

15.0 Sierra Leone

LDCF	Least Developed Countries Fund
NAPA	National Adaptation Programme of Action
UNFCCC	United Nations Framework Convention on Climate Change

Since 2000, when its nine-year civil war ended, Sierra Leone has begun to see positive economic and social development. Yet, it remains one of the least developed countries in the world and continues to need humanitarian aid to help address issues such as extreme weather events, pest and disease control (malaria), basic nutrition, drinking water supply, healthcare, sanitation, urban growth planning and education. Moreover, Sierra Leone's environment has been severely degraded; land degradation, deforestation, loss of biodiversity, fresh water pollution, coastal erosion and over exploitation of natural resources create additional challenges for the country—and are expected to be worsened by the negative effects climate change (LDCF, 2008).

A. Adaptation Needs and Priorities

According to climate projections, in comparison to the period of 1961 to 1990, Sierra Leone is expected to experience a rise in both average temperatures (of about 1.8°C to 2.5°C by the year 2100) and rainfall (by about 3 to 10 per cent) (MTA, 2008). The country already experiences a number of serious climate-influenced events that could become more frequent under a changing climate, including: flash floods; cyclone and severe storms; scarcity of fresh water due to less rain; higher evapotranspiration in the dry season; and frequent prolonged and widespread drought/dry spells (MTA, 2008). Flooding is also known to have adversely affected the agricultural livelihoods and homes of people. Their suffering has been further aggravated by the attending health problems of water-borne diseases (typhoid dysentery cholera and diarrhea) due to lack of safe drinking water.³⁰⁰

The country's social and economic context makes Sierra Leone vulnerable to projected climatic changes. Its economy is heavily dependent on natural resources, with agriculture being its largest economic sector, contributing approximately 46 per cent of GDP and employing over 65 per cent of the labor force (LDCF, 2008).³⁰¹ Key vulnerabilities for the country include (Sierra Leone, 2007; MTA, 2008):

³⁰⁰ ALM, <http://www.adaptationlearning.net/sierra-leone/profile>

³⁰¹ The mining sector is Sierra Leone's next largest productive economic resource, generating about 20 percent of the country's GDP (MTA, 2008).

- Agriculture, fishery and food security – main challenges for these sectors include inefficient land management, land erosion and reduced fishery productivity;
- Water resources – inefficient water management and current and future water shortages increase Sierra Leone’s vulnerability;
- Forests and natural resources – deforestation is a concern;
- Land erosion and human settlement;
- Coastal region – degraded coastal habitats reduce the country’s capacity to cope with sea level rise; and
- Human health.

B. National Level Policies and Strategic Documents

Sierra Leone completed its NAPA in 2008, shortly after submitting its Initial National Communication. It identifies a total of 24 priority interventions in sectors related to the country’s six vulnerable sectors (see Table 3).

Table 1: Key Government Policies and Reports reflecting Adaptation Needs, Priorities and Planned Actions

Name of Policy Action	Government Division Responsible	Status	Summary description
1. Sierra Leone’s National Communication	Government of Sierra Leone	Released in 2007	This document describes the steps Sierra Leone is taking and wants to undertake to help implement the UNFCCC. It underlines key vulnerabilities (agriculture/food security, forestry, water resources, coastal zones and resources and health) as well as potential adaptation measures.
2. National Adaptation Programmes of Action	Ministry of Transport and Aviation	Released in 2008	The NAPA identifies national and regional climate change impacts and climate change adaptation measures to address those impacts. A total of 24 priority interventions are identified.

C. Current Adaptation Action

A single on-going nationally-focused adaptation action (funded by the Least Developed Countries Fund - LDCF) has been identified to date in Sierra Leone. It is directed towards enhancing food security within the country’s rural areas and responds to priority needs identified in its NAPA. As well, Sierra Leone is one of five countries in which pilot projects will be implemented as part of the West Africa regional project “Evolution of Protected Area Systems with regard to Climatic, Institutional, Social, and Economic Conditions in the West Africa Region.”

Table 2: Current Adaptation Actions in Sierra Leone

Name	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
National Action							
1.	Integrating Adaptation to Climate Change into Agricultural Production and Food Security in Sierra Leone ³⁰²	The objective is to lessen the impact of climate change on vulnerable rural communities, as well as on natural resources critical for sustaining agricultural production and increase food security.	LDCF	Ministry of Lands, Country Planning and Environment; and Ministry of Agriculture and Food Security	Capacity building	2010 – 2015	Agriculture National
Participation in Regional and Global Projects							
2.	Evolution of Protected Area Systems with regard to Climatic, Institutional, Social, and Economic Conditions in the West Africa Region ³⁰³ (also known as <i>Climate Proofing Protected Areas in West Africa</i>)	The project will focus on developing science-based national- and regional-scale tools to support improved management of protected area systems in response to climate and other change impacts. Opportunities for transboundary collaboration will play a large part in the project activities, as these might offer some of the most effective solutions.	GEF; co-financing Budget: approx. US\$14.0 million	UNEP World Conservation Monitoring Centre	Capacity building	2009 – 2015	Biodiversity; Ecosystem conservation Regional: Core: Chad, The Gambia, Mali, Sierra Leone, and Togo Plus: Burkina Faso, Côte d'Ivoire and Ghana
<i>In Sierra Leone: to be identified</i>							

D. Proposed Adaptation Action

Through its 2008 NAPA, Sierra Leone identified a number of priority adaptation actions. The country's top priorities focus on rebuilding and strengthening its capacity to collect, monitor and use weather and climate information. Actions related to agriculture, water, nature conservation, energy, education, forestry, coastal zone management and fisheries are also highlighted.

³⁰² www.gefonline.org/projectDetailsSQL.cfm?projID=3716; and www.adaptationlearning.net/project/integrating-adaptation-climate-change-agricultural-production-and-food-security-sierra-leone.

³⁰³ http://www.unep-wcmc.org/protected_areas/cppawa.htm

Table 3: Priority projects identified in Sierra Leone's NAPA (MTA, 2008)

Name		Objectives	Project type	Priority Sector(s)	Geographic focus (if any)
1.	Develop an Early Warning System in Sierra Leone	To build the capacity of the Sierra Leone Meteorological Department to properly monitor weather systems and climate and in particular to be in a position to provide Early Warning of Imminent Hazardous Weather or Climate.	Capacity building	Disaster risk management; Government; Climate information services	National
2.	Rehabilitation and Reconstruction of Meteorological/Climate Monitoring Stations throughout the Country	To rehabilitate and improve the meteorological/climatic data collection, data analysis and storage of the country.	Field implementation	Climate information services	National
3.	Capacity Building of the Meteorological Department through the Training of Personnel for the Country's Adaptation to Climate Change	To recruit and/or train meteorological personnel at various levels in order to capacitate the Meteorological Department to support adaptation action. The expected outcome of the project is that the department would have enough meteorological personnel for climate/meteorological data collection, analyses, storage and/or dissemination to end-users.	Capacity building	Climate information services; Government	National
4.	Sensitization and Awareness Raising Campaigns on Climate Change Impacts on Women relating to the three Conventions of Biodiversity, Desertification and the UNFCCC	To make the public, especially the women and children, aware of the three conventions on climate change, desertification and biodiversity and how to work together in meeting our obligation as enshrined in these conventions.	Knowledge communication	Gender	National
5.	Development of Inland Valley Swamps for Rice Production in the Moyamba District	To increase the area under cultivation for increased rice production.	Capacity building	Agriculture	Moyamba District
6.	Development of an Integrated Natural Resources and Environmental Management Programme for Sierra Leone	To promote community based approaches in agricultural development and environmental management and to conduct a natural resources inventory and mapping of degraded areas.	Capacity building; Assessment; Policy formation and integration	Agriculture; Government	National
7.	Development of Irrigation and Drainage Systems for Agricultural Production in the Bombali District	To develop irrigation and drainage systems in the vulnerable areas of the country to increase food production.	Field implementation	Agriculture; Freshwater supply	Bombali District

Name		Objectives	Project type	Priority Sector(s)	Geographic focus (if any)
8.	Promote the Use of Renewable Energy (Solar Energy) in Sierra Leone and Improve Energy Efficiency and the Conservation of Energy Resources	For the Government, the objective is the sustainable exploitation and the efficient use of the country's renewable energy resources and power production in order to improve the quality of life of the people	Field implementation; Knowledge communication	Energy	Selected towns and villages
9.	Establishment of new Forest Reserves, Protected Areas and National Parks in Sierra Leone	To exercise legal and effective control over the un-reserved forest lands by the establishment of Protected Areas, National Parks, Sanctuaries and Forest Reserves for the conservation of the country's unique ecosystems and their biological diversity and to stem the rate of wanton destruction of the country's forest resources	Policy formation and integration; Capacity building; Field implementation	Forestry; Ecosystem conservation	National
10.	Management and Protection of Forest Reserves and Catchment areas including Wetlands	To put all catchment forests of national importance under sustainable management for water, soil and ecosystem conservation, and multiple production of forest products and services and to place all mangroves and other wetlands of national importance under sustainable management and be substantially developed.	Policy formation and integration; Capacity building	Forestry; Watershed management; Ecosystem conservation	National
11.	Institutional Strengthening of the Water Resources Sector in Sierra Leone	To build capacity in the water resources sector through institutional strengthening with a view to ensuring the effective delivery of hydrological services, predicated on the realization that workable options for adapting to climate change is consistent with collaborative research, monitoring, and efficient management of our finite resources.	Capacity building	Freshwater supply	National
12.	Improvement of Energy Efficiency and Conservation to Reduce Dependence on Firewood and Charcoal	To maximize the use of water resources for sustainable development by ensuring the efficient functioning of existing urban and rural water supply systems.	Capacity building; Field implementation	Freshwater supply	National
13.	Promotion of Rain Water Harvesting and Development of an Integrated Management System for Fresh Water Bodies	To increase water availability for domestic and commercial use through sensitization of communities about the possibility of capturing, storing and utilizing rainwater.	Knowledge communication	Freshwater supply	National
14.	Development of an Integrated Coastal Zone Management Plan for Sierra Leone	To delineate flood and erosion hazard areas; to improve the quality of topographic data; to assemble stakeholders, data and information on current understanding of coastal processes in the country.	Research; Policy formation and integration	Coastal zone management; Government	National

Name		Objectives	Project type	Priority Sector(s)	Geographic focus (if any)
15.	Rehabilitation of Degraded Coastal Habitats in the Northern Region of Sierra Leone	To restore the ecological integrity and productivity of coastal habitats; to restore source of livelihood for coastal dwellers; and to ensure proper management of coastal habitats	Knowledge communication; Research	Coastal zone management	Northern Region
16.	Development and Enactment of Appropriate policies and Regulations Relevant to the Development of Coastal Communities, Urban Growth Planning, and Critical Coastal Ecosystems Preservation	To development appropriate policies and regulations for planning growth and development of coastal community's critical coastal ecosystems preservation.	Policy formation and integration	Coastal zone management; Urban areas	National
17.	Establishment of a National Sea-Level Observing System for Sierra Leone	To have an operational permanent sea-level observing station for reporting monthly main averages to the national marine meteorological service; and to collect, analyze and make available data products for practical and/or scientific applications.	Research; Assessment	Climate information services	National
18.	Permanent Study Programme of the Multi Species Fisheries	To improve knowledge about the biology of the multi-species marine fisheries and to generate data.	Research; Capacity building	Marine Fisheries	National
19.	Delineation and Restoration of Vulnerable Habitats and Ecosystems in the Western Area of Sierra Leone	To prevent or reduce the destruction of vulnerable fishing habitats and to reduce the possibility of the decline of fishery productivity	Research; Capacity building	Fisheries	Western Area of Sierra Leone
20.	Improvement in the Quality on Fisheries Related Data and Research	To improve on the quality of data and research for better understanding of the different types of ecosystems.	Research	Fisheries	National
21.	Monitoring and Control of Malaria in the Moyamba District of Sierra Leone	To prevent and/or reduce malaria infection of vulnerable groups of Moyamba District's population; and to increase the access of the population to insecticide treated bed-nets.	Knowledge communication; Field implementation	Human health	Moyamba District
22.	Development of Appropriate Water and Sanitation Program Activities in the Slum Areas of the Western Area of Sierra Leone	To improve the existing unsanitary conditions and develop appropriate water and sanitation projects.	Knowledge communication; Field implementation	Urban areas; Waste management; Freshwater supply	Western Area
23.	Monitoring and Control of HIV/AIDS Prevention Activities in the Koinadugu District of Sierra Leone	To galvanize support for HIV/AIDS prevention activities; to improve the community's capability to control and prevent HIV/AIDS; and to reduce climate change related stress on HIV/AIDS control and	Capacity building	Human health	Koinadugu district

Name		Objectives	Project type	Priority Sector(s)	Geographic focus (if any)
		prevention activities.			
24.	Monitoring, Evaluation and Control of Water and Sanitation Activities in Slum Areas of Freetown	To improve existing unsanitary conditions and develop appropriate water and sanitation projects for urban slums in Freetown.	Knowledge communication; Field implementation	Urban areas; Waste management; Freshwater supply	Freetown

E. Assessment

Sierra Leone’s NAPA lists 24 small-scale adaptation actions in various vulnerable sectors. While aiming for more harmonized national action, the diverse adaptation priorities identified by Sierra Leone in its NAPA are oriented toward concrete action, specifically in regards to building response capacities and adapting infrastructure. Although only two of the priority projects identified in Sierra Leone’s NAPA focus on agriculture, its first LDCF funded project, “Integrating Adaptation to Climate Change into Agricultural Production and Food Security in Sierra Leone” addresses this key source of vulnerability. Its participation in the regional project “Evolution of Protected Area Systems with regard to Climatic, Institutional, Social, and Economic Conditions in the West Africa Region” should also assist it in addressing two of its priority needs related to the establishment and maintenance of protected areas.

A clear gap in the adaptation action taking place in Sierra Leone is the absence of projects that contribute to the building of meteorological capacity, which constitutes the objective of its first three NAPA projects. As a result the need for early warning systems remains unaddressed in Sierra Leone. Several priorities identified in the freshwater and fisheries sectors, as well as in relation to gender based programming, remain unaddressed as well.

References:

Government of Sierra Leone. (2007). Sierra Leone’s First National Communication. Retrieved from <http://unfccc.int/resource/docs/natc/slenc1.pdf>

Least Developed Countries Fund [LDCF] (2008). Project Identification Form: Integrating Adaptation to Climate Change into Agricultural Production and Food Security in Sierra Leone. Retrieved from



[http://207.190.239.143/uploadedFiles/Focal_Areas/Climate_Change_\(PDF_DOC\)/LDCF1/Sierra%20Leone_08-28-08_Integrating_Adaptation_CC_into_Agric_Prod_PIF.pdf](http://207.190.239.143/uploadedFiles/Focal_Areas/Climate_Change_(PDF_DOC)/LDCF1/Sierra%20Leone_08-28-08_Integrating_Adaptation_CC_into_Agric_Prod_PIF.pdf)

Ministry of Transport and Aviation [MTA] (2008). Sierra Leone's National Adaptation Programme of Action. Retrieved from <http://unfccc.int/resource/docs/napa/sle01.pdf>