



GOVERNMENT OF SIERRA LEONE

Disaster Risk Financing Strategy & Implementation Plan 2024-2029



Ministry of Finance
Treasury Building, George Street Freetown

Disaster Risk Financing
& Insurance Program



Acronyms

ADRFi	Africa Disaster Risk Financing
AfDB	African Development Bank
ARC	Africa Risk Capacity
CatDDO	Catastrophe Deferred Drawdown Option
CBO	Community-Based Organization
CDRF	Crisis and Disaster Risk Financing Strategy
CERC	Contingency Emergency Response Component
CFS	Critical Success Factor
CFU	Climate Finance Unit
CRRS	Climate-Resilient Road Strategy
CRW-ERF	Crisis Response Window - Early Response Financing
CSFs	Critical Success Factors
DaLA	Damage and Loss Assessment
DMPRR	Disaster Management, Preparedness, Response and Recovery Plan
DRF	Disaster Risk Financing
DRFS	Disaster Risk Financing Strategy
DRM	Disaster Risk Management
EIR	Extractive Income Revenue
EM-DAT	Emergency Events Database
EPA	Environmental Protection Agency
EPR	Emergency Preparedness and Response
EU	European Union
EVD	Ebola Virus Disease
GDP	Gross Domestic Product
GNI	Gross National Income
GoSL	Government of Sierra Leone
GRiF	Global Risk Financing Facility
HDI	Human Development Index
ICRC	International Committee of the Red Cross
IDA	International Development Association
IFAM	Incidence Finance and Administration Manager
IsDB	Islamic Development Bank
LC	Local Council
MLGRD	Ministry of Local Government and Rural Development
MLHCP	Ministry of Lands Housing and Country Planning
MoA	Ministry of Agriculture
MoD	Ministry of Defense
MoECC	Ministry of Environment and Climate Change
MoF	Ministry of Finance
MoHS	Ministry of Health and Sanitation

Acronyms

MoIA	Ministry of Internal Affairs
MoPED	Ministry of Planning and Economic Development
MoSW	Ministry of Social Welfare
MoWPA	Ministry of Works and Public Assets
MSMEs	Micro, Small and Medium Enterprises
NaCSA	National Commission for Social Action
NAGPC	National Asset and Government Property Commission
NCRA	National Civil Registration Authority
NDMA	National Disaster Management Agency
NGO	Non-governmental Organization
NPDRR	National Platform for Disaster Risk Reduction
NPHA	National Public Health Agency
NPPA	National Public Procurement Authority
NSPS	National Social Protection Strategy
ONS	Office of National Security
PFM	Public Financial Management
PFMA	Public Financial Management Act
PSSNYE	Productive Social Safety Nets and Youth Employment
QAERP	Quick Action Emergency Response Program
RMFA	Road Maintenance Fund Administration
SALHOC	Sierra Leone Housing Corporation
SLDMP	Sierra Leone Disaster Management Policy
SLICOM	Sierra Leone Insurance Commission
SLIMS	Sierra Leone Incidence Management System
SLL	Sierra Leonean Leone
SLMet	Sierra Leone Meteorological Services
SLRA	Sierra Leone Road Authority
SLRTC	Sierra Leone Road Safety Authority
SMEDA	Small and Medium Enterprise Agency
SMEs	Small and Medium Enterprises
SOP	Standard Operating Procedure
SRSP	Shock-Responsive Social Protection
SSL	Statistics Sierra Leone
SSN	Social Safety Net
STEmPRP	Social Transfer Emergency Preparedness and Response Plan
TWG	Technical Working Group
UN	United Nations
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
WB	World Bank
WFP	World Food Programme

Contents

1. Introduction and Rationale	8
2. Disaster Risks Profile	9
• Overall Impact of Disasters	13
• Economic and Financial Impact of Disasters	14
3. Legal, Institutional and Operational Framework for Disaster Risk Management	15
• Legal Framework	16
• Institutional Framework	19
• Operational Framework	21
4. Strengthening of Disaster Risk Financing	21
• Current Approach to Disaster Risk Financing	23
• Rationale for Disaster Risk Finance Strategy	25
5. Strategic Priorities in Disaster Risk Finance	26
• Strengthen Capacity to Identify and Quantify Disaster-related Economic Losses and Financial Risks, and Enhance Post-disaster Expenditure Tracking	26
• Improve Fiscal Stability at the National and Local Levels by Establishing a Portfolio of Disaster Risk Financing Instruments	27
• Reduce the Impact of Disasters on the Poor and Vulnerable Population by Supporting Key Social Protection Programs and Contributing to Building Resilience	28
• Help Farmers, Homeowners, and SMEs to Build Resilience against Floods and Wildfires through Access to Risk Transfer Instruments and Direct Assistance	29
• Strengthen Coordination and Institutional Capacity for Disaster Risk Financing and Management	29
6. Funding Gap and Risk Layering Strategy	30
• Fiscal Cost and Funding Gap Analysis	30
• Analysis of a Risk Layering Strategy to Close the Funding Gap	31

Contents

7. Monitoring and Evaluation of the Disaster Risk Finance Strategy	34
8. Critical Success Factors	35
• Political Support	35
• Strategic Leadership	35
• Support from Key Stakeholders	35
• Staff Capacity	35
Annex 1. Action Plan for the Implementation of the Disaster Risk Finance Strategy for 2023-2028	36

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**The Financial Secretary
Mr. Matthew Dingie**

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Foreword



Minister of Finance
Sheku A. F. Bangura

The multifaceted nature of disasters manifests in significant social, economic, fiscal, and environmental repercussions, often with profound and enduring inter-generational consequences. The human and economic toll of such events is substantial and escalating, exacerbated by demographic expansion, climate change, environmental degradation, and increased urbanization. The fiscal management of disaster impacts poses a formidable challenge, frequently necessitating the reallocation of resources intended for long-term developmental investments to address immediate humanitarian relief and recovery efforts.

This Disaster Risk Financing (DRF) Strategy is an integral component of our broader risk mitigation and preparedness framework. It is a testament to our commitment to multi-sectoral coordination among Ministries, Departments, and Agencies (MDAs). The strategy is designed to ensure prompt availability of financial resources in the aftermath of disasters. This preparedness will enhance the efficiency of fund transfers, minimize the opportunity costs associated with such transfers, foster greater fiscal discipline, and improve the management of risk information. Collectively, these measures aim to alleviate the fiscal burden of disasters on our most impoverished and vulnerable citizens.

The ensuing document delineates a suite of financial mechanisms that will be pursued over the next five years to diminish fiscal vulnerabilities attributable to disasters. This will involve the implementation of both anticipatory (ex-ante) and reactive (ex-post) financial instruments. The strategy embraces key principles: the prompt availability of funds, a stratified approach to disaster financial instruments, efficacious fund disbursement, and the utilization of precise data for informed decision-making. I am firmly convinced that the diligent execution of this strategy will significantly mitigate the fiscal ramifications of disasters.

In my capacity as Minister of Finance, and driven by a commitment to judicious fiscal management in the face of disasters, I have authorized the formulation of this Disaster Risk Financing Strategy and Implementation Plan.

Sheku A. F. Bangura
Minister of Finance

1 Introduction and Rationale

Sierra Leone is situated on the west coast of Africa with an area of 71,740 square kilometers (km²). The Country is bordered by the Atlantic Ocean in the southwest, Liberia in the southeast, and Guinea in the north and northeast. It has a relatively high urbanization rate of about 43 percent and a population of 7.6 million, of which 50.6 percent are female. The country has a young population, with 40 percent comprised of children under the age of 14 years.¹

Sierra Leone's Human Development Index (HDI) has been stagnant at about 181 of the 195 countries rated over the last few years.² Compared to 2020/2021, life expectancy at birth and the average number of years of schooling increased by 5.4 years and 0.9 years, respectively. The Gross National Income (GNI) per capita decreased by 2.8 percent.

The country has been experiencing macroeconomic stress and fiscal imbalances in recent years. Between the Ebola outbreak and the onset of the COVID-19 pandemic (2014–2020), the budget deficit averaged 5.7 percent, with domestic revenues averaging 12.7 percent of gross domestic product (GDP). Since 2019, the country is ranked at high risk of debt distress with a public debt-to-GDP ratio of 79 percent. The economy experienced a stint of recovery in 2021 as GDP grew by 3.2 percent. It was underpinned mainly by the resumption of iron ore production, as well as increased activities in agriculture and tourism. However, following the steep increases in global food and energy prices, high shipping costs due to demand and supply imbalances, and supply disruptions created by the COVID-19 pandemic, combined with the depreciation of the Leone, end-period inflation rose to 17.9 percent in December 2021. Food inflation also rose to 19.4 percent in 2021 from 15.1 percent in 2020.

Sierra Leone is exposed to a range of natural hazards including floods, droughts, and landslides, as well as epidemics, such as Ebola. Over the past 25 years, the country has experienced more than 300 disaster events, of which 10 were floods. Disasters in Sierra Leone have high immediate and long-lasting impacts on people, livelihoods, local and national economies, as well as the government's budget.

The Government of Sierra Leone has established institutions and structures to improve its management of disaster risks. Fundamental documents, such as the National Disaster Preparedness and Response Plan (2021), the Sierra Leone Disaster Management Policy (2018), and a multi-hazard risk assessment of major urban areas were developed in 2016. The Government has also established a Disease Surveillance, Monitoring and Control Unit within the Ministry of Health and Sanitation to provide early warning signals for potential epidemics and to design measures to contain them. In 2020, the Parliament enacted the National Disaster Management Agency (NDMA) Act, a government policy on disaster prevention, disaster risk reduction and climate risk management. It defines the institutional framework to manage disasters from the chiefdom to the national level.

Faced with the impact of climate change, which is increasing the frequency and severity of disasters, the Government is moving toward systematically planning for financial impacts deriving from future disasters. In 2020, the Ministry of Finance asked the World Bank to conduct a Crisis and Disaster Risk Finance (CDRF) Diagnostic to assess the country's financial preparedness to respond to crises and disasters. The diagnostic assessed the following: (i) the impact of past disasters; (ii) existing ex-post and pre-arranged funding available to the government; (iii) key legal and institutional arrangements relevant to the CDRF; and (iv) the funding gap (the difference between the pre-arranged funding and government liabilities driven by disaster

¹ See Government of Sierra Leone? Mid-term Census Report, 2021.

² Based on the 2021/2022 United Nations Development Programme (UNDP) Human Development Index (HDI).

losses). Based on this analysis, the diagnostic proposed options to strengthen financial planning to manage future shocks and crises, including: (i) enhancing post-disaster expenditure tracking; (ii) pre-arranging finance; and (iii) pre-identifying disbursement channels by building shock-responsive systems linked to pre-arranged finance.

Because of the growing frequency and severity of disasters, the government has faced challenges in financing emergency responses and reconstruction costs. The CDRF diagnostic found that the Government of Sierra Leone (GoSL) can mobilize a maximum of US\$0.5 million through budget reallocation, meaning that it faces a funding gap of US\$20 million on average for disaster response, excluding the Ebola crisis. Given this funding gap, one of the CDRF diagnostic recommendations was to establish a portfolio of disaster risk financing instruments by implementing an appropriate mix of risk retention (contingency funds or contingent finance) and risk transfer (for example, sovereign insurance). Having access to timely and predictable financial resources to respond to disasters is crucial for building the financial resilience of the country and minimizing the negative impact of disasters on Sierra Leone's economic growth.

This Disaster Risk Finance Strategy (DRFS) aims to improve the management of financial risks related to disasters by bringing together various ongoing and planned efforts from different sectors. Developed by the Ministry of Finance, the NDMA and other stakeholders, it provides a framework for coordination among key stakeholders to implement activities that will enhance the financial resilience of the Government of Sierra Leone, as well as households and businesses in the face of disasters. It builds upon the existing legal and policy framework for disaster and disaster-related financial risk management.

2 Disaster Risks Profile

Sierra Leone is highly prone to flood, landslide and coastal erosion, tropical storms and sea level rise hazards.³ The high level of the population exposed to flood and landslide hazards, coastal erosion and sea level rise hazards is clearly evident in the hilly and low-lying areas of the Western Area and along the coastal areas in the Western Area and the Northern and Southern Provinces of Sierra Leone. Table 1 provides a summary of prevailing hazards and risks in Sierra Leone.



Table 1: Prevailing Hazards and Risks in Sierra Leone

HAZARDS/RISKS	AREA OF PREVALENCE	IMPACTS
FLOODS	Freetown, Pujehun, Kambia, Bonthe, Kenema, and Moyamba	<ul style="list-style-type: none"> Human casualties Loss of crops Loss of livestock and poultry Infrastructure damage Deterioration of drainage systems Outbreak of waterborne diseases.
FIRES <ul style="list-style-type: none"> Domestic fires Wild/bush fires Electrical/Industrial 	Urban and local areas	<ul style="list-style-type: none"> Human casualties Housing damages Economic losses.
STORMS AND LIGHTENING	Mainly eastern and northern provinces	<ul style="list-style-type: none"> Human casualties Infrastructure damage.
EPIDEMICS (Health Emergencies)	Nation-wide	<ul style="list-style-type: none"> Human casualties.
MUD / LANDSLIDES	Kono District, Tonkolili District and the Western Area	<ul style="list-style-type: none"> Human casualties Infrastructure damage.
PEST INFESTATION	Kambia, Bombali, Koinadugu, Moyamba, Kailahun and Pujehun Districts	<ul style="list-style-type: none"> Loss of crops Loss of livestock and poultry.
POLLUTION	Predominantly urban and mining areas nationwide	<ul style="list-style-type: none"> Biodiversity loss Outbreak of waterborne diseases.
TRANSPORT-RELATED ACCIDENTS <ul style="list-style-type: none"> Sea Transport Road Transport Air Transport 	Freetown peninsula waters and the coastal communities; Freetown to Provincial and vice versa, and the Lungi International Airport	<ul style="list-style-type: none"> Human casualties Infrastructure damage.
UNPLANNED URBANIZATION Including population movements	Mainly urban Sierra Leone	<ul style="list-style-type: none"> Poor sanitation Increased disaster event trends.

HAZARDS/RISKS	AREA OF PREVALENCE	IMPACTS
DEFORESTATION	Mainly Eastern and Northern provinces, and Western Area	<ul style="list-style-type: none"> ● Reduction in water catchment area ● Water shortages ● Loss of biodiversity ● Increased erosion ● Increased land/mudslides.
MINING: <ul style="list-style-type: none"> ● Sand mining ● Aggregate stone mining ● Mineral mining 	North, East, South and the Western Area Rural District	<ul style="list-style-type: none"> ● Human casualties ● Land degradation ● Coastal erosion ● Food insecurity ● Pollution.
CLIMATE CHANGE	Nationwide	<ul style="list-style-type: none"> ● Increased magnitude of extreme weather events ● Food insecurity ● Coastal erosion ● Overall increased magnitude of natural disasters.

Source: Government of Sierra Leone, *Disaster Risks Management Policy*, (2020).

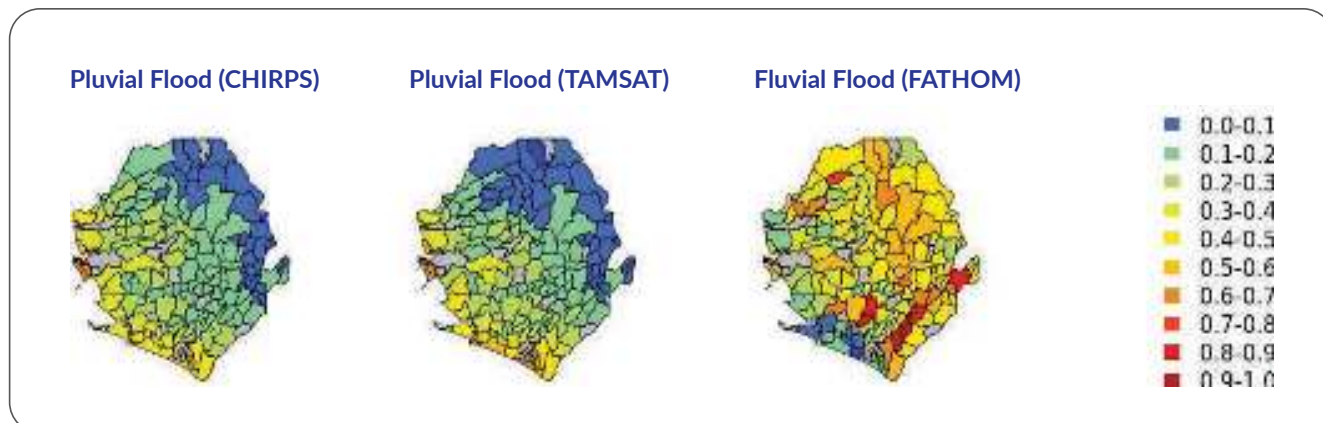
Regarding flood hazards, the identified elements at risk include population buildings, the agriculture sector (cultivated area and livestock), education facilities, health facilities and transport infrastructure (roads). As for landslide hazards, the vulnerability and risk assessment showed that the hilly and steep-sided slope areas in the Western Area – especially in Leicester, Regent, Granville Brook, Cline Town, Moa Wharf, Hill Court Road, Kissy Brook, Dwarzark, and Charlotte – are prone to landslides due to their moderate to very high slope susceptibility, as well as heavy precipitation during the wet season.

In general, floods are more likely in areas around the ten catchment areas close to estuaries and along the entire coastline of Sierra Leone (based on a 10-year return period). In addition, based on historical flood event data, flood hazards are likely to occur in many different locations in the country.

A recent flood exposure analysis obtained by combining hazard information with the population estimate, both aggregated at the district level, is shown in Figure 1.⁴

⁴ World Bank, "Sierra Leone: Shock Responsive Social Protection Global Risk Financing Facility." (Vulnerability and Risk Analysis Final Report) (World Bank, 2021).

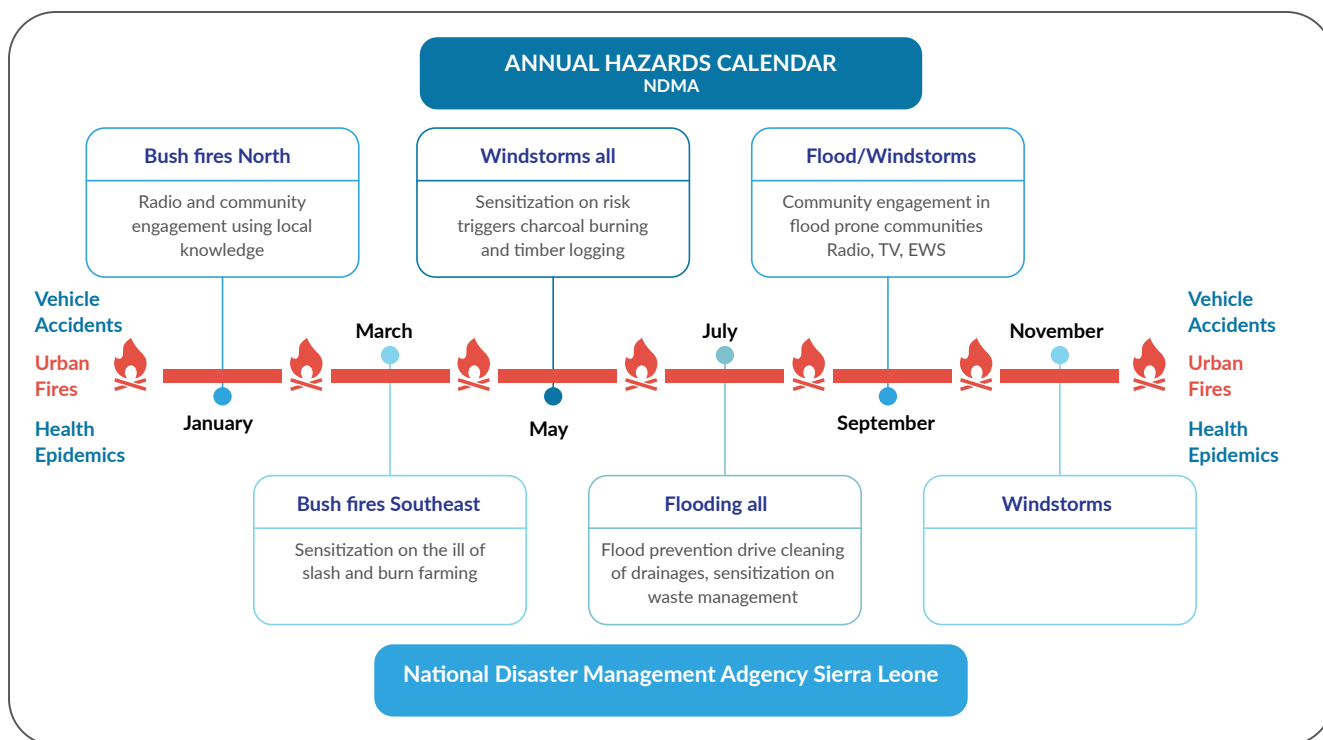
Figure 1: Flood Exposure Analysis



Source: World Bank/NaCSA risk vulnerability Assessment, 2021.

The annual hazard calendar (Figure 2) provides an outlook of hazards and incidents as they occur from January to December in various parts of the country. The annual calendar also provides a detailed analysis of incidents that occur by region and season. Bush fire is predominant in the month of January in the northern region and in March in the Southern region. In May, windstorms are predominant in all regions, as indicated in the hazard calendar. The months of July, August, and September (JAS) have recorded floods and windstorms across the nation. Thunder and windstorms also occur across the country in October, November, and December.

Figure 2: Annual Hazard Calendar



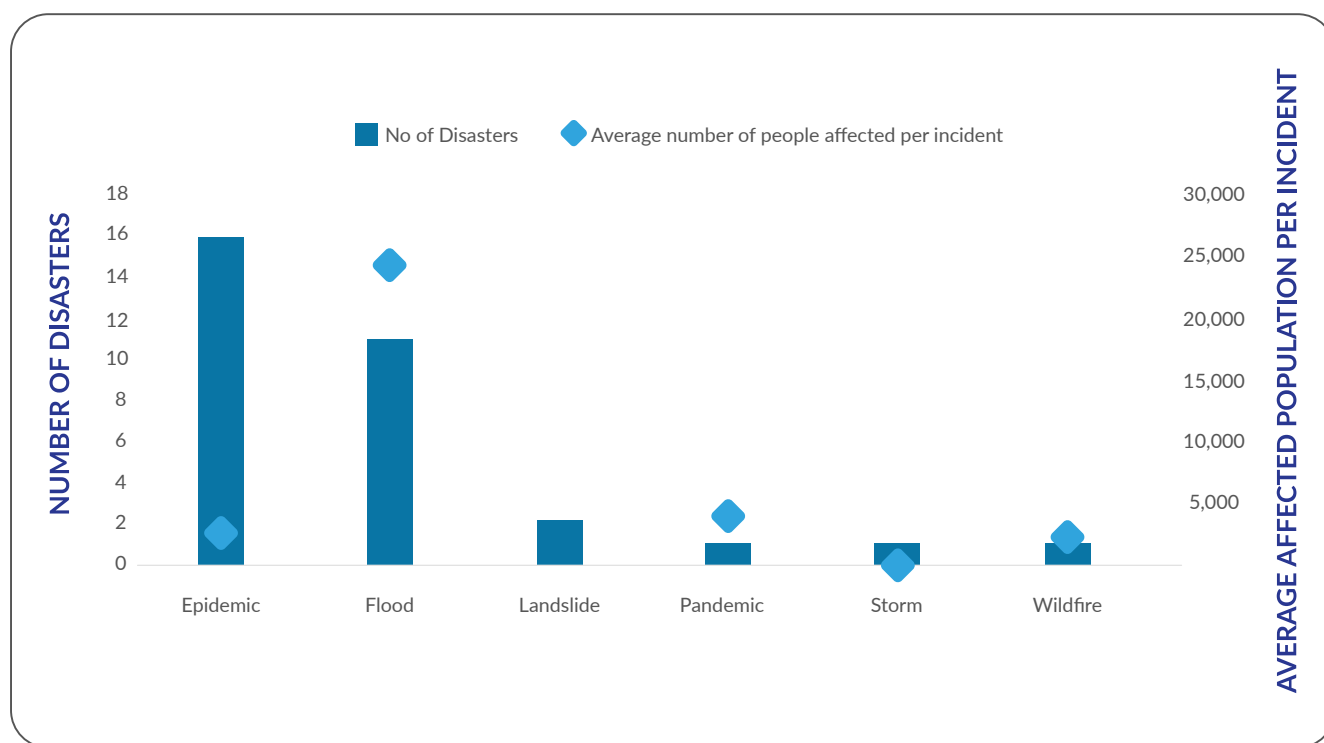
Source: The National Disaster Management Agency Hazards Calendar.

2.1 Overall Impact of Disasters

As noted, Sierra Leone faces a range of shocks, including health and climate shocks that adversely affect economic activity, food security, and human capital outcomes. In the last decade, Sierra Leone has suffered three major natural disasters, including the Ebola epidemic in 2014 and 2015, mudslides and floods in Freetown in 2017, and the COVID-19 pandemic in 2020. The flooding and landslides of 2015 and 2017 affected close to 20,000 Sierra Leoneans and killed 1,141.

According to the Emergency Events Database (EM-DAT) database, from 1996 to 2022, more than 320,000 people were affected by the natural disasters. Floods affected more than 250,000 people and killed around 200 people. In the same period, epidemics affected around 50,000 and killed more than 5,000 people. The Ebola epidemic in 2014 is undoubtedly one of the most severe shocks, causing around 4,000 deaths, thereby putting the society, economy, and health care system under tremendous stress. Whereas epidemics are the most frequent peril, the impact of floods is more extensive, affecting the highest number of people per incident than any other peril (see Figure 3).

Figure 3: Historical Disaster Experience in Sierra Leone, 1996-2022



Source: EM-DAT: The International Disaster Database, <https://public.emdat.be/>.

Disaster impacts have both physical and social impacts. The physical impacts of disasters include casualties (deaths and injuries) and property damage, and both vary substantially across hazard agents. The physical impacts of a disaster are usually the most obvious, easily measured, and first reported by the news media. Social impacts, which include psychosocial, demographic, economic, and political impacts, can develop over a long period. Thus, it can be difficult to assess when they occur. Despite the difficulty in measuring these

social impacts, there is a consensus about their adverse impacts, particularly on the most poor and vulnerable in the population. Social impact is often long-term. For example, during the Ebola and COVID-19 pandemic in Sierra Leone, the Government adopted and imposed containment measures. These included lockdowns and restrictions to public places, which had significant lasting impacts on socioeconomic activities, including trade and commerce, education, health and tourism.

Food insecurity in Sierra Leone has increased due to a combination of health and economic shocks—including high inflation, increased food prices, and reduced income-generating opportunities. Since the Ebola Virus Disease (EVD) Epidemic in 2014, a large part of the population has been chronically food insecure. Rural households who rely on subsistence agriculture suffer from the effects of adverse weather conditions, and economic shocks determine food insecurity levels in urban areas. In January 2020, the food security monitoring survey revealed that food insecurity was highest in rural districts. However, Sierra Leone also experienced a sharp increase in the number of urban residents living in food insecurity. The food insecure population reached 47.7 percent in February 2020, rising from 34 percent in February 2019.⁵

2.2 Economic and Financial Impact of Disasters

Since 2014, the economy has faced challenges emanating from the EVD outbreak and downturn in international prices of iron ore. The economy contracted by more than 20 percent in 2014. The recovery was challenged by the occurrence of mudslides and floods in Freetown in 2017. The situation was further compounded by the COVID-19 pandemic in 2019 and the Ukraine war in 2021. The Freetown mudslides and floods caused an estimated US\$16.8 million in damages and US\$14.9 million in losses. Since the event affected only a few communities, it is estimated that the impact on economic growth and the overall economic activity was negligible.⁶ However, the August 14 events significantly impacted budget implementation, with adverse impacts on revenue mobilization estimated to have exacerbated the problems. According to the multicity hazard and risk assessment, the combined fluvial and pluvial flood annual average loss to buildings⁷ for Freetown, Makeni and Bo is US\$ 2.8 million. From 2016 to 2019, economic growth averaged 4.6 percent, supported mainly by growth in the agricultural, mining, and services sectors.

Despite the policy measures taken by the government, the macroeconomic situation remains challenging, with persistent macroeconomic stress and fiscal imbalances. Between the Ebola outbreak and the onset of the COVID-19 pandemic (2014–2020), the budget deficit averaged 5.7 percent and domestic revenue mobilization averaged 12.7 percent of GDP, with an estimated tax gap of 4.5 percent of GDP. Public debt increased from 69.1 percent of GDP in 2018 to 72.9 percent of GDP in 2021. This poses serious challenges for the Government in achieving its medium-term national development plan for 2019–2023, which prioritizes productivity-raising structural reforms (under the economic diversification cluster), as well as improved cross-sector resource allocation through investments in physical and human capital.

The outbreak of the COVID-19 pandemic also had an adverse impact on growth and poverty reduction over the medium term. Economic growth contracted by 2 percent in 2020, as the COVID-19 pandemic led to a contraction in the service and industrial sectors following global supply chain disruptions, the suspension of international travel, lockdowns, and the closure of land borders. In addition, GDP per capita fell by 4 percent

⁵ World Bank, “Disaster Risk Management Diagnostic Note.” (World Bank, 2020).

⁶ World Bank, “Disaster Risk Management Diagnostic Note.” (World Bank, 2020).

⁷ The model accounts for educational, governmental, healthcare, utility and industrial facilities, formal and informal residential buildings, and road infrastructure.

in 2020, reversing some of the recent gains in poverty reduction. Non-farm households dependent upon private sector income (whether through self-employment or salaried work) disproportionately saw their incomes drop during the height of the pandemic. The poverty rate jumped from 40.6 percent in 2019 to 43.5 percent in 2020, primarily affecting urban households.⁸

3

Legal, Institutional and Operational Framework for Disaster Risk Management

Figure 4: Sierra Leone Disaster Management Framework



Source: Sierra Leone Incident Management System.

Note: EPR = Emergency Preparedness and Response.



3.1 Legal Framework

In the past few years, the Government has strengthened the disaster risk management framework (Figure 4). As a first step, the Government adopted the Disaster Risk Management (DRM) Policy in 2020. The aim was to establish processes, procedures and structures for the coordination and effective integration of disaster risk reduction into development planning and sector policies, the delivery of required assistance, as well as in addressing the consequences of disasters declared in Sierra Leone under the appropriate national legislation. The DRM policy includes clear roles and responsibilities for national and local governments. It also includes development partners and their ability to implement a timely response to disasters, while also integrating local-level communities into effective disaster management systems. The DRM policy was the basis of the NDMA Act of 2020, which established the National Disaster Management Agency (NDMA).

There are several other legal and regulatory instruments that provide a mandate to other institutions. As such, they define their functions in disaster management in the country. Table 1 provides a summary of the various legal and regulatory instruments, the related instruments, as well as the implications for disaster risk finance and management.



Table 2: Summary of Legal and Regulatory Instruments

Legal and Regulatory Instrument	Institution	Brief Summary of the Instrument related to DRF
Disaster Risk Management Policy (2020); Disaster Management, Preparedness, Response and Recovery Plan (DMPRR); NDMA Act 2020; and Standard Operating Procedure (SOP) for the Sierra Leone incident management system	National Disaster Management Agency (NDMA)	<ul style="list-style-type: none"> Disaster Management, Preparedness, Response and Recovery (DMPRR) Plan defines emergency response functions at the national and district/local levels. National Disaster Management Agency Act of 2020 mandates the establishment of a national disaster management fund. The SOP for the Sierra Leone incident management system defines adequate response, relief and recovery operations at the national, regional, district and chiefdom tiers.
Public Financial Management (PFM) Act of 2016	Ministry of Finance	Defines the establishment and use of the Contingencies Fund.
National Commission for Social Action (NaCSA) Acts (2001, 2019); Social Protection Strategy (2022)	National Commission for Social Action	To promote community-based, demand-driven and sustainable development activities leading to the alleviation of poverty and improvement in the speed, quality and impact of development initiatives in cooperation with non-governmental organizations (NGOs), community-based organizations (CBOs), relevant Ministries, private sector partners, and other interested parties.
Environmental Protection Act (EPA) Acts (2000, 2022))	Environmental Protection Agency (EPA)	To provide for more effective and efficient protection and management of the environment and other related matters.

Legal and Regulatory Instrument	Institution	Brief Summary of the Instrument related to DRF
National Security and Central Intelligence Act (NASCIA) of 2023	Office of National Security (ONS)	Providing reactive or response services in connection with the safeguarding of life and property.
National Public Procurement Act (2016)	National Public Procurement Authority (NPPA)	Defines procedures for emergency procurement.
Insurance Acts (2000, 2016)	Sierra Leone Insurance Commission (SLICOM)	Insurance Act (2016) provides for regulation of insurance companies.
National Asset and Government Property Commission Act No. 2 of 1990	National Asset Commission (NAGPC)	To make a provision for the control and identification of all National Assets and Government Property; to provide for the maintenance and improvement of such property, including the monitoring of their use or disposal; and for related purposes.





3.2 Institutional Framework

In 2020, the Parliament enacted the National Disaster Management Agency (NDMA) Act, which designates the Agency to coordinate and implement all aspects of disaster management, including governance, policy, planning, inter-agency coordination, training, and response. With the enactment of the National Disaster Management Act, the Government of Sierra Leone established improved institutional arrangements, as well as operational and financial disaster risk mechanisms to deal with the threatening disaster situations. In accordance with the NDMA Act, the Agency has developed a new legislative structure. In 2021, the Government adopted the National Disaster Preparedness, Response and Recovery Plan, which encompasses two phases of the disaster management cycle, namely: preparedness and response. The Plan applies to all communities, departments and agencies, as well as to other preparedness and response agencies in Sierra Leone, such as the Federal Emergency Management Agency, the National Emergency Operations Center, the Office of National Security, and so on.

The key entities supporting the country's institutional architecture for disaster risk management include:

- 1 The Office of National Security (ONS). It coordinates the national security and intelligence architecture with the aim of creating the enabling environment for sustainable national development, poverty reduction and conflict prevention.
- 2 The National Platform for Disaster Risk Reduction (NPDRR). It is the highest disaster-related policy-making body, primarily responsible for coordinating and managing national disasters. It is supported by the regional, district, and chiefdom disaster management committees.
- 3 National Disaster Management Agency (NDMA). It manages disasters and similar emergencies from the national to the chiefdom level.
- 4 Ministry of Finance. It manages fiscal risks, including those emanating from public health and natural hazards.
- 5 Local governments. They manage Level one disasters according to the recently developed Disaster Management, Preparedness, Response and Recovery Plan (2021).
- 6 National Commission for Social Action (NaCSA). It is responsible for social protection and cash transfers for vulnerable individuals, including those affected by disasters.
- 7 Ministry of the Environment. It develops and supervises the legal and policy framework for building national environmental resilience as it relates to climate change, and natural resource management, including forestry and wetlands conservation.
- 8 Environmental Protection Agency (EPA). It conducts environmental hazard mapping, risks, and vulnerability assessments and develops plans for environmental-related disaster risk reduction.
- 9 Insurance Commission (SLICOM). It administers, supervises, regulates and monitors the business of insurance in Sierra Leone.
- 10 Financial service providers, such as banks and insurance companies. They facilitate payments and provide financial products for risk management, including savings, credit and insurance to households, businesses and the Government.
- 11 Mobile service providers. They provide infrastructure for mobile cash transfers to disaster-affected individuals.
- 12 National Assets and Government Property Commission. It makes provisions for the control and identification of all national assets and government property. As such, it provides for the maintenance and improvement of such properties, including the monitoring of their use or disposal, as well as for related purposes.

3.3 Operational Framework

The adopted framework seeks to strengthen planning, preparedness and reporting for emergencies. According to the NDMA Act, the NDMA is responsible for the management of funds for disaster prevention, disaster risk reduction, climate change risk reduction, and emergency relief for disaster victims. Contingency relief reserves for the various categories are established/maintained at different levels, as necessary. They are based on realistic estimates of potential response and recovery operations at each level. It is also the responsibility of the Agency to facilitate the use of anticipatory finance, including forecast-based triggers for the early release of funds ahead of the impact of disasters. The Agency further provides for the adaptation of social protection programs and mechanisms to channel assistance before and after disaster events, thereby meeting the needs of vulnerable groups (National Disaster Preparedness and Response Plan of 2021).

Complementary to the adopted framework, the NDMA developed an integrated approach to disaster response by utilizing the globally aligned Sierra Leone Incident Management System (SLIMS). The system is customized to match current and future resources, capacities and capabilities. The SLIMS also introduced the Incident Finance and Administration Manager (IFAM). The IFAM is responsible for tracking expenditures related to incident responses, including personnel time; the procurement of resources, activation, and management of vendor contracts; the administration of compensation and claims; and the overall cost analysis for the incident.

Many priorities set in the framework remain unmet, mostly due to inadequate and untimely financing. The major DRM and social protection programs (social safety net) are funded by development partners, with very limited allocation from the Government's budget. This lack of a sustainable long-term funding arrangement creates a challenge for the coordination of adopted programs, as well as establishing national and community resilience to disasters. In addition, it limits opportunities to go beyond addressing immediate poverty to develop human capabilities and increase resilience through a long-term vision of inclusive social protection.

This DRF Strategy will complement and support the implementation of the DRM operational framework through the following:

- Establishing a portfolio of adequate disaster risk finance instruments;
- Mainstreaming climate risk assessments; and
- Strengthening capacity to collect and manage data concerning economic losses and track post-disaster expenditures.

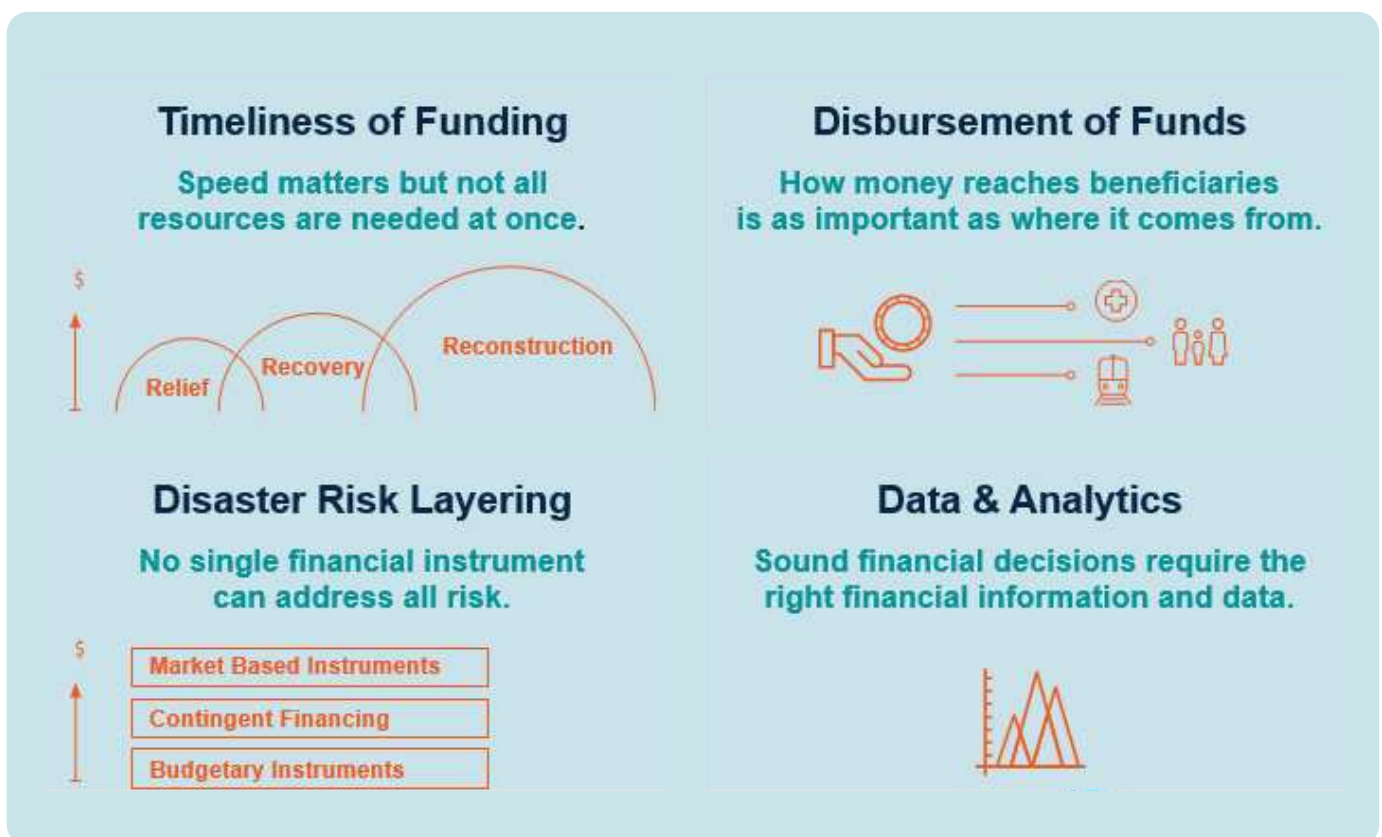
4 Strengthening of Disaster Risk Financing

Sovereign disaster risk financing aims to increase the capacity of national and local governments to improve the financial resilience of the country. It also seeks to strengthen the financial resilience of households and businesses to climate shocks and disasters. A comprehensive, proactive approach to risk financing can help a government become an active risk manager rather than an emergency borrower. The ability of the government to rapidly mobilize financial resources for an effective response to a disaster largely depends on the financial instruments it puts in place beforehand.

Disaster risk finance (DRF) involves risk-informed planning to ensure predictable and timely access to resources. International experience has shown that governments should ideally combine different instruments to protect against events of varying frequency and severity. The ideal way to manage risk is often through a combination of financing instruments, thereby retaining lower levels of risk and transferring higher levels of risk. This allows the government to secure funds for recurring disaster events and then increase its post-disaster financial capacity to finance less frequent, but more severe events. Such risk layering ensures that cheaper sources of money are used first, with the most expensive instruments used only in exceptional circumstances.

It is critical to have rapid access to the required resources for response and early recovery, but not all funds are needed at the same time. A comprehensive DRF strategy considers both the quantity and the timing of when such resources will be required. In addition, it is crucial to link pre-arranged funds to disbursement channels to enable funds to reach the targeted beneficiaries in a timely and cost-effective way. Implementing DRF requires establishing systems, mechanisms, and procedures for effectively allocating and disbursing the necessary funds in the aftermath of disasters. Finally, for a DRF strategy to be effective, it must be informed by robust data and analytics. Thus, this DRFS is based on these core principles (Figure 5).

Figure 5: Four Core Principles of Disaster Risk Finance



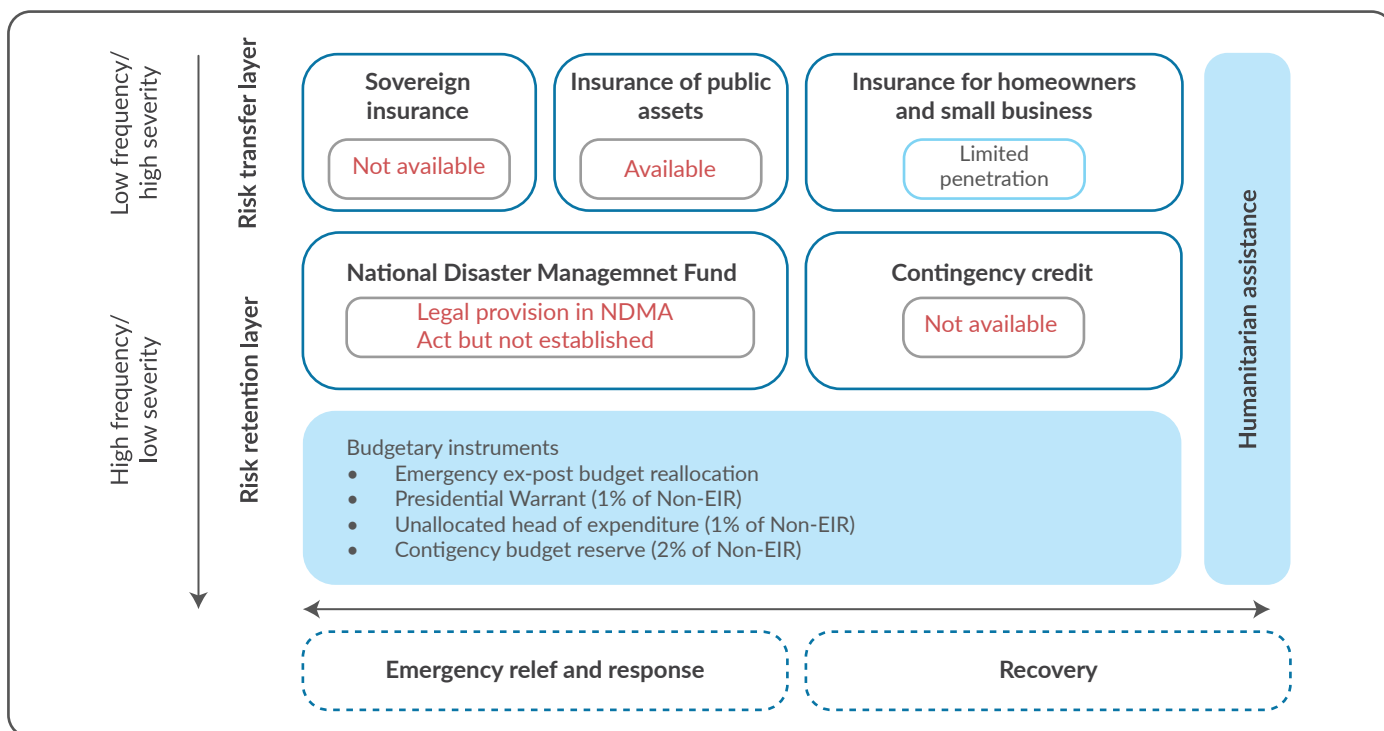
Source: <https://blogs.worldbank.org/voices/even-duller-disasters-how-earlier-finance-can-save-lives-emergencies>

4.1 Current Approach to Disaster Risk Financing

Currently, the government depends on moving money around in the budget and on aid, which is not always reliable or timely. It would be more efficient to plan and arrange financing ahead of time using a method that considers different levels of risk. This would help to lessen the financial impact of disasters of varying frequency and severity.

The Government does not have an explicit strategy or policy in place to systematically manage the financial impact of natural disasters. The only ex-ante instrument available is a contingent budgetary reserve, which is earmarked for all budgetary contingencies, including disasters. However, it is normally insufficient to cover post-disaster response costs (Figure 6). The Government relies heavily on ex-post mechanisms, such as budget reallocations and international donor assistance for response and recovery. Local governments do not have any contingency funds for disasters (or any other unforeseen events). Instead, they rely on budget reallocations. Thus, their response to disasters is financed solely from their own revenue sources.

Figure 6: Status of Disaster Risk Financing Instruments



Source: World Bank

Note: EIR= extractive income revenue; NDMA= National Disaster Management Agency.

The Government of Sierra Leone has developed a Social Protection Strategy to protect the poor from shocks and stresses, prevent households from falling into poverty, and promote climate-resilient livelihoods. The COVID-19 pandemic brought further awareness that shock-responsive systems are necessary. There is now a clear recognition, as seen in the Social Transfer Emergency Preparedness and Response Plans (STEmPRP) and the COVID-19 Quick Action Emergency Response Program (QAERP), that having robust systems in place is crucial to effectively respond to disasters. The Global Risk Financing Facility (GRiF) is supporting the development of Shock-Responsive Social Protection (SRSP) systems through a World Bank-funded Productive Social Safety Nets and Youth Employment (PSSNYE) Project.⁹ The goal of the project is to strengthen the capacity of the National Commission for Social Action (NACSA) to provide earlier and a more reliable response and recovery to climate and disaster shocks. One of the main features of Sierra Leone's SRSP is a comprehensive mapping and analysis of household vulnerability to shocks, focusing on flood and landslide risks. The analysis is instrumental for the operation and monitoring of a shock-responsive social protection system, as it informs prioritization and targeting in the event of a shock. The financial instrument currently in use for shock responses is the Contingency Emergency Response Component (CERC).¹⁰

The domestic insurance market is underdeveloped, but it has been growing steadily. As such, it offers an opportunity to enhance the financial resilience of the Government, households, and micro, small and medium enterprises (MSMEs) through financial protection. Coverage against floods and landslides is available as an optional add-on to fire insurance policies. The insurance penetration rate is less than 1 percent of GDP, with fire insurance accounting for 20 percent of the total general insurance premium. The insurance market has grown at an average rate of 9 percent per year, that is, from Sierra Leonean Leone (SLL) 152 billion (US\$7.7 million) in 2017 to SLL 212 billion (US\$10.7 million¹¹) in 2021. Given that there are 12 insurance companies and 1 reinsurance company in Sierra Leone, the number of written premiums per insurer is worryingly low. Thus, there is a need to transition to a risk-based capital supervisory framework and to strengthen the regulatory framework. Despite interest and need, the market lacks regulations for micro insurance, agricultural insurance, or Takaful (Islamic Insurance) due to the limited technical and financial capacity of the regulator. Public awareness of insurance also needs to be raised to improve policyholders' perception and understanding of insurance.

The creation of this Disaster Risk Finance Strategy is a critical step toward strengthening Sierra Leone's ability to finance responses to crises and climate-related shocks. This strategy aims to support the government, businesses, and the population in accessing disaster-related financial protection. To minimize the cost and optimize the timeliness of the response, the Government will implement a combination of financial instruments, including self-financing (risk retention). It will also start putting in place the building blocks for risk transfer. Prearranging financing, including leveraging donor funds and grants and risk transfer, will help the Government to lower the cost of debt. In addition, it will complement the medium-term debt management strategy.

⁹ The PSSNYE project is financed and implemented through World Bank support.

¹⁰ This is a non-funded project component that allows undisbursed project funds to be rapidly reallocated to shock responses in the event of a predetermined condition.

¹¹ This assumes United States Dollar to Sierra Leonean Leone Exchange rate of 1:19,750 based on 2023 November.



4.2 Rationale for Disaster Risk Finance Strategy

According to the Country's Disaster, Damage, Loss and Needs Assessment (DALA) studies, Sierra Leone's exposure to natural disasters is likely to worsen in the coming years, given the low level of urban planning in disaster-prone localities, as well as the low capacity to cope with extreme events, which have been compounded by socioeconomic and environmental factors. Approximately 40 percent of Sierra Leone's population lives in urban areas, and the majority live in disaster-prone areas. When disasters occur, the Government must divert resources from priority areas to address the socioeconomic consequences of these disasters, thereby crowding out pressing investments in physical and human capital. In the absence of external financial support, the disaster response could increase expenditures above budgeted levels and by extension, the budget deficit.

Currently, the Government relies on external assistance and budget reallocations to finance disaster responses. Humanitarian aid can be unpredictable and untimely, whereas budget reallocations divert funds from public services and ongoing projects; as such, this can be very costly. In view of the state's limited budget, and the increasing frequency and intensity of disasters, the current practice of funding responses to damaging disasters is no longer sustainable. Therefore, it would be more cost-effective to prearrange financing (ex-ante) according to a risk-layering approach. This would help to mitigate the financial impact of disaster events of varying frequency and severity.

The Government has developed this Disaster Risk Financing Strategy (DRFS) to limit the impact of crises and shocks on the national budget and reduce human, social, economic, fiscal, and environmental impacts. The Strategy outlines the strategic priorities and financial instruments to be implemented in the next five years. The DRFS seeks to develop a sustainable system for funding disaster responses through a portfolio of adequate disaster risk finance instruments, procedures, as well as clear rules. This will ensure that resources are more efficiently directed to beneficiaries.

The DRFS complements other Government policies and priorities, including the climate finance agenda, mainstreaming climate risk in the budgeting process. It also complements the planned National Climate Finance Strategy that will be developed by the newly established Climate Finance Department of the Ministry of Finance.






5 Strategic Priorities in Disaster Risk Finance

The overall objective of the DRFS is to enable the Government to proactively manage economic and fiscal risks, as well as to protect public finances against disasters, thereby reducing adverse human, social, economic, fiscal, and environmental impacts. This will be achieved by using sound risk assessments, having a variety of disaster risk financing options, creating clear procedures for allocating resources to those who need it, and continuing to work on reducing disaster risk.

This DRFS gives the Government of Sierra Leone and its institutions the requisite instructions and guidance on how to decrease the financial and economic effects of disasters. The DRFS also determines the priorities and the financial tools that will be used. It will serve as a guide for all relevant parties, such as the National Disaster Management Agency, the National Commission for Social Action, the Office of National Security, the Environmental Protection Agency, the Ministries of Environment, Agriculture and Forestry, Internal Affairs, Defense, insurance companies and Local Councils. As such, it will help them to understand the financial risks of disasters, as well as the financial tools that the government plans to use to prepare for and respond to disasters.

The Government has identified five strategic priorities for the period 2023-2028. A detailed breakdown of activities under each priority is presented in the Implementation Plan in the Annex. The most critical activities are detailed in the following subsections.

Strategic priorities include the following:

-  Strengthen capacity to identify and quantify disaster-related economic losses and financial risks and enhance post-disaster expenditure tracking.
-  Improve fiscal stability at the national and local levels by establishing a portfolio of disaster risk financing instruments.
-  Reduce the impact of disasters on the poor and vulnerable population (including children, women, persons with disabilities, the aged, and so on) by supporting shock-responsive social protection programs and contributing to building resilience.
-  Help farmers, homeowners, and small and medium enterprises (SMEs) to build resilience against floods and wildfires through the strengthening of the domestic insurance market and the provision of direct assistance.
-  Strengthen coordination and institutional capacity for disaster risk financing and management.

5.1 Strengthen Capacity to Identify and Quantify Disaster-related Economic Losses and Financial Risks, and Enhance Post-disaster Expenditure Tracking

The availability of robust data concerning historical expenditures is fundamental to making sound financial planning decisions. In the next period, the Government will work on strengthening its public financial management systems by introducing a systematic way of identifying and quantifying fiscal risks, economic losses, as well as tracking post-disaster budget expenditures on an annual basis.

The following key activities have been identified, and a longer list of activities is detailed in the Implementation Plan:



Develop and establish a system (Desinventar, United Nations Office for Disaster Risk Reduction [UNDRR]/Sendai) in Sierra Leone for recording disaster damages and produce yearly reports. This would involve collecting available historical disaster losses.



Train relevant government staff and (potential) grant recipients on eligible expenditures, model agreements, and required accountability.



Strengthen the technical capacity of the Ministry of Finance to manage disaster risk finance and conduct assessments of disaster-related contingent liabilities.

5.2

Improve Fiscal Stability at the National and Local Levels by Establishing a Portfolio of Disaster Risk Financing Instruments



To strengthen the ability of the government to manage the impacts of disasters and mobilize and deliver post-disaster assistance, it will establish a comprehensive portfolio of disaster risk financing instruments to respond to low-impact, high-frequency shocks, as well as major disaster shocks that happen less frequently. The portfolio of disaster risk financing instruments will be reviewed annually. To improve future funding for disaster responses, the Government of Sierra Leone will:



Establish a standalone (off-budget) **National Contingency Fund** strictly dedicated to post-disaster financing. The establishment of the National Disaster Management Fund is regulated by the NDMA Act, Section 38-44. The Fund will be used for disaster response and relief for level 1 and level 2 disasters. It will cover disasters emanating from natural and man-made events (including floods, landslides, fires, leakages, explosions, epidemics and pandemics). Financing would be used for emergency relief and recovery operations led by the NDMA. To ensure rapid procurement of goods, equipment, and supplies, the NDMA is advised to consider a market analysis of disaster relief suppliers and pre-screen their capacity to accelerate emergency procurement procedures. Funding will be provided from private donations and annual central and local budget allocations, and it will accrue over time. Funding options, for example, the proceeds from a levy on construction materials, will be further explored in a feasibility study. In addition, the Government will explore a financial protection solution to re-capitalize the Fund in the event of a severe shock.¹² The Fund will require clear rules for allocating resources and will include specifications of eligible expenditures and operational procedures to be articulated in a new regulation before the fund can be capitalized. A financial mobilization (capitalization) strategy will also need to be developed. It would further assess the most appropriate source of government funding, as well as the strategy to raise financing from donors and the private sector.



Assess the available **contingent credit instruments** from multilateral development banks and adopt such instruments in accordance with fiscal and disaster risk management objectives to complement the National Contingency Fund. Examples of contingent credit are presented in Annex 2. Summary of DRF Options Available from Development Partners.

¹² A parametric sovereign insurance policy.



Access the feasibility of **sovereign risk transfer solutions** for high severity shocks. The Government will consider purchasing market-based risk-transfer instruments over time, for example, parametric insurance against excessive rainfall leading to flood and epidemic risks. In the medium term, the DRFS implementation plan includes activities to establish the building blocks toward such a risk transfer solution.



Conduct a feasibility study regarding public asset insurance. This will determine the objectives, identify key hazards, and assess the potential benefits. Depending on the feasibility study, the next phase would be to develop an implementation plan accompanied by vulnerability curves informed by engineering operation exposure assessments.

5.3

Reduce the Impact of Disasters on the Poor and Vulnerable Population by Supporting Key Social Protection Programs and Contributing to Building Resilience

The poor and vulnerable, including women, children and persons with disabilities tend to be among those most affected by disasters. Therefore, the Government of Sierra Leone should take part of the risk upon itself. In 2022, the Government adopted the National Social Protection Strategy (NSPS) with a goal of establishing a gender-sensitive and age-appropriate framework for protection of the most poor and vulnerable. This DRFS will support the implementation of the NSPS.

A growing body of evidence shows that social safety nets (including cash transfers) can be part of an effective shock response. Since 2014, social safety net programs and other social protection interventions have reached more than 190,000 extremely poor households, providing them with a regular cash transfer. This has allowed beneficiary households to smooth their consumption and mitigate the most severe impacts of poverty. Safety nets have proved effective in channeling post-emergency assistance during the Ebola outbreak, during the 2017 landslide and floods, and during the COVID-19 pandemic in 2020. In the case of Ebola and the landslide/floods, the systems that were designed only emerged after the events. However, in the case of COVID-19 pandemic, the Government pre-arranged US\$4 million in contingency finance for emergency cash transfers as part of a World Bank project.

The following key activities have been identified. A longer list of activities is detailed in the Implementation Plan:

- 1 Work with the Ministry of Finance and the Technical Working Group regarding Shock-Responsive Social Protection (SRSP) to establish allocated funding to conduct anticipatory actions based on flood forecasts and other disasters.
- 2 Continue the expansion and operationalization of the social registry to ensure a shock-responsive system can reach additional vulnerable households following a qualifying disaster event.
- 3 Develop a Standard Operating Procedure (SOP) for the release of funds for all levels responsible for managing a disaster.

5.4

Help Farmers, Homeowners, and SMEs to Build Resilience against Floods and Wildfires through Access to Risk Transfer Instruments and Direct Assistance

The insurance market is underdeveloped, but it has been growing steadily. As such, it offers an opportunity to enhance the financial resilience of households and MSMEs through financial protection. The government aims to use the DRFS to contribute to supporting the development of the local insurance market in close cooperation with SLICOM. This step involves improving policies and taking regulatory decisions aimed at promoting and supporting private insurance. To help develop the insurance market in the medium term, the DRFS will include in its implementation plan the following critical activities aimed at enhancing the financial strength, technical capacity, and operational efficiency of the insurance market.

The following key activities have been identified. A longer list of activities is detailed in the Implementation Plan:



Develop an insurance road map based on an assessment of the status of the market and its gaps and opportunities. The priority should be on product lines, such as property and agriculture, which have the potential to limit the Government's contingent liability resulting from disasters.



Review experiences with agricultural risk finance in Sub-Saharan Africa with a view to potentially piloting agriculture risk finance schemes in Sierra Leone.



Develop regulations and guidelines for agriculture insurance, microinsurance and Takaful.

5.5

Strengthen Coordination and Institutional Capacity for Disaster Risk Financing and Management




Effective coordination and strong institutional capacity of all relevant stakeholders is critical for the successful implementation of this DRFS.

To increase the resilience of public finances against disasters, it is essential to identify, quantify, and comprehensively mitigate the impact of climate shocks and disasters. This is a shared responsibility across multiple line ministries, hence the need to clarify each stakeholder's role.

The role of the Ministry of Finance is to assess the potential impact of disaster risk on economic growth and key fiscal indicators. Meeting this task will depend on the responsible functions across multiple line ministries providing the right information. Thus, there is a need to strengthen capacity on data collection and management, programming, execution, the evaluation of disaster-related public spending, as well as transparency and accountability.

The appropriate combination of risk retention and risk transfer financing instruments also involves strengthening the analytical and technical capacities of the Ministry of Finance for example, the analysis and optimization of different portfolios of financing instruments for the retention and transfer of risk.

The following key activities have been identified while a longer list of activities is detailed in the Implementation Plan:

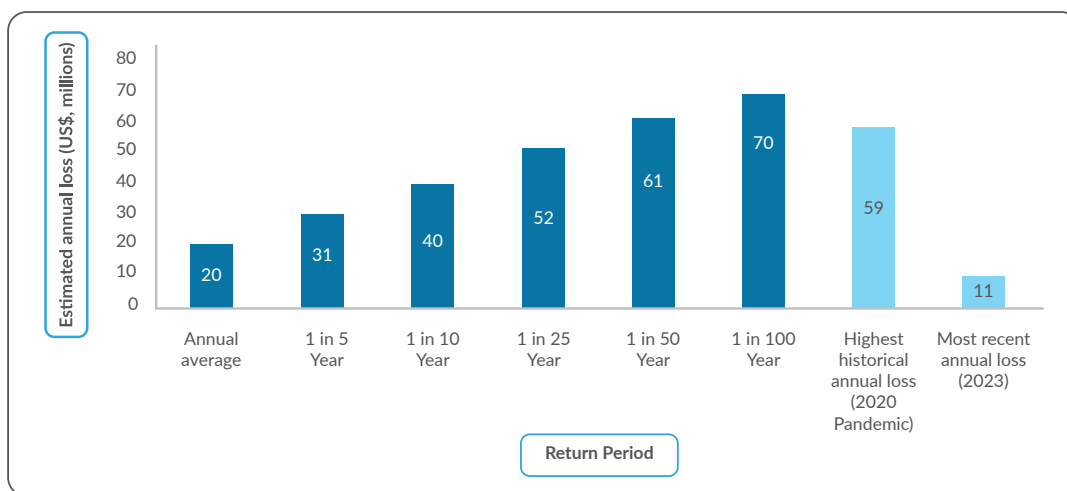
-  Capacity building for the technical and analytical aspects, including modelling of DRF instruments to ensure proper understanding and effectiveness in addressing the needs of the country.
-  Conduct training for line ministries and local governments on technical and operational aspects of DRF, including implementing operational procedures, templates, and checklists for disaster responses.
-  Develop a procurement manual for the procurement of emergency goods and services during a disaster response.

6 Funding Gap and Risk Layering Strategy

6.1 Fiscal Cost and Funding Gap Analysis

The simulated average annual cost of a disaster response in Sierra Leone is US\$20 million. With very severe events (with a 1 percent probability of occurrence), the cost could exceed US\$70 million (Figure 7). These estimates are not specific to a particular type of disaster. Rather, they are applicable to any shocks that impose large fiscal and financial costs on the government. It is estimated that the highest historical annual response cost of US\$59 million could occur every 40 years on average. Events incurring response costs of US\$16 million—for example, the landslide in 2017—have a 50 percent chance of occurrence in any single year, meaning that they could occur as often as once every other year.

Figure 7: Estimated Average Losses and Annual Potential Losses of Disasters (US\$)



Source: World Bank analysis based on data from Ministry of Finance and the United Nations United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Financial Tracking Service, <https://fts.unocha.org/>.

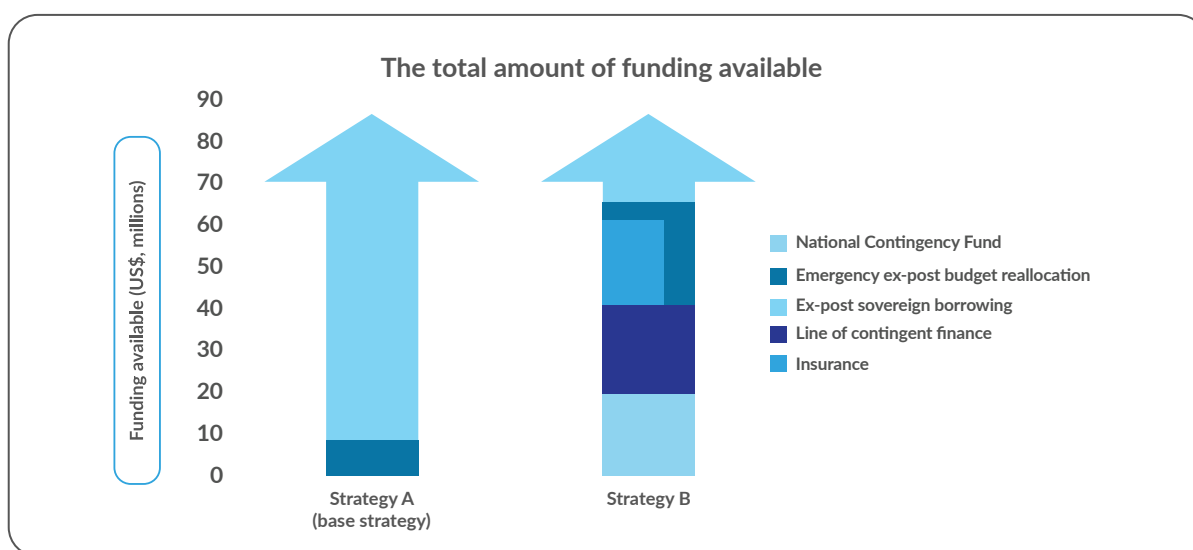
Note: The return period is the duration over which a loss of the same or greater magnitude should be expected. For instance, for a 1-in-5-year return period, the estimated annual loss is expected to be exceeded once every five years on average; in other words, in any given year there is a 20 percent probability of a loss at least as great as this. Similarly, for a 1-in-10-year return period, the annual loss is expected to be exceeded once every 10 years on average, that is, with a 10 percent probability.

The Government of Sierra Leone faces a significant funding gap in responding to shocks and crises. If the GoSL's response to disaster events in 2022 is taken to typify the existing approach, no more than US\$10 million could be mobilized through a budget reallocation and the contingency budget reserve. According to the Public Financial Management Act (2016), that contingency budget reserve should not exceed, at any time, two percent of the non-extractive income revenue (non-EIR). Compared to the estimated average and simulated annual costs of a response to shocks with different return periods, Sierra Leone faces a funding gap almost every year. Years such as the year with the highest disaster cost occur approximately every 40 years on average.¹³ If such a year were to happen again, the Government would face a funding gap of about US\$50 million.

6.2 Analysis of a Risk Layering Strategy to Close the Funding Gap

This analysis demonstrates how prearranging finance using a risk layering strategy, in which multiple financial instruments balance risk retention and risk transfer, compares to the current financing approach (base strategy). Risk layering refers to the process of combining different financial instruments to fund losses from different layers of risk. Each layer has its own cost and payout. The goal is to design a DRFS that provides adequate financial protection against various disaster scenarios, while also managing the overall costs. The total available funding under each strategy is presented in Figure 8.

Figure 8: Funds Modelled under the Two Strategies



Source: World Bank analysis.

The base strategy consists of a contingency budget reserve of US\$10 million in accordance with the Public Financial Management Act (2016). This is equivalent to 2 percent of non-extractive industry revenues (non-EIR). Contingency budget reserves operate similar to ex-post budget reallocations, as they are not prearranged funding set aside for unforeseen disaster events and emergencies only.

¹³ The 2014 Ebola outbreak is not considered in the return period calculation so as to compare events with relatively similar costs.

The proposed Strategy B consists of the planned National Contingency Fund under Strategic Priority 5.2 of this DRFS. It includes an amount of US\$20 million, a line of contingent finance of US\$20 million, and sovereign insurance with a maximum payout of US\$15 million and a ceding share of 70 percent. The instruments are also layered. The national contingency fund is designed to cover up to 1-in-2.5 year-event losses. Contingent finance used for illustrative purposes is the World Bank Catastrophe Deferred Drawdown Option (Cat DDO), ¹⁴ of which the maximum amount for Sierra Leone is US\$20 million. It covers up to 1-in-10-year-event losses.

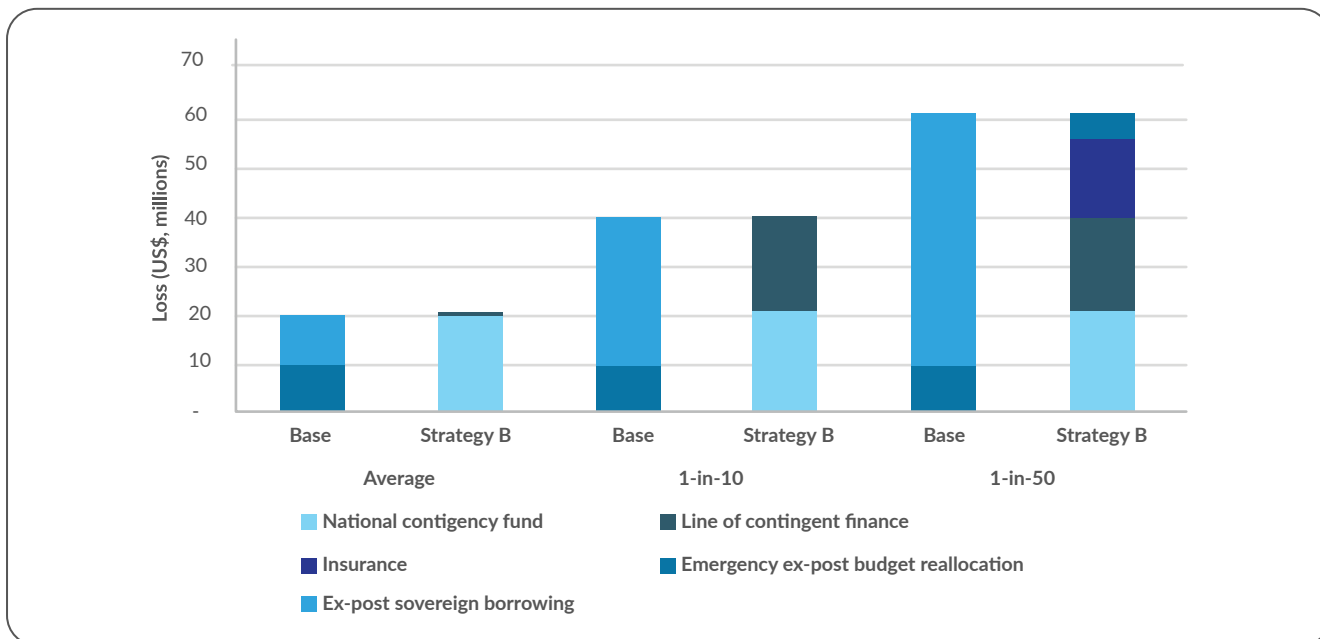
The sovereign insurance is assumed to cover key perils impacting Sierra Leone. It has a 70 percent ceding share, which means that the government transfers 70 percent of the possible losses in the sovereign insurance layer to the insurance market and retains the remaining 30 percent. The attachment is set in such a way that insurance pays out when the costs of response exceed US\$40 million, which is the cost of a 1-in-10-year loss event. Insurance would cover losses above those covered by the first two risk finance instruments, the reserve fund (National Contingency Fund) and a line of contingent finance. The potential maximum annual payout of the insurance is US\$15 million, and the annual premium would cost around US\$1.1 million. ¹⁵ Any losses beyond the insurance exhaustion point, which has been set at a 1-in-50-year loss of about US\$62 million, would not be covered by the insurance. In such a rare event, the government would reallocate funding from other expenditures and/or raise additional funds through borrowing. However, the cost of ex-post sovereign borrowing can be rather high compared to pre-arranged financial instruments. The strategy assumes that the national contingency fund and the line of contingent finance are to be used exclusively for disaster relief, thus incurring small administrative costs.

Both strategies include unlimited ex-post borrowing to fund residual risk. Under the base strategy, government would resort to borrowing and donor aid for moderate (around 1-in-1.5-year) events. Figure 9 illustrates a breakdown of instruments used under the base strategy and Strategy B for annual average loss events, 1-in-10-year events, and 1-in-50-year events. The gray and yellow layers could be interpreted as the funding gap, as no prearranged funding exists for these layers, and emergency ex-post funding is required instead. Under Strategy B, prearranged funding would fully cover 1-in-50-year loss events. In contrast, the government would require ex-post budget reallocations and borrowing to cover the 1-in-50-year loss events under the current (base) strategy. Strategy B minimizes the need for ex-post sovereign borrowing. As such, it reduces costs and saves time, which strengthens financial resilience to crises and disasters.

¹⁴ Cat-DDO-IBRD-Product-Note.pdf (worldbank.org).

¹⁵ The premium is calculated assuming the insurance pricing multiplier is 1.5, which means that the premium equals 1.5 times the annual average loss of US\$0.7 million.

Figure 9: Instruments used to Fund Different Sizes Losses for Each Strategy



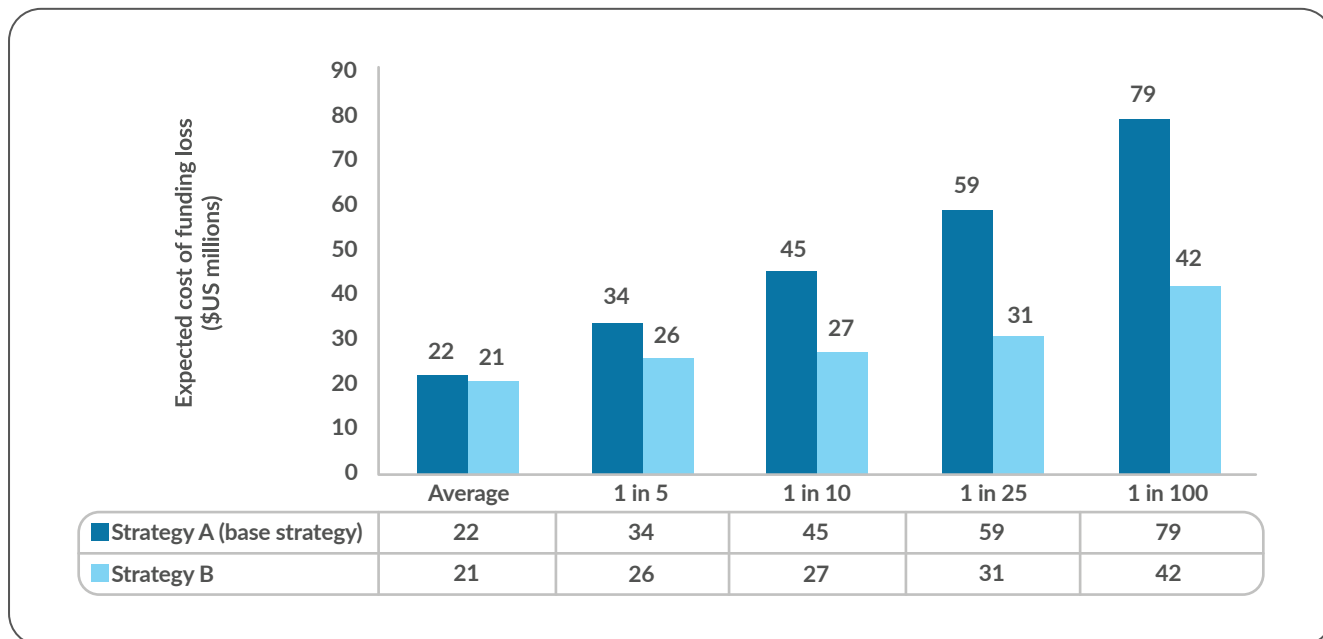
Source: World Bank analysis.

Based on the indicative distribution of simulated losses, the analysis shows that a risk-layered financing strategy could be more cost efficient, particularly for moderate and extreme events. For a moderate event, Strategy B could create annual savings of US\$8 million compared to the base strategy. Savings can further increase to US\$37 million in an extreme event (Figure 10). These savings arise in part by avoiding budget reallocations and in part by limiting ex-post borrowing, which are costly.¹⁶ Utilizing the line of contingency finance and insurance under the proposed strategy also helps to reduce funding costs for extreme and infrequent shocks.



¹⁶ The analysis assumes the marginal interest rate on ex-post sovereign borrowing to be 19 percent, reflecting the annual yield of the Sierra Leone 1-year Treasury Bill.

Figure 10: Opportunity Costs of Funding Disaster Responses for Each Strategy (US\$, millions)



Source: World Bank analysis.

The funding gap is highly sensitive to the US\$/SLL exchange rate. The indicative funding gap for the Sierra Leonean Leone has doubled in size compared to two years ago, which is solely due to the Leone currency depreciation. The analysis assumes that one US dollar is equivalent to SLL 20,000¹⁷. However, one US dollar was equivalent to SLL 10,000 in 2021. Similarly, high inflation and the annual yield on Sierra Leone Treasury Bills implies high opportunity costs in terms of ex-post borrowing. Limited GDP growth may also further increase sovereign borrowing costs.

The Government aims to stabilize the fiscal budget and minimize the chance of exhausting all pre-arranged funds too early. The proposed Strategy B is more effective in stabilizing the budget and minimizing the depletion of ex-ante funds as compared to the current approach. Implementing this DRFS with risk layering is expected to minimize the funding gap for disaster response costs, speed up the recovery process, and reduce reliance on external assistance. By avoiding costly ex-post financing, resources can be utilized more efficiently, thus allowing the country to respond faster to disasters.

7 Monitoring and Evaluation of the Disaster Risk Finance Strategy

The Strategy sets out the priorities in disaster risk financing for the next five years. Proper coordination is therefore critical for the successful implementation of the strategy and implementation plan. The Government will establish a Steering Committee comprised of representatives from all relevant institutions and chaired by the Financial Secretary. The Steering Committee will be responsible for overall coordination of the stakeholders in the implementation of the Disaster Risk Finance Strategy, as well as for monitoring progress and coordinating reporting on strategy implementation. Progress will be monitored periodically. Reports will be prepared every 12 months based on operational indicators for activities designed to accomplish the intended results. The report format will be prepared by the Ministry of Finance to ensure uniformity. Essentially, the Ministry will prepare aggregate annual reports regarding implemented activities and progress made.

¹⁷ The exchange rate was taken on February 26, 2023.

The annual reports prepared by the Steering Committee will be submitted to all relevant ministries and agencies and to partner institutions. They will serve as the basis for introducing amendments in subsequent planning for activities, as well as for securing the necessary financial resources. Annual reports concerning results and goals will be submitted to the government for adoption.

Program assessment is important because it provides evidence about the extent to which set objectives are met, on the efficiency of implementation, as well as whether defined measures and activities are adequate for achieving set objectives. The first program evaluation is planned in 2024. Based on the assessment and related recommendations, it will be possible to improve the program so that it is better able to attain the set objectives.

8 Critical Success Factors

In determining the strategic outcomes, outputs as well as targets to be achieved, stakeholders are aware that certain critical elements must be made available for sustainability. Critical Success Factors (CSFs) may change over time. Hence, there is a need for all relevant stakeholders to regularly observe these and make adjustments where necessary. The following are the CSFs that are assumed to be already in place for the stakeholders to meet the targets.

8.1 Political Support

The importance of creating an enabling environment and ensuring continued political support for the strategy and implementation plan cannot be overemphasized. This would largely indicate the level of the Government's willingness to venture into market-oriented financing instruments.

8.2 Strategic Leadership

Leadership is the driving force in the accomplishment of any organization's expected outcomes. Therefore, it is imperative that the Ministry's guidance in the implementation of the strategy be proactive, visionary, inspiring and accommodative.

8.3 Support from Key Stakeholders

For the successful implementation of this strategy, it is anticipated that all stakeholders, including development partners, will give adequate, requisite support.

8.4 Staff Capacity

It is expected that the Ministry of Finance will build the necessary capacity in disaster risk financing to effectively implement the strategy and monitor its progress. The implementation of the DRFS will leverage the newly established Climate Finance Unit under the Ministry of Finance.

Annex 1. Action Plan for the Implementation of the Disaster Risk Finance Strategy for 2023-2028

Description of Activities	Responsible Institution(s)	Partner Institution(s)	Implementation Deadline	Budget Funds	Other Funds	Output Indicators
Overall objective: Proactively manage economic and fiscal risks and protect public finances against disasters, thereby reducing adverse human, social, economic, fiscal, and environmental impacts.						
Strategic objective 1. Strengthen capacity to identify and quantify disaster-related economic losses and financial risks, and enhance post-disaster expenditure tracking.						
Work with parametric insurers and public health data institutions to quantify epidemic risks.	SLICOM	MOHS MOH/NPHA ARC MoF	2026			Database for epidemic risks developed.
1) A national multi-hazard disaster risk assessment and 2) a probabilistic risk assessment of all schools, health facilities and other critical public facilities.	MoECC	EPA MOH/ NPHA MOE NDMA MoW MOF	2025	GOSL	World Bank (resilient cities) and other Development Partners	Reports produced.
Develop public asset policy and asset register.	NAGPC	MWPA ONS SALHOC MLHCP MOF	2027	GOSL	European Union (State-building Complementary Project, Phase 3)	Asset policy and register produced.
Develop a Climate Resilient Road Strategy (CRRS) to assess the levels of vulnerability of the road sector to climate change and severe weather events, and identify the options to improve pre-arranged funding for disaster response and road recovery services.	SLRA	EPA SLMet NDMA NaCSA SLRSA RMFA	2027			Climate road strategy and severe weather events identified and developed.

Establish a central repository for all assessments and information about risks, public assets and facilities.	NDMA	ONS NAGPC SSL	2026	GOSL	ICRC and other Development Partners.	Central repository for all assessments and information concerning risks, public assets and facilities.
Establish and develop a system (Desinventar, UNDRR/Sendai) in Sierra Leone for recording disaster damages, capable of producing annual reports. This would involve collecting available historical information about disaster losses.	NDMA	ONS MOH/NPHA	2025	GOSL	UNDP and other Development Partners.	A system for recording disaster damages and losses has been developed.
Review current post-disaster expenditure monitoring and reporting practices.	NDMA	ONS MOF MOH/NPHA	2025	GOSL	World Bank & other Development Partners.	Post- disaster expenditure reports available.
Develop and implement an annual post-disaster public expenditure tracking system.	MoF	NDMA MOECC EPA	2026	GOSL	Development Partners.	Post-disaster public expenditure tracking and reporting template available.
Conduct a post-disaster public expenditure review.	NMDA	MOF	2025	GOSL		Post-disaster public expenditure review report available.
Regular updates of the available integrated disaster loss and damage assessment system and database.	NMDA	ONS NACSA EPA SSL NCRA	2024 (Monthly)	GOSL		Disaster loss and damage assessment system and database updated.
Establish and develop clear criteria, channels and agreements for post-disaster grants.	MoF	NACSA NDMA MOH/NPHA	2025	GOSL	World Bank (CERC) & other Development Partners.	Criteria, channels and agreement on post-disaster grant developed.

Train relevant government staff and (potential) grant recipients on eligible expenditures, model agreements and required accountability.	MOF	NACSA	2026	GOSL		The relevant government staff and grant recipients have been trained on eligible expenditures and model agreements.
Strengthen the technical capacity of Ministry of Finance concerning disaster risk finance and the ability to perform assessments of disaster-related contingent liabilities.	MOF	Development Partners	2025	GOSL	World Bank & other Development Partners.	Ministry of Finance staff trained in disaster risk finance and disaster-related contingent liabilities.
Strategic objective 2. Improve fiscal stability at the national and local levels by establishing a portfolio of disaster-risk financing instruments						
Government to decide on objectives for funding instruments.	MOF					
Develop and adopt regulations for the establishment of a national contingency fund and define its operational and governance procedures.	MOF	NDMA NACSA	2024	GOSL	World Bank, African Development Bank (AfDB) and other Development Partners.	Contingency fund established and institutionalized.
Develop a fundraising plan to capitalize the National Contingency Fund, including funding from government sources, donors and the private sector.	MOF	NACSA MOPED	2025	GOSL		Contingency fundraising plan developed.
Conduct a study on post-disaster financing and practices by local governments.	MOF	MLGRD	2025	GOSL	World Bank & other Development Partners.	Report on post-disaster financing and practices by local governments is available.

Review the available contingent credit offerings from the multilateral development banks, and assess their viability for Sierra Leone.	MOF	MOPED	2025	GOSL		Review completed.
Develop a road map to lay for the foundation for readiness for a risk transfer solution, including institutional, operational data, and market readiness.	MOF	SLICOM	2026	GOSL	World Bank, UNDP, European Union.	Road map developed.
Conduct a feasibility study regarding a public asset insurance program (with technical assistance [TA] from the World Bank). This will help to determine objectives, identify key hazards, and assess potential benefits. Depending on the feasibility study, a next phase would be to develop an implementation plan accompanied by vulnerability curves informed by engineering operation exposure assessments.	MOF	SLICOM NAGPC ONS NDMA MOH/NPHA	2025		World Bank & other Development Partners.	Feasibility study conducted.
Assess the suitability of new sovereign disaster insurance products (for example, for excess rainfall and epidemics).	MOHS	SLMeT SLICOM MOH/NPHA	2026	GOSL	European Union and other Development Partners.	Triggers for declarations of disasters developed and implemented.
Review and update original financial gap analysis contained in the DRFS.	MOF	MOPED NDMA MOH/NPHA	2025	GOSL	World Bank, AfDB.	Financial gap analysis contained in the DRF Strategy is updated.
Conduct an annual review of all risk finance instruments to ensure relevance and continual adherence with government objectives.	MOF	MOPED	2025	GOSL		Risk financing instruments reviewed.

Strategic objective 3. Reduce the impact of disasters on the poor and vulnerable population by supporting the key social protection programs and contribute to the building of resilience.

Develop a shock-responsive system to provide additional support to beneficiaries following a disaster, which would be aligned with the national DRFS, as well as with the Emergency Response Manual.	NDMA	ONS NACSA MOH/NPHA	2026	GOSL	World Bank and other Development Partners.	Shock-response systems developed.
Work with the Ministry of Finance and the Technical Working Group (TWG) for the SRSP to establish allocated funding to conduct anticipatory actions based on flood forecasts and other disasters.	NaCSA	TWG members	2024		World Bank and other Development Partners.	Anticipatory action plan developed.
Continued expansion and operationalization of the social registry to ensure a shock-responsive system can reach additional vulnerable households following a qualifying disaster event.	NaCSA	NDMA LOCAL COUNCILS and PARTNERS	2024		World Bank and other Development Partners.	Social registry for the shock responsive system updated.
Develop SOPs for the release of funds for all levels of disaster.	MOF	NDMA ONS MOHS NACSA EPA MOECC	2025	GOSL	World Bank and other Development Partners.	SOP developed.

Strategic objective 4. Help farmers, homeowners, and small and medium enterprises (SMEs) build resilience against floods and wildfires through access to adequate risk transfer instruments and direct assistance.

Develop an insurance road map based on an assessment of the status of the market, including gaps and opportunities. The priority should be on product lines, such as property and agriculture, which have the potential to limit the Government's contingent liabilities due to disasters.	SLICOM	MoA SMEDA MOF	2026	GOSL	European Union and other Development Partners.	An insurance road map based on an assessment of the status of the market has been developed.
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Review experiences with agricultural risk finance in Sub-Saharan Africa, with a view to potentially piloting agriculture risk finance schemes in Sierra Leone.	SLICOM	MoF MoA SMEDA	2025	GOSL		Pilot scheme conducted.
Assess the feasibility of a property catastrophe scheme for Sierra Leone. This will include technical (product type and data availability), operational (targeting and distribution) and financial feasibility (premiums and implementation costs).	SLICOM	MoF NDMA	2026	GOSL	European Union, World Bank, and AfDB.	Assessment report is produced.
Develop regulations and guidelines for agriculture insurance, microinsurance and Takaful .	SLICOM	MOSW NACSA MOA MOF	2025	GOSL	Islamic Development Bank (IsDB).	Regulations and guidelines for agriculture insurance, microinsurance and Takaful are developed.
Specific objective 5. Strengthen coordination and institutional capacity for disaster risk financing and management.						
Build capacity regarding the technical and analytical aspects, including the modelling of DRF instruments to ensure a proper understanding and effectiveness in addressing the needs of the country.	MOF	NDMA ONS EPA MOECC MOH/NPHA	2025	GOSL		# of officials trained
Conduct training for line ministries and local governments on the technical and operational aspects of DRF, including implementing operational procedures, templates, and checklists for disaster responses.	NDMA	MOF ONS NACSA EPA MOECC	2026	GOSL		# of officials trained

Map existing practices and contingency planning capacity and approaches as part of disaster preparedness across the Government Ministries/Departments. Strengthen preparedness and response capacity by addressing identified gaps and needs.	NDMA	ONS EPA MOECC	2025	GOSL		Existing practices and contingency plan mapped.
Conduct a market analysis of disaster relief suppliers and screen their capacity to accelerate emergency procurement procedures.	NDMA	NPPA	2025	GOSL		Market analysis of disaster relief suppliers conducted.
Assess the adequacy of current practices for the acquisition and storage of emergency goods.	NDMA	MOF	2024	GOSL		Assessment report produced.
Identify the most suitable procurement approach for emergency goods and services and improve procurement planning for emergency situations (as part of contingency planning). Develop a procurement manual for disaster risk.	MOF	NPPA NDMA	2025	GOSL		Suitable procurement approach for emergency goods and services identified.



Annex 2. Summary of DRF Options Available from Development Partners

Instrument/Program/Mechanism	Perils/Objectives	Description	Conditions/Requirements
Global Risk Facility (GRiF) World Bank	Strengthen the financial resilience of countries to climate and disaster shocks.	<ul style="list-style-type: none"> • Technical Assistance (up to US\$ 4 million). • Co-financing through matching grant for example, for insurance premium, contingent financing, and so on), (up to US\$10 million/year capped at US\$25 million/project over 3 years. • Capitalization (up to US\$10 million). • Start-up costs (up to US\$5 million). • Implementation costs for pre-arranged funding linked to national delivery systems (up to US\$5 million). 	<ul style="list-style-type: none"> • Through WB lending project (IPF) • Requirements <ul style="list-style-type: none"> • Grant concept note to be approved before DM • DP coordinator in MoF
Crisis Response Window Early Response Financing (CRW ERF) – World Bank ¹⁸	Early responses to slow-onset crises <ul style="list-style-type: none"> • Food security • Disease outbreak 	<ul style="list-style-type: none"> • Provides US\$50 million/country/ International Development Association (IDA) cycle 	<ul style="list-style-type: none"> • Should help prevent/limit impact of future crises • Requires crisis preparedness plan within 3 months for pre-allocated CRW (6 months ow)
Crisis Response Window Early Response Financing (CRW Last Resort) – World Bank ¹⁹	Last resort for countries coping with severe crises. Access is granted where alternative sources of funding are insufficient Public health, for example, Ebola <ul style="list-style-type: none"> • Food insecurity • Economic crises 	Amount depends on type and severity of shock.	<ul style="list-style-type: none"> • When alternative sources of funding are insufficient

¹⁸ The CRW-ERF aims to enable governments to respond at an earlier juncture to slower-onset crises, namely, disease outbreaks and food insecurity before escalation into a crisis.

¹⁹ The CRW last resort facility aims to enable response, as a last resort, to the impact of severe prolonged disasters, public health emergencies, and economic crises. CRW resources are allocated to specific projects or programs rather than to the national budget.

Catastrophe Drawdown Option (Cat DDO)²⁰	Immediate liquidity after a natural disaster and/or health-related event.	<ul style="list-style-type: none"> • Comprehensive disaster risk management • Drawdown is contingent on trigger (typically the declaration of a state of emergency). • Drawdown period = 3 years + 3 year renewal. 	<p>World Bank project (Development Policy Operation, DPO)</p> <p>Requirements:</p> <ul style="list-style-type: none"> • Adequate macroeconomic policy framework • Satisfactory disaster risk management program in place (or under preparation).
Contingent Emergency Response Component (CERC)	Swift access to and reallocation of undisbursed project funds.	<ul style="list-style-type: none"> • May be unfunded/pre-funded. • May be pre-funded using project funds or CRW. • Ideal for sectors that are susceptible to disasters, for example, agriculture, health, education and projects that involve the NDMA. • May be implemented by the same Project Implementation Unit (PIU) or by NDMA (subject to capacity assessment). • Activation <ul style="list-style-type: none"> • Declaration of state of emergency • Third party declaration, for example, United Nations appeal. 	<ul style="list-style-type: none"> • Project component in World Bank lending project (Investment Project Financing, IPF) • Activation conditions pre-set. • Requires: <ul style="list-style-type: none"> • Emergency Action Plan (with specific activities and expenditures) • CERC Annex at project preparation.
Africa Disaster Risk Finance (ADRFi) program	Strengthen resilience of rural households to droughts.	<ul style="list-style-type: none"> • Capacity building • Initial premium for sovereign insurance policy (ARC). 	<ul style="list-style-type: none"> • Budget support to be disbursed to households • Requirements • Contingency plan

²⁰ The World Bank's contingent line of credit (Development Policy Loan with a Catastrophe Deferred Draw Down Option – CAT DDO) aims to protect the budget in the event of a severe shock that leads to the declaration of a state of national disaster.

Insurance and Risk Financing Facility	Reduce community vulnerability through investments in and protection of livelihoods related to reefs, mangroves, forests, marshes, and water-basins.		
ARC ARC Agency ARC Limited	Droughts Epidemics (launched at the end of 2022 in Senegal). Floods (Launched in January 2023 in Djibouti).	Disaster risk management: <ul style="list-style-type: none">• Early warning• Contingency planning• Sovereign insurance through ARC Ltd (Risk pool)• Replica (cover for humanitarian actors, for example, the United Nations Children's Fund [UNICEF], World Food Programme [WFP]).	





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