



LIBERIA

Enhancing Resilience of Vulnerable Coastal Areas to Climate Change Risks in Liberia

| LEAST DEVELOPED COUNTRIES FUND | |
|--|---|
| LDCF grant | \$3,300,000 |
| Cofinancing | \$3,000,000 |
| NAPA completion | July 2007 |
| Inclusion in LDCF Work Program | March 2009 |
| Expected CEO endorsement | March 2010 |
| Expected implementation start and completion | June 2010–June 2014 |
| GEF Agency | United Nations Development Programme (UNDP) |
| Other executing partner | Environment Protection Agency (EPA) |

Liberia is a country of huge resource potential, richly varied geography, and tremendous human capability. As it emerges from recent civil war, Liberia has made significant development strides in promoting sustainable development policies, engaging in international environmental processes, and seeking to strengthen its human and institutional capacity. However, climatic risks pose a serious challenge to its emerging development priorities, with the potential to undermine development prospects and attainment of the Millennium Development Goals (MDGs). The National Adaptation Programme of Action (NAPA) identified vulnerability of coastal zones to climate change as a priority area for intervention through the LDCF. Most of Liberia's population live in close proximity to the coast and will experience serious consequences from sea-level rise (SLR).

According to the Liberian Environment Protection Agency, it is projected that about 95 km² of land in the coastal zone of Liberia will be inundated as a result of a 1-meter SLR (scenario B2), and about 50 percent, 48 km², of the total land loss due to inundation will be the sheltered coast. Three of Liberia's main coastal cities are at immediate risk

from climate change-induced SLR. With a 1-meter SLR, parts of the capital city of Monrovia and its environs, including West Point and New Kru Town and River Cess, Buchanan, and Robertsport cities, would be submerged and about US\$250 million worth of land and infrastructure would be lost. Inundation would be followed by shoreline retreat that would vary along the coast from 10 meters in the higher cliffed zone between Mamba Point and Sinkor, to about 20 meters in the lowlands on the Bushrod Island. Key economic sectors are clearly under threat from accelerated SLR, and displacement of people from Monrovia and Buchanan, important cities for the economic growth and development, is already increasing.

Furthermore, climate change projections for the year 2050 suggest that SLR will intensify the abrasive effects of residual currents. The plains are increasingly exposed to saline intrusion and acidification, causing significant degradation. Recent observations clearly corroborate these long-term trends: soil productivity has suffered a marked decrease, resulting in significantly decreased incomes for communities in the area.



Coastal settlements and economies of Liberia are extremely vulnerable to the projected impacts of SLR. Besides the additional pressures resulting from climate changes, the major root causes for the growing vulnerability of coastal areas include: (a) uncontrolled and unplanned urbanization along the coast, aggravated by domestic migrations resulting from the civil war; (b) unsustainable agricultural practices leading to clearing of mangroves and degradation of coastal vegetation systems; (c) sand mining; and (d) oil pollution and illegal solid and sewage wastes dumps. These non-climate-driven pressures result in reduction of natural buffering functions of coastal zones and dangerously limit their capacity to adapt to emerging threats.

Project Activities and Expected Impacts

To tackle this challenge, the required solution in Liberia is to promote a national adaptation process that generates a paradigm shift and support a climate-resilient coastal management regime. This new adaptive system is characterized by adapted systemic and institutional frameworks governing coastal development and Integrated Coastal Zone Management (ICZM); adoption of coastal management practices more consistent with the threats from SLR; increased information flows on climate change, including variability, between producers and users; strengthened abilities to design and implement early adaptation actions and long-term resilience plans; and well-managed and disseminated adaptation knowledge and lessons to stimulate a sector-wide change toward resilience.

Liberia's NAPA prioritized a number of urgent interventions to remove the barriers that hinder the country from implementing climate-resilient ICZM and pilot measures in priority coastal cities. Drawing on the methodology outlined in the Adaptation Policy Framework, the proposed project covers a significant part of the additional costs associated with enhancing Liberia's resilience and reducing vulnerability to climate change impacts in coastal regions, as well as incorporating climate change risks into national development programs. Contributions toward the reduction of vulnerabilities to climate change are achieved through the pursuit of specific outcomes, including: (a) integrating concerns into policies and planning processes at the state and national levels, (b) implementation of risk reduction strategies and measures at pilot sites, (c) strengthening technical capacity to integrate climate risks into management of coastal regions, and (d) capturing and disseminating lessons learned to key stakeholders.

Expected adaptation benefits include strengthening of technical capacities in key sectors, development of social and organizational capacity, and general awareness about the adverse impact of climate change. The project also promotes a programmatic approach to adaptation planning among various stakeholders, development partners, and donors, and facilitates the mainstreaming of climate risk reduction into planning frameworks, policies, and programs in Liberia, with an emphasis on such measures in vulnerable coastal areas. In the face of climate change and Liberia's subsequent adaptation to its adverse impacts, the project also supports future scaling up and replication, and identifies possible investment opportunities for adaptation. Finally, the project is catalytic in fostering a broader programmatic adaptation framework in Liberia.

Synergies and Coordination

The project elaborates on the current efforts of the National Disaster Relief Commission. With support from the UNDP/Bureau of Crisis Prevention and Recovery (UNDP/BCPR), drafting of a national disaster relief policy and provision of emergency relief to victims of floods in coastal communities are ongoing.

Additionally, the project closely collaborates with and builds on the baseline of the following national initiatives:

- **Guinea Current Large Marine Ecosystem (GCLME).** The project *Combating Living Resources Depletion and Coastal Area Degradation in the Guinea Current Large Marine Ecosystem (GCLME) through Ecosystem-Based Regional Actions* has a primary focus on the priority problems leading to unsustainable use of fisheries and other marine resources and the degradation of marine and coastal ecosystems by human activities;
- **UNDP-UNEP Poverty and Environment Initiative (PEI).** The overall goal of this initiative is to contribute to poverty reduction and improved well-being of poor and vulnerable groups. Through UNDP, Liberia intends to tap into this initiative by piloting projects that enhance environmental sustainability;
- **United Nations Military Mission Beach Erosion Assessment.** The project intends to carry out a comprehensive assessment of the coastline of Liberia in collaboration with the relevant national institutions, and prepare an Integrated Coastal Area Management Plan (ICAMP) for Liberia.

For More Information

Global Environment Facility
1818 H Street NW
Washington DC 20433 USA

Tel: 202-473-0508
Fax: 202-522-3240

August 2009
www.theGEF.org