATUS



### SUB-THEME SCORES



**Formalized Capacity Development Plans and Strategies**



**Training and Education**



**Capacity Development Monitoring and Evaluation**

National standards or programs pertaining to training and exercise requirements are not established due to the lack of training facilities and a dedicated budget. Therefore, a training curriculum also does not exist or is very limited. DRR capacity development efforts are informal and uncoordinated. Centralized in-person training is provided on an as-needed basis; however, training records are not maintained at the national level, nor are there exercise-evaluation or review standards for training plans and protocols. There is no dedicated program-support staff for training the staff for disaster operations; however, exercise participation is required for all participating agencies with DM functions. Public education, either K-12 or higher, is not provided. The private sector is largely missing in the capacity-development efforts.





## FORMALIZED CD PLANS AND STRATEGIES

- Training and Exercise Requirements and/or Recommendations: Sierra Leone has no formal national disaster management training and exercise requirements.** This has been identified by DMD as a need. DRM and DRR training is conducted often and by a wide range of partners, including, but not limited to, UNDP, SLRC, IOM, US Government partners, and regionally in Ghana at the Kofi Annan International Peacekeeping Training Centre (KAIPTC) through the Economic Community of West African States (ECOWAS) and other international organizations. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, May & Dec. 2019.)
- Position-Specific Competency Requirements: Position-specific competency requirements have not been mandated.** However, both the Director and Deputy Director of DMD have a long history with the department, with 12+ years (each) of experience in disaster management. (Interviews with ONS-DMD, May & Dec. 2019.)
- Coordination of CD Efforts: DM and DRR Capacity Development (CD) efforts are informal and uncoordinated.** ONS and DMD recognize the need for CD and work to enhance capacity in the absence of a national strategy, policy, or plan. (Interviews with ONS-DMD, May & Dec. 2019.)
- Strategy-Driven Efforts: DM and DRR capacity development plans are limited and not used to drive capacity-development efforts.** (Interviews with ONS-DMD, May & Dec. 2019.)
- DM and DRR Capacity and Resource Needs Assessments: DM and DRR capacity and resource needs assessment is limited.** (Interviews with ONS-DMD, May & Dec. 2019.)
- Coordination with Regional/Global CD Efforts: CD efforts have limited coordination with Regional/global efforts.** (Interviews with ONS-DMD, May & Dec. 2019.)
- National Science and Technology (S&T) Agenda: National S&T agenda addresses DM and DRR needs.** Sierra Leone Directory of Science, Technology & Innovation (DSTI) is the government agency dedicated to S&T that addresses national DM and DRR needs. DSTI is partnered with the GoSL COVID-19 Emergency Operations Centre and has collaborated with international partners, including UN and private partners like ESRI in producing geospatial datasets, analytic products, and tools using an open-source and open-access data protocol for health risk assessment. (Sierra Leone fights COVID-19 using innovative geospatial data and technology, DSTI Media. July 21, 2020, Sierra Leone COVID-19 Response Hub, 2020.)





## TRAINING & EDUCATION

- **Conduct of DM and DRR Training: Training is supported by GoSL, but there is neither a designated national DM training facility nor a budget.** In practice, training events are not guided by a national strategy, though DM and DRR training is conducted often and by a wide range of partners as noted above. Training at the subnational level has been outlined in the Standard Operating Procedures for District Disaster Management Committees (2015), but the delivery is inconsistent across the country. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019; and Interviews with UNDP, May 2019.)
- **Scope of Training and Education Curriculum: DM/DRR training and education curriculum is not present.** With the absence of a national training- and capacity-development strategy, the scope of trainings offered varies and is dependent on the availability of offerings from partners, as well as short-term goals, such as in preparation for flooding season. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019; and Interviews with ONS-DMD & UNDP, May 2019.)
- **Training Methods: There is centralized in-person training at a facility and/or mobile staff that provide distributed training.** In coordination with ONS-DMD, training reviewed to date is generally provided by ONS-DMD and partners on location at office locations in Freetown, and directly in the DDMCs. (Interviews with ONS-DMD & UNDP, May 2019.)
- **Training Catalog and Schedule: No training catalog or schedule exists.** Individual agencies and organizations manage their specialized training needs independent of DMD. (Interviews with ONS-DMD & UNDP, May 2019.)
- **Training Records: Training records are not maintained at the national level.** Individual agency/organization records may exist but were not identified.
- **Program to Support Exercises: Exercise efforts managed by staff with other regular day-to-day job functions.** DMD staff manages exercises as a collateral duty and does not have a dedicated lead to develop and execute events or provide exercise lessons-learned assessments. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, Oct. 2018 & May 2019.)
- **Exercise Evaluation Standards: Exercise evaluation standards do not exist.** Exercises, which are dependent on government resources and international partner donations and management support, are executed on an ad hoc, irregular basis, without a year-on-year means to mature the evaluation process.

(Interviews with ONS-DMD, May & Dec. 2019.)

- **Structured Annual Exercise Schedule: No annual exercise schedule exists, although DMD maintains general recommendations for exercise scheduling.** At the subnational level, the SOPs for district DM committees task ONS to coordinate the private sector, MDAs, and international organizations to actively engage in disaster-response exercises. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, Oct. 2018 & May 2019.)
- **National-Level Exercise: A national-level exercise is conducted, although disaster management is not the primary focus.** An annual DM-focused exercise is not institutionalized. Rather, DMD coordinates and executes an annual national security exercise. (Interviews with ONS-DMD, Oct. 2018 & May 2019.)
- **Support for Sub-jurisdictional Exercises: Support is limited to non-GoSL sources.** Financial, technical, and material support to district-level exercise efforts are not provided by the GoSL.
- **Exercise Participation Requirements: Exercise participation is required for all government agencies with DM functions.** As the lead agency for disaster management in Sierra Leone, DMD, through its parent organization ONS, has the authority to direct and coordinate the participation of GoSL MDAs in national and subnational level exercises. (Interviews with ONS-DMD, Oct. 2018, May & Dec. 2019.)
- **Stakeholder Involvement in Training and Exercises: Stakeholders are invited, but not required to participate in training and disaster exercises.** NGOs and private-sector stakeholders are invited to participate in training and exercises. These participants play a significant role in DM training and exercises, to include providing financial and staffing support to the planning and execution of events. (Interviews with ONS-DMD, Oct. 2018, May & Dec. 2019.)
- **DM Programs in the Higher-Ed Community: Higher-education community involvement is available, although it is limited in scope.** Academia supports DM efforts but has no official association with the governmental DM structures (Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Interviews with ONS-DMD, May & Dec. 2019.)
- **Higher-Ed Program and Degree Offerings: Higher education in disaster management is not offered at the main universities in Sierra Leone.** University of Sierra Leone maintains faculty who have the credentials to develop curriculum for Higher-Ed, however additional resources are needed. (Interview with University of Sierra Leone, May 2019.)
- **National DM Curriculum: DM and DRR curriculum for K-12 is under development.** University of Sierra Leone has noted the need for, and begun discussions to, increase national preparedness by developing a national curriculum for primary, secondary, and tertiary schools. The GoSL, with support

from UNDP, conducted a Disaster Risk Reduction and Management (DRRM) Program pilot project in several schools and colleges at the district level in Spring 2018 which helped to strengthen the capacity of the education sector by creating a DRRM curriculum for teachers. (UNDP DRR District Monitoring Report, Dec. 2018; UNDP School-based DRRM Monitoring Report, May 2018.)

- **Public Education Methods: Public education is provided through various media; however, no national public-awareness strategy exists.** Public awareness, preparedness, and resilience-building programs face implementation challenges based on staffing and financial resources and are conducted in an ad-hoc manner through various media. (Interviews with ONS-DMD, Sierra Leone Red Cross, and UNDP, May & Dec. 2019.)
- **Community Centers and Public Awareness/Education: Community centers and community organizations are engaged in the promotion of disaster awareness, preparedness, and training.** These efforts are not conducted uniformly throughout the country. (Interviews with ONS-DMD, May & Dec. 2019.)



## CAPACITY DEVELOPMENT MONITORING & EVALUATION

- **Disaster Preparedness Information for the Private Sector: Private-sector preparedness is not currently supported by GoSL.** Preparedness efforts are managed at the organization/company level. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Standard Evaluation Procedures: No standard procedures are in place to guide the evaluation and revision of plans, strategies, and standard operation procedures (SOPs).** Updates to procedures occur on an ad hoc, as-needed basis depending on the availability of staffing resources. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Review of Plans, Strategies, and SOPs: Plans, strategies, and SOPs reviewed/revised on an ad hoc basis.** The Government of Sierra Leone (GoSL) has produced several revisions of DRM strategies, policies, and SOPs. However, multiple versions of plans remain in circulation, and final versions have not been approved nor institutionalized within the DM stakeholder community at national and subnational levels. (Interviews with ONS-DMD, May & Dec. 2019.)

- **Review of DM Legislation: The DM legislation has not been reviewed or updated since ratified.** The principal disaster management legislation, the National Security and Central Intelligence Act of 2002, has not been updated since its inception. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Requirements for Post-Disaster Reviews: Post-disaster reviews have been completed for major events, although the requirement is not formalized in policy documents.** While there is no identified requirement for post-event review and evaluation of disaster-response efforts, after-action reports have been developed after large-scale disasters. (Interviews with ONS-DMD, May & Dec. 2019.)
- **Evaluations Incorporated into Plans, Policies, and/or SOPs: There is no evidence showing the evaluations have been incorporated into plans, policies, or the SOPs.** Post-event evaluations and assessments are used on an informal basis to guide planning and decision-making.

# THE DMA SUMMARY OF FINDINGS



## COMMUNICATION AND INFORMATION

Limited or No Capacity  
 Early Capacity Development  
 Achievement with Significant Limitations  
 Substantial Progress with Some Limitation  
 Advanced Capacity

**OVERALL SCORE**



**SUB-THEME SCORES**



Hazard and Risk Analysis



Monitoring and Notifications



Disaster Assessment



Information Management, Collection, Distribution



Media and Public Affairs

No requirements exist for regular record keeping of risks, risk-assessment processes, and standards. Vulnerable populations, climate change criteria, and local and indigenous knowledge in risk assessments are limited. The existing risk-assessment information and maps are managed centrally by DMD through INTEGEMS, a local private company that is publicly accessible. However, their results are not regularly updated or incorporated into the DM plans. Disaster assessments typically require the intervention of INGOs and NGO partners. Hazard monitoring is occurring at the national level, but local-level monitoring is limited. Sierra Leone Meteorological Agency (Met-SL), Ministry of Water Resources (MoWR), and Environmental Protection Agency of Sierra Leone (EPA-SL) are the main agencies that have the resources to monitor hazards, including flood, windstorm, lightning, and tropical storm. However, technical limitations and budgetary restrictions leave more than 75% of the population underserved in terms of hazard monitoring and early warning. There is an assigned PIO with the ONS-DMD, and public information is disseminated through a single channel; however, pre-scripted messages have not been developed. With the lack of a central information system, and with disaster databases having no apparent link to the National Statistics Agency, the data formats are mixed (some digitized and some not), and data sharing across agencies is informal and inconsistent.







## HAZARD & RISK ANALYSIS

- Risk-Assessment Processes and Standards: There are limited risk assessments, or they are conducted irregularly, and with no standards identified.** Two recent national and city-level assessments have been developed by external DM stakeholders, providing a de facto baseline for risk-assessment efforts in the country. (Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Sierra Leone Multi-City Hazard Review and Risk Assessment, World Bank, 2018; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018.)
- Risk-Assessment Requirements for Planning: Risk assessments are not required for DM or DRR planning efforts.** Although noted as a best practice by DMD and disaster management stakeholders, there is no requirement formalized in legislation or national policy for the use of risk-assessment practices and results in DRM and DRR planning efforts. (Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Interviews with ONS-DMD, Oct. 2018.)
- Risk-Assessment Staffing Capacity: No organic GoSL risk-assessment staffing capacity exists; external partner resources are required.** Risk assessments (including the two noted above) have been conducted by non-GoSL partners, with funding from international organizations including UNDP and World Bank, as well as this assessment sponsored by the US Government, in coordination with DMD. (Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Sierra Leone Multi-City Hazard Review and Risk Assessment, World Bank, 2018.)
- Vulnerability Measured in Risk Assessments: Vulnerability-assessment criteria limited in scope to demographic data and/or housing type, or inclusion of complex vulnerability measures is hindered by implementation challenges.** The 2017 Sierra Leone Hazard Profile and Capacity Gap Analysis includes limited demographic indicators of vulnerability in its hazard profiles, including gender, age, and disability. The 2018 Sierra Leone Multi-City Hazard Review and Risk Assessment focuses on housing data and location proximity. (Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Sierra Leone Multi-City Hazard Review and Risk Assessment, World Bank, 2018.)
- Climate Change Included in Risk Assessments: Climate change criteria limited in scope, or inclusion of climate change measures is hindered by implementation challenges.** The two most recent assessments included climate change criteria, although not comprehensively. The 2017 Sierra Leone Hazard Profile and Capacity Gap Analysis limits the scope to sea-level rise prone areas. Climate change is also integrated into the 2018 Sierra Leone Multi-City Hazard Review and Risk Assessment by accounting for hazard zones “in the near future (the year 2050) accounting for climate change”. (Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Sierra Leone Multi-City Hazard Review and Risk Assessment, World Bank, 2018; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018.)

- **Local and Indigenous Knowledge in Risk Assessments: Not included.** Neither the 2017 Sierra Leone Hazard Profile and Capacity Gap Analysis nor the 2018 Sierra Leone Multi-City Hazard Review and Risk Assessment includes information from local and indigenous sources explicitly, though it is noted as a gap. (Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Sierra Leone Multi-City Hazard Review and Risk Assessment, World Bank, 2018.)
- **Hosting of Risk Assessment Information: A centralized GIS system managed by DMD through a local contractor exists to support risk-assessment reporting, but sub-jurisdictional access and/or training support is not provided.** As part of the 2017 assessment, two online resources, Hazard and Risk Profile Information System - Sierra Leone (HARPIS-SL) and Climate Information, Disaster Management and Early Warning System (CIDMEWS), were created and are hosted by a local private company, Integrated Geo-information and Environmental Management Services (INTEGEMS). The applications are publicly available, though DM stakeholders do not regularly review and leverage these applications for preparedness or DRR activities. (Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Sierra Leone Multi-City Hazard Review and Risk Assessment, World Bank, 2018; Interviews with INTEGEMS, Oct. 2018 & Dec. 2019.)
- **Risk-Mapping Requirements: They do not exist.** There is no formal requirement to map risk at either the national or subnational levels.
- **Risk Mapping Capacity: Outside support is required to conduct risk mapping.** Risk mapping capacity is available through non-GoSL stakeholders. DMD does not have resident capacity for risk mapping. (Interviews with ONS-DMD, Oct. 2018.)



## MONITORING & NOTIFICATION

- **Existence of Hazard Monitoring: Monitoring of some major hazards is occurring at the national level, with limited monitoring in some districts.** The Sierra Leone Meteorological Agency (Met-SL) has the mandate to monitor and provide data for weather-related hazards to DMD and aviation officials. However, a lack of equipment and manpower hinders their ability to provide detailed information for disaster preparedness and decision making. Except for public health efforts through the PHNEOC, there are no other mechanisms for hazard monitoring at the national level. Ten local communities in six districts have implemented hazard monitoring and early warning practices in collaboration with Sierra Leone Red Cross. (Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Interviews with ONS-DMD & SLRC, May and Dec. 2019.)
- **Coordination of Hazard Monitoring: Coordination of hazard monitoring occurs, but there is no single office or agency tasked with monitoring all major hazards, or coordination activities remain in development.** Hazard monitoring for meteorological events is the mandate of Met-SL, which reports any potential weather events (flood, windstorm, lightning, and tropical storm) to DMD. The Environmental

Protection Agency (EPA-SL) and the Ministry of Water Resources (MoWR) are supporting agencies. Public health monitoring is conducted by the PHNEOC. (Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Interviews with ONS-DMD & Met-SL, Feb., May and Dec. 2019.)

- **Population in Areas Served by Monitoring Efforts: Hazard monitoring serves less than 25% of the Sierra Leone population.** Due to a severely resource-constrained environment and technical limitations, hazard-monitoring systems are in place for less than a quarter of the population based on a national assessment. (Interviews with ONS-DMD, SLRC, & Met-SL Dec. 2019.)
- **Doppler Radar Coverage: Available but covers less than 25% of land area in Sierra Leone.** Met-SL reported a lack of any functioning radar in the country, with international sources such as the African Centre of Meteorological Applications for Development (ACMAD) and World Meteorological Organization (WMO) filling critical gaps in this area. (Interviews with ONS-DMD & Met-SL, May and Dec. 2019.)
- **Hazard-Monitoring Responsibility: Hazard monitoring is managed by agencies or offices with relevant or hazard-specific missions.** Hazard monitoring for meteorological events is the mandate of Met-SL. EPA-SL and MoWR are supporting agencies, providing key data to inform on hazards nationwide. (Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Interviews with ONS-DMD & Met-SL, Feb., May and Dec. 2019.)
- **Hazard-Monitoring Methods: Hazard-monitoring methods are limited by scope and older technologies.** Utilizing best-practice methods and technologies for hazard monitoring is a noted challenge. In response, two online web-mapping applications, HARPIS and CIDMEWS-SL, were designed and implemented to monitor hazards and provide early warning. However, the systems appear to be underutilized and are not institutionalized by the disaster-management community. (Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Interviews with ONS-DMD & Met-SL, Feb., May and Dec. 2019.)
- **Assignment of Notification/Early Warning Responsibilities: Sierra Leone's Notification/Early Warning Responsibilities are spread across multiple agencies.** There is no national system covering the most common or severe (in terms of exposure) hazards, and ensuring adequate alerting and communication to the public. In the absence of a single national system, the main GoSL agencies involved in hazard monitoring (Met-SL, EPA-SL, and MoWR) send information about potential natural hazard threats directly to DMD for dissemination to the public via media sources. (Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Support to Communication and Dialogue on Early Warning and Forecasting Products & Climate Information Project, INTEGEMS, 2017; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Overview presentation at NDPBA kickoff, Oct. 2018; Interviews with ONS-DMD, Met-SL & INTEGEMS, Oct. 2018 & May and Dec. 2019.)
- **Standard Procedures for Early Warning: No standard procedures for early warning exist in Sierra Leone.** Early warning notifications are managed on an informal basis, without written guidance in policy, plans, or SOPs.
- **Early Warnings Communication Channels: Warnings are provided through radio, television, social media, and mobile (cellular) phones (text).** Warnings are not provided through landline phones or

siren. No standard procedures exist to facilitate notification and early warning. Should a notification to the public be necessary, several mechanisms may be used at the discretion of DMD, including radio and television depending on the hazard type and threat level. (Interviews with ONS-DMD, Met-SL & INTEGEMS, Oct. 2018 & May and Dec. 2019.)

- **Targeted Early Warning Capabilities: Early warning systems in Sierra Leone are not able to target specific locations according to risk.** Early warning and notification systems at the national level are not advanced to the level of targeting specific locations. (Interviews with ONS-DMD, Met-SL & INTEGEMS, Oct. 2018 & May and Dec. 2019.)
- **Early Warning Systems Coverage Area: Less than 25% of Sierra Leone is covered by an Early warning system of any type.** Some communities have implemented a local EWS with the assistance of DMD and partners such as Sierra Leone Red Cross. Additional examples include the sounding of an alarm via church bells or other devices and using local radio to warn community members of a potential hazard. (Interviews with ONS-DMD, SLRC, & Met-SL Dec. 2019.)
- **Testing of Early Warning Systems: Existing EWS capabilities are not regularly tested or institutionalized in Sierra Leone.** There are no formalized procedures or schedules for testing EWS. (Interviews with ONS-DMD, SLRC, & Met-SL Dec. 2019.)
- **Training and Education for Warning Recipients: Some communities in Sierra Leone served by early-warning systems are provided with pre-disaster training or education about message meaning and appropriate response.** In some rural areas, local monitoring and early warning systems have been developed for specific hazards with support from partners. These include 10 communities in six districts. (Interviews with ONS-DMD& SLRC, May & Dec. 2019.)
- **Population Targeting of Early Warning Messages: Early warning systems have limited capacity to address the needs of specific populations.** While there is not a national EWS, some populations (vulnerable or special needs) are targeted with specific messaging in some rural areas, which have implemented local hazard monitoring and early warning systems. (Interviews with ONS-DMD& SLRC, May & Dec. 2019.)



## DISASTER ASSESSMENT

- **Disaster-Assessment Capabilities: Disaster-assessment systems and procedures exist, supported by policy and in practice.** In coordination with international partners, DMD utilizes the Multi-Cluster/ Sector Initial Rapid Assessment (MIRA) process to perform assessments during disaster-response events. MIRA supports these efforts by providing a common understanding of where humanitarian needs are most severe and which population groups are most in need of assistance. (Interviews with ONS-DMD, Dec. 2019.)

- **Disaster-Assessment Requirements: Disaster assessments are considered and performed on a non-routine basis, but decision making often occurs irrespective of assessment outcomes.** Assessments are mentioned in various disaster management documents. However, specifics and standards of roles and responsibilities are not defined. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, Dec. 2019.)
- **Nationally Authorized Assessment Methodology: A nationally authorized assessment methodology exists, but universal application is hindered by either a lack of implementation requirements or implementation challenges.** The GoSL utilizes the MIRA process as the approved methodology to perform assessments during Level 2/3 events. (Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, Dec. 2019.)
- **Assessment Resource Capacity: Disaster assessments in Sierra Leone typically require the intervention of international organizations and NGO partners.** The MIRA assessment requires the assistance (computer/technical and data management) of international partners working within Sierra Leone. ONS and DMD do not maintain the staffing or technical expertise to conduct the assessments without external support. (Interviews with ONS-DMD, Dec. 2019.)
- **Assessments and Incident Action Planning: Assessments are conducted, but implementation challenges and other obstacles often limit their utility in the IAP process.** While the situation reports from Pillar leads and the MIRA methodology are present for large-scale events, the lack of an institutionalized assessment methodology for national and subnational jurisdictions and agencies for all three levels of disasters prevents the standardization of data and reporting, which may present challenges in the decision-making process. (Interviews with ONS-DMD, Dec. 2019.)
- **Stakeholder Engagement in the Assessment Process: Multi-stakeholder engagement is not required but is encouraged through the Pillar system.** Both the NPDRR and NSSG include a broad range of stakeholders from Sierra Leone MDAs. However, not all are effectively integrated into the decision-making process. Where appropriate, Sierra Leone has worked to try and integrate and match non-governmental organizations with appropriate counterparts through functional areas and the existing Pillar system. (Interviews with ONS-DMD, Dec. 2019.)





## INFORMATION COLLECTION, MANAGEMENT, & DISTRIBUTION

- Data Collection and Storage Standards: No official DM data standards exist in Sierra Leone.** However, Sierra Leone established its Open Government Initiative (OGI) in 2008, passed the Right to Access Information Act in 2013, and joined the Open Government Partnership (OGP) in 2014. (Right to Access Information Act of 2013; Interviews with ONS-DMD, Dec. 2019.)
- Format of Data: Some of Sierra Leone’s DM data are digitized but is mostly in a mixed format.** Without a nationally adopted data standard (such as an NSDI), each GoSL MDA implements a standard for internal use. Example formats include handwritten logbooks, spreadsheets, PDF documents, and GIS layers.
- Data Sharing: Data sharing is informal and inconsistent, and data are not typically shared between different levels of government.** Data between GoSL MDAs at national and subnational levels are shared positively and openly. In practice, the process involves several layers of approval, and technical capacity is low, which delays the data-sharing process. The Right to Access to Information Act of 2013 requires the GoSL to disclose publicly held records that involve GoSL data sharing, but implementation challenges exist due to a lack of planning and protocols. (Right to Access Information Act of 2013; Interviews with ONS-DMD, Dec. 2019.)
- GIS-Based Data Management System to Leverage a Common Operating Picture: No central information system exists; no common operating picture (COP) is utilized, and limited GIS capacity exists.** Two online web-mapping applications, HARPIS-SL and CIDMEWS, contain a collection of GIS information designed to monitor hazards and provide early warning nationwide. These applications are operational but appear under-utilized by the disaster management community. (Interviews with ONS-DMD, INTEGEMS & Stats-SL, Oct. 2018 & May and Dec. 2019.)
- Disaster Database Linked to the National Statistics Agency: Disaster-loss information is collected but no national database exists, and/or disaster-loss information is not linked to the national statistics system.** (Interviews with ONS-DMD, May and Dec. 2019.) A DesInventar database exists but is not present at DMD, and the database has not been recently updated due to a lack of staff resources and technical capacity. Potential resources include historical flood data from 2009 to 2017, landslide data from 2009 to 2016, and fire statistics from 2009 to 2015. (Interviews with ONS-DMD, May and Dec. 2019.)

- **Facilitation of Information Sharing: DM information sharing occurs through disparate systems or platforms.** Information is requested from ONS-DMD in meetings. ONS-DMD reaches out to various Pillars/Partners/subnational levels but with no defined data standards or formats. (Interviews with ONS-DMD, May and Dec. 2019.)
- **Dedicated Media Briefing Space: The GoSL provides a dedicated media briefing space collocated with the NSR/EOC.** The public broadcasts related to security or emergency/disaster are made in coordination with Pillar #4. (Interviews with ONS-DMD, Dec. 2019.)



## MEDIA AND PUBLIC AFFAIRS

- **Public Information Officer: The GoSL utilizes a single-agency point of contact for public affairs across all government DM functions.** There is an assigned ONS Public Information Officer position that manages public affairs for any national security event, and coordinates disaster-related events with Pillar #4 Social Mobilization and Communications led by the Ministry of Information and Communication (MIC). (Interviews with ONS-DMD, May and Dec. 2019.)
- **Documented Communications Strategy: Sierra Leone does not have a documented communications strategy.** Existing policy and planning documents do not contain a communication strategy for disaster events. (Interviews with ONS-DMD, May and Dec. 2019.)
- **Media Training: Media training on disaster-specific communication is offered to key officials and government leadership.** Media training is provided by international partners. ONS and DMD staff attend media-related training events offered regionally, such as the November 2019 Disaster Risk Reduction Best Practices two-day program organized by ECOWAS in conjunction with the United Nations Office for Disaster Risk Reduction. (Interviews with ONS-DMD, Dec. 2019; ECOWAS Website)
- **Information Dissemination Formats: Public information-dissemination capabilities are communicated primarily through a single channel (e.g., the media or websites).** For national security threats or emergencies, the primary mechanisms for the dissemination of public information are television and radio in an address from ONS headquarters by the national security coordinator or a designated official. (Interviews with ONS-DMD, Dec. 2019.)
- **Pre-scripted Information Bulletins: Pre-scripted messages or bulletins have not been developed.** ONS and DMD do not maintain pre-scripted public communications for the range of potential or likely hazards events. For recent disasters, including the 2017 and 2019 events, MIC – with ONS and DMD

support – developed bulletins based on-scene information from rapidly developing situations. (Interviews with ONS-DMD, Dec. 2019.)

- **Public information Audiences: Public information capabilities address a uniform audience in their methods and messaging.** Dissemination of information is conducted broadly to the general public via television and radio to reach the largest audience. (Interviews with ONS-DMD, Dec. 2019.)
- **Tracking Publicly Generated Information: Publicly generated information is tracked and used, but no dedicated policies or procedures exist to do so.** ONS staff monitors social media for potential security concerns. There is no standard operating procedure for monitoring and reporting hazards or disaster-related public reporting via social media. (Interviews with ONS-DMD, Dec. 2019.)



**THE NDPBA**

# NATIONAL RECOMMENDATIONS

## THE NDPBA

# NATIONAL RECOMMENDATIONS

The following national recommendations are presented based on the findings of Sierra Leone's National Disaster Preparedness Baseline Assessment, conducted by the Pacific Disaster Center. The recommendations focus on strengthening the culture of disaster risk reduction through comprehensive disaster management and good disaster-risk governance.

The Disaster Management Department (DMD) currently functions as a directorate within the Office of National Security (ONS). Under this institutional arrangement, disaster management (DM) is considered an element of the national security strategy, illustrating the importance that the Sierra Leone Government places on the potential destabilization that could occur from any disaster.

Senior-level support and decision-making process is timely during disasters; however, interministerial operationalization of DM does not yet appear to have been fully realized, resulting in limitations and challenges with the current institutional arrangement. Research findings indicate the GoSL could benefit from broader stakeholder participation across the MDAs, providing the appropriate level of support to national disaster management efforts. The legal frameworks for comprehensive disaster management, while providing a foundation, are limited in scope, with an absence of plans and procedures for all phases of the disaster management cycle, leading to limited comprehensive disaster management capacity at the national, district, and local levels.

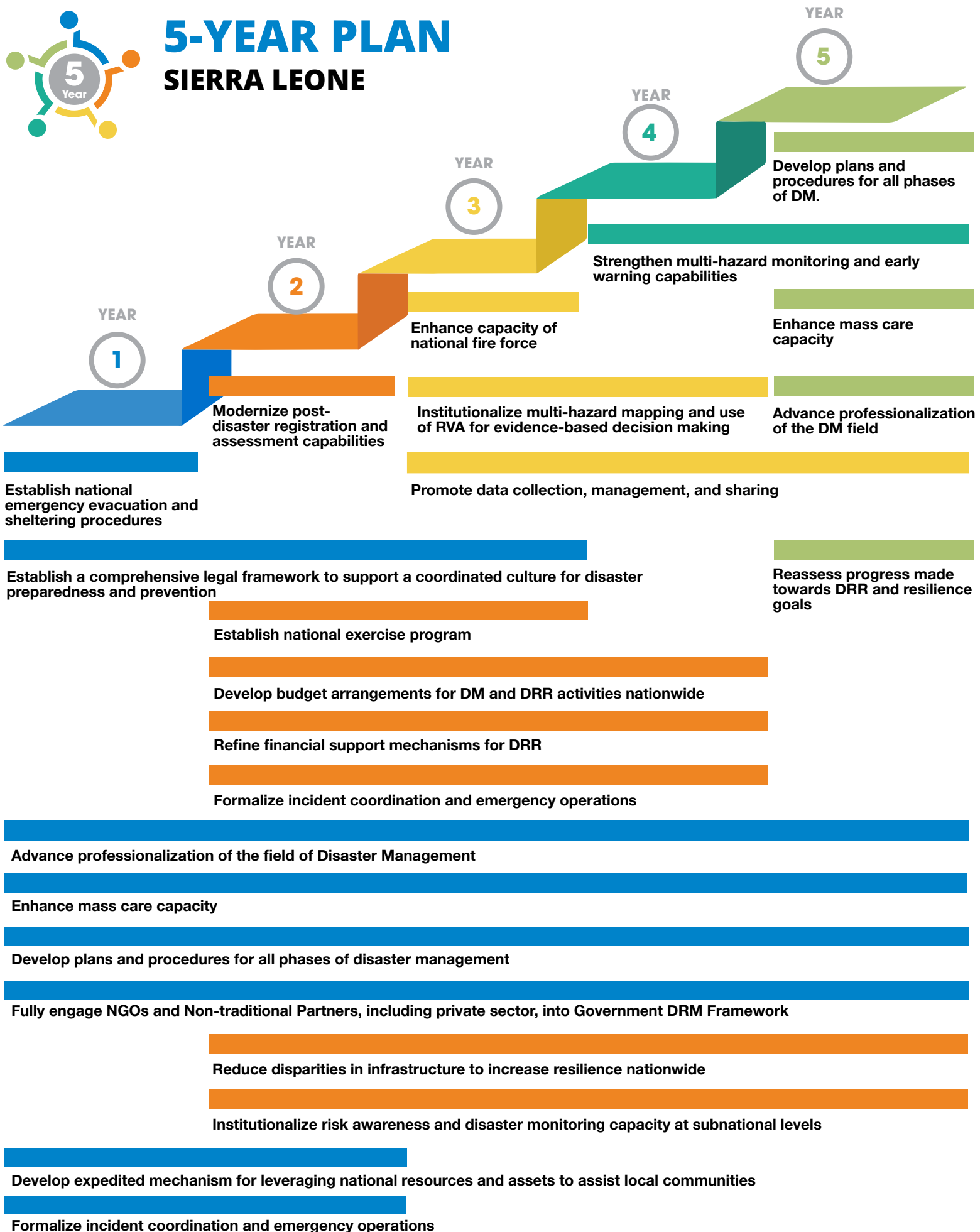
These challenges have been identified by Sierra Leone, and preliminary action has been taken to strengthen DRR at all levels. This is most visible through the recent update of the National Disaster Risk Management Policy, which is pending ratification. The new policy would establish a standalone National Disaster Management Agency (NDMA) with high-level buy-in and updated legislation, policies, plans, and – importantly – financial authorities to support its mission. The development of this policy displays the commitment of Sierra Leone to build a safer, more disaster-resilient nation. Honoring the foundation and the intent of the Sierra Leone Government to ratify and implement this policy, the following recommendations are provided as a roadmap to further advance disaster management and disaster risk-reduction efforts. These recommendations will assist Sierra Leone in meeting its commitment to citizens and residents of the nation as well as their international targets under the Sendai Framework.





# 5-YEAR PLAN

## SIERRA LEONE



# THE NDPBA NATIONAL RECOMMENDATIONS

## 1

### **ESTABLISH A COMPREHENSIVE LEGAL FRAMEWORK TO SUPPORT A COORDINATED CULTURE FOR DISASTER PREPAREDNESS AND PREVENTION IN SIERRA LEONE**

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#### **1.1. Update legislation to address all phases of disaster management, including:**

- Designated authorities and disaster management roles across the NDMA and MDAs.
- Requirements to establish plans for each phase of disaster management.
- Requirements for a dedicated budget to support DM and DRR roles in both the NDMA and MDAs.
- Specific vertical support structures from local to national level.
- Procedures for emergency and disaster declarations, including requisition of GoSL resources for disaster response.
- Guidelines to integrate external resources and support from NGO/IGOs, the private sector, regional organizations, and foreign governments.

#### **1.2. Establish implementation schedules, guidelines, and procedures.**

#### **1.3. Socialize legislation throughout the government to ensure all GoSL MDAs are informed and included in the process.**

## 2

### **DEVELOP BUDGET ARRANGEMENTS SPECIFICALLY FOR DM AND DRR ACTIVITIES NATIONWIDE**

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#### **2.1. Develop a dedicated budgetary framework to support the NDMA.**

- Utilize DRR financial best practices in coordination with national and international stakeholders.

#### **2.2. Designate financial resources for national preparedness and response, including:**

- Programmatic, administrative, and operational costs.
- Professional development, training, and education.
- National, district, and local exercises (see Recommendation 11 below).
- Technical capacity development, especially in hazard monitoring, early warning and risk, and vulnerability assessment.
- Support to district and local-level disaster management.

# 3

## REFINE FINANCIAL SUPPORT MECHANISMS FOR DISASTER RESPONSE AND RECOVERY

**3.1. In coordination with the Ministry of Finance; the Ministry of Social Welfare, Gender and Children’s Affairs (MSWGCA); and the National Commission for Social Action (NACSA) develop partnerships to establish guidelines and best practices for establishing a sustainable disaster-contingency fund.**

- Coordinate efforts with regional and international disaster management and relief organizations as well as the private sector.
- Establish guidelines for the bi-directional flow of disaster relief funds, including
  - Standard procedures for accepting external contributions to the fund.
  - Eligibility criteria and cash-transfer mechanisms for distributing funding to families and businesses.

**3.2. Establish microfinance and disaster insurance options as an alternative means of disaster relief and risk transfer.**

# 4

## DEVELOP PLANS AND PROCEDURES FOR ALL PHASES OF DISASTER MANAGEMENT

**4.1. Standardize planning guidance and develop associated templates for multiple hazards covering all disaster management phases.**

**4.2. Plans and procedures should be based on the scientific evidence provided in the NDPBA Assessment.**

- For Example: Consider the environmental challenges that compound hazard exposure in the densely populated Western Area. Land degradation, population pressures, unmanaged urban development, clean-water vulnerability, and waste disposal contribute to increased risk of disaster from floods and landslides.

**4.3. Create national planning frameworks that create a seamless coordination pathway through all levels of government and with other stakeholder organizations in Sierra Leone, as well as with regional, international, and private-sector partners.**

**4.4. Plans should include a whole-of-community approach, clearly identifying roles for government, private sector, non-governmental organizations, and the public.**

- Define coordination mechanisms for capacity and capability-based multilateral engagement.

# 5

## **FULLY ENGAGE NON-GOVERNMENTAL STAKEHOLDERS AND NON-TRADITIONAL PARTNERS INCLUDING THE PRIVATE SECTOR INTO GOVERNMENT DRM FRAMEWORK**

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- 5.1. Consistent with recommendations from UNDP, formally integrate NGO, private sector, and non-traditional partner organization (e.g., university programs) capacities (skills, equipment, resources, etc.) to better prepare for and respond to disasters and emergencies.
- 5.2. Formalize the role of the Sierra Leone Association of Non-Governmental Organizations (SLANGO) to ensure transparency of NGO activities and coordinate alignment with capacities, needs, and mission of the NDMA.
- 5.3. Within the NDMA, establish an office to support public-private partnerships for DM and DRR.
- 5.4. Work with non-governmental partners, including the private sector, to develop and standardize procedures for the provision, acceptance, and distribution of personnel and material support.
- 5.5. Strengthen partnerships with national and regional actors (ex. ECOWAS, bilateral relationships with neighboring countries, USAFRICOM) to ensure that multi-stakeholder support for planning and capacity-building efforts are maintained.

# 6

## **DEVELOP AND IMPLEMENT AN EXPEDITED MECHANISM FOR LEVERAGING NATIONAL RESOURCES AND ASSETS TO MEET THE NEEDS OF LOCAL COMMUNITIES IMPACTED BY DISASTER**

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- 6.1. Include jurisdictional arrangements for districts and major cities and identify a clear pathway for subnational government activities to request resources and assets.
  - For example, during the 2019 Freetown floods, jurisdictional challenges were noted in the process of requisitioning national resources (via ONS and NSSG) for the City of Freetown.

# 7

## **FORMALIZE INCIDENT COORDINATION AND EMERGENCY OPERATIONS**

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- 7.1. Establish and maintain the physical and human resources necessary to effectively coordinate disaster response and recovery operations.
  - Build a hazard-resilient national EOC equipped and staffed for focused DM response operations and training.
  - Identify alternative EOC facilities, such as MoHS' Public Health National Emergency Operations Center (PHNEOC), to serve as functional backup sites for national-level events.

- 7.2. Clarify the roles and responsibilities of supporting functional emergency Pillars to facilitate effective GoSL, INGO, IGO, and other stakeholder support and coordination during major disaster events.
- 7.3. Establish a more robust communication system that can leverage short-wave radio or satellite communication to more effectively communicate with underserved areas with poor national-level communication structures.

# 8

## ENHANCE THE CAPACITY OF THE NATIONAL FIRE FORCE

- 8.1. Enable the integration and expansion of the National Fire Force as a mechanism to reduce disparities in emergency-service coverage and capacity in rural jurisdictions outside of the Western Area. Add fire departments to the following districts that currently do not have fire departments: Kailahun, Koinadugu, Port Loko, Tonkolili, Bonthe, and Pujehun.
  - Focus on building community and volunteer fire corps.
  - Conduct an inventory of existing and functional resources and assets.
    - The findings of inventory should be used as the basis for resource adjustments to more adequately meet needs countrywide (equipment and human resources).
  - Expand specialized training to increase functional capabilities (i.e., search and rescue (SaR), hazardous materials (HAZMAT), and pre-care/ambulatory services).
- 8.2. Develop and implement national fire-safety policy guidelines to include codes, regulations, standards, and enforcement mechanisms.

# 9

## ENHANCE MASS CARE CAPACITY

- 9.1. Utilize multi-hazard risk and vulnerability assessment methods to anticipate commodity needs in vulnerable areas.
- 9.2. Evaluate the coverage and accessibility of nationwide stockpiles, including those from all DM stakeholders (government and non-government partners) in relation to areas of increased disaster risk.
- 9.3. Conduct nationwide training for warehouse logistics management and commodities tracking.
- 9.4. Establish a program to develop and maintain pre-disaster commodities contracts with DM stakeholders, including the private sector.
- 9.5. Develop a disaster-response resource registry of commodities and equipment to be supplied by GoSL MDAs, private sector, and regional and international organizations assessed as necessary by anticipated requirements.
  - Assign management and maintenance of the resource registry to a NDMA staff position who would review and update commodities and equipment suppliers on at least an annual basis.
- 9.7. Ensure logistics plan is in place to quickly distribute commodities to those in need during emergencies.



# 10

## **ESTABLISH NATIONAL EMERGENCY EVACUATION AND SHELTERING PROCEDURES**

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### **10.1. Working in coordination with the Sierra Leone Red Cross, the International Organization for Migration, and other organizations, develop policy guidance, requirements, and standard operating procedures for national and subnational evacuation and sheltering.**

- Practice evidence-based decision making to ensure evacuation and sheltering consider hazard exposures and vulnerabilities from the RVA.
- Identify minimum and/or recommended standard functional requirements for shelters (incl. capacity, resources, staffing, supplies, and other factors).
- Establish and implement nationwide community-level evacuation and sheltering- capacity building efforts, including training for volunteers and shelter managers.
- Pre-Identify and equip shelters based on estimated needs assessments from previous disaster events.

# 11

## **ESTABLISH A NATIONAL EXERCISE PROGRAM**

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### **11.1. Develop national requirements and standards for the planning, execution, and evaluation of disaster drills and exercises.**

### **11.2. Establish links between national exercises and planning requirements, ensuring that lessons learned are captured and reflected in updates to DM policies and plans on a pre-determined cycle.**

### **11.3 Conduct a national-level exercise on an annual basis, requiring participation by all DM stakeholders.**

- Establish linkages between the national-level exercise and district- and local-level DM exercises and training.

# 12

## **ADVANCE THE PROFESSIONALIZATION OF THE DISASTER MANAGEMENT FIELD**

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### **12.1. Develop DM competencies based on Sierra Leone-specific requirements and aligned with international best practices. To achieve competency standards at all levels:**

- Establish minimum training requirements for all DM staff.
- Support the development of higher-education offerings to advance the professionalization of disaster management and future leaders at all administrative levels.
- Develop certification guidelines for general and specific DM competencies.
- Incentive DM professionals, both GoSL and partner stakeholders, to work in district- and local-level DRR to understand subnational complexities and local solutions.

# 13

## **INSTITUTIONALIZE MULTI-HAZARD MAPPING AND RISK AND VULNERABILITY ASSESSMENT FOR EVIDENCE-BASED DECISION MAKING**

**13.1. In coordination with the Directorate of Science, Technology, and Innovation (DSTI), and non-traditional actors such as academia, utilize the NDPBA results to guide further advancement and enhancements to multi-hazard mapping and comprehensive risk and vulnerability assessment to contextualize and prioritize disaster risk reduction at the national and subnational levels.**

- Use the NDPBA as a baseline for tracking progress on Sendai Framework targets.

**13.2. Mandate the use of assessments in the planning, development, and permitting processes.**

# 14

## **STRENGTHEN MULTI-HAZARD MONITORING AND EARLY WARNING CAPABILITIES**

**14.1. Enhance capabilities of GoSL MDAs in monitoring multi-hazard threats at the national level, including meteorological, environmental, and geologic.**

- Build technical, instrumental, and staffing capacities of Met-SL to produce timely and accurate weather forecast data.
- Leverage scientific, evidence-based, freely available web-based tools, including PDC's Disaster-AWARE®, to enable decision support, hazard monitoring, and early warning capacities.

**14.2. Building on the Climate Information, Disaster Management, and Early Warning System (CIDMEWS-SL) project piloted by INTEGEMS in 2017 develop and leverage a national multi-hazard early warning system, capable of timely and actionable messages to inform Sierra Leone communities of potential threats.**

**14.3. Pursue the development and use of existing and emerging technologies, including satellite-derived forecasting, networked monitoring stations, a countrywide cellular push notification alert system, and an integrated platform for hazard communication, data visualization, and decision making.**

# 15

## PROMOTE DATA COLLECTION, MANAGEMENT, AND SHARING

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- 15.1. Establish national digital data standards and Spatial Data Infrastructure (SDI) in coordination with the Directorate of Science, Technology, and Innovation (DSTI).
- 15.2. Leverage DSTI's online Integrated Geographic Information System Portal to encourage free and open sharing of data and information across the GoSL and MDAs.
- 15.3. Support national and local-level digital data and mapping initiatives by providing in-situ training for hardware, software, and technical assistance across MDAs involved in collecting and standardizing official datasets.
- 15.4. Integrate disaster plans and national development frameworks leading to the effective and efficient use of resources and timelier and streamlined data collection and reporting in support of voluntary reporting for Sustainable Development Goals and Sendai Targets.

# 16

## MODERNIZE POST-DISASTER REGISTRATION AND ASSESSMENT CAPABILITIES

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- 16.1. Standardize and mandate the use of damage and needs assessment (rapid and non-rapid) tools and protocols, such as UNOCHA's Multi-Cluster/Sector Initial Rapid Needs Assessment (MIRA), utilizing technologies such as database-linked forms mobile data entry.
  - Working with international partners build technical capacity and provide training on assessment and reporting roles and responsibilities of GoSL and non-governmental partners.
- 16.2. Link assessments and registration to the national disaster-declarations process and eligibility requirements for disaster financing.

# 17

## INSTITUTIONALIZE RISK AWARENESS AND DISASTER-MONITORING CAPACITY AT SUBNATIONAL LEVELS

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- 17.1. Work to institutionalize subnational DM and DRR, creating proactive and resilient communities guided by policy from the NDMA.
  - Consistent with World Bank's Rapid Damage and Loss Assessment following the 2017 landslide, engage communities in risk awareness and resilience building through public communication, training, and exercises.

- Advance efforts underway with the Sierra Leone Red Cross to expand community training.
  - Develop a national program of locally managed community emergency-response teams (CERT).
- Implement the Standard Operating Procedures for District Disaster Management Committees (2015), synchronizing stakeholders' roles for preparedness and incident coordination at all levels.
- Strengthen bi-directional data gathering and communications from local to national level, including the establishment of hazard zones and reporting of disaster impacts.
  - Consistent with recommendations from UNDP, fully incorporate District Health Management Teams into the District Disaster Management Committees.
  - Implement best practices and lessons learned from the MoHS Integrated Disease Surveillance and Response (ISDR) system to support subnational data recording and reporting for hazards and disasters.

# 18

## REDUCE DISPARITIES IN INFRASTRUCTURE TO INCREASE RESILIENCE NATIONWIDE

### 18.1. Communications, energy, transportation, and clean-water infrastructure capacities drop sharply outside of the Western Area, reducing economic stability and disaster resilience.

- Establish partnerships between GoSL and existing mobile communications companies, including Orange, Africel, and Sierratel, to increase access and reliability of mobile communications in underserved areas.
- Radio broadcasts and mobile phone messaging are the principal means to disseminate hazard warnings across Sierra Leone. Identify partners to support the distribution of additional equipment to expand access to DM communication means.
- Identify and work with partners to expand, strengthen, and secure a national electrical-utility grid. Work to promote equitable distribution of fuel, including consumer gas stations and a national fuel-storage network.
- Identify and work with partners to improve the quality and density of the transportation network, ensuring that less-populated areas are accessible and connected to the rest of the country.
- Identify and work with partners to strengthen water infrastructure nationwide to reduce clean-water vulnerability. Equitable access to safe, clean drinking water and sanitary toilet facilities will reduce the spread of disease and dramatically improve quality of life.

# 19

## REASSESS PROGRESS MADE TOWARD DRR AND RESILIENCE GOALS

### 19.1. Update the NDPBA, including both the RVA and DMA analyses, to track progress toward reducing vulnerabilities, increasing coping capacities, and building disaster management capabilities in support of Sierra Leone's Disaster Risk Reduction and Sustainable Development Goals for a more resilient nation.



Photo Credit: FAO.org

**NDPBA**

# **DISTRICT RISK PROFILES**

**ASSESSMENT RESULTS**



# DISTRICT RISK PROFILES

District profiles are provided as an addendum to this report and offer more granular assessment of each district in Sierra Leone. Included in the district profiles are drivers of vulnerability, coping capacity, and resilience, a comparison of each district with the overall country, and strategic, data-driven, actionable recommendations.

Each district recommendation looks at one of the top four drivers of resilience through the lens of the existing national disaster management structure in Sierra Leone. The recommendations are designed to be concise, actionable, and supported by the data.

## APPLYING RESULTS

Characterizing risk in terms of multi-hazard exposure, vulnerability, and coping capacity, the RVA provides necessary justification to support policy decisions that will protect lives and reduce losses from disasters. The RVA results allow decision makers examine the drivers of risk for each district in Sierra Leone, providing evidence to support the identification, assessment, and prioritization of investments that will have the greatest impact on disaster risk reduction. The NDPBA RVA results establish a subnational foundation for monitoring risk and vulnerability over time and enhance the DRR decision making process through improved access to temporal and spatial data for all districts in Sierra Leone.

# APPENDIX A

## RVA METADATA

### Multi-Hazard Exposure

#### Subcomponent: Raw Exposure

Indicator	Source(s)	Year	Description
Raw Population Exposure	INTEGEMS, UNEP, Facebook (see notes for details)	2018 (Population)	Cumulative raw count of person units exposed to multiple hazards, including inland flood, coastal flood/sea-level rise, Landslide, Drought and Wildfire

#### Notes

**Inland Flood:** Qualitative assessment of areas susceptible to flood based on historic observations, proximity to streams and coastline, elevations/drainage, rainfall, and land use/land cover. (INTEGEMS, 2017)

**Coastal Flood/Sea-Level Rise:** Areas susceptible to coastal floods and/or projected sea-level rise, based on coastal elevation and mean sea level. Areas of 'high' and 'very high' susceptibility were used to define this hazard zone, corresponding to flood depths of 1-3 meters above sea level. (INTEGEMS, 2017)

**Landslide:** Areas susceptible to landslide were estimated using environmental inputs of slope, lithology, precipitation, soils, and land cover, and proximity to road network. Susceptibility was classified on a relative scale. Areas of 'moderate', 'high', and 'very high' susceptibility were used to define the hazard zone (INTEGEMS, 2017).

**Drought:** Areas susceptible to drought or complete crop failure were estimated using the Standardized Precipitation Index (SPI). Areas of 'high' and 'very high' susceptibility were used to define the hazard zone (INTEGEMS, 2017).

**Wildfire:** Areas exposed to fire hazards in Sierra Leone were based on remotely-sensed observations of historic fire density and probabilistic modeling (UNEP, 2010).

Facebook's high resolution (30m) gridded population (2018) was used to estimate population exposure. Each Hazard was intersected with the population grid, and values were summed by district. Data represent the cumulative sum for all hazards.

# APPENDIX A

## RVA METADATA

Multi-Hazard Exposure			
Subcomponent: Relative Exposure			
Indicator	Source(s)	Year	Description
Relative Population Exposure	INTEGEMS, UNEP, Facebook	2018 (Population)	Cumulative raw count of person units exposed to multiple hazards (listed above), per capita.
Notes			
See above for detailed description of hazard zones.			

# APPENDIX A

## RVA METADATA

Vulnerability				
Subcomponent: Economic Constraints				
Indicator	Source(s)	Year	Description	Notes
Economic Dependency Ratio	SSL - Population and Housing Census 2015, Thematic Report on Population Projections	2020 (Projected)	Ratio of non-working age population (0-14, 65+) to the working age population (15-64).	
Lowest Wealth Quintile	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Percentage of the population that is in the country's lowest wealth quintile.	Proxy for Sierra Leone's poorest population.
GINI Coefficient	SSL - Sierra Leone Malaria Indicator Survey (MIS) 2016	2016	GINI Coefficient of economic inequality.	
Child Labor	SSL - Population and Housing Census 2015, National Analytical Report	2015	Percentage of children aged 10-14 that are in the labor force.	

# APPENDIX A

## RVA METADATA

Vulnerability				
Subcomponent: Access to Information Vulnerability				
Indicator	Source(s)	Year	Description	Notes
Illiteracy, Population Aged 10+	SSL - Population and Housing Census 2015, National Analytical Report	2015	Population aged 10 and older that is illiterate.	
Primary School Attendance Ratio	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Net Primary school attendance ratio.	
Upper Secondary Completion Rate	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Percent completion rate for upper secondary school.	
Households with Internet	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Percentage of households with internet access.	
Households with Television	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Percentage of household with a television.	



# APPENDIX A

## RVA METADATA

Vulnerability				
Subcomponent: Clean Water Access Vulnerability				
Indicator	Source(s)	Year	Description	Notes
Households with Improved Water Source	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2018	2018	Percentage of Household population with access to improved water.	Access to improved water was aggregated by summing the of percentage household population with access to water from the following sources: piped into dwelling, piped into yard/plot, piped to neighbor, public standpipe, tubewell/ borehole, protected well-protected spring, rainwater collection
Households with Improved Sanitation	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Percentage of Household population with access to improved sanitation.	
Population at High Risk of Fecal (E. Coli) Contamination of Source Drinking Water	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Percentage of Household population with high risk of fecal contamination of source drinking water from E. Coli, based on rates >11 per 100mL.	
Water Source > 30 minutes from Home	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Percentage of Household population that is > 30 minutes from Water source.	

# APPENDIX A

## RVA METADATA

Vulnerability				
Subcomponent: Vulnerable Health Status				
Indicator	Source(s)	Year	Description	Notes
Life Expectancy at Birth	SSL - Population and Housing Census 2015, Life Tables Report	2015	Life expectancy at birth.	
Infant Mortality Rate	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Infant mortality rate per 1,000 live births.	
Maternal Mortality Ratio	MoHS - Maternal Death Surveillance and Response Annual Report, 2016	2016	Maternal mortality ratio per 100,000 live births.	
Disability	SSL – Sierra Leone Integrated Household Survey, 2018.	2018	Percentage of the population with at least one disability.	As the majority of available RVA data represents the 2015 census district boundaries, counts of disabled persons were aggregated to 2015 census boundaries.
Acute Malnutrition	WFP - Sierra Leone Food Security Monitoring System Report, 2018	2018	Percentage of children under age 5 with acute malnutrition.	WFP reporting of Global Acute Malnutrition rate is based on Mid-Upper Arm Circumference (MUAC) measurement and test for oedema.
HIV Prevalence (ages 15 -49)	SSL - Sierra Leone Demographic and Health Survey, 2013	2013	Percentage tested positive for HIV among those tested (men and women, age 15-49)	
Average TB Incidence Rate, 2012 - 2014	WHO - Epidemiological Review of TB Disease in Sierra Leone, 2015	2012-2014	Average annual incidence of pulmonary Tuberculosis per 10,000 persons, 2012 - 2014	
Prevalence of Malaria in Children	SSL - Malaria Indicator Survey, 2016	2016	Percentage of children (age 6-59 months) infected with malaria, according to microscopy results.	

# APPENDIX A

## RVA METADATA

Vulnerability				
Subcomponent: Population Pressures				
Indicator	Source(s)	Year	Description	Notes
Average Annual Total Population Change	SSL - Population and Housing Census, National Analytical Report, 2015	2015	Average annual percentage of total population change between the 2004 and 2015 Censuses.	
Average Annual Urban Population Change	SSL - Population and Housing Census Migration and Urbanization Report, 2015; SSL - Population and Housing Census, 2004 - Analytical Report on Population Distribution, Migration, and Urbanization	2015	Average annual percentage of urban population change for the 2004 and 2015 Censuses.	
Net Migration Rate	SSL - Population and Housing Census, Migration and Urbanization Report, 2015	2015	Crude net recent migration rate per 1,000 inhabitants.	
Youth Bulge	SSL - Population and Housing Census 2015, Thematic Report on Population Projections	2020 (Projected)	Ratio of youth population (15-24) to the adult population (15 and older).	

# APPENDIX A

## RVA METADATA

Vulnerability				
Subcomponent: Population Pressures				
Indicator	Source(s)	Year	Description	Notes
Population that is Food Insecure	WFP - Sierra Leone Food Security Monitoring System Report, 2018	2018	Population experiencing moderate to severe food insecurity.	<p>The severity of food insecurity is measured using the Food Insecurity Experience Scale.</p> <p>Food insecurity at moderate levels of severity is typically associated with the inability to regularly eat healthy, balanced diets. As such, a high prevalence of food insecurity at moderate levels can be considered a predictor of various forms of diet-related health conditions in the population, associated with micronutrient deficiency and unbalanced diets. Severe levels of food insecurity, on the other hand, imply a high probability of reduced food intake and therefore can lead to more severe forms of undernutrition, including hunger.</p>

# APPENDIX A

## RVA METADATA

Vulnerability				
Subcomponent: Environmental Stress				
Indicator	Source(s)	Year	Description	Notes
Livestock Density	SSL - Census Agricultural Report, 2015	2015	Density of cattle, sheep, goats, and pigs per sq. kilometer land area.	
Average Annual Forest Loss	University of Maryland Global Forest Change Dataset	2018	Estimate of average annual forest loss from 2000 - 2018	<p>Majority forested area was estimated for the year 2000 using regions with tree cover <math>\geq</math> 50%. Trees are defined as vegetation taller than 5m in height. Forest Cover Loss is defined as a stand-replacement disturbance, or a change from a forest to non-forest state, during the period 2000–2018</p> <p>Data and methods are based on: Hansen, M.C. et al. (2013). High-Resolution Global Maps of 21st-Century Forest Cover Change. <i>Science</i>, Vol. 342, Issue 6160, pp. 850-853.</p>
Land Affected by Mining	INTEGEMS, National Mineral Agency	2019	Estimate of the percentage of land area affected by mining.	<p>Mine locations were buffered using 1 km buffers to represent conservative estimate of cascading areal effects of mining on surface and subsurface water, soil, and land degradation.</p> <p>Note that the dataset includes only mining sites recognized by the National Minerals Agency and does not include degradation from illicit mining.</p>
Ecological Change (Land Degradation)	WFP Sierra Leone Integrated Context Analysis, 2017	2017	Land-cover based assessment of positive and negative ecological changes, represented as average change.	Negative values represent environmental degradation or ecological loss.
Erosion Potential	WFP Sierra Leone Integrated Context Analysis, 2017	2017	Estimate of the percentage of land area that is prone to erosion.	Erosion potential is calculated as the percentage of land area that experiences soil loss at a rate of 5 tons per hectare per year, or greater.



# APPENDIX A

## RVA METADATA

Vulnerability				
Subcomponent: Gender Inequality				
Indicator	Source(s)	Year	Description	Notes
Proportion of Local Government Leadership Positions Held by Females	National Electoral Commission Local Council Election Results 2018	2018	Proportion of female seats in local government.	As the majority of RVA data represents 2015 census district boundaries, counts of local councilors were aggregated to 2015 boundaries.
Female to Male Secondary Education Attendance	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Gender Parity for Upper Secondary School Attendance. Values closer to 1 indicate greater parity	
Female to Male Land Ownership	SSL - Sierra Leone Demographic and Health Survey 2013	2013	Ratio of female land ownership to male land ownership. Values closer to 1 indicate greater parity	
Female to Male Home Ownership	SSL - Sierra Leone Demographic and Health Survey 2014	2013	Ratio of female homeownership to male homeownership. Values closer to 1 indicate greater parity	
Economically active population (female and male)	SSL - Population and Housing Census 2015, National Analytical Report	2015	Ratio of female labor force participation to male labor force participation. Values closer to 1 indicate greater parity	

# APPENDIX A

## RVA METADATA

### Coping Capacity

#### Subcomponent: Environmental Capacity

Indicator	Source(s)	Year	Description	Notes
Protected Areas and Wetlands	INTEGEMS	2017	Percentage district area that is a protected area or protected wetland.	

#### Subcomponent: Energy Capacity

Indicator	Source(s)	Year	Description	Notes
Households Connected to the Electrical Grid	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Percentage of households connected to the electrical grid.	
Fuel Stations per 100,000 Persons	INTEGEMS	2020	Fuel stations per 100,000 persons.	Includes data from Total Sierra Leone, LEONIL Company Limited, and National Petroleum Group.

#### Subcomponent: Transportation Capacity

Indicator	Source(s)	Year	Description	Notes
Road Density	OpenStreetMap	2018	Total length of road (km) per sq. km of territory.	
Average Distance to Nearest Port or Airport	World Ports Index (Ports), ICAO/ OurAirports.com (Airports)	2019	Average distance (from populated regions of the district) to the nearest port or airport.	Average distance was calculated for populated areas only.  Populated areas were estimated using the 2018 Facebook population grid, including all areas with population above zero.

# APPENDIX A

## RVA METADATA

### Coping Capacity

#### Subcomponent: Health Care Capacity

Indicator	Source(s)	Year	Description	Notes
Physicians per 10,000 Persons	MoHS - Summary Report of the 2017 Service Availability and Readiness Assessment (SARA) in Sierra Leone	2017	Physicians per 10,000 Persons	
Nurses and Midwives per 10,000 Persons	MoHS - Summary Report of the 2017 Service Availability and Readiness Assessment (SARA) in Sierra Leone	2017	Nurses and Midwives per 1,000 Persons	
Hospital Beds per 10,000 Persons	MoHS - Summary Report of the 2017 Service Availability and Readiness Assessment (SARA) in Sierra Leone	2017	Inpatient Hospital Beds per 10,000 Persons	
Average Distance to Nearest Hospital	Global Healthsites Project; INTEGEMS	2016; 2019	Average Distance (from populated regions of the district) to nearest Hospital	Health facilities reported with 'type' or 'function' equal to 'Hospital' were used to calculate average distance. Average distance was calculated for populated areas only. Populated areas were estimated using the 2018 Facebook population grid, including all areas with population above zero.
General Service Readiness	MoHS - Summary Report of the 2017 Service Availability and Readiness Assessment (SARA) in Sierra Leone	2017	General health service readiness index.	The general service readiness index is a composite measure of the overall capacity of health facilities to provide the essential package of health services. It combines the mean availability indices or scores for the five domains: basic amenities, basic equipment, standard precautions, diagnostics, and essential medicines.
Immunization Coverage	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Percentage of children (age 12-23 months) fully immunized, including BCG, Polio, Pentavalent, PCV, Rotavirus, Yellow Fever, Measles vaccinations.	

# APPENDIX A

## RVA METADATA

### Coping Capacity

#### Subcomponent: Communications Capacity

Indicator	Source(s)	Year	Description	Notes
Households with Mobile Phone	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Percentage of households that have a mobile phone.	
Cellular Towers per 100,000 Persons	INTEGEMS (Cellular Towers)	2020	Cellular phone towers per 100,000 persons.	

#### Subcomponent: Emergency Service Capacity

Indicator	Source(s)	Year	Description	Notes
Estimated Firefighters per 100,000 Persons	National Fire Force	2015	Estimate of the number of firefighters per 100,000 persons.	
Emergency Vehicles per 100,000 Persons	National Fire Force	2015	Estimate of the number of fire and rescue vehicles per 100,000 persons.	
Search and Rescue Teams per 100,000 Persons	National Fire Force	2015	Estimate of the number of search and rescue teams per 100,000 persons.	

#### Subcomponent: Governance

Indicator	Source(s)	Year	Description	Notes
Voter Participation	National Electoral Commission - 2018 Election Runoff Results	2018	Percentage of registered voters that participated in the 2018 presidential electoral runoff.	As the majority of RVA data represents 2015 census district boundaries, counts of both votes cast and registered voters were aggregated to 2015 boundaries.
Conflict	ACLED	2015-2019	Conflict events (July 2015 to July 2019) per 100,000 persons.	

# APPENDIX A

## RVA METADATA

Coping Capacity				
Subcomponent: Economic Capacity				
Indicator	Source(s)	Year	Description	Notes
Concentration of Wealth	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Percentage of the district population in the highest national wealth quintile.	
Households with Bank Account	SSL/UNICEF - Multiple Indicator Cluster Survey (MICS) for Sierra Leone, 2017	2017	Percentage of households with a bank account.	
Financial Institutions per 100,000 Persons	Bank of Sierra Leone (via GoSL Integrated GIS Portal)	2020 (population)	Financial Institutions (money agents, micro-finance institutions, commercial banks, foreign exchange bureaus, financial service associations, ATMs, and community banks) per 100,000 persons.	As the majority of available RVA data represents 2015 census district boundaries, counts of Financial Institutions were aggregated to 2015 boundaries.
Employment Rate	SSL - Population and Housing Census, Economic Report, 2015	2015	Percentage of the labor force that is employed.	





**APPENDIX B:** \_\_\_\_\_

**DMA METHODOLOGY  
& DATA**

**SURVEY RESULTS**

# APPENDIX B

# DMA SURVEY RESULTS

The Disaster Management Analysis provides context to the risk and vulnerability data. Understanding the complex environment of disaster management in Sierra Leone allows stakeholders to identify the best course of action that aligns within Sierra Leone's legal framework and with national disaster risk- reduction goals.






In the section below each disaster management indicator is provided with detailed supporting information. Data were compiled through online and archival research and validated with in-country stakeholders.

# APPENDIX B

# DMA

# METHODOLOGY

# & DATA

-  Limited or No Capacity
-  Early Capacity Development
-  Achievement with Significant Limitations
-  Substantial Progress with Some Limitation
-  Advanced Capacity



## INSTITUTIONAL ARRANGEMENTS

### ORGANIZATIONAL STRUCTURES

#### ORGANIZATION OF GOVERNMENT DM FUNCTIONS

- Sierra Leone has a dedicated disaster management agency that is part of the Office of National Security (ONS).
- The Disaster Management Department (DMD) was formally established under the Office of National Security in 2004. The Government of Sierra Leone enacted the National Security and Central Intelligence Act in 2002 (section 18, subsection IV), which mandated ONS to coordinate the management of national emergencies both natural and man-made. DMD has been tasked to carry out those tasks and specifically to:
  - Ensure the integration of disaster risk management into sustainable development programs and policies, ensuring a holistic approach to disaster management;
  - Improve the identification, assessment, monitoring, and early warning of risks;
  - Improve the effectiveness of response through stronger disaster preparedness.
- National Security and Central Intelligence Act, 2002; Environmental Assessment and Evaluation of Natural Disaster Risk and Mitigation in Freetown, 2014; Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015.

**THE VISION FOR ONS-DMD IS “A SAFER AND RESILIENT NATION IN WHICH COMMUNITIES, ECONOMY, AND ENVIRONMENT ARE BETTER PROTECTED FROM NEGATIVE IMPACTS OF HAZARDS, THROUGH APPROPRIATE COMPREHENSIVE DISASTER RISK MANAGEMENT”.**

#### DEVELOPMENT OF DM ORGANIZATIONAL STRUCTURE

- A defined national disaster management structure and organizational arrangement exists, but the implementation of the structure has not yet been fully operationalized.
- As seen below in Figure 1, there is a defined national disaster management structure in Sierra Leone that operates in both steady-state and during times of crisis. At the highest level, the National Platform for Disaster Risk Reduction (NPDRR - known locally as the Platinum level) is the high-level strategic and advisory body for national disaster management activities in Sierra Leone. The NPDRR is chaired by the

Vice President, or in his absence the National Security Coordinator, and includes senior representatives of the Sierra Leone Government, UN agencies, NGOs and INGOs. The specific roles and responsibilities of the NPDRR are 1) to serve as a national coordination mechanism and enhance multi-stakeholder collaboration and coordination; 2) foster an enabling environment for developing a culture of prevention; and 3) facilitate the mainstreaming of DRR into national policies, planning, and programs in various development sectors, as well as into international or bilateral development aid policies and programs.

- Applying guidance from the NPDRR, the National Strategic Situation Group (NSSG, known locally as the Gold level) is the central coordination body during national-level disaster emergencies (Levels 2 and 3, see Figure 1). The NSSG comprises a broad range of stakeholders, including government ministries, departments and agencies, civil society organizations, media, UN and donor agencies, private sector, and faith-based organizations. All Pillar agencies (as seen in Table 1 below) are represented. The main objective of the NSSG is to ensure coordination during an emergency response, with the Ministry, Department, or Agencies (MDAs) present ensuring support to ONS in response to the emergency. Once the NSSG is activated for Level 2 and 3 emergencies, the National Situation Room is activated as a working space. Sierra Leone does not maintain a full-time National Emergency Operations Center (NEOC).

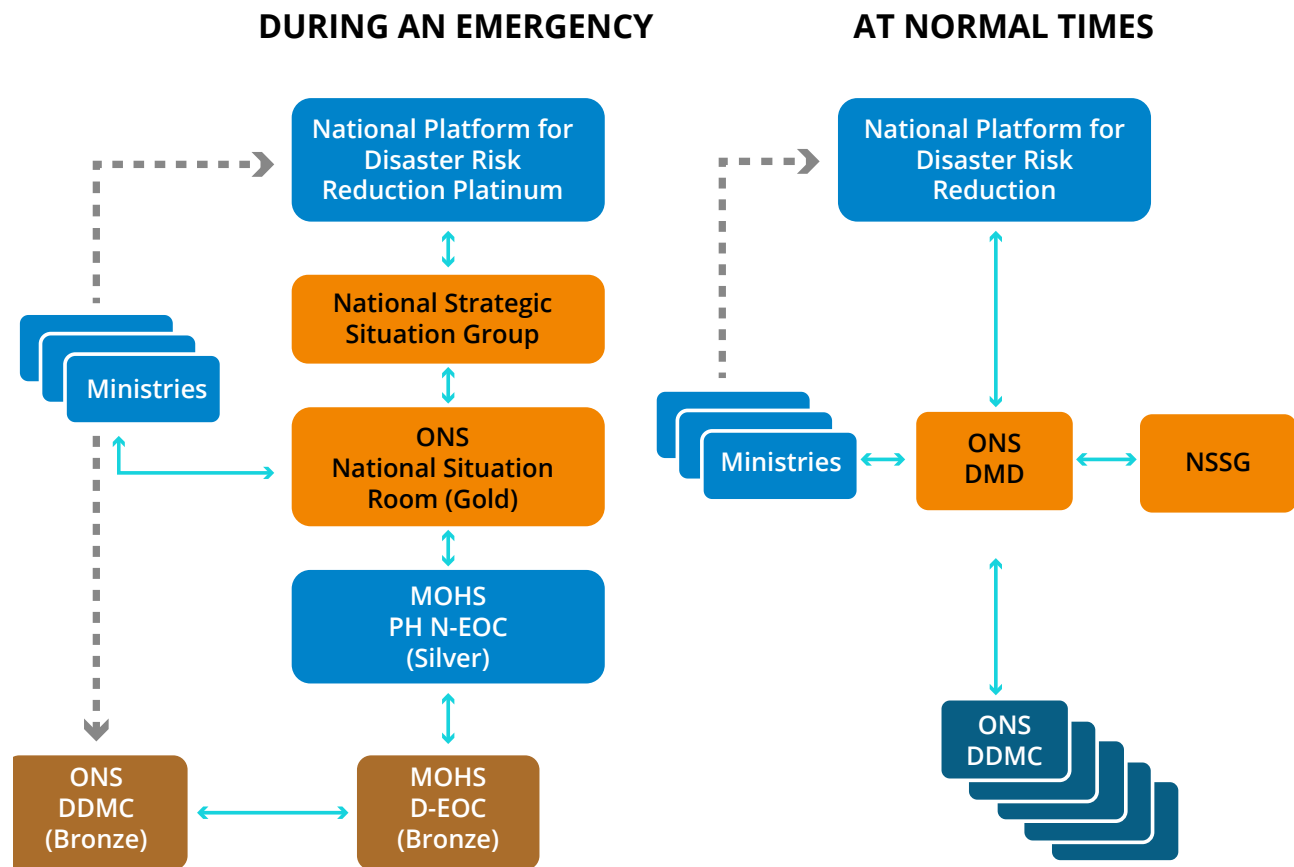


Figure 1. Organizational Arrangement at Normal Times (Level 1) and During an Emergency (Level 2 & 3)  
 Source: Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees (2015)

APPENDIX B: DMA SURVEY RESULTS

Table 1 - National Emergency Coordination Pillar Matrix

NO	PILLAR	LEAD BY	RESPONSIBILITIES	MEMBERSHIP
1.	Coordination	Office of National Security (ONS)	<p>Coordination of District Emergency Operations Centers where established</p> <p>Ensuring the meeting of the National Platform for Disaster Risk Reduction (NPDRR)</p> <p>Chairing the National Strategic Situation Group meeting</p> <p>Coordination of efforts</p> <p>Mobilization of resources to respond to the emergency</p> <p>Ensuring that pillars function effectively</p> <p>Perform any other task assigned by the NPDRR</p>	International Organization for Migration (IOM), International Security Advisory Team (ISAT)
2.	Health and Burial	Ministry of Health and Sanitation (MoHS)	<p>Mass Casualty Management, including Ambulance Service and Emergency Medical Facilities (Government Hospitals etc.)</p> <p>Collection of bodies and ensuring safe and dignified burials</p> <p>Observe Public Health Protocols and provide technical advice</p> <p>Establishment of National Public Health EOC and District Public Health EOC as required, linking to the National Disaster Management Structures</p> <p>Identification of logistical needs of victims</p>	Republic of Sierra Leone Armed Forces (RSLAF), Sierra Leone Red Cross Society (SLRC), Freetown City Council (FCC), World Health Organization (WHO), World Vision, Centre for Disease Control (CDC), Action Against Hunger, CARE International
3.	Logistics	Republic of Sierra Leone Armed Forces (RSLAF)	<p>Transportation/distribution of food and non-food items as required</p> <p>Update regularly on stockpile and pre-positioning of response items</p> <p>National Emergency Response Fleet Management</p> <p>Warehouse management</p> <p>Provide support in building up tents</p>	World Food Programme (WFP), Ministry of Finance & Economic Development (MoFED), United Nations Development Programme, (UNDP), Ministry of Transport & Aviation (MTA), Sierra Leone Red Cross Society (SLRC), National Commission for Social Action (NaCSA), Republic of Sierra Leone Armed Forces (RSLAF), Freetown Wash Consortium (FWC), Evangelical Lutheran Church in Sierra Leone (ELCSL), United Nations Children's Fund (UNICEF)
4.	Social Mobilization and Communication	Ministry of Information and Communication (MIC)	<p>Communication of Strategies, Plans, and Execution</p> <p>Press Releases and Media Appearances</p> <p>Engagement with other Pillars to agree messaging and press statements</p> <p>External Communication to the Media, Civil Society, and International Organizations</p> <p>Social Mobilization Strategy and Execution</p> <p>Development and distribution of IEC materials</p> <p>Community engagement on Disaster Risk Reduction</p> <p>Media monitoring</p>	GOAL Sierra Leone, Office of National Security (ONS), Sierra Leone Red Cross Society (SLRC), United Nations Children's Fund (UNICEF), United Nations Development Program (UNDP), National Protected Area Authority (NPAA), Freetown City Council (FCC), World Health Organization (WHO), Environmental Protection Agency (EPA), Lands Protection Agency, World Vision, Trocaire, Restless Development, CARE International

NO	PILLAR	LEAD BY	RESPONSIBILITIES	MEMBERSHIP
5.	Registration	Ministry of Social Welfare, Gender, and Children's Affairs (MSWGCA)	<p>Development of standard tools to undertake registration exercise</p> <p>Organize joint registration exercises of affected population and direct victims within 24 hours</p> <p>Compile, collate, disaggregate, and verify registers</p> <p>Distribute registers to the ONS</p> <p>State the urgent needs of victims</p>	Office of National Security (ONS), United Nation Development Program (UNDP), Sierra Leone Red Cross Society (SLRC), Ministry of Lands Country Planning & Environment (MLCPE), National Commission for Social Action ( NaCSA), Statistic Sierra Leone (SSL), Sierra Leone Police (SLP), National Civil Registration Authority (NCRA), Ministry of Information & Communication (MIC), Evangelical Lutheran Church in Sierra Leone (ELCSL), Caritas, Handicap Internationa
6.	WASH	Ministry of Water Resources (MoWR)	<p>Assess the status of water and sanitation after an emergency</p> <p>Provide and share information on an assessment conducted</p> <p>Highlight communities that are in dire need of water and sanitation facilities</p> <p>Coordinate partners for effective and efficient water and sanitation response</p> <p>Ensure adequate supply of water and sanitation facilities</p>	Freetown Wash Consortium (FWC), Save the Children, Oxfam, Freetown City Council (FCC), World Health Organization (WHO), Ministry of Health & Sanitation (MoHS), United Nation Development Program (UNDP), Guma Valley Water Company (GWVCo), Sierra Leone Water Company (SaLWaCo), United Nations Children's Fund (UNICEF), WASH Net, International Organization for Migration (IOM), Action Against Hunger, World Hope International, World Vision, Disaster Alert Network Sierra Leone, CARE International
7.	Protection and Psychosocial	MSWGCA	<p>Provide psychosocial support to victims, especially women and children</p> <p>Work in partnership with other agencies in providing psychosocial support to relatives of victims and survivors</p> <p>Update the NSSG/coordination meeting on the psychosocial needs and challenges of victims</p> <p>Ensure that victims are not exposed to physical, sexual, emotional and mental abuse</p>	Save the Children, Caritas, United Nations Children's Fund (UNICEF), Child Fund, GOAL Sierra Leone, World Hope, Freetown City Council (FCC), Plan International, Restless Development, Trocaire, Handicap International, Disaster Alert Network Sierra Leone, International Organization for Migration (IOM)
8.	Food and Nutrition	Ministry of Agriculture Forestry and Food Security (MAFFS)	<p>Assess the categories and needs of victims</p> <p>Ensure fit food is supplied to victims</p> <p>Ensure regular and appropriate diet is supplied to victims</p>	World Food Program (WFP), Wealth Hunger Hilfe (WHH), Ministry of Agriculture Forestry & Food Security (MAFF), Evangelical Lutheran Church in Sierra Leone (ELCSL), COOPI, Caritas, Action Against Hunger, World Health Organization (WHO), Centre for Disease Control (CDC)



## APPENDIX B: DMA SURVEY RESULTS

NO	PILLAR	LEAD BY	RESPONSIBILITIES	MEMBERSHIP
9.	Security and Safety	Sierra Leone Police (SLP)	<ul style="list-style-type: none"> <li>Devise appropriate strategy for security response</li> <li>Engage with all other Pillars, especially the Coordination Pillar, to ensure security strategy alignment to humanitarian response needs</li> <li>Receive and execute directives from the Coordination Pillar</li> <li>Maintain public order</li> <li>Ensure security and safety for victims</li> <li>Provide safe and secure environment for response workers</li> </ul>	Republic of Sierra Leone Armed Forces (RSLAF), National Fire Force (NFF), Office of National Security (ONS), International Federation for Red Cross (IFRC), International Organization for Migration (IOM), World Food Program (WFP), Ministry of Internal Affairs (MIA), Sierra Leone Correctional Service (SLCS)
10.	Shelter	National Commission for Social Action (NaCSA)		Republic of Sierra Leone Armed Forces (RSLAF), National Fire Force (NFF), Office of National Security (ONS), International Federation for Red Cross (IFRC), International Organization for Migration (IOM), World Food Program (WFP), Ministry of Internal Affairs (MIA), Sierra Leone Correctional Service (SLCS)

Source: Adapted from Sierra Leone ONS-DMD National Emergency Coordination Pillars Terms of Reference (ToR) (n.d.)

- At the operational level, known as the Silver level, Pillar leads (functional groups) coordinate on functional areas of support (WASH, logistics, etc.). Each of the ten Pillars has a designated lead government agency with supportive MDAs and international partners. Pillar coordination meetings are to occur regularly in support of the emergency situation, with the Pillar leads in coordination with ONS (via the NSSG) for senior-level guidance.
- Disaster management activities at the local level lie with the District Disaster Management Committees (DDMCs) in each of the 14 districts. The decentralized command, control, and coordination structure of DDMCs are further broken down administratively into Chiefdom, Section/Ward, and Village level, however, this is theoretical and not currently functioning.
- Based on our field observations and the interviews with officials, the organizational structure for disaster management described above has potential implementation challenges. One likely area for confusion regards the lead disaster-response authority. For example, during the response to the 2019 floods, it was not clear whether the disaster-response coordination lead would be the local authority of the affected region or ONS. Another example is the lack of clear differentiation between Level 1 and Levels 2/3 emergencies, since the ONS is responsible for the coordination of emergency response either way. Another area where more clarity would be useful is related to the lack of resources to implement the authority. For example, Freetown has one District Disaster Management Committee (DDMC) for the Western Area Rural, but not one for the Western Area Urban. Since most local jurisdictions do not have their own resources, they require national-level resources. Therefore, the national government has control over the local response in most disasters.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Sierra Leone ONS-DMD National Emergency Coordination Pillars Terms of Reference (ToR), n.d.; Stakeholder presentations, 2019, Interviews with ONS-DMD, 2019.

## LEVEL 1

Localized events which are dealt with as regular operations by the protective and health services (i.e., police, national fire force, and peripheral health units). This indicates a Level 1 situation with no potential threat to national security.

## LEVEL 2

Emergency/disaster events that overwhelm the capacity of the affected region to respond using its resources but which do not overwhelm the capacity of the state to respond and recover. Actions that could be taken during this period include: (i) activation of the national strategic situation group (NSSG), (ii) activation of the national situation room (NSR), (iii) staffing-up of the NSR by ONS-DMD and relevant MDAs, (iv) District Disaster Management Committees-DDMCs activated to hold regular meetings.

## LEVEL 3

An emergency/disaster event, which is a significant and immediate threat to national security, thus overwhelming the capacity of the state to respond and recover using its own resources thereby requiring international support. Such an event may be designated as a national disaster as pronounced by the President or other authorized person.

### BI/MULTILATERAL ENGAGEMENT

- Sierra Leone does not maintain an office or entity dedicated exclusively to promotion and engagement with bilateral, international, and other humanitarian actors.
- ONS-DMD maintains responsibility for bilateral and international coordination with humanitarian partners. However, the current structure maintained by the agency has not assigned coordination duties to an exclusive staff position. DMD does maintain a current list of partner agencies and points of contact but lacks necessary information on capabilities. The engagement with the partners is done on an ad hoc basis and lacks a defined coordination mechanism.
- Interviews with ONS-DMD, 2019.

### REGIONALIZED CAPACITY

- Regional DM offices exist in Sierra Leone but have limited operational functions.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Interviews with ONS-DMD, 2019.
- Regionalization of Disaster Management is not yet fully realized.

DM has been identified by Sierra Leone as a national security issue. The Disaster Management Department (DMD) is a directorate under the Office of National Security (ONS) headed by the National Security Coordinator. The national security structure is decentralized through Provincial Security Committees (PROSECs) and District Security Committees (DISECs). It is through this structure that District Disaster Management Committees (DDMCs) were established to serve as first responders at the regional level. The District Security Coordinator is dual-hatted serving also as the District Disaster Management Coordinator. The composition of the DM structures for DDMC is depicted in Figure 2, and the decentralized command and control structure is shown in Figure 3 below.

Figure 2. Composition of Disaster Management Structures for DDMCs  
Key stakeholders along the DM chain to respond to disaster in a timely manner

District Level			
• District Council Chairman (Chair)	• NaCSA	• Mayor (where applicable)	• Maritime Officer
• Hon. Paramount Chief (Deputy Chair)	• MAFFS	• Chair CPC	• SLRC
• Office of National Security (Coordinator)	• Min. Marine Resources	• SLP- LUC	• CSO Rep.
• MoHS (DMO)	• MSWGCA	• RSLAF-Bg. Comd.	• Media (Comm. Radio)
• District Office	• Min. Lands	• NFF	• Local & Int Partners
	• Min. Water Resources	• EPA-SL	• Dist. Youth Chair-person

Chieftom Level			
• Paramount Chief (Chair)	• Women’s Leader	• CSOs	• Teachers’ Rep
• MDAs Rep	• Member of Parliament	• C S Cord	• Note: In Chieftoms with CHISECs, the C S Cord should coordinate
• Councilors	• NGOs	• SLP/Security	

Note: In Chieftoms with CHISECs, the C S Cord should coordinate

Section Level	
• Section Chief / Speaker (Chair)	• Sectional Youth Leader
• Sectional Religious Leader	• Teachers’ Rep
• Sectional Women Leader	• Secrete Society Head

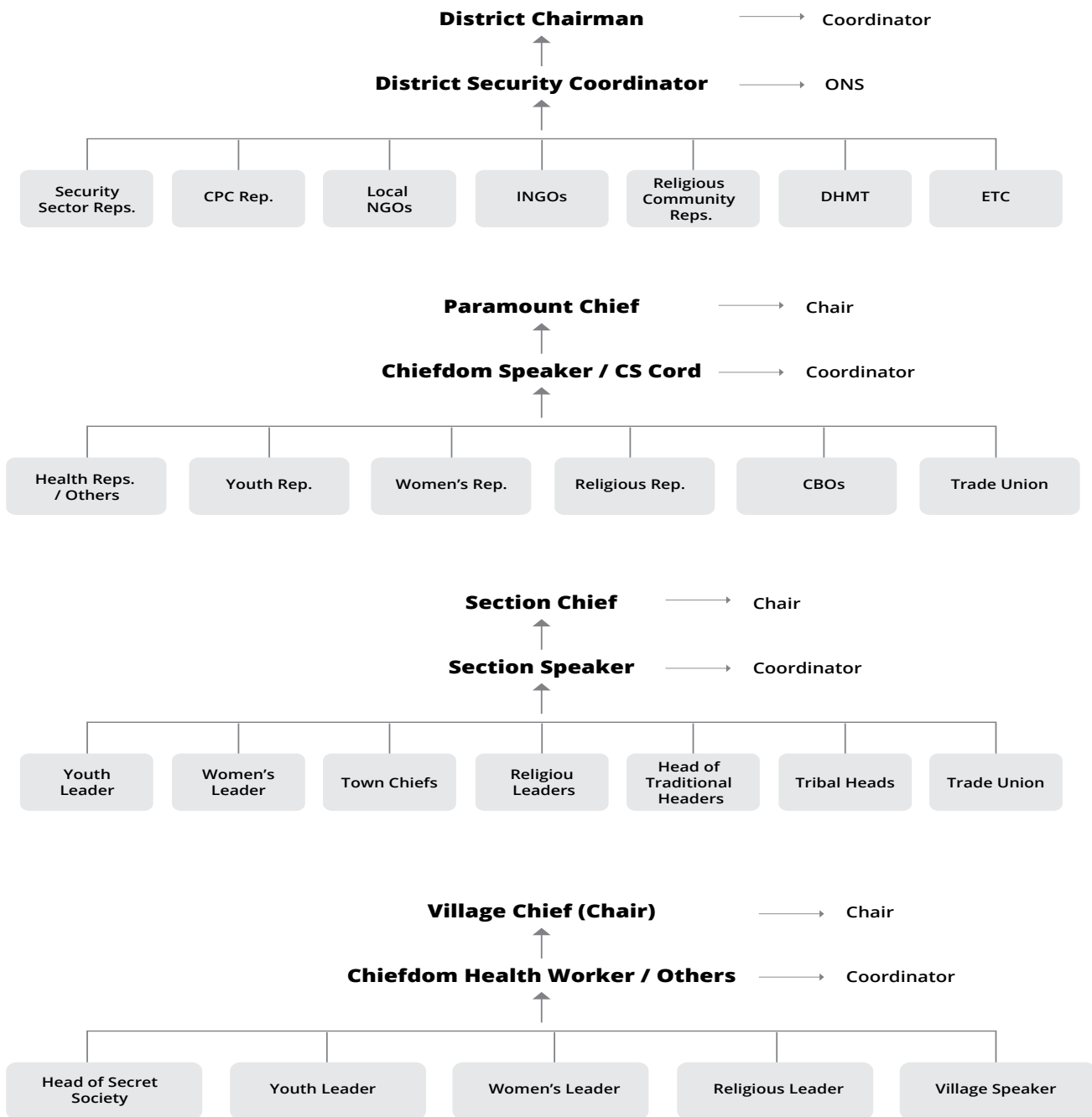
NOTE: Any other relevant person(s)

Village Level	
• Village Chief (Chair)	• Youth Leader
• Religious Leader	• Secrete Society Head
• Women’s Leader	• Teacher’s Rep

NOTE: Any other relevant person(s)

Source: Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees (2015)

Figure 3. Decentralized Command and Control Structure and Coordination



Source: Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees (2015)

The implementation of the above structure is not fully operational.

**DISASTER RISK REDUCTION (DRR) PLATFORM**

- Plans exist to establish a DRR platform, but implementation is not complete, or the platform is not functioning at ideal capacity.
- Sierra Leone declared ONS-DMD as the focal point to manage the implementation of DRR initiatives and monitor the Sendai Framework, however, implementation challenges exist. Disaster Risk Reduction (DRR) has been identified as a government priority; however, the government has not yet operationalized the necessary mechanism to align DRR activities in Sierra Leone with those of the Sendai Framework. The 2018 National Disaster Risk Management Policy (not yet ratified) acknowledges the Sendai Framework as one of the mechanisms to address specific issues of the National Poverty Reduction Strategy and to aid in meeting sustainable development goals. The policy notes a need for a shift from a “purely disaster management approach and practice focused on immediate post-catastrophe responses in Sierra Leone to a more comprehensive disaster risk-management approach that integrates all key aspects of Disaster Risk Prevention and Mitigation, Preparedness, Emergency Response, and Recovery.” (Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018). ONS-DMD has acknowledged challenges with gathering the data and necessary information to track Sendai targets due to the absence of government-wide coordination mechanisms.
- Interviews with ONS-DMD, 2019.

**CLIMATE CHANGE ADAPTATION (CCA) PLATFORM**

- Plans exist to establish a DRR platform, but implementation is not complete, or the platform is not functioning at ideal capacity.
- Sierra Leone has a national platform/office to manage the implementation of Climate Change Adaptation (CCA) under the Paris Agreement; however, implementation challenges exist. Sierra Leone ranks as the third most vulnerable nation after Bangladesh and Guinea Bissau to the adverse effects of climate change. GoSL has established the National Climate Change Secretariat as the primary national government agency for climate change response. It resides within the Environmental Protection Agency. To help advance and link disaster management and climate change efforts, the 2014 and 2018 (not yet ratified) National Disaster Risk Management Policies acknowledge CCA as one of 11 Focus Areas of national priority (Sierra Leone National Disaster Risk Management Policy 2014 and 2018- DRAFT). Ministries have implemented separate efforts to address CCA with the Ministry of Lands, Country Planning and the Environment, completing a National Adaptation Program of Action (NAPA or NAP) in 2007. The key vulnerabilities in the 2007 NAPA were identified as (1) Agriculture/Food Security, (2) Coastal Zones and Marine Ecosystems, (3) Water Resources, (4) Public Health, and (5) Fisheries. For example, in 2013, GoSL MWR initiated a multi-part project worth USD 24.4 million to assist farming communities through drought resilience and upstream- and downstream-river flow monitoring and to rehabilitate the critical infrastructure related to climate-related observational work (i.e., Automatic Weather Stations and Hydromet Automatic Stations). This allows for minimum monitoring of low-lying coastal areas for high tide, as well as monitoring flat lands, which are subject to riverine flooding (UNDP, 2013).
- A new NAP is expected to be completed by the end of 2020<sup>1</sup>. The draft NAP 2020 proposes regulatory frameworks and institutional arrangements for the adaptation through multi-stakeholder consultations. Sierra Leone is also pursuing the development of a comprehensive Coastal Climate Change Adaptation Plan as part of the NAP. There are efforts to develop the current Draft Climate Policy into a comprehensive Climate Act, which will align with the decisions adopted through the United Nations Framework Convention on Climate Change (UNFCCC) in 2016. Climate Change was also one of the nine commitment areas that were covered in GoSL’s Second Open Government Partnership National Action Plan 2016-2018 (NAP2), with the main challenge being listed as the lack of citizen access to climate change information. The Climate Change Communications Strategy that was released recently attempts to remedy that problem, as well create awareness and generate support and political commitments.

<sup>1</sup> However, progress has been slow, especially recently due to the stay-at-home orders concerning the COVID-19 pandemic (GoSL, 2020).

- Sierra Leone National Adaptation Programme of Action, 2007; Open Government Partnership Sierra Leone National Action Plan 2016-2018, 2016; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2014/2018; Interviews with ONS-DMD, 2019; Sierra Leone Climate Change Communications Strategy, 2020.

### **SUSTAINABLE DEVELOPMENT (SD) PLATFORM**

- Plans exist to establish a sustainable development platform, but implementation is not complete, or the platform is not functioning at ideal capacity.
- Plans exist in Sierra Leone to support the management and implementation of the Sustainable Development Goals 2030 Agenda. The Government of Sierra Leone manages the implementation of the Sustainable Development Goals (SDG) 2030 Agenda through a dedicated parliamentary committee, which regularly engages the Ministry of Planning and Economic Development (MoPED), the Ministry of Foreign Affairs & International Cooperation, and the Supreme Audit Service to ensure effective tracking and implementation of the SDGs. Voluntary National Review (VNR) is coordinated by MoPED, which published comprehensive VNR reports in 2016 and 2019. The SDG implementation strategy is built upon a whole-of-community approach, integrating government with civil society and active I/NGO and UN resources for training and socialization of the SDG Agenda. Noted in MoPED's 2019 VNR Report, major challenges exist regarding limited dedicated resources for comprehensive tracking and implementation of SDGs. According to Sierra Leone's Medium-Term National Development Plan: 2019-2023, the sector MDAs see the multiple reporting requirements on national and global development agendas as a burden. The solution is to integrate the global plans and the national- development frameworks leading to (1) the effective and efficient use of resources, and (2) timelier streamlined data collection and reporting. These goals can be achieved through investing in development coordination, data systems, monitoring and evaluation, and reporting (MoPED, 2019, p. 15).
- Sierra Leone National Adaptation Programme of Action, 2007; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2014/2018; Interviews with ONS-DMD, 2019; Sierra Leone's Medium-Term National Development Plan: 2019-2023 by MoPED, 2019.

### **INTEGRATION OF DRR, CCA, AND SD**

- Some integration exists, or integration is planned.
- Sierra Leone has some integration of DRR, CCA, and SDG with a desire to have a whole-of- government approach to improve the integration of efforts across sectors. DRR, CCA and SDG have been identified as priorities for Sierra Leone and are included in the conceptualization of a new disaster management agency being planned under the 2018 National Disaster Risk Management Policy (not yet ratified). To date, CCA and sustainable development interventions are not yet fully integrated with disaster risk-management initiatives. Although a whole-of- government approach has not been taken to address CCA or SDG in Sierra Leone, MDAs where appropriate, have integrated general practices into frameworks, plans, and procedures.
- In July 2018, in a partial effort to integrate DRR, CCA, and SDC, GoSL launched a five-year, \$41.5 million project, Adapting to Climate Change Induced Coastal Risks Management in Sierra Leone to restore mangrove habitats that will help protect against rising seas, rising temperatures, and uncertain climate futures. Key partners include the Sierra Leone Environmental Protection Agency, Ministry of Fisheries and Marine Resources, Institute of Marine Biology and Oceanography, and the National Tourist Board<sup>2</sup>.
- Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Interviews with ONS-DMD, 2019.

<sup>2</sup> <https://www.adaptation-undp.org/sierra-leone-launches-us10-million-coastal-resilience-project-support-united-nations-development>



**MILITARY INTEGRATION/ENGAGEMENT**

- Sierra Leone has formally integrated the military into the disaster management structure by having them lead core logistics functions. Specifically, the Republic of Sierra Leone Armed Forces (RSLAF) under the current disaster management structure has been tasked with:
  - Warehouse management
  - Transportation/distribution of food and non-food items
  - Update regularly on stockpile and pre-positioning of response items
  - National Emergency Response Fleet Management
  - Debris clearance
  - Search and rescue
  - Engineering support
  - Medical first aid

As described further under the Facilitation of Military Support section below, the necessary military operations in support of disaster management are categorized by the generic title of Military Aid to Civil Authorities (MACA). Under MACA, the military can expand beyond the logistics and allow for the utilization of military resources to support mitigation efforts, recovery of deceased persons, and policing efforts, including control of population movements. To facilitate efficient coordination of military support into the civilian-led disaster management structure, a RSLAF liaison officer is assigned full-time to ONS-DMD and is co-located in the DMD office

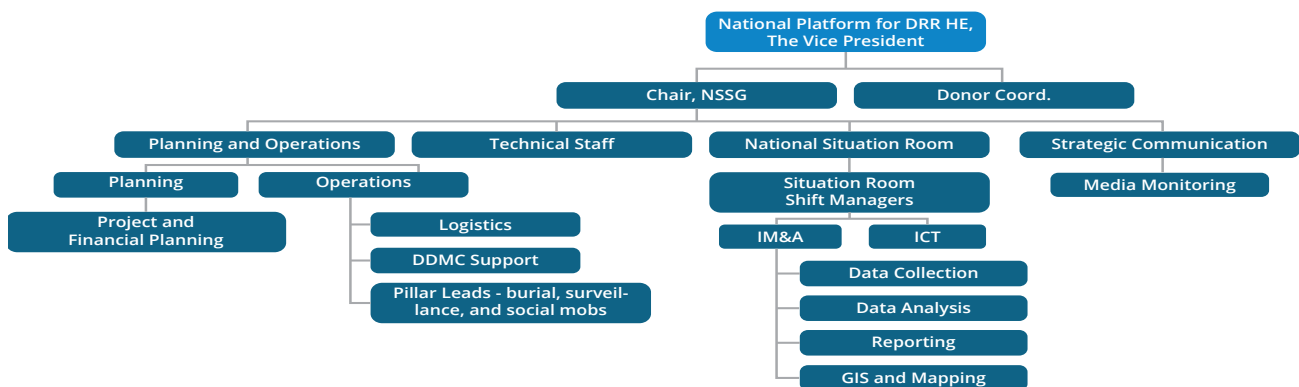
- Military Aid to Civil Authorities (MACA) – Sierra Leone, 2014; Interviews with ONS-DMD, 2019.

**LEADERSHIP**

**EMERGENCY MANAGEMENT LEADERSHIP ARRANGEMENT**

- Functional leadership positions (e.g., preparedness, operations, recovery) exist within the existing DMD structure and chain of command.
- The current disaster management structure falls under the National Security Council (NSC) headed by the President or in his absence the Vice President (as depicted in Figure 4 below), and the National Security Council Coordinating Group (NSCCG) (Sierra Leone NDRM Policy, 2018, p.5).

Figure 4. Security Emergency Arrangements for a Level 2 & 3 Situation



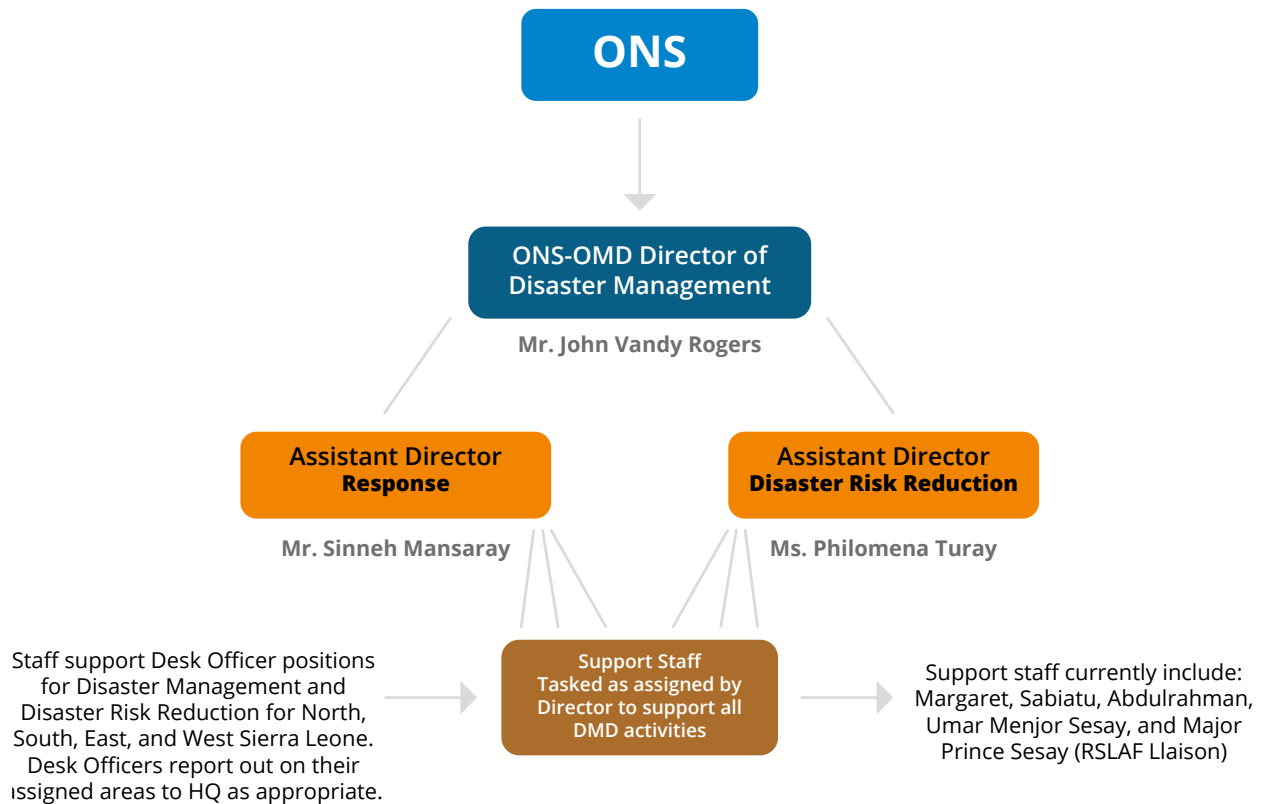
Source: Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees (2015)

ONS, headed by the National Security Coordinator, is the national DRM lead agency and manages these responsibilities through its Disaster Management Department. Below Figure 5 illustrates the ONS organizational structure. The NSC and NSCCG are not shown in Figure 5. The national security structure has decentralized representatives at the province and district levels through Provincial Security Committees (PROSECs) and District Security Committees (DISECs), in which Disaster Management Committees were established to serve as “first responders.” (Sierra Leone NDRM Policy, 2018, p.5).

As shown below in Figure 5, DMD is comprised of one director, two sub-directors (preparedness and response), and several support staff, who are focused on internal tasks and are also leads for different geographic regions of the country (e.g., North, South, East, and West).

At a subnational (district) level, there are designated District Disaster Management Committee (DDMC) leads who are dual-hatted as District Security Coordinators under ONS-DMD. The lead district-level disaster management position (non-ONS) is the District Council Chairman, an elected political position.

Figure 5. ONS-DMD Organizational Structure



Source: ONS-DMD, 2019

- Standard Operating Procedures for District Disaster Management Committees, 2015, Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Interviews with ONS-DMD, 2019.

**LEADERSHIP POSITIONS FILLED**

- All disaster management leadership positions are filled.
- All appointed senior leadership positions at DMD are filled. Limitations exist with technical staff where there are currently technical staff vacancies.
- Interviews with ONS-DMD, 2019.

**JOB-SPECIFIC COMPETENCIES OF LEADERSHIP POSITIONS**

- DM leadership positions are appointed and do not require job-specific competencies including previous disaster management experience.
- As appointed positions, job-specific competencies for DMD leadership have not been institutionalized. Currently, both Mr. John Vandy Rogers, the Director, and Mr. Sinneh Mansaray, the Assistant Director of Response of DMD, have appropriate experience and skills having served in the field of disaster management for over a decade, including leading major preparedness, response-and-recovery efforts. This is consistent with appointed positions; however, technical staff are typically expected to have subject-matter expertise in the area. Within Sierra Leone, the technical and more junior positions tend to rotate in from other government ministries, and lack the specialized training and skills often required to support leadership during day-to-day operations.
- Interviews with ONS-DMD, 2019.

**POLITICAL ACCESS OF DM LEADERSHIP**

- DM leadership reports to the highest level of government through an intermediary position.
- At an operational level, the Director, Disaster Management Department (DMD) reports to the Office of National Security (ONS), specifically to the National Security Coordinator (NSCOORD). As the chair of the National Strategic Situation Group, the NSCOORD, upon advisement from the DMD Director, provides guidance to direct the central coordination body of MDAs during national disaster-response operations. If needed, the NSCOORD and DMD Director may elevate the situation to the National Security Council, chaired by the President, for additional coordination and support. At a strategic level, the Vice President chairs the National Platform for Disaster Risk Reduction (NPDRR, Platinum level), the senior level policy-making body. NPDRR provides ONS and DMD with strategic priorities and policy recommendations to execute in order to ensure the nation is advancing disaster preparedness and response.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Interviews with ONS-DMD, 2019.

**PROXY LEADERSHIP ARRANGEMENTS**

- Yes; formal procedures exist and systems to support this arrangement are fully implemented.
- The National Security and Central Intelligence Act of 2002 provides the authority for disaster management leadership to appoint or otherwise ensure incident-specific proxy leadership during major disaster events such that centralized leadership is maintained during concurrent incidents. During a Level 1 response (described under the Development of DM Organizational Structure), disaster-response activities are to be coordinated directly at a subnational level; thus, the lead would be the Village, Section, Chiefdom/Paramount, or District Chief/Coordinator depending on the severity of the event. Should an event arise that requires proxy leadership arrangements to be implemented. The NPDRR will appoint an appropriate MDA to lead response-and-recovery activities according to the Pillar system as discussed and depicted earlier in Table 1.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; National Flood Preparedness Response Plan for Sierra Leone; 2016; Interviews with ONS-DMD, 2019.

### **SPECIAL DECISION-MAKING COMMITTEES FOR RESPONSE AND RECOVERY**

- Policies and plans call for such committees and/or structures, but implementation is not yet complete.
- As discussed earlier under the section Organization of Government DM Functions, and depicted in Figure 1, the National Platform for Disaster Risk Reduction (NPDRR) is the highest strategic/advisory or supervisory body in the Sierra Leone national disaster management system. NPDRR, although not fully functional, is responsible for the direction and creation of national policy and strategic guidance. NPDRR is chaired by the Vice President and made up of senior-level representatives of Sierra Leone Government MDAs (see Figure 4 above). For Level 1 events, regular operations by the jurisdictional security, protective, and health services (i.e., district disaster management committee, police, national fire force, peripheral health units, etc.) are utilized to respond. If necessary, the District Disaster Management Committees (DDMCs) are activated and hold regular meetings. During national disaster events (Levels 2 and 3), the National Strategic Situation Group (NSSG, Gold level) is the central command, control, and coordination body (See the earlier Figure 1). The NSSG comprises a broad range of stakeholders, including government ministries, departments, and agencies (MDAs); civil society organizations; UN agencies; and IN-GOs, donors, and other partner agencies. These stakeholders are grouped functionally into Pillars, which are shown in Table 1. The NSSG is chaired by the National Security Coordinator and serves to ensure that emergency situations receive the necessary support from all partners to streamline response efforts.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; National Flood Preparedness Response Plan for Sierra Leone; 2016; Interviews with ONS-DMD, 2019.

### **SPECIAL DISASTER RISK MANAGEMENT POLICY-MAKING COMMITTEES**

- Special disaster risk management policy-making structures are in place.
- The National Platform for Disaster Risk Reduction (NPDRR) is the highest strategic/advisory or supervisory body in the Sierra Leone national disaster management system. NPDRR is responsible for the direction and creation of national policy and strategic guidance. NPDRR is chaired by the Vice President and made up of senior-level representatives of Sierra Leone Government MDAs. The quarterly scheduled meetings for NPDRR are rarely conducted.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, 2019.

### **MULTI-STAKEHOLDER PARTICIPATION IN DECISION-MAKING COMMITTEES**

- Stakeholders are included but have limited operational decision-making responsibility.
- Both the NPDRR and NSSG include a broad range of stakeholders from Sierra Leone ministries, departments, and agencies. Also, the functionally grouped Pillar system (as shown earlier in Table 1) has designated functional leads (e.g., logistics) with co-leads including international partners. However, not all are effectively integrated into the decision-making process.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; National Flood Preparedness Response Plan for Sierra Leone; 2016; Sierra Leone ONS-DMD National Emergency Coordination Pillars Terms of Reference (ToR), n.d.; Interviews with ONS-DMD, 2019.

## STAKEHOLDER ENGAGEMENT

### NON-GOVERNMENTAL STAKEHOLDER REPRESENTATION IN GOVERNMENT DM STRUCTURES

- Disaster management organizational arrangements recognize the role of non-governmental organizations (NGOs) in the Sierra Leone official DM and DRR structures in general terms.
- Non-governmental and intergovernmental organizations, such as the UN country team and Red Cross, provide support for disaster risk reduction-and-response activities, at national and subnational levels, in coordination with DMD and partner government agencies. These relationships are typically developed through direct memorandums of understanding (MOUs) between DMD/GoSL and the organization. Sierra Leone has leveraged partnerships, including UNDP, Sierra Leone Red Cross (SLRC), and World Food Programme (WFP), to augment staffing and capacity by integrating full-time staff into DM operations (ONS-DMD, PDC interviews, 2019). DMD works to maintain an updated contact list of non-governmental stakeholders and partners operating in the country, but notes that the inventory does not include organizational capabilities. NGOs are mentioned in disaster preparedness-and-response plans and provide broad areas of support (ONS-DMD, PDC interviews, 2019). Where appropriate, Sierra Leone has worked to integrate and match non-governmental organizations with appropriate counterparts through functional areas and the existing Pillar system. Described in more detail earlier (Table 1), each functional Pillar has a Government lead and several partner organizations from the international community. For example, the Logistics Pillar is led by the Republic of Sierra Leone Armed Forces (RSLAF) with WFP, United Nations Children's Fund (UNICEF), United Nations Development Programme (UNDP) and Sierra Leone Red Cross (SLRC) as members of the Pillar.
- Sierra Leone ONS-DMD National Emergency Coordination Pillars Terms of Reference (ToR), n.d.; Interviews with ONS-DMD, 2019.

### PUBLIC-PRIVATE PARTNERSHIPS (PPPS)

- Sierra Leone does not have a formal public-private arrangement to support disaster operations.
- Private-sector engagement in DRR/Preparedness has not been developed in Sierra Leone and is identified as a gap by leadership. During response operations, the private sector does contribute financial and goods/service donations; however, these are typically ad hoc and not formalized.
- Interviews with ONS-DMD, 2019.

### NGO AND PRIVATE-SECTOR INVENTORY

- An inventory and registry exist with DMD but lacks information on capabilities and resources, which limits the operational and planning utility of the information.
- The Sierra Leone Association of NGOs (SLANGO) was established in 1994 with the main task of coordinating the activities of NGOs in the country. SLANGO is a consortium of NGOs, both local and foreign, that seeks to build the capacity of civil society organizations for increased participation in governance and to reduce the duplication of their efforts. Membership in SLANGO has become a requirement for NGOs before commencing operations in the country. The procedures, guidelines, and policies outlined in the NGO policy document were geared towards the effective coordination and monitoring of the activities of both National and International NGOs in order to enhance their cooperation with the GoSL and ensure maximum benefits to the people of Sierra Leone.

Access to SLANGO data was limited, and there is an indication that SLANGO is not as active as before. As of 2013, SLANGO reports a total of 327 NGOs operating in Sierra Leone, of which 96 were described

as international. The majority of NGOs (42.2%) are engaged in health-sector activities, providing health services to underserved populations of the country. The remaining NGOs focused on education (19.3%), agriculture (8.6%), microfinance (9.2%), governance (6.7%), and other services (10.1%)

- Non-Governmental Organizations (NGOs) Survey for National Accounts Compilation, 2013; Interviews with ONS-DMD, 2019.

### **NATURE OF MULTI-STAKEHOLDER ENGAGEMENT**

- Plans and/or strategies call for direct engagement with non-governmental stakeholders, but implementation challenges remain.
- Non-governmental organizations focused on disaster management are most actively engaged in community-based disaster risk-management efforts, notably the SLRCS, WFP, and UNDP. Efforts have focused heavily on training local-level disaster management officials, and on community-based hazard and risk mapping. DMD has acknowledged limitations with subnational capacity in isolated and underserved areas and has worked with NGOs to meet those needs. During response operations, non-governmental stakeholders have customarily supported the GoSL with impact assessments, logistics, WASH, and commodities and relief supplies.
- Interviews with ONS-DMD, 2019.

### **PRIVATE-SECTOR ENGAGEMENT**

- Businesses have the capacity to support DM efforts but are not formally engaged.
- No formal policies or arrangements exist to guide the participation of private entities in disaster management. Private-sector engagement in DRR/Preparedness has been noted as a gap. During response operations, the private sector contributes by providing financial support and in-kind donations of goods and services.
- Interviews with ONS-DMD, 2019.

### **NGO ORGANIZATIONAL ARRANGEMENTS**

- NGOs with disaster management program areas or missions coordinate most often through informal networks both pre- and post-disaster issues.
- Although legally they must register with the Sierra Leone Association of NGOs (SLANGO), it does not appear that there are the necessary mechanisms to support this effort and ensure that it is fully operationalized. Local and foreign agencies tend to have direct MOUs with agencies and/or are working through informal networks to meet the needs of the country pre- and post-disaster. The main mechanism of coordination for non-governmental organizations (NGO and I-NGO) within the Sierra Leone disaster management system is via the Pillar system as described above and in Table 1. Active only during disaster-response operations, each functional Pillar has a GoSL lead and several partner organizations from the NGO/I-NGO community.
- Sierra Leone ONS-DMD National Emergency Coordination Pillars Terms of Reference (ToR), n.d.; Interviews with ONS-DMD, 2019.

### **ACADEMIA INVOLVEMENT IN GOVERNMENT DM**

- Academia supports DM efforts but has no official association with the government DM structures.
- The University of Sierra Leone has noted the need for, and begun discussions to, increase national preparedness by developing a national curriculum for primary, secondary, and tertiary schools. The



University looks to advance the professionalism of the DM/DRR field in Sierra Leone by adding degree programs in coordination with other universities and institutions. Although in the early stages of development, these programs would significantly increase the national preparedness and risk-reduction efforts of both citizens and DM stakeholders nationally.

- Interview with University of Sierra Leone, 2019.

## NATIONAL GOVERNMENT ENGAGEMENT IN REGIONAL AND GLOBAL EFFORTS

- Government involvement with global and regional DM organizations is typically limited to that of a support recipient.
- No formalized bilateral disaster management agreements exist. Sierra Leone is a member of the African Union and has been the beneficiary of projects and activities implemented by them. They are also engaged with efforts under the United Nations Office for Disaster Risk Reduction (UNDRR), The World Bank Global Facility for Disaster Risk Reduction (GFDRR), and Economic Community of West African States (ECOWAS), most notably the “Building Disaster Resilience to Natural Hazards in Sub-Saharan African Regions, Countries, and Communities.” — the first DRR program of its kind in Sub-Saharan Africa. Sierra Leone was selected to participate in a site visit in November 2019, and the results of that visit are forthcoming. This multi-year regional program kicked off in 2017 with an overall objective to strengthen the resilience of Sub-Saharan African regions, countries, and communities to the impacts of natural disasters, including the potential impacts of climate change, in order to reduce poverty and promote sustainable development. The five key project result areas are:
  - Implementation of the Africa Regional Strategy for Disaster Risk Reduction.
  - Establishment of DRR coordination, planning, and policy-advisory capacities within the African Regional Economic Communities (i.e. ECOWAS) to support their respective member states.
  - Improvement of the core capacities of the specialized national and Regional Climate Centers (RCCs) to meet the needs of DRM agencies for the effective use of weather and climate services and real-time early warning systems.
  - Improvement of available knowledge of risk via the compilation of historical disaster data.
  - Development of multi-risk financing strategies at regional, national, and local levels to assist in decision making and to mitigate the socioeconomic, fiscal, and financial impacts of disasters.
- WorldBank-GFDRR, Building Disaster Resilience in Sub-Saharan Africa Program 2014-2016.



## ENABLING ENVIRONMENT

### LEGAL FOUNDATION

### LEGAL ARRANGEMENTS ADDRESS DM REQUIREMENTS

- DM legislation has a limited focus on response.
- The National Security and Central Intelligence Act of 2002 is the single existing law referencing disaster management in Sierra Leone. The Government of Sierra Leone enacted the National Security and Central Intelligence Act (NSCIA) in 2002<sup>3</sup> (section 18, subsection IV), which mandated the Office of National

3 *Supplement to the Sierra Leone Gazette Vol. CXXXII, No.42 dated 4<sup>th</sup> July 2002, Part IV, Section 18, Functions of National Security Coordinator, paragraph (a) article iv*

Security (ONS) as the primary point to coordinate the management of national emergencies both natural and man-made. Subsequently, a National Disaster Management Department (DMD) was established within the ONS as the focal and main implementing institution. The Act vested the authority for coordinating national emergencies on the ONS-DMD as follows:

“The National Security Coordinator shall be the Government’s primary coordinator for the management of national emergencies such as disasters, natural or artificial.”

Under the provision, the National Security Coordinator who is appointed by the President, has the authority to declare a State of National Emergency and to coordinate national emergencies at the strategic level. The DMD is supported by the relevant Ministries, Departments and Agencies, and the Sierra Leone Red Cross. It also leverages support on disasters from stakeholders, such as NGOs, UN specialized agencies, the private sector, media, and local communities (INTEGEMS, 2017b). Disaster Management Committees established as part of the organization in each of the 14 districts are to hold monthly meetings (UNISDR, 2010, p. 195). In essence, the ONS coordinates and helps promote cross-sectoral disaster management at various levels as outlined in the GoSL 2006 Disaster Management (DM) Policy.

The 2006 DM Policy Statement of Sierra Leone promised a comprehensive approach through “the enhancement of increased political commitment to disaster risk management.” The same policy also promoted government agencies to take the lead and be supported by NGOs in their DM activities. Other key points in the 2006 DM Policy Statement highlighted public awareness; incorporation of disaster risk management into development planning; sources of funding; and reduction of bureaucracies in accessing the funds, thereby accommodating effective coordination.

The 2014 National Disaster Risk Management Policy (NDRMP), developed as an update to the 2006 DM policy by the Sierra Leone Government, had three objectives: “(1) to decrease the vulnerability of at-risk populations, (2) to reduce the social, economic, and environmental consequences of disasters, and (3) to avoid setbacks toward sustainable development.” In short, the 2014 NDRMP policy was intended to move from a purely DM-focused approach to a comprehensive disaster risk-management approach that integrated the mission areas of emergency management – i.e., Prevention and Mitigation; Preparedness; Emergency Response; and Recovery.

The 2018 National Disaster Risk Management Policy (not yet ratified) further strengthens the legal framework in Sierra Leone by proposing to establish a standalone National Disaster Management Agency (NDMA). If fully implemented, it would help streamline disaster management efforts nationwide and provide a more centralized approach and authority for disaster management efforts. Other relevant legislation includes the Sierra Leone Red Cross Society Act of 2012, which establishes the Sierra Leone Red Cross and delineates its role within national preparedness-and-response plans during disasters.

However, to date, the DM Policies described above have not been translated into formal parliamentary legislation.

- National Security and Central Intelligence Act, 2002; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2014/2018.

## SCOPE OF LEGISLATION

- Existing disaster management legislation currently has a limited focus on response.
- The National Security and Central Intelligence Act of 2002 does not address specific disaster phases, only the “management of national emergencies such as disasters, natural or artificial”. The ratification of the 2018 National Disaster Risk Management Policy is needed to ensure all phases of the disaster management cycle are considered and a whole-of-government approach is implanted through all ministries to support disaster risk reduction, climate change, and sustainable development.
- National Security and Central Intelligence Act, 2002; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2014/2018.

## BASIS OF THE LEGISLATIVE PROCESS

- Disaster management legislation has an all-hazards basis but is largely reactionary.
- Legislation is rooted in national security and is primarily a reaction to specific hazard events. The National Security and Central Intelligence Act of 2002 does not provide details on disaster management implementation or address preparedness measures or stakeholder support and coordination. These issues have been identified as a challenge and priority for the establishment of a new disaster management agency currently being planned. The new National Disaster Management Agency Bill, or National Disaster Management Act 2020, was ratified and signed into law with amendments on March 27, 2020, paving the way for the establishment of the new National Disaster Management Agency. This act is a major step in the establishment of the National Disaster Management Agency.

The existing National Security and Central Intelligence Act of 2002, the 2006 and 2014 Disaster Management Policies, and the 2018 National Disaster Risk Management Policy (not yet ratified) identify a multi-hazard approach that includes security, natural hazards, and diseases. The 2002 legislation lacks a focus on preparedness or a whole-of-government approach to disaster risk reduction, climate change, and sustainable development. The 2018 policy, if ratified and turned into a legislative action, would expand the government's reactionary approach and be rooted in a more holistic view of disaster management.

- National Security and Central Intelligence Act, 2002; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2014/2018; NightWatch SL, National Disaster Management Agency Act Ratified, March 27, 2020.

## IMPLEMENTATION SCHEDULES IN LEGISLATION

- No strategic requirements for the implementation of DM legal provisions, and/or implementation has not occurred.
- Existing legislation does not address implementation schedules. A National Disaster Risk Management Policy drafted in 2006, with updated versions in 2014 and 2018, has an associated Strategy and Action Plan, which is to provide a roadmap and timeline for implementation. The National Disaster Management Agency Bill was ratified and signed into law with amendments on March 27, 2020.
- National Security and Central Intelligence Act, 2002; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2006/2014/2018; NightWatch SL, National Disaster Management Agency Act Ratified, March 27, 2020.

## LEGISLATION AND INSTITUTIONS

- Disaster management legislation makes no provisions for DM Institutions.
- Under the 2002 National Security and Central Intelligence Act, there is no provision for an independent disaster management institution/agency. The still to be ratified 2018 Disaster Management Risk Policy does provide the necessary legal framework to establish a formal independent disaster management agency and illustrates clear awareness and commitment by the GoSL to advance these efforts. The National Disaster Management Agency Bill was signed into law on March 27, 2020, paving the way for the establishment of the new National Disaster Management Agency.
- National Security and Central Intelligence Act, 2002; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2006/2014/2018; NightWatch SL, National Disaster Management Agency Act Ratified, March 27, 2020.

## LEGISLATION AND BUDGETS

- Disaster management legislation makes no provisions for DM budgets.
- A dedicated disaster management budget does not exist. The budget for DMD is allocated from the ONS and covers core DMD staff and limited internal resources. Supplemental funding for disaster preparedness and response is not included and must be requested from the central government or non-governmental stakeholders (partners) on an “as needed” basis.
- Interviews with ONS-DMD, 2019.

## LEGISLATION IS SOCIALIZED

- Disaster management legislation is not socialized.
- The National Security and Central Intelligence Act of 2002 is the single piece of legislation and does not clarify the role of GoSL MDAs in disaster risk management or response. Various other policies and plans, including the DRR Platform, National DRM Policy, and the National Disaster Preparedness and Response Plan are not fully adopted or operationalized/institutionalized by GoSL MDAs or local and international partners. There has been a recent movement on the new DRM legislation as discussed above.
- National Security and Central Intelligence Act, 2002; Interviews with ONS-DMD, 2019.

## DECLARATIONS PROCESS, VERTICAL COOPERATION, AND RESOURCE REQUISITION

- Legislation does not formalize a declarations processes, vertical cooperation mechanisms, or a means to conduct requisition of human and material resources during disaster events.
- Legislation does not formalize a declarations process. However, several disaster management plans authored by the NSSG (led by ONS) reference a declaration process with cooperation and communications processes from the local level to national. In practice, these procedures are not integrated into all districts (DDMCs) as subnational preparedness and response remains weak in underserved areas. As a result, the national level authorities at ONS-DMD remain the main focal point and responder for disasters in all parts of the country.
- Interviews with ONS-DMD, 2019.

## EMERGENCY POWERS

- Some provisions exist under current legislation to curtail activities during a state of emergency, such as evacuations, curfews, and price fixing.
- Section 29 of the 1991 Sierra Leone Constitution allows the President to declare a State of Public Emergency. Outlined in the Constitution, a Public Emergency exists during times of war or threat of breakdown of public order and public safety, and “occurrence of imminent danger, or the occurrence of any disaster or natural calamity affecting the community or a section of the community in Sierra Leone”. The powers granted by the Constitution during a public emergency include:
  - Make provision for the detention of persons, the restriction of the movement of persons within defined localities, and the deportation and exclusion of persons other than citizens of Sierra Leone from Sierra Leone or any part thereof;
  - Authorize (1) the taking of possession or control on behalf of the Government of any property or undertaking; and (2) the acquisition on behalf of the Government of any property other than land;
  - Authorize the entering and search of any premises;

- Amend any law, suspend the operation of any law, and apply any law with or without modification (provided that such amendment, suspension, or modification shall not apply to this Constitution);
  - Provide for charging – in respect of the grant of issue of any license, permit, certificate, or other document for the purpose of the regulations – such fees as may be prescribed by or under the regulations;
  - Provide for payment of compensation and remuneration to persons affected by the regulations;
  - Provide for the apprehension, trial, and punishment of persons offending against the regulations;
  - Provide for maintaining such supplies and services as are, in the opinion of the President, essential to the life and wellbeing of the community.
- Constitution of Sierra Leone, 1991.

### **DM STRUCTURES AND ARRANGEMENTS OF SUB-JURISDICTIONS**

- Some provisions exist to support the disaster management structures at a subnational level.
- Legislation does not formalize DM structures and arrangements at lower levels of government. The national-level authorities at ONS-DMD remain the main focal point and responder for disasters in all parts of the country. Several disaster management plans authored by the NSSG, namely the National Ebola Response Plan (2016), the National Flood Preparedness Response Plan (2016), MoHS All-Hazards Public Health Incident Emergency Response Plan (n.d.), and the National Disaster Preparedness and Response Plan (2006) reference subnational structures with cooperation and communications processes from local level to national. In practice, these procedures are not integrated into all GoSL MDAs or districts (DDMCs), as subnational preparedness and response remains weak and a major challenge in underserved areas of the country.
- National Disaster Preparedness and Response Plan, 2006; Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; The National Ebola Response Plan for Sierra Leone, 2016; National Flood Preparedness Response Plan, 2016; All-Hazards Public Health Incident Emergency Response Plan (n.d.); Interviews with ONS-DMD, 2019.

### **GUIDANCE FOR DRR ACTIVITIES AND REQUIREMENTS**

- Existing legislation does not guide DRR activities and requirements, such as code enforcement, land use regulations, and sustainable development practices.
- As illustrated during the 2017 landslide and as noted by The World Bank (2017), “Disaster risk reduction is yet to be effectively institutionalized in Sierra Leone. The ONS budget for disaster risk management is not adequately funded. Partners, donors, international financial institutions, and non-governmental institutions fund most national activities. In general, development partners support preparedness and response, not disaster risk reduction.” The government has not yet implemented a whole-of-government approach to address disaster risk reduction, climate change, or sustainable development. Where possible and appropriate MDA have attempted to integrate best practices despite lacking a formal mandate.
- Sierra Leone – Rapid Damage and Loss Assessment of August 14<sup>th</sup>, 2017 landslides and flood in the Western Area, 2017; Interviews with ONS-DMD, 2019.

### **FACILITATION OF MILITARY SUPPORT**

- Existing legislation enables and facilitates military support for disaster management with comprehensive provisions that allow for military resources to be fully integrated.
- Military operations undertaken within Sierra Leone fall under Military Aid to Civil Authorities (MACA) (MACA Policy, 2014). This authority outlines the role of the Republic of Sierra Leone Armed Forces

(RSLAF) in support of civil authorities and includes the sub-divisions of Civil Power (MACP), Civil Community (MACC), and Other Government Departments (MAGD). The MACA Policy document provides the legal basis, rooted in the 1991 Constitution of Sierra Leone and The National Security and Central Intelligence Act of 2002, which obligates the RSLAF to guard and secure the nation and preserve the safety and territorial integrity of the state.

MACA requires emergency powers to be in effect and is authorized by the National Security Council, headed by the President. MACA is guided by three principles:

- Military aid should always be the last resort. The use of mutual aid, other agencies, and the private sector must be otherwise considered as insufficient or unsuitable;
- The Civil Authority lacks the required level of capability to fulfill the task, and it is unreasonable or prohibitively expensive to expect it to develop one; and
- The Civil Authority has the capability, but the need to act is urgent and it lacks readily available resources.

MACA has been authorized on several recent occasions, including the 2014 Ebola outbreak, the 2017 landslide and floods in the Western Area, and the 2019 nationwide flooding. Specific MACA missions have been efforts to clear drainage, search-and-rescue operations, control of population movements, and relief-supply logistics.

- National Security and Central Intelligence Act, 2002; Military Aid to Civil Authorities (MACA), 2014; Interviews with ONS-DMD, 2019.

## **FACILITATION OF INTERNATIONAL & CROSS-BORDER ACTIVITIES**

- Pre-event facilitation is extremely limited and is not formalized.
- Existing plans do not facilitate the participation of regional or international stakeholders in disaster management. During response operations, ONS and DMD work with national and international partners on an ad hoc basis for needs assessments and resource support. Due to the COVID-19 pandemic, Sierra Leone participated in cross-border coordination, communication, and collaboration between the West African states for disease surveillance and limiting entries to the participating states (ECOWAS, 2020).
- Interviews with ONS-DMD, 2019; ECOWAS, COVID-19 Virus: WAHO, Regional Health Ministers Call for Collective Response, 2020.

## **FINANCIAL RESOURCES**

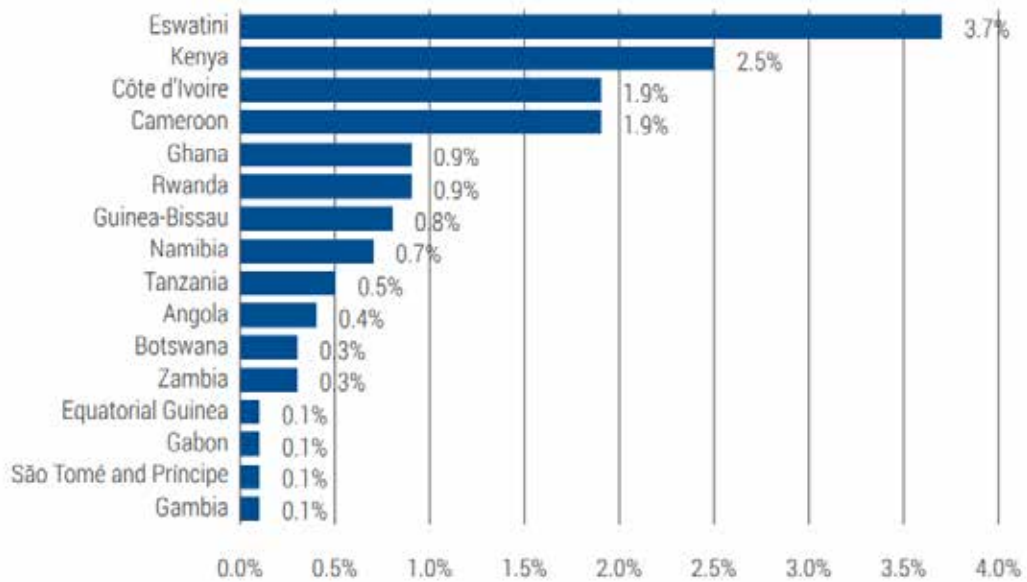
### **DM BUDGET ARRANGEMENT**

- Disaster management budget exists as a subcomponent of an agency-level budget, and not as a general budget line item.
- Disaster management legislation makes no provisions for DM budgets. DMD funding is provided as part of the main ONS budget and covers core staff and limited material resources. Supplemental funding for disaster preparedness, response, recovery, and mitigation efforts is not included and must be requested from the central government or non-governmental stakeholders on an “as needed” basis. The ONS budget consists of 0.4% of the total non-interest, non-salary recurrent government expenditure with no forecasted increase in proportion. The ONS budget is divided equally between the administrative & operative costs and the coordination of the security sector. The ONS budget makes up roughly 3% of the



overall Security Services budget<sup>4</sup> (Ministry of Finance, 2018a; 2018b). Considering the fact that the ONS budget is a direct DRR investment, Sierra Leone’s DRR budget of 0.4% falls within the lowest 50<sup>th</sup> percentile of the 16 African countries, whose data were available through a UNDRR study (UNDRR, 2020, p.3), as seen in Figure 6 below. Another way to put it, the average direct DRR budget for the 16 African countries was found to be 1%, where Sierra Leone’s budget of 0.4% is less than half of the average as seen in Figure 7 below.

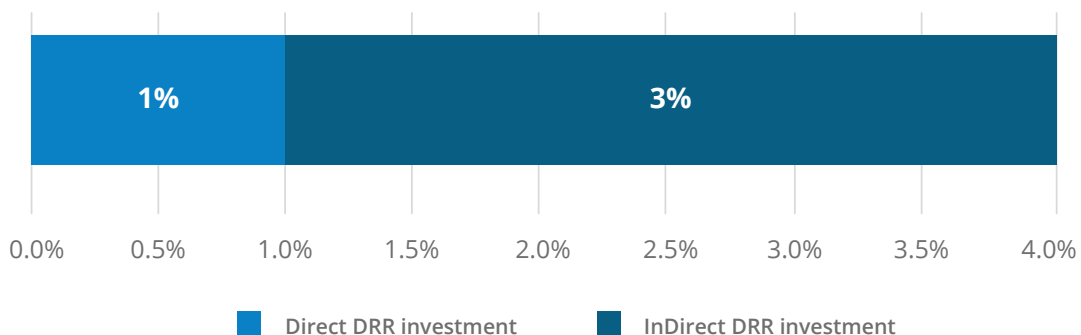
Figure 6. Annual Direct DRR Investments by Country



Source: Development Initiatives, based on 16 country RSB reports developed by UNDRR.

Note: The budget reviews cover three to five financial years depending on the country (except for that of Cameroon, which covers only one financial year).

Figure 7. Total DRR Investments as Percent of National Budgets

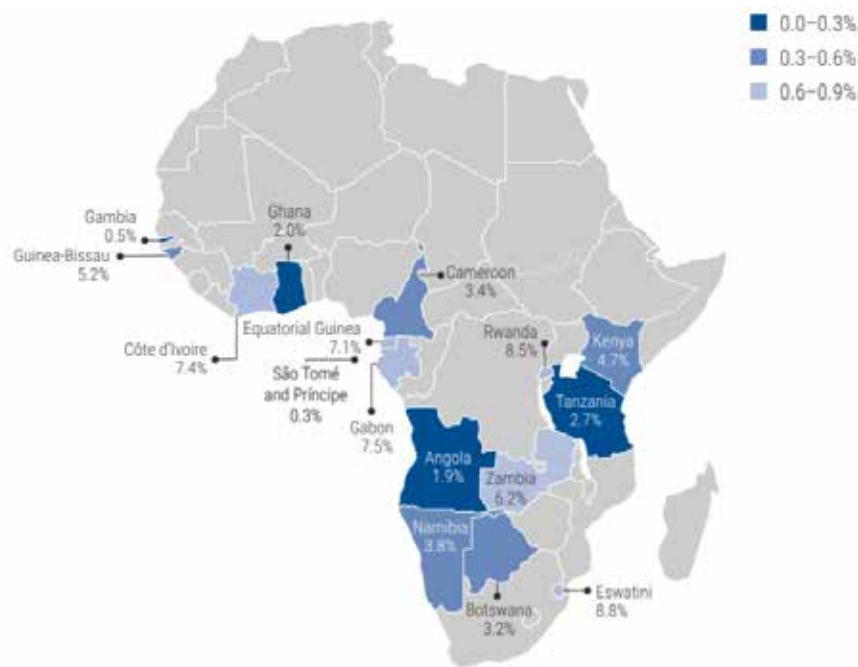


The findings of the 2020 UNDRR Disaster Risk Reduction Investments in Africa report indicate that in countries where the DRM authorities domicile within one of the highest political offices –such as

<sup>4</sup> Security Services budget line item includes logistics, and administrative and operating costs of the Ministry of Defence, Ministry of Civil Registration Authority, Ministry of Internal Affairs, SL Correctional Services, National Fire Authority, Central Intelligence & Security Unit, Immigration Department, and National Drugs Law Enforcement Agency.

the President, Vice President, Prime Minister, or Deputy Prime Minister – total DRR investments are higher compared to countries with DM authorities located within a lower-level political office. The DRR budgets of the former, on average, are three times higher than the average budgets of the latter. A key takeaway from the UNDRR analysis is that when DRM authorities are placed within a higher-level political office, DRR mainstreaming is better facilitated, including connecting policy agendas, and competing priorities are better aligned across ministries and between central and local governments (UNDRR, 2020, p.4).

Figure 8. Total DRR Investments in Respective National Budgets (Average Percentage)



Source: Development Initiatives, based on 16 country RSBP reports developed by UNDRR.

- Sierra Leone National Disaster Risk Management Policy – DRAFT, 2014/2018; Ministry of Finance Original Budget Profile 2018-2020; Ministry of Finance Enacted 2019-2021 GoSL Budget; UNDRR, Disaster Risk Reduction Investments in Africa-Evidence from 16 Risk-sensitive Budget Reviews, 2020.

### DM BUDGET FUNDED AT TARGETED LEVELS

- Legislation does not provide recommendations for funding targets.
- Under the existing 2002 National Security and Central Intelligence Act recommendations for funding targets are not designated. Under the 2018 Disaster Risk Management Policy (not yet ratified by GoSL), an autonomous DM agency would be established. Under this policy, the GoSL has identified the need for adequate funding mechanisms to implement disaster preparedness, response, recovery, and mitigation activities. This includes ensuring that all relevant stakeholders make provisions in their annual budgets to fund activities described in disaster risk-reduction plans. The 2018 DRM Policy includes guidance on disaster risk-management financing with the following goals:
  - Financial resources earmarked for DRM coordinating institutions, through an appropriately defined and established transparent funding mechanism and allocation process.

- Financial resources earmarked for key sector lead institutions, through an appropriately defined and established transparent funding mechanism and allocation process.
- Clear and transparent mechanisms and processes are defined and implemented for the mobilization and use of all DRM funding at all levels for all DRM phases and all DRM phase components, whatever the sources and final utilization.
- Measures and actions are identified and implemented to mobilize partners' financial contributions in national funds and in supporting ongoing and planned interventions.
- Measures and actions are defined and implemented to ensure that governmental DRM- sectoral institutions recognize and optimally and effectively mobilize and use existing government funds.
- National Security and Central Intelligence Act, 2002; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2014/2018; Interviews with ONS-DMD, 2019.

### **SCOPE OF DM BUDGET**

- The DM budget covers only operational staffing and facilities costs, existing as a subcomponent of the ONS agency-level budget, and not as a general budget line item.
- The DMD budget comes from the main ONS budget and covers core staff and limited internal resources (supplies). Supplemental funding for disaster preparedness and response is not included and must be requested from the central government or non-governmental (donor) stakeholders on an “as needed” basis.
- Interviews with ONS-DMD, 2019.

### **DRM GRANT PROGRAMS**

- Grant programs exist, but are not often recurring or are limited in their scope.
- Grant programs operate in a limited scope and are provided by outside agencies. No GoSL-funded or managed DRM grant programs currently exist. Due to limited GoSL resources, support for DRR programs are solicited and provided by partner organizations and donors. Organizations such as the United Nations, Sierra Leone Red Cross, US Embassy, and others provide support in the form of focused DRR projects, capacity building and training, and cash funds for disaster- response operations. These activities are managed by DMD and serve as an unofficial national grant program.
- Interviews with ONS-DMD, 2019.

### **BUDGET SUPPORTS TRAINING, EDUCATION, AND RESEARCH & DEVELOPMENT**

- The limited budget from ONS-DMD does not support training, education, or DM research and development. These capacity-building efforts are typically supported by donors such as UNDP, Red Cross, US Embassy, or other organizations.
- Interviews with ONS-DMD, 2019.

### **NATIONAL BUDGET SUPPORTS SUB-JURISDICTIONS**

- The current budget does not support capacity development efforts at the subnational level.
- There are no budget provisions in support of DRM at the regional or district levels.

- Interviews with ONS-DMD, 2019.

### **DEDICATED EMERGENCY OR CONTINGENCY FUND EXISTS**

- A dedicated national emergency or contingency fund does not exist.
- In the absence of a resourced national emergency or contingency fund, post-event disaster funds have been set up for recent events, including the 2017 flooding and landslide in the Western Urban area, the 2019 nationwide flooding, and multiple fire events. At the national level, the process has typically involved a donor organization providing funds, which are then distributed to disaster victims in cooperation with ONS and DMD. Funds are provided directly via cash transfer or mobile phone. At the subnational level, some DDMCs have set up their own emergency fund. These funds however are ad hoc and have not seen regular contributions.
- Interviews with ONS-DMD, 2019.

### **EXISTENCE OF AND PUBLIC SUPPORT FOR CATASTROPHE RISK TRANSFER**

- There is no established catastrophic risk-insurance market in Sierra Leone.
- N/A
- Interviews with ONS-DMD, 2019.

### **INSURANCE INDUSTRY OVERSIGHT**

- There is no catastrophic risk-insurance market.
- N/A
- Interviews with ONS-DMD, 2019.

### **AVAILABILITY OF LOW-INTEREST LOANS TO SUPPORT RECOVERY**

- Low-interest loan programs to support recovery do not exist.
- Low-interest loans have not yet been institutionalized as a disaster response-and-recovery mechanism in Sierra Leone.
- Interviews with ONS-DMD, 2019.

### **AVAILABILITY OF MICROFINANCE CREDIT SCHEMES**

- Microfinancing does not exist.
- N/A
- Interviews with ONS-DMD, 2019.

### **GUIDELINES FOR DISASTER RELIEF DISBURSEMENT**

- There were no formal mechanisms identified for the provision of disaster relief funds to disaster-impacted jurisdictions at the national level.

- There are no identified disaster relief funds for regions, districts, or public-disaster victims. However, the Sierra Leone Red Cross Society (SLRCS) that supports the National Disaster Management Office, as delineated in the 2012 Sierra Leone Red Cross Society Act, has been actively involved in disaster relief-fund disbursement and coordination. In the aftermath of the 2017 mudslides that claimed over 500 lives, the SLRCS in collaboration with the World Food Programme conducted a registration of affected people and targeted approximately 4,800 direct and 50,000 indirect beneficiaries, and prepared a budget for emergency relief. The total budget of 4.6 million Swiss francs included provisions for food, shelter, medical aid, cash disbursements, relief equipment, international and national personnel fees, and training (IFRC, 2017). The SLRCS was again at the center of the government-led multi-agency response plan after the 2019 floods and landslides, which claimed six lives and affected over 5,000 people. This time approximately 173,000 Swiss francs were secured for the Disaster Relief Emergency Fund (DREF) to assist about 1,800 people affected by the floods (IFRC, 2019). There were 91 national staff and 1,800 active volunteers during the disaster-relief efforts. SLRCS partnered with 14 organizations, including the IFRC, ONC, Freetown City Council, Ministry of Agriculture, and international NGOs such as UNICEF and WFP (IFRC, 2019).
- Sierra Leone Red Cross Society Act, 2012; IFRC, Emergency Appeal – Sierra Leone: Mudslides, 2017; IFRC Emergency Plan of Action DREF Final Report – Sierra Leone: Floods, 2019; Interviews with ONS-DMD, 2019.

## STRATEGIES

### STRATEGIC PLANS AND POLICIES

- DM and DRR strategies and policies exist but as components of other policy instruments.
- The 2018 National Disaster Risk Management Policy has not been ratified by the GoSL and consequently remains of limited value for stakeholder planning and action. The corresponding Strategic Action Plan, with focus areas for policy implementation, has not yet been completed. The government recognizes the need for a whole-of-government approach, guided by clear and effective policies. The development of a national approach through an approved DRM policy and corresponding planning documents has been identified as a priority action item for the new disaster management agency.
- Sierra Leone National Disaster Risk Management Policy – DRAFT, 2006/2014/2018; Interviews with ONS-DMD, 2019.

### STAKEHOLDER ENGAGEMENT

- There is no evidence that stakeholders are formally addressed in DM and DRR strategic plans.
- The development and update of DRM and DRR strategic plans in Sierra Leone remains a significant challenge for the broad DM community. Development of the draft National DRM Policy has required external (non-GoSL) support; the document remains unratified, and national and subnational stakeholder input is not included.

The “Standard Operating Procedures for District Disaster Management Committees” outlines the national and subnational response framework with standard procedures, including command and control and the role of various institutions in the response phase of a disaster. Additionally, the Pillar system, while informal, supports stakeholder engagement in some sectors.

- Sierra Leone National Disaster Risk Management Policy – DRAFT, 2006/2014/2018; Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Si-

erra Leone ONS-DMD National Emergency Coordination Pillars Terms of Reference (ToR), n.d; Interviews with ONS-DMD, 2019.

### STAKEHOLDER GUIDANCE

- Stakeholder guidance and direction are provided through the Standard Operating Procedures for District Disaster Management Committees. Direct guidance from the national emergency operations center is provided during times of disaster.
- Building on this, hazard-specific plans are available for flooding and Ebola. However, these plans present a sometimes inconsistent response structure for these hazards. Additionally, guidance is only provided to a limited range of potential stakeholders, with the focus on the public sector.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; The National Ebola Response Plan for Sierra Leone, 2016; The National Flood Preparedness Response Plan for Sierra Leone, 2016; Sierra Leone’s Medium-Term National Development Plan: 2019-2023, Volume I, 2019.

### POLICY SUPPORT OF DRR INTEGRATION

- DRR and DM policies are not formally coordinated with Climate Change Adaptation (CCA) or Sustainable Development (SD) policies and goals.
- A whole-of-government approach to integrate DRR, CCA, and SD has not yet been achieved. Several policies and plans, including the Medium-Term National Development Plan and 2018 Draft Disaster DRM Policy, reference the importance of integrating a whole-of-government approach into DRM with broader development goals in mind. With limited resources, the GoSL necessarily focuses on emergent response needs, leading to limited institutionalization of DRR in both policy and practice. While several GoSL MDAs and national and international partner organizations work in the DRR space, there is no centralized action plan complete with financial resources and stakeholder buy-in. The draft 2018 National DRM Policy identified an uncoordinated implementation of a DRR framework with a common vision for the entire country considering all levels, areas, and sectors as a major challenge.
- Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Sierra Leone’s Medium-Term National Development Plan: 2019-2023, Volume I, 2019.

### DRR AND DM POLICY INTEGRATION PROGRESS

- DM and DRR policy instruments are limited to DM-relevant agencies.
- ONS and DMD recognize the need to integrate DRR and DM across the whole-of-government, private sector, and other national and international partners. The lack of a national DRM framework has limited the ability of DMD to integrate resources and activities across the GoSL and partner DM stakeholders. In the absence of an approved policy, the GoSL and non-governmental DM partners, including those at the subnational level, develop independent plans and policies that may not be consistent with national priorities and procedures. This has been noted as a major challenge and identified as a priority action item for the new disaster management agency once established.
- Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Interviews with ONS-DMD, 2019.

### MITIGATION MANDATES IN DRR POLICIES

- No existing mandates were identified in established DRR Policies.



- Mitigation planning is included in the 2018 update to the National Disaster Risk Management Policy, which has not yet been ratified by the GoSL. The policy prioritizes mitigation in Focus Area 6: Disaster Risk Prevention and Mitigation stating: “Adequate low-cost structural and non-structural mitigation measures must be systematically promoted to reduce risks at the community level, including all everyday practices that reduce hazards, vulnerabilities, risk, and increasing resilience.”

While structural and non-structural mitigation efforts do occur across the country by GoSL and partners, the lack of a national strategy, mitigation requirements, and/or enforcement mechanisms undermine the coordination and effectiveness of such programs.

- Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018.

### **CONSIDERATION OF GENDER AND VULNERABLE GROUPS IN STRATEGIES AND POLICIES**

- Existing strategies and policies do not currently address gender issues and vulnerable groups.
- The 2018 National DRM Policy includes “Promoting Gender as a cross-cutting issue including equity” as a guiding principle. Ratification and implementation of the policy likely will enhance proactive preparedness and support-response efforts for vulnerable populations.
- Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018.

### **PUBLIC CONFIDENCE & POLITICAL SUPPORT**

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#### **SUPPORT FROM TOP GOVERNMENT OFFICIALS**

- The offices of the President and Vice-President become engaged in response-related activities only when large-scale events have occurred. Support for preparedness, long-term recovery, or mitigation activities was not clearly identified.
- There is a defined national disaster management structure in Sierra Leone that operates both pre- and post-disaster. At the highest level, the National Platform for Disaster Risk Reduction (NPDRR - known locally as the Platinum level) is the high-level advisory body for national disaster management activities in Sierra Leone. The NPDRR is chaired by the Vice President or, when the Vice President is absent, the national security coordinator and contains senior representatives of the GoSL, UN agencies, NGOs and INGOs. The specific roles and responsibilities of the NPDRR are 1) to serve as a national coordination mechanism and enhance multi-stakeholder collaboration and coordination; 2) foster an enabling environment for developing a culture of prevention; and 3) facilitate the mainstreaming of DRR into national policies, planning, and programs in various development sectors as well as into international or bilateral development air policies and programs.

If a disaster event is deemed a threat to national security, the NPDRR Chair may elevate the situation to the National Security Council, chaired by the President of Sierra Leone. This ensures the highest level of coordination among GoSL MDAs.

However, DRR is not mainstreamed or functional in SL. Most resources, plans, and policies are focused on response.

- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015.

### **SUPPORT OF THE LEGISLATURE**

- There are no standing legislative or other advisory committees with a central focus on DM and/or DRR issues; however, there does exist one or more standing committees that include DM and/or DRR issues in their portfolio.
- The responsibilities are dispersed across advisory committees. Although DM and DRR fall under the responsibility of DMD a whole-of-government approach does not currently exist.
- Interviews with ONS-DMD, 2019.

### **INTERAGENCY AND MULTI-STAKEHOLDER INPUT IN THE LEGISLATIVE PROCESS**

- Committees do not actively facilitate interagency and multi-stakeholder input in the legislative process.
- Currently, there are no formal documented committees operating with the mission to facilitate interagency and multi-stakeholder input in the legislative process.
- Interviews with ONS-DMD, 2019.

### **PUBLIC CONFIDENCE IN GOVERNMENTAL DM**

- The public lacks confidence in the capabilities and capacities of DM agencies.
- The general public in Sierra Leone is highly critical of and appears to lack confidence in the GoSL's DM capabilities, and in DMD as the lead DM agency. There is high public expectation of the role of DMD to manage hazards and prevent events from becoming disasters. This expectation does not match DMD's mandate, which tasks the department to:
  - Ensure the integration of disaster risk management into sustainable development programs and policies, ensuring a holistic approach to disaster management;
  - Improve the identification, assessment, monitoring, and early warning of risks;
  - Improve the effectiveness of response through stronger disaster preparedness.
- However, DMD does not have the mandate to implement key disaster risk-reduction programs, such as city planning, creating and enforcing building permits, and the prevention of environmental degradation. DMD's limited staff and budget prevent it from focusing on disaster preparedness and subnational efforts. Noting these challenges, the GoSL seeks to create an autonomous disaster management agency to apply a whole-of-government approach to disaster risk management, preparedness, and response.
- National Security and Central Intelligence Act, 2002; Interviews with ONS-DMD, 2019.

### **POLITICAL APPROVAL RATINGS**

- Political approval ratings are not collected, and public support for political figures is not measured.
- Several opinion polls/surveys have been completed in Sierra Leone by international partners, including the Afrobarometer and Sierra Leone Public Opinion Survey. Both surveys queried respondents about the quality of government and services rendered, as well as overall quality of life. While the instruments did not focus on DM-specific issues, general comments on GoSL support to the public were included. The

limited DM data from these surveys are not formally integrated into DRR decision making.

- Interviews with ONS-DMD, 2019.

### ATTITUDES, ENGAGEMENT, & EXPERIENCE

#### PRACTICAL EXPERIENCE OF THE JURISDICTION

- Sierra Leone experiences approximately one major disaster requiring interagency and extra-jurisdictional coordination every one to three years.
- The 2017 hazard assessment conducted by INTEGEMS and funded through the UNDP Sierra Leone Country Office describes the country as highly prone to flood, landslide and coastal erosion, tropical storms, and sea-level rise hazards (INTEGEMS, 2017a; World Bank, 2018). The 2017 landslide and flooding and the 2019 nationwide flooding are the most recent examples of extensive response operations (IFRC, 2017; IFRC, 2019). Flooding, wildfires, and other hazards occur yearly and are primarily dealt with at a district level. Additionally, considering the high frequency of urban and wildland fires, the number of ONS response efforts numbered 391 from 2006-2017, as stated by DMD. Since the 2014 Ebola virus outbreak, which infected more than 14,000 people and claimed nearly 4,000 lives in Sierra Leone, biomedical incidents are listed as the nation's top DM concern (INTEGEMS, 2017a). During the 30 years between 1980 and 2010, epidemics were the deadliest hazards and were responsible for 83% disaster deaths (INTEGEMS, 2017a). Infectious diseases are the leading cause of death, with malaria being the single biggest killer with 38% of all hospital admissions, and tuberculosis second with up to 1,000 infections each year (MoHS, 2018). The rising numbers of COVID-19 virus infections may add to the already high mortality rate unless the healthcare capacity of the nation is improved. The World Health Organization recently warned that the stalled vaccination programs due to the COVID-19 pandemic have put millions of children at risk of preventable infectious diseases (WHO, 2020).
- INTEGEMS Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, 2017; Interviews with ONS-DMD, 2019.

#### PRACTICAL EXPERIENCE OF THE LEAD DM OFFICIAL

- The lead DM official coordinates multiple major disasters requiring extra-jurisdictional assistance each year and has held that position for at least 3 years.
- Mr. John Vandy Rogers, the DMD director, has over 15 years of DM experience. The director has held previous posts within DMD (deputy) and other directorates within ONS and has largely been involved with DMD and disaster management for most of his career.
- Interviews with ONS-DMD, 2019.

#### PUBLIC ENGAGEMENT IN DM

- There is little to no public engagement in disaster management efforts.
- ONS and DMD offer community-engagement activities to inform the general public on DRR efforts. With limited staff, DMD does not actively solicit public engagement in DM through a planning process, drills, exercises, or regularly scheduled training. Because Sierra Leone is still progressing in its social and economic development after many years of civil conflict, the public has not directed its attention to the DM and DRR goals. The general struggle to earn a living among the majority of the population means that specific DM/DRR investments are an afterthought. However, DM and DRR are part of the development process and need to be integrated into the development plans.

- Interviews with ONS-DMD, 2019.

### PRIVATE-SECTOR ENGAGEMENT IN DM

- Little to no disaster planning was reported by the business community, and there was little to no business-community participation in community emergency management efforts.
- The private sector has limited engagement/participation in disaster management planning efforts and has no formal public-private arrangement to support disaster operations. Private-sector engagement in DRR and preparedness has been noted as a major DM gap area. There is little disaster planning or participation in community emergency-management efforts by the business community. While no formal policies or arrangements exist to guide the participation of private entities in DM, during response operations, the private sector contributes by providing financial support and/or goods and services. However, these efforts are ad hoc and not formalized or coordinated broadly with other stakeholders. DMD does not maintain a resource registry of private donors and their capacities. When required, the government requests specific resources or private businesses volunteer support in the form of donations, construction materials, food/water, or other needs.
- Interviews with ONS-DMD, 2019.

### HOUSEHOLD PREPAREDNESS

- No assessment or surveys of household or individual disaster preparedness has been conducted.
- Surveys of household or individual disaster preparedness are not available. DMD and SLRC have the capability to utilize volunteer networks at the district level to gain insight into preparedness levels of communities, though there is no national, coordinated methodology to conduct regular assessments.
- Interviews with ONS-DMD, 2019.



## DISASTER GOVERNANCE MECHANISMS

### PLANS & PROCESSES

#### DM PHASES ADDRESSED IN PLANS

- Existing disaster management plans and SOPs focus primarily on the response phase.
- References to planning, preparation, recovery, and mitigation are limited, and plans do not assign roles, responsibilities, or resources in these phases of disaster management. The key document which provides guidance to DM stakeholders is the Standard Operating Procedures for District Disaster Management Committees (2015). The SOP outlines the national and subnational response framework with standard procedures, including command and control and the role of various institutions in the response phase of a disaster. Building on this, hazard-specific plans are available for flooding and Ebola, which present a similar, but sometimes not consistent, response structure for these events. An informal process has been established for other ministries and agencies to address other DM phases in coordination with DMD. An example is the Ministry of Health and Sanitation (MoHS) All-Hazards Public Health Incident and Emergency Response Plan (IERP) that was developed as a result of the 2014 Ebola Virus Disease (EVD) outbreak in Sierra Leone. It provides detailed arrangements for responding to incidents and emergencies and is underpinned by the MoHS Concept of Operations (CONOPS), which describes actions and staff roles and responsibilities for multiple phases of the DM cycle.

- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; All-Hazards Public Health Incident & Emergency Response Plan (IERP), n.d.; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019; National Ebola Response Plan for Sierra Leone, 2016.

### **COORDINATION OF GOVERNMENT DISASTER PLANS**

- DM agencies have unique plans, but they are coordinated in structure and function.
- Disaster Management agencies have organization-specific plans. However, a whole-of-government approach that standardizes planning processes across organizations is not fully realized. Using the Standard Operating Procedures for District Disaster Management Committees (2015) as the baseline document, the two hazard-specific plans most recently activated – the National Ebola Response Plan (2016) and Flood Preparedness Response Plan (2016) – follow a similar response command-and-control structure presented by DMD and NSSG. Some GoSL MDAs, especially those with Pillar-lead functions, have developed internal emergency plans. An example includes the Ministry of Social Welfare, Gender and Children’s Affairs (MSWGCA), lead for Pillars #5 (Registration) and #7 (Protection and Psychosocial), which maintains an emergency plan-framing support to the functional areas of victim registration, protection, and psychosocial support.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; All-Hazards Public Health Incident & Emergency Response Plan (IERP), n.d.; Sierra Leone ONS-DMD National Emergency Coordination Pillars Terms of Reference (ToR), n.d.; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019; National Ebola Response Plan for Sierra Leone, 2016.

### **CONTINUITY OF OPERATIONS (COOP) AND CONTINUITY OF GOVERNMENT (COG)**

- No guidance or structure is provided for government COOP and COG.
- Evidence suggests that no formal structure has been put in place to support COOP or COG planning at the national or subnational level.
- Interviews with ONS-DMD, 2019.

### **ROLES AND RESPONSIBILITIES DEFINED BY PLANS**

- Plans and SOPs identify roles and responsibilities for each level of government.
- Four plans were reviewed for this assessment 1) MoHS All-Hazards Public Health Incident & Emergency Response Plan (n.d.); 2) National Ebola Response Plan (NSSG, 2016); 3) Standard Operating Procedures for District Disaster Management Committees (ONS-UNDP, 2015); and 4) National Flood Preparedness and Response Plan (NSSG, 2016). These plans outline the roles and responsibilities of various GoSL MDAs in response to an emergency at each level of government (local, regional, national). The plans also provide a broad overview of the GoSL disaster management system. As noted in research and interviews, several challenges exist, including 1) the presented architecture of the GoSL DM system is not consistently presented; 2) roles and responsibilities outlined in the plans are not yet operationalized within GoSL MDAs and partners; 3) the subnational architecture presented in the plans is not yet functional below a district level; and 4) DM plans are not updated regularly with broad stakeholder input. These challenges have been identified as a priority for the establishment of the newly planned disaster management agency.
- ONS-UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; MoHS All-Hazards Public Health Incident & Emergency Response Plan, n.d.; National Ebola Response Plan, 2016; National Flood Preparedness Response Plan, 2016; Interviews with ONS-DMD, 2019.

## DEFINITION OF THE DECLARATIONS PROCESS

- Declaration process exists in DM plans, SOPs, and other official documentation, but in practice, the process remains ad hoc and not fully operationalized.
- The national command architecture for disaster and emergency management outlined in the SOPs for District Disaster Management Committees (2015) states “the declaration of an emergency will be carried out by the President in accordance by the provisions made the national constitution of Sierra Leone having thoroughly been advised by the National Security Coordinator (ONS) and Chief Medical Officer (CMO).” The SOP is automatically initiated upon a declaration of disaster by the President.

The national security coordinator is authorized by Act of Parliament 2002 to coordinate and mobilize resources to respond and recover from the effects of disasters/emergencies or the imminent threat of a disaster/emergency affecting the state, whether national or regional.

Although three levels of criteria have been developed for Level 1/2/3 disasters, there remains no criteria for the definition of a disaster and reporting structure. Various methods for reporting events to ONS and DMD exist: the 119 call center, ONS volunteers, and DDMC Disaster Management Coordinators (also the District Security Coordinator). All share a role in reporting disaster incidents to ONS. The reporting mechanism and defining what constitutes a disaster at the national and subnational levels have been identified as key objectives of the new disaster management agency.

- ONS-UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; MoHS All-Hazards Public Health Incident & Emergency Response Plan, n.d.; National Ebola Response Plan, 2016; National Flood Preparedness Response Plan, 2016; Interviews with ONS-DMD, 2019.

## ACCESSIBILITY OF PLANS AND PROCESSES

- Some but not all disaster management plans and SOPs are publicly available.
- Plans and SOPs are accessible upon formal request to the managing agency. The use of the internet for open sharing of information related to disaster management is limited in Sierra Leone. The limited availability of plans and SOPs provides challenges to the effective coordination and implementation of policy. UNDRR’s PreventionWeb site provides links to Sierra Leone’s national policy, plans, and statements, providing access to the 2006 DM Policy final draft document and the 2006 GoSL National Disaster Preparedness and Response Plan (NDPRP) Volume 1 hosted by IFRC. The NDRP does not appear to have been formally endorsed or used by any agency. In addition, the Sierra Leone Urban Research Centre (SLURC) website hosts the 2016 National Flood Preparedness Plan.
- Sierra Leone: National Disaster Preparedness and Response Plan (NDPRP), 2006. Retrieved from <https://www.preventionweb.net/english/policies/v.php?id=60536&cid=154>; Military Aid to Civil Authorities (MACA) – A Guide to Operations in Sierra Leone. RSLAF Policy 26, 2016. Retrieved from <http://www.mod.gov.sl/rslaf-consolidated-policies.html>; National Flood Preparedness Response Plan for Sierra Leone, 2016. Retrieved from [https://www.slurc.org/uploads/1/6/9/1/16915440/final\\_draft\\_of\\_the\\_floods\\_plan\\_-\\_2016v3.pdf](https://www.slurc.org/uploads/1/6/9/1/16915440/final_draft_of_the_floods_plan_-_2016v3.pdf)

## COORDINATION OF GOVERNMENT AND STAKEHOLDER PLANS

- The Government provides basic DM planning guidance to stakeholders but does not actively promote or require plan coordination.
- Formal government coordination for disaster management planning is limited. Top-down guidance for the development of community plans is not implemented across the country, leaving the planning to be driven by districts and communities in coordination with non-governmental partners. This is due, in part, to the lack of legislation updates since the 2002 National Security and Central Intelligence Act. Since the passage of the 2012 SLRC Act, which specifies the role of the SLRC within the national preparedness and response plans during disasters, SLRC has worked in six districts to help communities develop



village-level disaster management plans. The plans are designed to enhance disaster preparedness and response within the community, and effective coordination with neighboring and higher-level jurisdictions. As indicated under the Legal Foundations section above, a bill introducing a standalone NDMA was signed into law with amendments on March 27, 2020.

- Interviews with Sierra Leone Red Cross Society, 2019; NightWatch SL, National Disaster Management Agency Act Ratified, March 27, 2020.

### **MUTUAL AID AGREEMENTS**

- Mutual aid agreements exist but are informal, unwritten, or unsigned.
- Mutual aid agreements between communities and districts exist in a very limited form at the subnational or local level. These agreements are typically unwritten and available upon direct request. Mutual aid support across Sierra Leone is typically conducted only during times of disaster and on an ad hoc or as-needed basis. Pre-disaster agreements for the sharing of resources have not been developed. This is partly due to the limited availability of critical resources needed to meet day-to-day operations, preventing mutual aid from being a viable form of surge support within Sierra Leone. Mutual aid support within GoSL is facilitated by ONS-DMD without the use of formal agreements on account of the highly centralized government structure. National resources are authorized by the NPDRR and NSSG to support all levels of disaster response as needed. As discussed earlier, mutual aid agreements with the private sector are not present pre-disaster.
- Interviews with ONS-DMD, 2019.

### **INTERNATIONAL MUTUAL AID AGREEMENTS**

- No formalized international mutual aid agreements currently exist.
- Bilateral mutual aid agreements have not been formalized with neighboring countries or regional organizations. This is, in part, due to limited critical resource shortages in the region for managing day-to-day operational needs. Sierra Leone is a member of ECOWAS and the African Union, which supports DM capacity-building projects and cross-border collaboration due to COVID-19 (ECOWAS, 2020). However, disaster-response mutual aid support has not been included. In recent Level 3 emergencies, international donor countries and organizations have responded with resources voluntarily or via informal requests to individual embassies or organizations. There appears to be no formal mechanism in place with the GoSL to make official requests.
- Interviews with ONS-DMD, 2019.

### **PROTOCOLS FOR THE USE OF EXTERNAL DISASTER ASSISTANCE**

- Processing of external resources is facilitated but not streamlined during disasters.
- Management of external assistance is conducted informally by DMD during disasters. Implantation challenges have prevented efficient use of external disaster assistance despite the existence of protocols and procedures. Should external resources be necessary, DMD makes requests via the stakeholder contact list based on assessments of the impacted areas. The assignment and distribution of resources is done by DMD on an ad hoc basis during events. Processing (through customs and immigration) of external resources is facilitated by ONS but not expedited during disasters.
- Interviews with ONS-DMD, 2019.

### **VOLUNTEER AND DONATIONS MANAGEMENT CAPACITY**

- Volunteers and donated goods are managed on an ad hoc basis.

- The utilization of donated goods and volunteer resources is managed through informal processes.
- Interviews with ONS-DMD, 2019.

## COMMAND, CONTROL, & COORDINATION SYSTEMS

### INCIDENT COMMAND SYSTEMS

- The incident command system has been incorporated as a formal component of disaster- response operations but has only been operationalized during large-scale events.
- The Standard Operating Procedures for District Disaster Management Committees document from the NSSG outlines the national architecture for disaster and emergency management within the country. This includes strategic and operational guidance for different levels of response described in the “Development of DM Organizational Structure” section above and the “Incident Coordination Systems” section below. Incident Command System training has been provided to Sierra Leone. The concept is also identified in existing SOPs although not fully operationalized at all levels of government.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, May & Dec. 2019.

### INCIDENT COORDINATION SYSTEMS

- Incident management procedures or protocols are often used to coordinate vertical and horizontal inter-agency and stakeholder engagement, but there is no standard system in the area of assessment.
- The National Platform for Disaster Risk Reduction (NPDRR), Sierra Leone’s highest-level disaster management entity referred to as Platinum, is chaired by the Vice President and responsible for the creation of national direction and policy. During normal times and Level 1 emergencies, NPDRR is supported by ONS, which acts as its secretariat ensuring that all required MDAs are represented and involved. During Level 2 and 3 emergencies, NPDRR is supported by the National Strategic Situation Group (NSSG) and National Situation Room (NSR), which facilitates the gathering of national-level stakeholders to oversee the national response.

The National Strategic Situation Group (NSSG) is activated during Level 2 or 3 emergencies to coordinate and provide national-level support to the affected area(s). Known as the Gold level, the NSSG is the primary national-level entity responsible for command, control, and coordination. Led by ONS core staff, the NSSG includes stakeholders from relevant MDAs, including Republic of Sierra Leone Armed Forces (RSLAF), Sierra Leone Police (SLP), Ministry of Finance and Economic Development (MoFED), Ministry of Health and Sanitation (MoHS), Ministry of Social Welfare Gender & Children’s Affairs (MSWGCA) and Ministry of Local Government and Rural Development (MLGRD).

In support of the NSSG is the National Situation Room (NSR), a 24-hour facility dedicated to the NSSG. The NSR serves as the national emergency operations center.

During a Level 2 or 3 emergency, the NPDRR will identify an MDA to serve as the operational lead in response to the emergency. Known as the Silver level, the lead MDA becomes supported by other relevant stakeholder institutions in the NSSG and NSR and will be required to coordinate the support of all those involved in the response process.

Known as the Bronze level, District Disaster Management Committee (DDMC) exists within each district, bringing together local stakeholders including district council leaders, security representatives, key local representatives, sectoral organizations, and any active international partners within the area. During Level 1 emergencies, ONS provides the secretariat services to the DDMCs and foster the required coordination.

dination. During Level 2 and 3 emergencies, support from the national level (NSSG) is facilitated through the Silver level outlined above. A District Emergency Response Centre will be stood up at the site of the event as the local level EOC. Overall coordination/lead is the responsibility of the District Chairman, supported by the ONS District Lead.

Authorized structures of authority exist at the district level, including down to chiefdoms, sections, and villages. Communication should flow from the least unit, which is the village and its components parts, to the section level and then to the chiefdom and finally the district arrangements (DDMCs) as depicted earlier in Figure 3. As noted by DMD, disaster management at subnational levels (district and below) is not yet fully operational, thus ONS-DMD plays an active role at all levels within the country.

- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, May & Dec. 2019.

### LEGAL BASIS OF COMMAND AND COORDINATION STRUCTURES

- Incident command systems and structures, including decision-making authority, are not fully operationalized in Sierra Leone.
- Existing plans describe the foundation for local, regional, and national coordination, providing a general approach for the incident command structure. These approaches identify the need for on-scene command, coordination, and communication at all levels of government. Research showed that an incident command system has not been fully operationalized throughout the country, but planning and SOP development related to hazard-specific plans (including the 2016 Ebola and Flood) do provide a solid foundation for the application of an incident command system for all hazards. These response procedures need to be operational and institutionalized within the country.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, May & Dec. 2019.

### FUNCTIONAL SUPPORT AREAS

- Plans and procedures delineate leadership and coordination for disaster and emergency-support functional areas (Logistics, Search and Rescue [SAR], Public Health, Shelter, etc.).
- Functional support areas are identified and clearly documented in plans and are typically implemented during major or large-scale response events. Authorized structures of authority exist at the village, sections, chiefdoms, and district level as was indicated earlier and in Figure 2. The implementation and institutionalization of functional areas varies throughout the country. As indicated in Figure 1, the functional areas of support, or Pillars, are led by GoSL:
  - Coordination: Office of National Security (ONS)
  - Health and Burial: Ministry of Health & Sanitation (MoHS)
  - Logistics: Republic of Sierra Leone Armed Forces (RSLAF)
  - Social Mobilization and Communication: Ministry of Information & Communication (MIC)
  - Registration: Ministry of Social Welfare, Gender & Children's Affairs (MSWGCA)
  - Water, Sanitation, and Hygiene (WASH): Ministry of Water Resources (MoWR)
  - Protection and Psychosocial: Ministry of Social Welfare Gender & Children's Affairs (MSWGCA)
  - Food and Nutrition: Ministry of Agriculture, Forestry & Food Security (MAFFS)
  - Security and Safety: Sierra Leone Police (SLP)
  - Shelter: National Commission for Social Action (NaCSA)

- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; National Emergency Coordination Pillars Terms of Reference (ToR), n.d.

### **FACILITATION OF INTERAGENCY COORDINATION**

- Interagency coordination is facilitated or supported using informal mechanisms.
- Interagency coordination is not fully developed in Sierra Leone. Predictably, coordination leverages the framework of established functional areas and responsible agencies but is often operationalized using informal or ad hoc mechanisms. The established functional areas attempt to leverage the Pillar system to identify the lead agency and define roles and responsibilities. The implementation and operationalization is limited and often leverage personal relationships or informal mechanisms. DMD would benefit from established implementation guidelines and procedures.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; National Emergency Coordination Pillars Terms of Reference (ToR), n.d.; National Ebola Response Plan, 2016; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019.

### **GOVERNANCE INFRASTRUCTURE**



### **EMERGENCY OPERATIONS CENTER**

- Sierra Leone does not maintain a sole-use, all-hazard emergency operations center (EOC).
- However, ONS-DMD has a dedicated space to coordinate national response operations with known and identified limitations. Dedicated DMD meeting space and the ONS National Situation Room are used for operations during major response events. Although limited infrastructure limits the integration of advanced methods and technologies for coordination, the dedicated and widely communicated space serves to bring the necessary agencies and partners to one location for a more effective response. The existing EOC in Sierra Leone serves many purposes, including general meeting space. Although a sole-use EOC does not exist, Sierra Leone has managed well with limited resources. DMD has a dual-use space that is occupied during response operations. Additionally, ONS maintains the National Situation Room (NSR), a designated conference room with limited information and communications technology infrastructure that is designated to provide the NSSG a centralized space to conduct operations (see Figure 9 below).

The Ministry of Health does have a designated and functioning operations center known as the Public Health National EOC (PHNEOC). The PHNEOC is managed in coordination with the Centers for Disease Control and Prevention (CDC) of the United States. It was originally established in response to the Ebola crisis and remains in operation for the coordination of public health emergencies.

- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; National Ebola Response Plan, 2016; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019; Interviews with ONS-DMD, May & Dec. 2019; Site Tour, Dec. 2019.

### **DEDICATED EOC FACILITY**

- The EOC is in a dedicated facility.

- ONS does not have a purpose-built EOC but has a National Situation Room (NSR) on the second floor of the ONS headquarters building, Tower Hill as shown in Figure 9 below.
- Interviews with ONS-DMD, May & Dec. 2019; Site Tour, Dec. 2019

Figure 9. ONS-DMD National Situation Room, Source: ONS-DMD



### EOC RESOURCES

- The national EOC is adequately equipped for minor incidents but needs additional equipment and resources to effectively respond to large-scale events. The room is equipped with approximately 20 laptops networked to one server, four mobile and several landline phones, a printer, and a projector for briefings. While the EOC is not staffed during steady-state operations, technical staff can be activated to receive, analyze, and assess incoming information and to generate reports for use by the whole of government.
- Interviews with ONS-DMD, May & Dec. 2019; Site Tour, Dec. 2019.

### EOC ACTIVATION READINESS

- The existing EOC can be quickly activated to support quick onset or no-notice events. The EOC is maintained in a ready state and is available for immediate use as necessary.
- Interviews with ONS-DMD, May & Dec. 2019; Site Tour, Dec. 2019.

### EOC ACTIVATION DURATION

- EOC is staffed and equipped to ensure continuous operations.
- The EOC can function for long-term response operations with surge staffing provided by NPDRR and NSSG. The EOC can be staffed and equipped to ensure continuous operations for an unlimited duration. Staffing for the NSR comes from DMD and other ONS directorates, as well as supporting MDAs and partners. For large-scale emergencies, the NPDRR and NSSG ensures that staffing resources are available to support event response as necessary. Directed by the Vice President and senior leaders, the NPDRR is able to designate available resources to meet needs and also request additional support from non-government partners.

- Interviews with ONS-DMD, May & Dec. 2019; Site Tour, Dec. 2019.

### **EOC RESILIENCE**

- The EOC is physically protected from the most common hazards in Sierra Leone.
- The EOC/NSR at Tower Hill is an area of high security due to its location as the primary site for major GoSL infrastructure. While Tower Hill is outside of flood and coastal hazard zones and provides suitable roadway access should evacuation be required.
- Interviews with ONS-DMD, May & Dec. 2019; Site Tour, Dec. 2019.

### **EOC ACCESSIBILITY**

- The EOC is easily accessible to key government officials.
- Located on the second floor of the ONS headquarters building, the EOC is easily accessible by DMD staff and key government officials. There are access control points to enter Tower Hill, as well as a manned gate to enter the ONS building and a security checkpoint at the entrance. Access is restricted to those on official business. Procedures for non-GoSL partners to enter ONS have not been formalized. DMD would benefit from establishing protocols to support clear enforcement and remove potential barriers that prevent needed assistance from reaching decision makers during operations.
- Interviews with ONS-DMD, May & Dec. 2019.

### **BACKUP EOC**

- No capacity currently exists to establish a backup EOC.
- ONS, through DMD, maintains only the NSR as the primary EOC location. With limited resources, the establishment of a backup EOC is not a priority for the GoSL. It is recommended that DMD explore the possibility of leveraging the Public Health National EOC (PHNEOC) as a potential backup or secondary EOC facility if needed.
- Interviews with ONS-DMD, May & Dec. 2019; Site Tour, Dec. 2019.

### **FIELD-LEVEL COORDINATION CENTERS**

- DMD has basic capabilities and resources to establish a field-level coordination center.
- The national architecture for disaster and emergency management identifies DDMCs to exist within each district, with the purpose of bringing together local stakeholders, including district council leaders, security representatives, key local representatives, sectoral organizations, and any active international partners within the area. During major disasters, DMD would augment that local structure and support the activation of a District Emergency Response Center in the locally impacted area. The center would most often be housed in a government building to support suitable response coordination. With varying levels of capacity at the subnational level, DMD acknowledges the need for national support in response to minor events outside of the capital. DMD further identified limitations to adequately support more than one field-level coordination center at any given time.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; National Ebola Response Plan, 2016; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019.



### LONG-TERM COMMUNITY RECOVERY FACILITATION CAPACITY

- Sierra Leone currently does not have the plans, procedures, or resources to support long-term recovery operations.
- The GoSL focus post-event is on short-term recovery and life-saving operations. Long-term recovery is not yet included in national policies, plans, or procedures, and resources are not pre-allocated. Long-term efforts are addressed as emergency situations arise and as an extension of the DMD-led response operation. These efforts typically require the support of local non-governmental, private sector, and international partners.
- Interviews with ONS-DMD, October 2018

### COMMUNICATIONS INTEROPERABILITY

- Partial and limited communications and interoperability exists in Sierra Leone.
- Communications during national-level events are managed using off-the-shelf technologies. Communication between the EOC and response agencies are conducted via mobile (voice and text) and landline telephone, limiting some common interoperability issues. At the district level, communications are managed similarly, with voice and text as the primary means of sharing information. A more robust communication system that can leverage short-wave radio or satellite communication should be evaluated in detail as a way to more effectively communicate with underserved areas with poor national-level communication structures.
- ONS NDBPA kickoff presentation, Oct. 2018.

### RESPONDER CREDENTIALING

- No national-level disaster or emergency-management credentialing exists.
- Responder agencies, such as the National Fire Force, National Police, and the RSLAF, maintain agency-specific credentialing processes. Sierra Leone does not have a national program for disaster or emergency-management credentials.
- Interviews with ONS-DMD, October 2018



## CAPABILITIES AND RESOURCES

### FACILITIES & EQUIPMENT

#### EMERGENCY SERVICES FACILITIES CAPACITY

- Fewer than one fire station per 100,000 people; fewer than one fire station per 50 square miles.
- Emergency services capacity in Sierra Leone is extremely limited. The National Fire Force (NFF) is the principal national emergency service and first responder. The NFF maintains 10 fire stations within the country, all of which are located in the seven urban environments, namely Freetown (4), Makeni, Bo,

Kambia, Kenema, Moyomba, and Kono. This calculates to roughly one station per 710,000 persons<sup>5</sup>, and fewer than one fire station per 7,175 square kilometers, leaving a large portion of the country underserved.

- National Fire Force statistics, 2019.

### **MATERIAL RESOURCES AVAILABLE FOR DM**

- Material resources designated for disaster management are maintained at inconsistent levels (less than 50%) across Sierra Leone.
- There is one DMD-managed, GoSL-owned warehouse located in MacDonald Town, approximately 40 kilometers southeast of Freetown. Inventory includes disaster-relief supplies, such as cooking kits, tarps, water canisters, solar kits, and other basic items. Material resources designated for emergency management are for general-response use, and inventory is not maintained at levels matching anticipated needs. Partner organizations, such as the Sierra Leone Red Cross, World Food Programme, and United Nations Children Educational Fund, also maintain basic resources in country. Available resources are based roughly on previous emergency needs and available funding, which can fluctuate considerably.
- Interviews with ONS-DMD, Oct. 2018; Site Visit, Oct. 2018.

### **SUPPLEMENTAL DM RESOURCES**

- Supplemental DM resources and equipment are generally met through ad hoc arrangements with international partners and private entities during response operations. No formal arrangements or agreements are currently in place during steady-state, non-emergency operations.
- Interviews with ONS-DMD, May & Dec. 2019.

### **DM EQUIPMENT INVENTORIES**

- Accurate and up-to-date inventories of disaster-relevant equipment are maintained.
- Inventories of EOC equipment as well as supplies and equipment in the MacDonald Town warehouse are maintained through DMD. Partner agencies (Red Cross, World Food Programme, and United Nations Children Educational Fund) all reported keeping inventories of equipment and supplies.
- Interviews with ONS-DMD, Dec. 2019.

### **SHELTER CAPACITY**

- There is very limited shelter capacity in Sierra Leone, with no formalized sheltering system established.
- Emergency-shelter capacity meets far less than 50% of anticipated needs for major events in Sierra Leone population centers. Designated emergency shelters are not pre-identified or properly equipped. During an emergency, where there is a need to shelter affected populations, DMD coordinates primarily with IOM and UNHCR to provide tents, in addition to working with community leaders to identify spaces and buildings to serve as temporary community shelter areas. Re-housing survivors after a disaster is a major challenge. Following the 2017 Sugar Loaf landslide, NGOs, and UN agencies supported temporary tent camps for displaced families in Juba and Hill Station. A relocation village was constructed in Mile Six, a small village situated in the Western Rural Area outside Freetown, to serve as supplemental reduced-cost housing for landslide survivors. Though the community is purpose-built, residents at Mile Six noted challenges related to the village's isolation – including energy, reliable water, and sanitation facilities, security, and limited economy to maintain livelihoods and cover their rents (USD 500 per year).

<sup>5</sup> 2017 population estimate is 7.1 million. For a comparison, according to a 2018 survey, in the U.S., there are about 30,000 fire stations which means there are roughly nine fire stations per 100K population (NFPA, 2020, p.13).

Nearby the purpose-built apartments is a second site, which was established following the 2015 Freetown Floods. Intended as a temporary relocation site, residents remain in homes constructed of raw building materials, highlighting the challenge of establishing permanent housing to disaster survivors.

- Interviews with ONS-DMD, Oct. 2018 & Dec. 2019; Site Tour, Oct. 2018; Sierra Leone – Rapid Damage and Loss Assessment of August 14th, 2017 Landslides and Flood in the Western Area, World Bank, 2017; Sierra Leone: Flood Survivors Stuck in Temporary Shelters, Mail & Guardian Newspaper. 12 December 2017.

### **SHELTER SUITABILITY ASSESSMENTS**

- Shelters have not been assessed for suitability.
- No formal system exists to assess suitability. Designated emergency shelters are not pre-identified or specially equipped.
- Interviews with ONS-DMD, Oct. 2018.

### **SHELTER EQUIPMENT**

- Less than half of all shelters are specially equipped for disaster use.
- Limited shelter equipment exists in Sierra Leone. The GoSL maintains basic equipment for potential shelter use in the government-managed warehouse. Additional supplies and equipment will be purchased or provided by donor organizations on an ad hoc basis during response operations. As shelters are not pre-identified, there is no advance placement of shelter equipment during steady-state, non-emergency operations.
- Interviews with ONS-DMD, Oct. 2018.

### **WAREHOUSING CAPACITY**

- One designed government disaster management warehouse and staging facility exists to support logistics and operations requirements in a major disaster event.
- The GoSL has inventory available for general-purpose use during a disaster. In addition to the Mac-Donald Town warehouse, several disaster management stakeholders maintain facilities throughout the country:
  - WFP maintains a warehouse containing non-food items in Port Loko, in close proximity to the Lungi International Airport;
  - SLRC maintains two large warehouse facilities located in Freetown (Waterloo) and Bo City. SLRC also maintains smaller storage units (shipping containers) in four districts (Port Loko, Kono, Kambia, and Bombali); and
  - International partners, including UNICEF and the International Organization for Migration, also maintain warehouses within the country.
- Site visit, Oct. 2018.

### **PUBLIC HEALTH AND MEDICAL FACILITIES**

- Sierra Leone's public health and medical facilities are not fully integrated components of the nation's disaster management system.

- The integration of public health into DM is still informal. Integration efforts are underway following the Ebola response for a more holistic and all-hazards approach to DM. Although progress has been made, public health is not a fully integrated element of disaster management and is currently limited to capacity-building efforts.
- Interviews with ONS-DMD, Oct. 2018.

## HUMAN RESOURCES

### EMERGENCY SERVICES STAFF

- Fewer than one firefighter per 5,000 population.
- Staff dedicated to emergency management in Sierra Leone is extremely limited. The Sierra Leone National Fire Force (NFF) is the primary source of emergency services throughout the country, but even that is minimum. Among the 10 NFF fire stations within the country, there are 288 firefighters to provide services to a total population of approximately 7.1 million. Most firefighters (193) are located in the Freetown urban area, with several districts having no access to any type of emergency services. This calculates to an average of four firefighters per 100,000 population protected<sup>6</sup>, leaving a large portion of the population underserved. According to a study compiled by WHO in 2015, Sierra Leone ranks number seven out of 81 countries in terms of the number of estimated deaths from fire, heat, and hot substances, with 8.7 deaths per 100,000 persons per year (CTIF, 2018)<sup>7</sup>. The following districts have no fire departments: Kailahun, Koinadugu, Port Loko, Tonkolili, Bonthe, and Pujehun.
- NFF statistics, 2019.

### PLANNING STAFF

- DMD supports basic national-level disaster planning efforts but no dedicated planning staff exist at the district level.
- DMD staff have dedicated job functions, with planning elements specific to their roles. However, DMD does not have the resources to assign staff to a full-time position as a DM planner. At the national level, DMD is comprised of one director, two subdirectors (for preparedness and response), and four or 5 technical support staff. The support staff are designated leads for a region of the country (North, South, East, and West regions). Each of these staff members support basic planning efforts for all DM phases.

At a district level, there is one designated DDMC lead, who is dual-hatted as the district security coordinator (a national government function through ONS). The lead district-level disaster management official (not under ONS) is the district council chairman, an elected political position. Districts do not have designated disaster management positions provided and funded at the local level to focus on planning.

- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, Oct. 2018.; Dec. 2019.

### SURGE-STAFF DOCUMENTATION AND PROCEDURES

- Surge staffing needs are formally addressed in the jurisdiction's disaster plans and procedures, but the

<sup>6</sup> For a comparison, according to a 2018 survey, in the U.S., the total number of volunteer and career firefighters was estimated to be 341 per 100,000 population protected)

<sup>7</sup> Angola has had 13 deaths per 100K, Cote d'Ivoire 11.8, Russia 10.2, Belarus 10.1, Somalia 9.2, and Central African Republic 9.1. (CTIF, 2018).

adequacy of staffing resources is not at the desired levels.

- Surge-staffing needs are met through formal requests from DMD to ONS. At ONS, all staff is cross-trained and available to support DMD if needed during a large-scale event. Staff may be pulled from other departments to support as necessary. Additionally, if needed DMD can request support from the following:
  - Military personnel may be tasked to support specific functions as outlined in RSLAF Policy 26 - Military Aid to Civil Authorities at the request of ONS;
  - Through the NSSG, GoSL MDAs can be requested to support under the existing Pillar structure; and
  - The GoSL, through ONS, may request support from non-governmental partners.
- Military Aid to Civil Authorities (MACA), 2014; Interviews with ONS-DMD, Oct. 2018 & Dec. 2019.

### **SURGE-STAFF SOURCE**

- Surge-capacity staff are drawn from throughout the disaster management stakeholder community, including NGOs, the private sector, and other government agencies.
- Required in large-scale events, DMD can request surge-capacity staff directly from ONS. If the need is greater than what ONS can directly provide, additional mechanisms are in place to facilitate staff from other government agencies (MDAs), NGOs, and the private sector. Surge staffing beyond ONS is utilized in the most extreme situations.
- Military Aid to Civil Authorities (MACA), 2014; Interviews with ONS-DMD, Oct. 2018 & Dec. 2019.

### **ROSTERS OF TRAINED PROFESSIONALS**

- DMD does not maintain a roster of trained professionals, to support critical post-disaster needs (e.g., building inspectors, engineers) and recovery efforts.
- ONS and DMD do not have a formal resource registry of trained professionals for critical response-and-recovery needs. DMD leadership and staff maintain an informal contact list of experienced response professionals to call on short notice. This list of personnel includes both government and non-governmental resources.
- Interviews with ONS-DMD, Dec. 2019.

### **CITY PAIRING OR SIMILAR TECHNICAL STAFFING PARTNERSHIPS**

- City-pairing arrangements, secondment schemes, or other similar mechanisms to address disaster-related technical staffing requirements do not exist in Sierra Leone.
- Currently, surge-staffing requirements are met internally by ONS, the military, and the existing Pillar system. Some support from international partners is provided but focused primarily on response efforts. In some rural areas, DMD noted that informal agreements between villages to support one another exist but are limited.
- Interviews with ONS-DMD, Dec. 2019.

## COMMODITY & SUPPLY INVENTORY

### GENERATING ESTIMATES OF POST-DISASTER COMMODITY NEEDS

- Estimates of post-disaster commodity needs are not maintained.
- DMD, with support from Pillar partners, conducts damage and needs assessments for large-scale disasters. While post-disaster commodity needs are not pre-estimated, in the recovery phase for events requiring extended support to communities, DMD tasks the Registration Pillar to begin the process of documenting impacted persons and infrastructure. The lead of the Registration Pillar is the Ministry of Social Welfare, Gender and Children's Affairs (MSWGCA), which is responsible for creating and maintaining a list of affected persons. Using an internal registration form and database, along with the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) Multi-Cluster/Sector Initial Rapid Assessment (MIRA), impacted populations are recorded and provided to DMD to determine needs.
- Interviews with ONS-DMD, Dec. 2019.

### COMMODITY-STOCKPILE QUANTITIES

- Basic levels of commodity stockpiles are maintained at the GoSL warehouse; however, the existing supply does not meet estimated or anticipated needs.
- While GoSL maintains a supply-warehousing capability as noted above, material resources designated for response and recovery are not held at levels based on anticipated needs for specific hazards. Some partners (for example, the SLRC) manage commodity stockpiles based on needs identified in previous events, such as the preceding year's flood season. Commodities are purchased or donated on an ad hoc basis during the response-and-recovery phases.
- Interviews with ONS-DMD & SLRC, Dec. 2019.

### LOCATION OF COMMODITY STOCKPILES

- Government commodity stockpiles are kept in a single location that enables access to most major population centers within 24-48 hours during rapid-onset disaster events, but not to remote or rural locations.
- The GoSL maintains a single disaster management warehouse in MacDonald Town. Limited government stockpiles are supplemented by the NGO community and partner nations. For example, World Food Programme, in coordination with DMD, maintains a warehouse in Port Loco, in close proximity to the Lungi International Airport, the country's only international airport.
- Other international partners, including UNICEF and IOM, also maintain warehouses within the country.
- Interviews with ONS-DMD & US Embassy, May & Dec. 2019.

### BASIS OF COMMODITY-STOCKPILE DISTRIBUTION

- Commodity distribution is based primarily on proximity to the warehouse facility, leaving large areas of the country underserved.
- Supply distribution from stockpile locations is managed by DMD based on location, post-impact needs assessments, and ability to deliver by the RSLAF, Logistics Lead. As such, the RSLAF is tasked with:
  - Transportation/distribution of food and non-food items.



- Update regularly on stockpile and pre-positioning of response items.
- National Emergency Response Fleet management.
- Warehouse management.

An RSLAF liaison officer is assigned to and co-located in the DMD office to support coordination of preparedness-and-response efforts. The RSLAF can be tasked to provide vehicles to move items from the MacDonald warehouse to areas within the country when necessary. Supplies from warehouses maintained by disaster management partners are directly distributed to those in need in coordination with DMD.

- Interviews with ONS-DMD, May & Dec. 2019.

### **COMMODITY CONTRACTS**

- No pre-existing contracts exist for the rapid acquisition of commodities.
- Ad hoc arrangements are formed during the response phase during Pillar coordination meetings and are managed by DMD. The contractual arrangements for resources are then fulfilled by GoSL MDAs and non-governmental partners.
- Interviews with ONS-DMD, May & Dec. 2019.

### **FREQUENCY OF RESOURCE AND SUPPLY INVENTORY UPDATES**

- There is no formal requirement by law or policy to update inventories on a regular schedule.
- Frequency of inventory updates can vary. Inventories are reviewed and updated on an as-needed basis and dependent on available staff resourcing and funding.
- Interviews with ONS-DMD, May & Dec. 2019.

### **HOSTING OF RESOURCE AND SUPPLY INVENTORIES**

- Accurate, up-to-date inventories are maintained by DMD.
- Current inventories for the MacDonald warehouse are kept by DMD and inventories for other partner-maintained warehouses are maintained and kept by the respective partners.
- Interviews with ONS-DMD, May & Dec. 2019.

### **DISASTER-LOGISTICS PROGRAM**

- The development of a national logistics capability is underway, but challenges remain.
- National-level logistics are managed through the military, in coordination with UN agencies and NGOs. The development of subnational and local logistics capabilities is supported through general guidance but is limited by funding and access.
- Interviews with ONS-DMD, May & Dec. 2019.

## FUNCTIONAL CAPABILITIES



### PSYCHOSOCIAL RECOVERY

- National-level support for psychosocial recovery exists, but implementation challenges remain.
- Psychosocial support covered under Pillar #7 - Protection and Psychosocial led by the Ministry of Social Welfare and Children's Affairs (MSWGCA). The ministry is tasked to:
  - Provide psychosocial support to victims, especially women and children.
  - Work in partnership with other agencies in providing psychosocial support to relatives of victims and survivors.
  - Update the NSSG/coordination meeting on the psychosocial needs and challenges of victims.
  - Ensure that victims are not exposed to physical, sexual, emotional, or mental abuse.

MSWGCA's Emergency Plan guides the Ministry's support to emergency response. Additionally, a separate Sierra Leone Mental Health Strategy provides a strategic guide for psychosocial programs within the country.

- Interviews with MSWGCA, Dec. 2019.

### CAPACITY TO SUPPORT EVACUATIONS

- Sierra Leone does not have the capacity to support evacuations.
- No formal disaster management-based evacuation plans exist at the national level. Should a mass evacuation be necessary, it would be led by the RSLAF per the general process outlined in the MACA. With the support of Sierra Leone Red Cross, community-based early warning and evacuation procedures have been designed but remain limited in implementation and operationalization due to funding.
- Military Aid to Civil Authorities (MACA), 2014; Interviews with ONS-DMD & SLRC, May & Dec. 2019.

### POST-DISASTER WATER, SANITATION, AND HYGIENE (WASH) NEEDS

- WASH is addressed in plans and policies, but implementation challenges remain.
- WASH is covered by Pillar #6, which is led by the Ministry of Water Resources (MoWR) and tasked to:
  - Assess the status of water and sanitation after an emergency.
  - Provide and share information on the assessment conducted.
  - Highlight communities that are in dire need of water and sanitation facilities.
  - Coordinate partners for effective and efficient water and sanitation response.
  - Ensure an adequate supply of water and sanitation facilities.

Although well-defined roles and responsibilities of the Pillar are outlined, the standard operating procedures for activation, coordination, and command & control are not documented in plans or procedures.

- Interviews with ONS-DMD, May & Dec. 2019.

### **SAFETY AND SECURITY OF DISASTER-AFFECTED POPULATIONS**

- Safety and security is a defined disaster management function, and responsibilities are defined and assigned to the Sierra Leone Police.
- Security and Safety is managed by Pillar #9 which is led by Sierra Leone Police and tasked to:
  - Devise appropriate strategy for security response.
  - Engage with all other pillars, especially the Coordination Pillar, to ensure security-strategy alignment to humanitarian response needs.
  - Receive and execute directives from the Coordination Pillar.
  - Maintain public order.
  - Ensure security and safety for victims.
  - Provide a safe and secure environment for response workers.

As defined in the RSLAF Policy 26 - Military Aid to Civil Authorities (MACA), the RSLAF may be called upon to provide additional support as necessary.

- Interviews with ONS-DMD, May & Dec. 2019.

### **HAZARDOUS MATERIALS (HAZMAT)**

- Sierra Leone does not have national-level HAZMAT capabilities.
- No centralized or national HAZMAT-response capability exists within the country.
- Interviews with ONS-DMD, Oct. 2018.

### **SEARCH-AND-RESCUE CAPABILITIES**

- Limited centralized or national search-and-rescue teams or resources exist.
- The development of subnational and local SAR capabilities is supported through community-level training when funding is available. Limited search-and-rescue capabilities exist within three entities in the country: National Fire Force, RSLAF, and SLRC. National Fire Force has limited capabilities in nine districts and Freetown, including pit rescue and drowning/sea rescue. Sierra Leone Red Cross' National Disaster Response Teams include first responders trained in search and rescue and crowd control. Training of SLRC teams has been provided by the RSLAF and National Fire Force as requested. Technical equipment for search and rescue is available only in Freetown, while those in rural areas must utilize local materials.
- NFF statistics, 2019; Interviews with SLRC & MAJ Prince, May 2019.



## CAPACITY DEVELOPMENT (CD)

### FORMALIZED CD PLANS & STRATEGIES

#### TRAINING AND EXERCISE REQUIREMENTS AND/OR RECOMMENDATIONS

- Sierra Leone has no formal national disaster management training and exercise requirements, but this has been identified by DMD as a need.
- DM training and exercise training and exercises are recommended at specific administrative levels in the Standard Operating Procedures for District Disaster Management Committees (2015). At each level (village, section, and district) Disaster Management Committees (DMCs) are tasked with training community members and conducting simulation exercises and/or drills in order to prepare for disasters. In practice, these training goals are not yet implemented in all areas of the country, and training and exercises are not guided by a national strategy. DRM and DRR training is conducted often and by a wide range of partners including, but not limited to, UNDP, SLRC, IOM, US Government partners, and regionally in Ghana at the Kofi Annan International Peacekeeping Training Centre (KAIPTC) through the Economic Community of West African States (ECOWAS) and other international organizations.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, May & Dec. 2019.

#### POSITION-SPECIFIC COMPETENCY REQUIREMENTS

- Position-specific competency requirements have not been mandated.
- As discussed under section 1, “Institutional Arrangements,” competency requirements have not been established for DMD or other DM-specific positions in the EOC (NSR) and elsewhere, either at the national or subnational levels. However, both the Director and Deputy Director of DMD have a long history with the department, with 12+ years (each) of experience in disaster management. Junior staff in ONS typically rotate to various government positions, often with no prior disaster management experience.
- Interviews with ONS-DMD, May & Dec. 2019.

#### COORDINATION OF CAPACITY-DEVELOPMENT EFFORTS

- Disaster Management and Disaster Risk Reduction capacity development efforts are informal and uncoordinated.
- ONS and DMD recognize the need for coordinated capacity development (CD) and work to enhance capacity in the absence of a national strategy, policy, or plan. Capacity development and training in DRM and DRR are often ad hoc and conducted by a wide range of partners with limited oversight and coordination. The lack of a systematic national approach allows for gaps in the advancement of capacity development at all levels. Additionally, DMD has identified shortfalls in both assessment of capacities and in coordinating capacity development with regional and international partners. These areas have been noted as priority action items for the new disaster management agency currently being planned.
- Interviews with ONS-DMD, May & Dec. 2019.

**STRATEGY-DRIVEN EFFORTS**

- Limited. See previous.

**DM AND DRR CAPACITY AND RESOURCE NEEDS ASSESSMENTS**

- Limited. See above.

**COORDINATION WITH REGIONAL/GLOBAL CD EFFORTS**

- Limited. See above.

**NATIONAL SCIENCE AND TECHNOLOGY (S&T) AGENDA**

- Sierra Leone National Science and Technology Agenda addresses DM and DRR Needs.
- The Sierra Leone Directorate of Science and Technology (DSTI), newly established by President Julius Maada Bio in 2018, with a mission to “...use science, technology, and innovation to support the Government of Sierra Leone deliver on its national development plan effectively and efficiently; and to help transform Sierra Leone into an innovation and entrepreneurship hub.” (DSTI, 2020). The directorate has four strategic pillars: 1) Data for Decision Making, 2) Data Systems & Technology, 3) Service Delivery and Citizen Engagement, and 4) Innovation and Entrepreneurial Ecosystem Strengthening. DSTI is situated in the Office of the President of Sierra Leone and implements operations through the Office of the Chief Minister. The directorate works across all government sectors and MDAs, acting as an additional government resource to support MDAs’ missions and objectives. In 2019, the DSTI supported the development of the first online Integrated GIS Portal, containing government and private-sector data to support decision making and research (<https://www.gis.dsti.gov.sl/>). DSTI’s mission includes data, science, and technology support for national emergencies. In coordination with The Government of Sierra Leone’s National COVID-19 Emergency Operations Centre, DSTI collaborated with a coalition of international partners in July 2020 to produce crucial geospatial datasets, analyses, and tools to support Sierra Leone’s COVID-19 response (DSTI Media, 2020).
- DSTI Vision, Ethos, and Strategic Pillars, Directorate of Science Technology. Accessed from: <https://www.dsti.gov.sl/about/>; Innovation Sierra Leone fights COVID-19 using innovative geospatial data and technology, DSTI Media. July 21, 2020, Sierra Leone COVID-19 Response Hub, 2020.

**TRAINING & EDUCATION****CONDUCT OF DM AND DRR TRAINING**

- Training is supported by GoSL, but there is neither a designated national DM training facility nor a budget.
- In practice, training events are not guided by a national strategy, though DM and DRR training is conducted often and by a wide range of partners as noted above. Training at the subnational level has been outlined in the Standard Operating Procedures for District Disaster Management Committees (2015), but the delivery is inconsistent across the country. The SOP notes the following recommendation: “There is an urgent need for training stakeholders in the different DM structures at all levels on measures to prevent disaster and a timely and coordinated response mechanism.” There is no overarching training-management system at either the national or subnational levels.

Sierra Leone does not maintain a single, centralized disaster management training facility. Individual

agencies and organizations – such as the NFF, NP, and RSLAF – provide general and specialized training on-site. DMD coordinates additional training via mobile teams. Subnational training is conducted directly in the districts in coordination with the DDMCs.

- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019; and Interviews with UNDP, May 2019.

### SCOPE OF TRAINING AND EDUCATION CURRICULUM

- DM/DRR training and education curriculum is not present.
- With the absence of a national training-and-capacity development strategy, the scope of trainings varies and is dependent on the availability of offerings from partners, as well as short-term goals, such as preparation for flooding season. In general, these trainings are coordinated with DMD and attended by the ONS-DMD and SLRC volunteer networks, as well as stakeholders in the DM community at national and subnational levels.

Also, DMD in partnership with UNDP has developed and conducted training for the DDMCs. The goal of the training is to build capacity in preparedness and response, and enhance the capability of both DMD and DDMCs to be fully capable to address key components in the disaster risk-management cycle at the national and district levels. There is no set schedule of events; trainings are conducted prior to the start of the rainy season in some districts, or when new districts are created (as happened in 2019), or when funding resources are available. The trainings and workshops focus on:

- Improving stakeholders' knowledge of the concepts and procedures of disaster risk management.
- Developing risk and hazard maps for district intervention.
- Increasing the understanding of the role of DDMCs before, during, and after a disaster event, including activation of an Emergency Operation Centre (EOC) and the disaster-response structure, and identifying victims of high priority and first line of rescue targets.
- Developing district disaster management plans for the attention of their respective district chairman.
- Conducting a disaster management simulation exercise.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Sierra Leone Red Cross Flood Preparedness and Response Plan, 2019; and Interviews with ONS-DMD & UNDP, May 2019.

### TRAINING METHODS

- There is centralized in-person training at a facility and/or mobile staff that provide distributed training.
- In coordination with ONS-DMD, training reviewed to date is generally provided by ONS-DMD and partners at office locations in Freetown, and directly in the DDMCs.
- Interviews with ONS-DMD & UNDP, May 2019.

### TRAINING CATALOG AND SCHEDULE

- A training schedule and/or catalog does not exist.
- Individual agencies and organizations manage their specialized training needs independent of DMD. There is no centralized training schedule or catalog. Without a national training or capacity-development strategy, offerings of DM-related training are ad hoc and highly dependent on GoSL and partner resource availability.



- Interviews with ONS-DMD & UNDP, May 2019.

### **TRAINING RECORDS**

- Training records are not maintained at the national level. Individual agency/organization records may exist but were not identified.
- DMD does not maintain national-level records for DRM or DRR training. Record keeping for specialized training for the NFF, NP, RSLAF, and non-governmental stakeholders is managed by the individual agencies or organizations.
- Interviews with ONS-DMD, Oct. 2018.

### **PROGRAM TO SUPPORT EXERCISES**

- Exercise efforts are managed by staff with other regular day-to-day job functions.
- Exercise planning and execution is conducted with existing staff, without a formal, full-time program with dedicated resources. DMD staff manages exercises as a collateral duty and does not have a dedicated lead to develop and execute events or provide exercise lessons-learned assessments. Several simulation exercises have occurred in the past, but they are not aligned to the national priorities and there is no regular schedule. There are also National Security Exercises, also not regularly scheduled with the last one during the Ebola Outbreak in 2014.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, Oct. 2018 & May 2019.

### **EXERCISE EVALUATION STANDARDS**

- The GoSL has not developed exercise-evaluation standards.
- Exercises, which are dependent on government resources and international partner donations and management support, are executed on an ad hoc, irregular basis, without a year-on-year means to mature the evaluation process.
- Interviews with ONS-DMD, May & Dec. 2019.

### **STRUCTURED ANNUAL EXERCISE SCHEDULE**

- No annual exercise schedule exists, although DMD maintains general recommendations for exercise scheduling.
- At the subnational level, the Standard Operating Procedures for District Disaster Management Committees tasks ONS to coordinate the private sector, MDAs, and international organizations to actively engage in preparedness, mitigation, prevention, response-and-recovery activities and exercises in order to maintain the overall national risk-reduction and response capability. Challenges in implementing subnational exercises have been noted.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, Oct. 2018 & May 2019.

### **NATIONAL-LEVEL EXERCISE**

- A national-level exercise is conducted, although disaster management is not the primary focus.

- An annual DM-focused exercise is not institutionalized. Rather, DMD coordinates and executes an annual national security exercise. While the event is most often focused on national security issues, past exercises have included a DM component.
- Interviews with ONS-DMD, Oct. 2018 & May 2019.

### **SUPPORT FOR SUB-JURISDICTIONAL EXERCISES**

- Support is limited to non-GoSL sources.
- Financial, technical, and material support to district-level exercise efforts are not provided by the GoSL. Non-governmental partners provide support for exercises at both national and subnational levels on an as-needed, as-available basis in coordination with DMD.
- Interviews with ONS-DMD, Oct. 2018.

### **EXERCISE PARTICIPATION REQUIREMENTS**

- Exercise participation is required for all government agencies with DM functions.
- Although national disaster management exercises are not conducted regularly, DMD, through its parent organization ONS, has the authority to direct and coordinate the participation of GoSL MDAs in national- and subnational-level exercises. Participation by the private sector and NGOs remains voluntary.
- Interviews with ONS-DMD, Oct. 2018, May & Dec. 2019.

### **STAKEHOLDER INVOLVEMENT IN TRAINING AND EXERCISES**

- Stakeholders are invited but not required to participate in training and disaster exercises.
- NGOs and private-sector stakeholders are invited to participate in training and exercises. These participants play a significant role in DM training and exercises, including providing financial and staffing support for the planning and execution of events.
- Interviews with ONS-DMD, Oct. 2018, May & Dec. 2019.

### **DM PROGRAMS IN THE HIGHER-ED COMMUNITY**

- Higher-education community involvement is available, although it is limited in scope.
- As previously noted under the Academia Involvement in Government DM, academia support DM efforts but have no official association with the governmental DM structures. Also, the University of Sierra Leone looks to advance the professionalism of the DM/DRR field in Sierra Leone by adding degree programs in coordination with other universities and institutions. Although in the early stages of development, these programs would significantly increase the national preparedness and risk-reduction efforts of citizens and DM stakeholders nationally. Still, support for DM by the Sierra Leone higher-education community remains limited in number and scope of offerings. This challenge is noted in the draft 2018 Disaster Risk Management Policy.
- Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Interviews with ONS-DMD, May & Dec. 2019.

### **HIGHER-ED PROGRAM AND DEGREE OFFERINGS**

- Degrees and certificates in disaster management are not offered at the main universities in Sierra Leone.

- Dr. Suma at the University of Sierra Leone offers several good suggestions, which are as follows:
  - 1. Make Disaster Preparedness a modular course in high schools, in the University of Sierra Leone, other universities, and tertiary institutions.
  - 2. Prepare teaching material and textbooks to reach a wider population.
  - 3. Produce special documentaries and short video clips for wider dissemination to the general public.
- Interview with University of Sierra Leone, May 2019.

### **NATIONAL DM CURRICULUM**

- K-12 curriculum is under development.
- As previously noted under Academia Involvement in Government DM, the University of Sierra Leone has noted the need for, and begun discussions to, increase national preparedness by developing a national curriculum for primary, secondary, and tertiary schools. In its effort to increase disaster risk-management and preparedness within the country, the GoSL, with support from UNDP, conducted a Disaster Risk Reduction and Management (DRRM) Program pilot project in several schools and colleges at the district level in Spring 2018. The program strengthened the capacity of the education sector by creating a DRRM curriculum for teachers in 10 schools in each of the targeted districts of Bombali, Bo, and Pujehun. The success of the pilot program has led to the recommendation of its expansion into the regular school curriculum. DMD and UNDP are currently in discussions with national- and district-school authorities to incorporate the program into the regular school curriculum as one of the subjects taught in schools nationally.
- UNDP DRR District Monitoring Report, Dec. 2018; UNDP School-based DRRM Monitoring Report, May 2018.

### **PUBLIC EDUCATION METHODS**

- Public education is provided through various media; however, no national public awareness strategy exists.
- Public awareness, preparedness, and resilience-building programs face implementation challenges based on staffing and financial resources, and are conducted in an ad hoc manner through various media.

As noted in the 2018 Disaster Risk Management Policy:

“Despite varied progress to date existing DRM public sensitization, education and research interventions are still limited: (i) public sensitization initiatives are not yet carried out on a fixed basis and are yet to systematically address all public categories, disaster-prone areas, and hazards. (ii) Media contribution in public sensitization and education is still very limited.”

In coordination with DMD, partner organizations carry out local and regional public-awareness activities. For example, the SLRC has a Community Engagement and Accountability Group that works with local communities through theater and radio to build awareness of disaster preparedness.

While providing a valuable benefit to the DM community, the lack of a national strategy allows for gaps in the advancement of public awareness at all levels. This has been noted as a challenge and identified as a priority for the establishment of a new disaster management agency currently being planned.

- Interviews with ONS-DMD, Sierra Leone Red Cross, and UNDP, May & Dec. 2019.

### **COMMUNITY CENTERS AND PUBLIC AWARENESS/EDUCATION**

- Community centers and community organizations are engaged in the promotion of disaster awareness, preparedness, and training.
- As noted earlier, these efforts are not conducted uniformly throughout the country.

- Interviews with ONS-DMD, May & Dec. 2019.

### **DISASTER PREPAREDNESS INFORMATION FOR THE PRIVATE SECTOR**

- Private-sector preparedness is not currently supported by GoSL.
- Preparedness efforts are managed at the organization/company level.
- Interviews with ONS-DMD, May & Dec. 2019.

## **CAPACITY DEVELOPMENT MONITORING & EVALUATION**

### **STANDARD EVALUATION PROCEDURES**

- No standard procedures are in place to guide the evaluation and revision of plans, strategies, and SOPs.
- The evaluation and revision of DM plans and processes are not mandated by existing strategy or policy. Updates to procedures occur on an ad hoc, as-needed basis depending on the availability of staffing resources. The lack of updated and institutionalized DM strategies and plans remain a challenge for national and subnational stakeholders to understand their roles and responsibilities in preparedness and response phases.
- Interviews with ONS-DMD, May & Dec. 2019.

### **REVIEW OF PLANS, STRATEGIES, AND SOPS**

- Plans, strategies and SOPs reviewed/revise on an ad hoc basis.
- The Government of Sierra Leone (GoSL) has produced several revisions of DRM strategies, policies, and SOPs. However, multiple versions of plans remain in circulation, and final versions have not been approved nor institutionalized within the DM-stakeholder community at national and subnational levels. Reviews and updates occur on an as-needed basis depending on the availability of staffing resources and generally with the support of partner organizations. This challenge has been recognized, and the GoSL has prioritized the update of DM legislation, plans, strategies, and SOPs as part of the plan to create an autonomous disaster management agency. Review of the documents suggest areas of recommended updates:
  - Provide a clear presentation of the national and subnational disaster management system.
  - Work to operationalize the roles and responsibilities of GoSL MDAs and partners outlined in the plans.
  - Mature and operationalize the subnational DM architecture at the district level and below.
  - Develop a means to update DM plans regularly and with broad stakeholder input.

Management of these areas has been identified as a priority action in the design of the new disaster management agency.

- Interviews with ONS-DMD, May & Dec. 2019.

### **REVIEW OF DM LEGISLATION**

- DM legislation has not been reviewed or updated since ratified.
- The principal disaster management legislation, the National Security and Central Intelligence Act of 2002, has not been updated since its inception. However, the National Disaster Management Act 2020

was ratified on March 27, 2020, leading to the establishment of a new DRM agency. Once established, the responsibility to update DM legislation, plans, strategies, and SOPs will fall to the new, autonomous disaster management agency.

- Interviews with ONS-DMD, May & Dec. 2019; NightWatch SL, National Disaster Management Agency Act Ratified, March 27, 2020.

### REQUIREMENTS FOR POST-DISASTER REVIEWS

- Post-disaster reviews have been completed for major events, although the requirement is not formalized in policy documents.
- While there is no identified requirement for post-event review and evaluation of disaster-response efforts, after-action reports have been developed after large-scale disasters. In one example, following the 2017 Freetown Flooding and Landslide, DMD, in coordination with other GoSL and international partners, conducted a post-event analysis of the causes and losses, noting cross-cutting challenges and recommendations.
- Interviews with ONS-DMD, May & Dec. 2019.

### EVALUATIONS INCORPORATED INTO PLANS, POLICIES, AND/OR SOPS

- There is no evidence showing the evaluations have been incorporated into plans, policies, or the SOPs.
- Post-event evaluations and assessments are used on an informal basis to guide planning and decision making. DMD does not have a formal process to incorporate the assessments into future plans.
- Interviews with ONS-DMD, Oct. 2018.



## COMMUNICATION AND INFORMATION MANAGEMENT

### HAZARD & RISK ANALYSIS

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#### RISK-ASSESSMENT PROCESSES AND STANDARDS

- There are limited risk assessments; or they are conducted irregularly, and with no standards identified.
- Risk assessments are not regularly performed by the GoSL, and no standardized evaluation processes exist. DMD noted the challenges associated with routinely conducting risk assessments, as outlined in the draft 2018 National Disaster Risk Management Policy:

“Interventions towards or contributing to risk assessment remain very limited for a number of reasons: (i) A limited number of risk assessments has been undertaken, some sectoral risk assessments have commenced but are incomplete, and there is no spatial analysis of risk (risk mapping) available; (ii) There is an absence of participation and ownership of roles by specialized national institutions (excluding Environmental Impact Assessments); (iii) There is no scientific risk assessments to understand and characterize all key hazards faced by Sierra Leone, and (iv) There is an absence of a governmental mechanism or system for undertaking such assessments systematically or regularly.”

In light of these challenges, two recent national and city-level assessments have been developed by external DM stakeholders, providing a de facto baseline for risk-assessment efforts in the country:

- The 2017 Sierra Leone Hazard Profile and Capacity Gap Analysis conducted with assistance from Integrated Geo-information and Environmental Management Services (INTEGEMS).
- The 2018 Sierra Leone Multi-City Hazard Review and Risk Assessment by the World Bank.
- Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Sierra Leone Multi-City Hazard Review and Risk Assessment, World Bank, 2018; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018.

### **RISK-ASSESSMENT REQUIREMENTS FOR PLANNING**

- Risk assessments are not required for DM or DRR planning efforts.
- Although noted as a best practice by DMD and disaster management stakeholders, there is no requirement formalized in legislation or national policy for the use of risk-assessment practices and results in DRM and DRR planning efforts.
- Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Interviews with ONS-DMD, Oct. 2018.

### **RISK ASSESSMENT STAFFING CAPACITY**

- No organic GoSL risk-assessment staffing capacity exists; external partner resources are required.
- Risk assessments (including the two noted above) have been conducted by non-GoSL partners, with funding from international organizations including UNDP and World Bank, as well as this assessment sponsored by the US Government in coordination with DMD.
- Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Sierra Leone Multi-City Hazard Review and Risk Assessment, World Bank, 2018.

### **VULNERABILITY MEASURED IN RISK ASSESSMENTS**

- Vulnerability-assessment criteria are limited in scope to demographic data and/or housing type, or inclusion of complex vulnerability measures is hindered by implementation challenges.
- The 2017 Sierra Leone Hazard Profile and Capacity Gap Analysis includes limited demographic indicators of vulnerability in its hazard profiles, including gender, age, and disability. The national-level report summarizes overarching concepts of vulnerability that are prevalent in Sierra Leone, including physical and material, social and organizational, and attitudinal and motivational vulnerabilities. These provide context but are not represented comprehensively or quantitatively at the subnational level. The 2018 Sierra Leone Multi-City Hazard Review and Risk Assessment considers the vulnerability as the density of built environment, exposure of buildings to inundation, direct fatalities due to drowning, and the probability of the existence of persons in direct harm with no demographic indicators other than location and occupancy.
- Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Sierra Leone Multi-City Hazard Review and Risk Assessment, World Bank, 2018.

### **CLIMATE CHANGE INCLUDED IN RISK ASSESSMENTS**

- Climate change criteria are limited in scope and the inclusion of climate change measures is hindered by implementation challenges.
- Similar to the vulnerability measures noted above, climate change criteria included in risk assessments have been limited in scope. The two most recent assessments included climate change criteria, although



not comprehensively. The 2017 Sierra Leone Hazard Profile and Capacity Gap Analysis limits the scope to areas prone to sea-level rise. Climate scenarios are not applied to other climate-sensitive hazards, such as rainfall and flooding, to anticipate future risks.

Climate change is also integrated into the 2018 Sierra Leone Multi-City Hazard Review and Risk Assessment by accounting for hazard zones “in the near future (the year 2050) accounting for climate change”. Challenges with the integration of climate change into DM are noted in the draft 2018 National Disaster Risk Management Policy:

“Disaster Risk Management (DRM) and climate change adaptation interventions are not yet adequately and systematically integrated. Both mechanisms are still addressed as separate issues in separate agendas, frameworks and interventions: (i) stakeholders are not sufficiently aware of the importance of climate change in DRM design and implementation; (ii) DRM and climate change adaptation integration tends to be more theoretical than practical.”

- Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Sierra Leone Multi-City Hazard Review and Risk Assessment, World Bank, 2018; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018.

### LOCAL AND INDIGENOUS KNOWLEDGE IN RISK ASSESSMENTS

- Not included.
- Neither the 2017 Sierra Leone Hazard Profile and Capacity Gap Analysis nor the 2018 Sierra Leone Multi-City Hazard Review and Risk Assessment includes information from local and indigenous sources explicitly, although it is noted as a gap with the following recommendation: “Strengthen community-based early warning (EWS) for incorporating relevant indigenous knowledge and capacitate communities at village level to conduct community-based risk assessments.”
- Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Sierra Leone Multi-City Hazard Review and Risk Assessment, World Bank, 2018.

### HOSTING OF RISK-ASSESSMENT INFORMATION

- A centralized GIS system managed by DMD through a local contractor exists to support risk-assessment reporting, but sub-jurisdictional access and/or training support is not provided.
- As part of the 2017 assessment, two online resources, Hazard and Risk Profile Information System - Sierra Leone (HARPIS-SL) and Climate Information, Disaster Management and Early Warning System (CIDMEWS), were created and are hosted by a local private company, Integrated Geo-information and Environmental Management Services (INTEGEMS). The applications incorporate a significant collection of geospatial data with real-time hazard observations, and the results of the national and subnational risk assessment. The applications strive to increase the level of access to information on multi-risk and early warning to the national disaster management-stakeholder community. The applications are publicly available, though DM stakeholders do not regularly review and leverage these applications for preparedness or DRR activities.
- Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Sierra Leone Multi-City Hazard Review and Risk Assessment, World Bank, 2018; Interviews with INTEGEMS, Oct. 2018 & Dec. 2019.

### RISK-MAPPING REQUIREMENTS

- Risk Mapping requirements do not exist.
- There is no formal requirement to map risk at either the national or subnational levels.

- Interviews with ONS-DMD, October 2018.

### **RISK-MAPPING CAPACITY**

- Outside support is required to conduct risk mapping.
- Risk mapping capacity is available through non-GoSL stakeholders. DMD does not have resident capacity for risk mapping. Recent risk assessments (see above) have been conducted by non-governmental partners, with mapping capacity managed external to the GoSL. However, limited GIS resources exist in other ministries (Health, EPA) and in the private sector (INTEGEMS) that support elements of risk mapping within the country. It is not clear if any formal agreements are leveraged to institutionalize these resources for risk mapping.
- Interviews with ONS-DMD, Oct. 2018.

### **MONITORING & NOTIFICATION**



#### **EXISTENCE OF HAZARD MONITORING**

- Monitoring of some major hazards is occurring at the national level, with limited monitoring in some districts.
- The monitoring of natural hazards is conducted at the national level. The Sierra Leone Meteorological Agency (Met-SL) has the mandate to monitor and provide data for weather-related hazards to DMD and aviation officials. However, a lack of equipment and manpower hinders their ability to provide detailed information for disaster preparedness and decision making. Except for public health efforts through the PHNEOC, there are no other mechanisms for hazard monitoring at the national level.

In collaboration with partners such as Sierra Leone Red Cross (SLRC), 10 local communities in six districts have implemented hazard monitoring and early warning practices. Communities are trained on how to identify increasing hazard threats, mitigate potential impacts, and warn residents to evacuate if necessary. Examples include river and rain gauges to provide early warnings for flooding, and local firefighting supplies and alarms in preparation for the dry season. Efforts to expand this program are underway; however, limited financial and staffing resources have hindered progress.

- Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Interviews with ONS-DMD & SLRC, May and Dec. 2019.

#### **COORDINATION OF HAZARD MONITORING**

- Coordination of hazard monitoring occurs, but there is no single office or agency tasked with monitoring all major hazards, or coordination activities remain in development.
- Hazard monitoring for meteorological events is the mandate of Met-SL, which reports any potential weather events (flood, windstorm, lightning, and tropical storm) to DMD. The Environmental Protection Agency (EPA-SL) and the Ministry of Water Resources (MoWR) are supporting agencies, providing key data to inform on hazards nationwide. With Met-SL as the lead, these three agencies provide information directly to DMD for preparedness and decision making.

Public health monitoring is conducted by the PHNEOC and is coordinated separately with ONS.

- Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Interviews with ONS-DMD & Met-SL, Feb., May and Dec. 2019.

### POPULATION IN AREAS SERVED BY MONITORING EFFORTS

- Hazard monitoring serves less than 25% of the Sierra Leone population.
- Due to a severely resource-constrained environment and technical limitations, hazard- monitoring systems are in place for less than a quarter of the population based on a national assessment. Some communities have implemented local hazard-monitoring procedures with the assistance of DMD, the SLRC, and international partners. Examples noted above.
- Interviews with ONS-DMD, SLRC, & Met-SL Dec. 2019.

### DOPPLER RADAR COVERAGE

- Doppler Radar is available but covers less than 25% of land area in Sierra Leone.
- Met-SL reported a lack of functioning radar in the country, with international sources such as the African Centre of Meteorological Applications for Development (ACMAD) and World Meteorological Organization (WMO) filling critical gaps in this area.

As part of a UNDP-funded project, eight automatic weather stations have been installed across the country to provide real-time data. However, the stations are not yet being utilized by Met-SL or DMD for DM decision making.

- Interviews with ONS-DMD & Met-SL, Feb., May, and Dec. 2019.

### HAZARD-MONITORING RESPONSIBILITY

- Hazard monitoring is managed by agencies or offices with relevant or hazard-specific missions.
- Hazard monitoring for meteorological events is the mandate of Met-SL. EPA-SL and MoWR are supporting agencies, providing key data to inform on hazards nationwide. With Met-SL as the lead, these three agencies provide information directly to DMD for preparedness planning and event decision making. As noted above, a lack of technical resources, including Doppler radar, causes gaps in monitoring of hazards nationally. To help offset these challenges, some disaster management partners, in collaboration with DMD, work directly with communities to increase monitoring and early warning capabilities in hazard-prone areas. See previous notes on SLRC activities at the district level.
- Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Interviews with ONS-DMD & Met-SL, Feb., May, and Dec. 2019.

### HAZARD-MONITORING METHODS

- Hazard-monitoring methods are limited by scope and older technologies.
- Utilizing best-practice methods and technologies for hazard monitoring is a noted challenge. From the 2017 Sierra Leone Hazard Profile and Capacity Gap Analysis, “There is a lack of appropriate systems, equipment, and technical competencies concerning monitoring hazards in Sierra Leone. Sierra Leone Metrological Department (Met-SL) is significantly underfunded and lacks modern equipment and systems to monitor hazards appropriately.”

In response to these challenges, two online web-mapping applications, HARPIS and CIDMEWS-SL, were designed and implemented to monitor hazards and provide early warning. Although operational and providing real-time information for some hazards (primarily flooding), the systems appear to be underutilized and are not institutionalized by the disaster management community.

- Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Interviews with

ONS-DMD & Met-SL, Feb., May, and Dec. 2019.

### **ASSIGNMENT OF NOTIFICATION/EARLY WARNING RESPONSIBILITIES**

- Sierra Leone’s Notification/Early Warning responsibilities are spread across multiple agencies.
- Early warning and notification functions are assigned to ONS and DMD or a specific agency for some hazards. There is no national system covering the most common or severe (in terms of exposure) hazards and ensuring adequate alerting and communication to the public. In the absence of a single national system, the main GoSL agencies involved in hazard monitoring (Met-SL, EPA-SL, and MoWR) send information about potential natural-hazard threats directly to DMD for dissemination to the public via media sources. As noted above, HARPIS and CIDMEWS-SL were designed to integrate and centralize information on natural hazards and early warnings for all meteorological, climatological, environmental, and hydrological hazards. However, despite being operational, capable, and providing real-time information for some hazards, especially flooding, these systems have not been institutionalized.
- Update of Sierra Leone Hazard Profile and Capacity Gap Analysis, INTEGEMS, 2017; Support to Communication and Dialogue on Early Warning and Forecasting Products & Climate Information Project, INTEGEMS, 2017; Sierra Leone National Disaster Risk Management Policy – DRAFT, 2018; Interviews with ONS-DMD, Met-SL & INTEGEMS, Oct. 2018 & May and Dec. 2019; DMD Overview presentation at NDPBA kickoff, Oct. 2018.

### **STANDARD PROCEDURES FOR EARLY WARNING**

- No standard procedures for early warning exist in Sierra Leone.
- Early warning notifications are managed on an informal basis, without written guidance on policy, plans, or SOPs.
- Interviews with ONS-DMD, Met-SL & INTEGEMS, Oct. 2018 & May and Dec. 2019.

### **EARLY WARNING COMMUNICATION CHANNELS**

- Warnings are provided through radio, television, social media, and mobile (cellular) phones (text). Warnings are not provided through landline phones or siren.
- No standard procedures exist to facilitate notification and early warning. Should a notification to the public be necessary, several mechanisms may be used at the discretion of DMD, including radio and television depending on the hazard type and threat level. For rural areas outside Freetown, communications may be sent via phone calls and SMS/WhatsApp messages to key community focal points, including the District Council Chairman, District Security Coordinator, ONS volunteers, SLRC staff, and community leaders.
- Interviews with ONS-DMD, Met-SL & INTEGEMS, Oct. 2018 & May and Dec. 2019.

### **TARGETED EARLY WARNING CAPABILITIES**

- Early warning systems in Sierra Leone are not able to target specific locations according to risk.
- Early warning and notification systems at the national level are not advanced to the level of targeting specific locations. In some rural areas, hazard monitoring and early warning systems have been developed for specific hazards with support from national partner organizations.
- Interviews with ONS-DMD, Met-SL & INTEGEMS, Oct. 2018 & May and Dec. 2019.

### **EARLY WARNING SYSTEMS COVERAGE AREA**

- Less than 25% of Sierra Leone is covered by an early warning system of any type.
- In a severely resource-constrained environment, early warning systems (EWS) are in place for less than a quarter of the population. Existing EWS capabilities are not regularly tested or institutionalized.
- Some communities have implemented a local EWS with the assistance of DMD and partners, such as SLRC (see above). Additional examples include the sounding of an alarm via church bells or other devices, and using local radio to warn community members of a potential hazard.
- Interviews with ONS-DMD, SLRC, & Met-SL Dec. 2019.

### **TESTING OF EARLY WARNING SYSTEMS**

- Early warning Systems are not tested in Sierra Leone.
- There are no formalized procedures or schedules for testing EWS.
- Interviews with ONS-DMD, SLRC, & Met-SL Dec. 2019.

### **TRAINING AND EDUCATION FOR WARNING RECIPIENTS**

- Some communities in Sierra Leone served by early warning systems are provided with pre-disaster training or education about message meaning and appropriate response.
- No national early warning training or education is conducted. In some rural areas, local monitoring and early warning systems have been developed for specific hazards with support from partners. These projects may include limited training of local populations on the understanding of hazard exposure and potential impacts, as well as response and evacuation procedures. The SLRC project included 10 communities in six districts.
- Interviews with ONS-DMD& SLRC, May & Dec. 2019.

### **POPULATION TARGETING OF EARLY WARNING MESSAGES**

- Early warning systems have limited capacity to address the needs of specific populations.
- While there is not a national EWS, some populations (vulnerable or special needs) are targeted with specific messaging in some rural areas, which have implemented local hazard-monitoring and early warning systems.
- Interviews with ONS-DMD& SLRC, May & Dec. 2019.

## **DISASTER ASSESSMENT**

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### **DISASTER-ASSESSMENT CAPABILITIES**

- Disaster-assessment systems and procedures exist, supported by policy and in practice.
- In coordination with international partners, DMD utilizes the Multi-Cluster/Sector Initial Rapid Assessment (MIRA) process to perform assessments during disaster-response events. MIRA supports these efforts by providing a common understanding of where humanitarian needs are most severe and which population groups are most in need of assistance. MIRA was developed by the Inter-Agency Standing

Committee, Needs Assessment Task Force (IASC/NATF) drawing from the wealth of experience and knowledge gathered from United Nations agencies, non-governmental organizations, donors, academic institutions, and other technical bodies. MIRA is implemented through a phased process of secondary and primary data collection, joint analysis, and reporting taking place in the first two weeks following a disaster.

- Interviews with ONS-DMD, Dec. 2019.

### **DISASTER-ASSESSMENT REQUIREMENTS**

- Disaster assessments are considered and performed on a non-routine basis, but decision making often occurs irrespective of assessment outcomes.
- Assessments are mentioned in various disaster management documents. However, specifics and standards of roles and responsibilities are not defined. The Multi-Cluster/Sector Initial Rapid Assessment (MIRA) discussed above is utilized for large-scale (Level 2/3) events. There is a lack of specific guidance on Level 1 events.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, Dec. 2019.

### **NATIONALLY AUTHORIZED ASSESSMENT METHODOLOGY**

- A nationally authorized assessment methodology exists, but universal application is hindered by either a lack of implementation requirements or implementation challenges.
- The GoSL utilizes the MIRA process described above as the approved methodology to perform assessments during Level 2/3 events.
- Sierra Leone ONS-DMD & UNDP Standard Operating Procedures for District Disaster Management Committees, 2015; Interviews with ONS-DMD, Dec. 2019.

### **ASSESSMENT-RESOURCE CAPACITY**

- Disaster assessments in Sierra Leone typically require the intervention of international organizations and NGO Partners.
- The MIRA assessment requires the assistance (computer/technical and data management) of international partners working within Sierra Leone. ONS and DMD do not maintain the staffing or technical expertise to conduct the assessments without external support.
- Interviews with ONS-DMD, Dec. 2019.

### **ASSESSMENTS AND INCIDENT-ACTION PLANNING**

- Assessments are conducted to drive incident-action planning (IAP), but implementation challenges and other obstacles often limit their utility in the IAP process.
- Disaster-response action planning in Sierra Leone is driven by a number of factors, including informal needs assessments and situation reports from Pillar leads during partner coordination meetings. Information from the assessment process and Pillar lead agencies are reviewed during the meetings to ensure that support to the affected areas is coordinated among the GoSL and partner agencies. While the MIRA methodology is present for large-scale events, the lack of an institutionalized assessment methodology for national and subnational jurisdictions and agencies for Level 1, 2, and 3 disasters prevents the standardization of data and reporting, which may present challenges in the decision-making process.



- Interviews with ONS-DMD, Dec. 2019.

### STAKEHOLDER ENGAGEMENT IN THE ASSESSMENT PROCESS

- Multi-stakeholder engagement is not required but is encouraged through the Pillar system.
- The assessment process is managed by DMD, which coordinates with and delegates to corresponding Pillar leads and partner agencies for completion. Applying guidance from the NPDRR, the National Strategic Situation Group (NSSG, known locally as the Gold level) is the central coordination body during national-level disaster emergencies (Levels 2 and 3), as was discussed under the Institutional Arrangements (see Figure 1). NSSG's role is to ensure coordination during an emergency response, with the MDAs present ensuring support to DMD in response to the emergency. Both the NPDRR and NSSG include a broad range of stakeholders from Sierra Leone MDAs. However, as discussed earlier, not all are effectively integrated into the decision-making process. DMD works to maintain an updated contact list of non-governmental stakeholders and partners operating in the country, without specific references to organizational capabilities. NGOs are mentioned in disaster-preparedness and response plans, and provide broad areas of support. Where appropriate, Sierra Leone has worked to integrate and match non-governmental organizations with appropriate counterparts through functional areas and the existing Pillar system. (see Table 1 for the Pillar system and partners). During response operations, non-governmental stakeholders have customarily supported the GoSL with impact assessments, logistics, WASH, and commodities and relief supplies.
- Interviews with ONS-DMD, Dec. 2019.

### INFORMATION COLLECTION, MANAGEMENT, & DISTRIBUTION

#### DATA COLLECTION AND STORAGE STANDARDS

- No official DM data standards exist in Sierra Leone.
- In the absence of formalized national data standards, each GoSL MDA implements data collection and storage independently. However, Sierra Leone established its Open Government Initiative (OGI) in 2008, passed the Right to Access Information Act in 2013 and joined the Open Government Partnership (OGP) in 2014. The OGP National Action Plan, with support from the World Bank, commits Sierra Leone to pass an Archives and Records Management Bill and establish an Open Data Portal. Sierra Leone launched its national Open Data Portal (<http://opendata.gov.sl>) in May 2015. The ultimate aim is to have a full-fledged Open Data Initiative. As indicated in the 2016 Open Data Readiness Assessment Report prepared by the World Bank for the GoSL, Sierra Leone stands to benefit greatly from an Open Data Initiative, as demonstrated by the response to the Ebola virus outbreak in 2014. A multi-stakeholder effort to produce a map of outbreak data through an open and standardized format can enhance stakeholder collaboration, enabling more timely access to critical information and a better disaster response and post-disaster recovery. The 2016 World Bank report notes that the GoSL is aware of the critical need for establishing nationwide data standards through institutional frameworks.
- Right to Access Information Act of 2013; Interviews with ONS-DMD, Dec. 2019.

#### FORMAT OF DATA

- Some of Sierra Leone's DM data are digitized but are mostly in a mixed format.
- Without a nationally adopted data standard (such as an NSDI), each GoSL MDA implements its own standard for internal use. Consequently, data formats vary with each MDA. Data that were made available for this project were in digital form. However, the format and data structure varied. Example formats

include handwritten logbooks, spreadsheets, PDF documents, and GIS layers.

- First-hand experience.

## DATA SHARING

- Data sharing is informal and inconsistent, and data are not typically shared between different levels of government.
- Online repositories of data are not common in Sierra Leone, and data sharing must be formalized through official requests to GoSL MDAs. Data sharing between GoSL MDAs at national and subnational levels are communicated positively and openly. In practice, the process involves several layers of approval, and technical capacity is low, which delays the data-sharing process. The Right to Access to Information Act of 2013 requires the GoSL to disclose the publicly held records that involved the GoSL data sharing, but implementation challenges exist due to a lack of planning and protocols. The Open Data Initiative as discussed above can be instrumental.
- Right to Access Information Act of 2013; Interviews with ONS-DMD, Dec. 2019.

## GIS-BASED DATA-MANAGEMENT SYSTEM TO LEVERAGE A COMMON OPERATING PICTURE

- No central information system exists; no common operating picture (COP) is utilized, and limited GIS capacity exists.
- GIS capacity was observed within some MDAs (Statistics Sierra Leone and EPA-SL have full-time GIS staff, for example). However, very few MDAs routinely utilize GIS, and the capacity does not exist at DMD, Met-SL, or the subnational level. Two online web-mapping applications, HARPIS-SL and CID-MEWS, contain a collection of GIS information designed to monitor hazards and provide early warning nationwide. These applications are operational but appear under-utilized by the disaster management community.
- Interviews with ONS-DMD, INTEGEMS & Stats-SL, Oct. 2018 & May and Dec. 2019.

## DISASTER DATABASE LINKED TO THE NATIONAL STATISTICS AGENCY

- Disaster loss information is collected, but no national database exists and/or disaster loss information is not linked to the national statistics system.
- A DesInventar<sup>8</sup> database exists but is not present at DMD, and the database has not been recently updated due to a lack of staff resources and technical capacity. There are historical flood data from 2009 to 2017, landslide data from 2009 to 2016, and fire statistics from 2009 to 2015 (INTEGEMS, 2017). The DesInventar data are not linked to Statistics Sierra Leone, and no other data on disaster losses have been identified for this assessment. The EM-DAT<sup>9</sup> database also keeps a log of disaster loss data about Sierra Leone.
- Interviews with ONS-DMD, May, and Dec. 2019.

<sup>8</sup> DesInventar is a conceptual and methodological tool for the generation of National Disaster Inventories and the construction of databases of damage, losses, and in general the effects of disasters supported by UNDRR and other sponsors. The Sierra Leone database is available at: [https://www.desinventar.net/DesInventar/profiletab.jsp?countrycode=sle&continue=y#more\\_info](https://www.desinventar.net/DesInventar/profiletab.jsp?countrycode=sle&continue=y#more_info)

<sup>9</sup> EM-DAT is a global database on natural and technological disasters, containing data on the occurrence and effects of disasters in the world from 1900 to present. <https://www.emdat.be/database>

### **FACILITATION OF INFORMATION SHARING**

- a. DM information sharing occurs through disparate systems or platforms.
- b. In terms of response, there is a documented process of sharing information from the lower level DDMCs up to national via the DM architecture. Information is requested from ONS-DMD in meetings, who then reach out to various Pillars/Partners/subnational levels to get it with no defined standards or formats.
- c. Interviews with ONS-DMD, May, and Dec. 2019.

### **MEDIA & PUBLIC AFFAIRS**

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#### **PUBLIC INFORMATION OFFICER**

- The GoSL utilizes a single agency point of contact for public affairs across all government DM functions.
- Public information is the focus of Pillar #4 - Social Mobilization and Communications – led by the Ministry of Information and Communication (MIC), which is tasked with:
  - Communication of strategies, plans, and execution.
  - Press releases and media appearances.
  - Engagement with other Pillars to agree on messaging and press statements.
  - External communication to the media, civil society and international organizations.
  - Social mobilization strategy and execution.
  - Development and distribution of IEC materials.
  - Community engagement on Disaster Risk Reduction.
  - Media monitoring.

There is an assigned ONS Public Information Officer position that manages public affairs for any national security event and coordinates with Pillar #4 for disaster-related events.

- Interviews with ONS-DMD, May, and Dec. 2019.

#### **DOCUMENTED COMMUNICATION STRATEGY**

- Sierra Leone does not have a documented communication strategy.
- Existing policy and planning documents do not contain a communication strategy for disaster events. Internal (to the GoSL) and external, public communication is managed by MIC through Pillar #4, as described above.
- Interviews with ONS-DMD, May, and Dec. 2019.

### **DEDICATED MEDIA-BRIEFING SPACE**

- The jurisdiction provides a dedicated media-briefing space collocated with the NSR/EOC.
- The GoSL has a dedicated media briefing space at ONS headquarters where public broadcasts related to security or emergency/disaster are made in coordination with Pillar #4.
- Interviews with ONS-DMD, Dec. 2019.

### **MEDIA TRAINING**

- Media training on disaster-specific communication is offered to key officials and government leadership.
- Media training is provided by international partners. ONS and DMD staff attend media-related training events offered regionally, such as the November 2019 Disaster Risk Reduction Best Practices two-day program organized by ECOWAS in conjunction with the United Nations Office for Disaster Risk Reduction. The workshop's focus was on building the capacity of national government and media representatives for reporting of hazards and vulnerabilities and their impact on communities.
- Interviews with ONS-DMD, Dec. 2019; ECOWAS Website

### **INFORMATION DISSEMINATION FORMATS**

- Public information dissemination capabilities are communicated primarily through a single channel (e.g., the media or a website).
- For national security threats or emergencies, the primary mechanisms for the dissemination of public information are television and radio in an address made from ONS headquarters by the national security coordinator or a designated official.
- Interviews with ONS-DMD, Dec. 2019.

### **PRE-SCRIPTED INFORMATION BULLETINS**

- Pre-scripted messages or bulletins have not been developed.
- ONS and DMD do not maintain pre-scripted public communications for the range of potential or likely hazards events. For recent disasters, including the 2017 and 2019 events, MIC – with ONS and DMD support – developed bulletins based on on-scene information from rapidly developing situations.
- Interviews with ONS-DMD, Dec. 2019.

### **PUBLIC INFORMATION AUDIENCES**

- Public information capabilities address a uniform audience in their methods and messaging.
- Dissemination of information is conducted broadly to the general public via television and radio to reach the largest audience.
- Interviews with ONS-DMD, Dec. 2019.

### **TRACKING PUBLICLY GENERATED INFORMATION**

- Publicly generated information is tracked and used, but no dedicated policies or procedures exist to do so.
- ONS staff monitors social media for potential security concerns. There is no standard operating procedure for monitoring and reporting hazards or disaster-related public reporting via social media.
- Interviews with ONS-DMD, Dec. 2019.

# REFERENCES

## DOCUMENTS

Abu, T. W. (2019). 2019 Flood Preparedness Plan. Sierra Leone Red Cross Society (SLRC), Disaster Management Program. Provided by SLRC.

Awoko Newspaper. (2020, March 10). Ahead of today's debate... MPs concern over National Disaster Management Act 2020. Awoko Newspaper. Retrieved from <https://awokonewspaper.com>

Constitution of Sierra Leone, Act No 6 of 1991. (1991). Retrieved from <http://www.statehouse-sl.org/constitution/#>

CTIF - International Association of Fire and Rescue Services, Center of Fire Statistics, Brushlinksy, N. N., Ahrens, M., Sokolov, S. V., & Wagner, P. (2018). World Fire Statistics (23). Retrieved from [https://www.ctif.org/sites/default/files/2018-06/CTIF\\_Report23\\_World\\_Fire\\_Statistics\\_2018\\_vs\\_2\\_0.pdf](https://www.ctif.org/sites/default/files/2018-06/CTIF_Report23_World_Fire_Statistics_2018_vs_2_0.pdf)

Dauda, M. (2018). Back to Office Report, Environment and Natural Disaster Management. United Nations Development Programme (UNDP). Provided by UNDP.

DSTI MEDIA. (2020, July 21). Sierra Leone fights COVID-19 using innovative geospatial data and technology. Retrieved from <https://www.dsti.gov.sl/sierra-leone-fights-covid-19-using-innovative-geospatial-data-and-technology/>

Economic Community of West African States (ECOWAS). (2020, February 18). COVID-19 VIRUS: WAHO, Regional Health Ministers Call for Collective Response. Retrieved June 3, 2020, from <https://www.ecowas.int/covid-19-virus-waho-regional-health-ministers-call-for-collective-response/>

Economic Community of West African States (ECOWAS). (2019, November 23). ECOWAS Commission and Partners Train Journalists on Disaster Risk Reduction Best Practices. <https://www.ecowas.int/ecowas-commission-and-partners-train-journalists-on-disaster-risk-reduction-best-practices/>

EM-DAT: The Emergency Events Database. (2020). Université catholique de Louvain (UCL) - CRED, D. Guha-Sapir. Brussels, Belgium. Retrieved from [www.emdat.be](http://www.emdat.be)

Frazer-Williams, R., Benjamin, R., Kanu, B., Lahai, S., Mark, K., & Dreiser, C. (2014). Environmental Assessment and Evaluation of Natural Disaster Risk and Mitigation in Freetown. Freetown City Council. Retrieved from [https://www.slurc.org/uploads/1/6/9/1/16915440/environmental\\_assessment\\_and\\_evaluation\\_of\\_natural.pdf](https://www.slurc.org/uploads/1/6/9/1/16915440/environmental_assessment_and_evaluation_of_natural.pdf)



Government of Sierra Leone (GoSL). (2006). Sierra Leone: National Disaster Preparedness and Response Plan (NDPRP). Retrieved from <https://www.preventionweb.net/english/policies/v.php?id=60536&cid=154>

Government of Sierra Leone (GoSL). (2006). Sierra Leone Disaster Management Policy (Final DRAFT). June 2006. Retrieved from <https://www.ifrc.org/docs/idrl/671EN.pdf>

Right to Information Access Act 2013. (2013, October 31). Government of Sierra Leone (GoSL). Retrieved June 23, 2020, from <http://www.sierra-leone.org/Laws/2013-02.pdf>

Government of Sierra Leone (GoSL). (2014). Sierra Leone Disaster Risk Management Policy (Final Version). May 5, 2014.

Government of Sierra Leone (GoSL). (2014, August). Military Aid to Civil Authorities (MACA) – A Guide to Operations in Sierra Leone. RSLAF Policy 26. Provided by Office of National Security (ONS), Disaster Management Department (DMD). Also retrieved from <http://www.mod.gov.sl/rslaf-consolidated-policies.html>

Government of Sierra Leone (GoSL). (2016, July). Open Government Partnership Sierra Leone National Action Plan 2016-2018. Retrieved from <https://www.opengovpartnership.org/documents/sierra-leone-national-action-plan-2016-2018/>

Government of Sierra Leone. (n.d.). Coronavirus Response. Retrieved from <https://coronavirus-response-moic.hub.arcgis.com/>

Environment Protection Agency SL. (2016, November). Sierra Leone's Intended Nationally Determined Contribution (INDC) to CCA. Retrieved from <https://www.unfccc.int/sites/ndcstaging/PublishedDocuments/Sierra%20Leone%20First/SIERRA%20LEONE%20INDC.pdf>

Government of Sierra Leone (GoSL). (2018). Sierra Leone National Disaster Risk Management Policy (DRAFT). Provided by Office of National Security (ONS), Disaster Management Department (DMD).

Government of Sierra Leone (GoSL). (2019). Sierra Leone's Medium-Term National Development Plan: 2019-2023, Volume I. Retrieved from <http://www.moped.gov.sl/wp-content/uploads/2019/03/Medium-Term-National-Development-Plan-Volume-I.pdf>

Government of Sierra Leone (GoSL). (2020, June). Key highlights on how COVID19 impacted adaptation particularly in advancing NAPs. Virtual Zoom session presented at the June Momentum NAP event United Nations Climate Change. Retrieved from [https://unfccc.int/sites/default/files/resource/Presentation\\_SierraLeone.pdf](https://unfccc.int/sites/default/files/resource/Presentation_SierraLeone.pdf)

Government of Sierra Leone (GoSL). (2020 June). Sierra Leone's Climate Change Communications Strategy Under the National Adaptation Plan. Retrieved from <http://napglobalnetwork.org/resource/sierra-leones-climate-change-communications-strategy-under-the-national-adaptation-plan/>

Government of Sierra Leone. (Undated). National Emergency Coordination Pillars Terms of Reference (ToR).

Provided by Office of National Security (ONS), Disaster Management Department (DMD).

IFRC. (2017). Emergency Appeal – Sierra Leone: Mudslides. Retrieved from [https://reliefweb.int/sites/reliefweb.int/files/resources/MDRSL007\\_Siera\\_Leon\\_Mudslide\\_EPOA\\_16.08.2017%5B1%5D.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/MDRSL007_Siera_Leon_Mudslide_EPOA_16.08.2017%5B1%5D.pdf)

IFRC. (2019). Emergency Plan of Action DREF Final Report – Sierra Leone: Floods. Retrieved from <https://reliefweb.int/sites/reliefweb.int/files/resources/MDRSL008dfr.pdf>

Integrated Geo-Information and Environmental Management Services (INTEGEMS). (2017a). Update of Sierra Leone Hazard Profile and Capacity Gap Analysis. Provided by INTEGEMS.

Integrated Geo-Information and Environmental Management Services (INTEGEMS). (2017b). Support to Communication and Dialogue on Early Warning and Forecasting Products & Climate Information Project – Final Report. Provided by INTEGEMS.

Mail and Guardian Newspaper. Sierra Leone: Flood survivors stuck in temporary shelters. Retrieved from <https://mg.co.za/article/2017-12-12-sierra-leone-flood-survivors-stuck-in-temporary-shelters/>

Ministry of Finance (2018a). Original Budget Profile 2018-2020.

Ministry of Finance (2018b). Enacted 2019-2021 GoSL Budget.

Ministry of Health and Sanitation (MoHS). (2018). National Action Plan for Health security 2018-2022. Retrieved from <https://www.afro.who.int/sites/default/files/2019-10/Sierra%20Leone%20National%20Action%20Plan%20for%20Health%20Security%20%282018-2022%29.pdf>.

Ministry of Health and Sanitation (MoHS). (Undated). All Hazards Public Health Incident & Emergency Response Plan (IERP). Provided by MoHS.

Ministry of Planning and Economic Development (MoPED). (2019). 2019 VNR Report on SDGs in Sierra Leone – Final Draft. Retrieved from: [https://sustainabledevelopment.un.org/content/documents/23378Sierra\\_Leone\\_VNR\\_FINAL.pdf](https://sustainabledevelopment.un.org/content/documents/23378Sierra_Leone_VNR_FINAL.pdf)

Ministry of Transport and Aviation, Government of Sierra Leone. (2007). National Adaptation Programme of Action (NAPA) – Final Report. Retrieved from <https://www.preventionweb.net/english/policies/v.php?id=8571&cid=154>

National Fire Force (NFF). (2019). Freetown, Sierra Leone. Statistical data provided by NFF.

NightWatch SL. (2020, March 27). National Disaster Management Agency Act Ratified. Retrieved from <http://www.nightwatchsl.com/national-disaster-management-agency-act-ratified/>

National Security and Central Intelligence Act. (2002). Provided by Office of National Security (ONS), Disaster Management Department (DMD). Also retrieved from <http://www.sierra-leone.org/Laws/2002-10.pdf>

National Strategic Situation Group (NSSG). (2016). The National Ebola Response Plan for Sierra Leone. Provided by Ministry of Health and Sanitation (MoHS).

National Strategic Situation Group (NSSG). (2016). The National Flood Preparedness Response Plan for Sierra Leone. Provided by ONS-DMD. Retrieved from [https://www.slurc.org/uploads/1/6/9/1/16915440/final\\_draft\\_of\\_the\\_floods\\_plan\\_-\\_2016v3.pdf](https://www.slurc.org/uploads/1/6/9/1/16915440/final_draft_of_the_floods_plan_-_2016v3.pdf)

Pacific Disaster Center. (2020, March 3). Disaster preparedness initiative advances in Sierra Leone with tabletop flood exercise and risk assessment. Retrieved June 5, 2020, from <https://www.pdc.org/ndpba-mid-term-sierra-leone-2019/>

Rogers, J. (2018, October 23). Country Presentation for Sierra Leone. Disaster Management Baseline Survey [PowerPoint Slides]. Office of National Security (ONS), Disaster Management Department (DMD). Provided by ONS-DMD.

Sierra Leone Office of National Security (ONS), Disaster Management Department (DMD) and United Nations Development Programme (UNDP) in Sierra Leone. (2015). Standard Operating Procedures for District Disaster Management Committees. Provided by ONS-DMD.

Sierra Leone Red Cross Society Act. (2012). Retrieved from <http://www.sierra-leone.org/laws.html>

Statistics Sierra Leone. (2013). 2013 Non-Governmental Organizations (NGOs) Survey for National Accounts Compilation. Retrieved from [https://www.statistics.sl/images/StatisticsSL/Documents/Publications/2013/2013\\_ngo\\_survey\\_for\\_national\\_accounts\\_compilation.pdf](https://www.statistics.sl/images/StatisticsSL/Documents/Publications/2013/2013_ngo_survey_for_national_accounts_compilation.pdf)

Statistics Sierra Leone. (2015, December 1). 2015 Population and Housing Census - Key Figures. Retrieved June 26, 2020, from [https://www.statistics.sl/images/StatisticsSL/Documents/Census/2015/2015\\_census\\_fact-sheet.pdf](https://www.statistics.sl/images/StatisticsSL/Documents/Census/2015/2015_census_fact-sheet.pdf)

Svärd, P. (2016). Freedom of information laws and information access. *Information Development*, 33(2), 190–198. <https://doi.org/10.1177/0266666916642829>

Swaray, M., Dauda, M. (2018). Field Project Monitoring Report, Environmental and Disaster Management. United Nations Development Programme (UNDP). Provided by UNDP.

UNDP (2018). School-based DRRM Monitoring. Back to Office Report. May 12, 2018. Provided by UNDP.

UNDP (2018). DRR District Monitoring Report – District School-based DRM Project. Field Project Monitoring Report. Dec. 2018. Provided by UNDP.

UNDP. (2020). Climate Change Adaptation – Sierra Leone. Retrieved from <https://www.adaptation-undp.org/explore/western-africa/sierra-leone>

United Nations Office for Disaster Risk Reduction. (2020, March). Disaster Risk Reduction Investments in Africa- Evidence from 16 Risk-sensitive Budget Reviews. Retrieved from <https://www.undrr.org/publication/disaster-risk-reduction-investment-africa-evidence-16-risk-sensitive-budget-reviews>

UNISDR (2010). Inventory of National Coordination Mechanisms, Legal Frameworks and National Plans for Disaster Risk Reduction in Africa. Retrieved from [https://www.unisdr.org/files/18926\\_africadrrinventoryfinal.pdf](https://www.unisdr.org/files/18926_africadrrinventoryfinal.pdf)

USAID. (2019, May 23). Sierra Leone Validates Climate Change Adaptation Plan as Stakeholders Prepare for Action. Retrieved from <https://www.wabiccc.org>

Usamah, M. (2017). Analysis of the Causal and Trigger Factors of the August 2017 Landslide in Freetown: Towards a Sustainable Landslide Risk Management in Sierra Leone. United Nations Development Programme. Retrieved from [https://www.sl.undp.org/content/sierraleone/en/home/library/crisis\\_prevention\\_and\\_recovery/analysis-of-the-causal-and-trigger-factors-of-the-august-2017-la.html](https://www.sl.undp.org/content/sierraleone/en/home/library/crisis_prevention_and_recovery/analysis-of-the-causal-and-trigger-factors-of-the-august-2017-la.html)

U.S. National Fire Protection Association, Everts, B., & Stein, G. (2020, February). U.S. Fire Department Profile. Retrieved from <https://www.nfpa.org/News-and-Research/Data-research-and-tools/Emergency-Responders/US-fire-department-profile>

World Bank-GFDRR. (2017). Building Disaster Resilience in Sub-Saharan Africa Program: Result Area 5 Activity Report 2014-2016. Retrieved from <https://www.gfdr.org/en/publication/building-disaster-resilience-sub-saharan-africa-program-result-area-5-activity-report#:~:text=The%20Building%20Disaster%20Resilience%20in,and%20the%20World%20Bank%20GFDRR.>

World Bank. (2016, June). Open Data Readiness Assessment. Retrieved from [https://opendatatoolkit.worldbank.org/docs/odra/odra\\_sierra\\_leone.pdf](https://opendatatoolkit.worldbank.org/docs/odra/odra_sierra_leone.pdf)

World Bank. (2017). Sierra Leone – Rapid Damage and Loss Assessment of August 14th, 2017 Landslides and Flood in the Western Area. Retrieved from <http://documents.worldbank.org/curated/en/523671510297364577/pdf/Sierra-Leone-Rapid-damage-and-loss-assessment-of-August-14th-2017-landslides-and-floods-in-the-western-area.pdf>

World Bank. (2018). Sierra Leone Multi-City Hazard Review and Risk Assessment. Final Report (Volume 1 of 5): Technical Methodology and Summary of Results. Retrieved from <https://www.worldbank.org/en/topic/disasterriskmanagement/brief/sierra-leone-multi-city-hazard-review-and-risk-assessment>

World Bank. (2020). The World Bank in Sierra Leone – Overview: Context. Retrieved from <https://www.worldbank.org/en/country/sierraleone/overview>

World Health Organization. (2020). COVID-19 situation reports. Retrieved June 3, 2020, from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

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