



HAITI

Strengthening Adaptive Capacities to Address Climate Change Threats on Sustainable Development Strategies for Coastal Communities

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GEF Agency	United Nations Development Programme (UNDP)
Other executing partner	Ministry of Environment

Growing scientific evidence shows that new climate trends and new climate risks patterns are now emerging in Haiti as a result of global warming. Both the Initial National Communication (INC) to the United Nations Framework Convention on Climate Change (UNFCCC) and the National Adaptation Programme of Action (NAPA) established that the annual average temperature across the country is expected to rise in the range of 0.8°C to 1°C by 2030 and in the range of 1.5°C to 1.7°C by 2060. It is predicted that these changes will be accompanied by increasing rainfall variability, decrease in precipitation in the range of -5.9 to -20 percent by 2030, and increased frequency and intensity of extreme floods and droughts.

Haitian observations tend to confirm these scientific findings: people report dry seasons lasting longer and rainy seasons less, but they are more intense. Anticipated increases in sea levels and sea surface temperatures are also likely to be primary causes for increased beach erosion, salinization of fresh water aquifers and estuaries, coastal erosion, and increased coral reef bleaching throughout the island. There is a trend suggesting increased frequencies of hurricanes, to which the southern peninsula is especially vulnerable. The impacts of these climatic changes pose a direct threat to the island's tightly populated coastal settlements and their

economies. The densely populated slum districts of Haiti's coastal cities are located to a large degree in flood plains, rendering the poorest even more vulnerable to catastrophic hydrometeorological events.

While current climate change exerts indisputable pressures on Haiti's coastal areas, a number of non-climate-driven problems seriously increase the vulnerability of low-elevation coastal zones (LECZs) to climate hazards and limit their capacity to adapt. The main immediate threats to Haiti's coastal systems include uncontrolled and unplanned urbanization along the coast, boosted by rapid population growth and booming rural migration; unsustainable farming practices, such as overgrazing, overpumping of coastal aquifers, and clearing of mangroves for agriculture and charcoal production; and pollution of coastal water bodies and ecosystems due to suboptimal or nonexistent urban waste and wastewater treatment systems. The effect of these pressures leads to loss of natural coastal buffer zones and exacerbates exposure to climate change and sea level rise (SLR) impacts. Combined with current baseline stressors on LECZs, climate change effects are likely to hamper attainment of Millennium Development Goals and national development objectives in Haiti if risk reduction responses are not put into motion.



To address these challenges, the sustainable solution for Haiti is to establish a national system that can support the process of adaptation of the coastal development sector in a continuous and sustainable way, and that can address both climate-driven and baseline problems in an integrated manner. However, several barriers exist today that prevent Haiti from achieving the above solution, including inadequate planning and technical environments, which impede promotion of climate risk management in the coastal development sector; insufficient institutional capacities and donor coordination, which limit opportunities to identify and channel adaptation resources in relation to needs; and inappropriate coastal development practices that do not account for climate change and potentially increase coastal areas' vulnerability to emerging climate risks and disasters.

Project Activities and Expected Impacts

The LDCF project aims to overcome these barriers and to strengthen the adaptive capacity of populations and productive sectors in coastal areas to address increasing climate change risks. This includes three basic project activities: (a) improving institutional capacity to plan for and respond to increasing coastal hazards, (b) mainstreaming climate risks into existing humanitarian and development investment frameworks, and (c) local pilot activities to demonstrate how to enhance climate change resilience in the LECZs.

First, the project fosters a policy shift from reactive crisis management to proactive risk management. LDCF funding is used to train policy makers and key technical staff, and help them incorporate climate hazards into coastal zone planning. Furthermore, the project informs climate change–considerate legislation for the management of coastal areas and facilitates alignment of existing coastal management programs with a view toward stronger integration and climate resilience.

Construction and development standards are also reviewed and upgraded so that key features of climate impacts in Haiti are incorporated into the design of coastal infrastructure and equipment, and adaptation requirements for the LECZ are properly incorporated into the design of the new Environmental Information System for Haiti. Furthermore, it strengthens institutional set-ups and mechanisms to adapt to anticipated climate change impacts, and ensure that information flows are improved among climate monitoring, forecasting, and early-warning services to municipalities and communities in high-risk coastal areas. Disaster prevention, rescue and early recovery measures, and plans are also upgraded to take into account the additional risks induced by climate change.

Second, the project helps make the costs of climate change on human development in LECZ more explicit in order to mobilize the donor community and stimulate the creation of a National Adaptation Coalition. More specifically, a Multi-Donor Programmatic Partnership for Climate Risk Management (CRM) is put in place, including a package of interventions

to address climate change risks and policy, regulatory and institutional reforms, and capacity building. Investments are to be executed and funded in a coordinated way, from a variety of sources, including national budgets, bilateral development cooperation agreements, country assistance programs of multilateral agencies, and private foundations.

Finally, the project implements a suite of specific community-based adaptation measures to demonstrate how to withstand the impacts of extreme weather events like hurricanes and floods as well as increased erosion, submersion, and salinization caused by SLR. New risks assessment procedures and zoning regulations are tested in order to align municipal planning processes with emerging coastal hazards and shoreline changes. The project also produces and implements shoreline management plans in selected high-risk areas so as to ensure climate resilience of current coastal development processes and provide a cohesive framework for carrying out coastal adaptation activities at the field level. Specific attention is paid to the maintenance of "buffer zones" in the LECZ, through the protection and restoration of natural coastal defenses, such as mangroves and sand beaches systems, by using environmentally friendly technologies and sustainable land management methods.

Additionally, the project pays particular attention to the development of suitable systems to secure sources of potable water for coastal communities prone to saline intrusion resulting from accelerated SLR and more frequent flooding. Innovative coping mechanisms such as rainwater harvesting, micro surface and ground water recharge, and treatment facilities are piloted and demonstrated for scaling up over time and in future projects. It is expected that the results achieved through the pilot activities feed into the process of institutional strengthening of key central agencies by providing concrete examples and field guidelines for the development of climate-proofed investment plans and long-term development policies.

Synergies and Coordination

This project concept has been discussed with different actors of the government of Haiti, such as the Ministries of Environment, Interior, and Planning and External Cooperation. The project closely interacts with the following programs currently under implementation: The World Bank *Emergency Recovery and Disaster Management Project*, European Union *Local Capacity Building for Better Risks Management*, Inter-American Development Bank *National Programme for Early Flood Warning*, UNDP *Strengthening of the National Disasters Risks Management System and Environmental Management Support Programme*, French Agency for Development, AFD *Flood Management Programme in Jacmel's Municipality*, Spanish Agency for International Cooperation, AECI *Integrated Watershed Management in the South-East Provinces*, and Ministry of the Environment/Inter-American Development Bank *Enhancing Environmental Management Capacities in National Institutions*.

For More Information

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