



RWANDA

Reducing Vulnerability to Climate Change by Establishing Early-Warning and Disaster Preparedness Systems and Support for Integrated Watershed Management in Flood-Prone Areas

LEAST DEVELOPED COUNTRIES FUND

| | |
|--|---|
| LDCF grant | \$3,641,000 |
| Cofinancing | \$3,400,000 |
| NAPA completion | May 2007 |
| Inclusion in LDCF Work Program | February 2009 |
| Expected CEO endorsement | October 2009 |
| Expected implementation start and completion | December 2010–December 2013 |
| GEF Agency | United Nations Environmental Programme/United Nations Development Programme (UNEP/UNDP) |
| Other executing partner | Ministry of Natural Resources |

Rwanda is characterized by a mountainous landscape and ecosystems particularly vulnerable to climate change. A north-south mountain chain forms part of the divide between the Nile and Congo watersheds, two of Africa's largest. The Congo basin is made up of short waterways leading to Lake Kivu, and the Nile basin covers almost all the country. Most of the rivers start from the slopes of the crest known as the Gishwati ecosystem. Its ecology is very dynamic and complex, and the lakes and rivers constantly change their size and shape according to rainfall and river flow. Rains can be very heavy, sometimes causing violent floods.

The Gishwati region is experiencing irregular and unpredictable rainfall. The analysis of climate data,

undertaken during the National Adaptation Programme of Action (NAPA) preparation and based on the Initial National Communication (INC), shows that the period between 1991 and 2000 was the driest since 1961. At the same time, excess rainfall has led to significant economic, environmental, and social damage, including population displacement. The analysis of rainy seasons shows a progressive tendency for short rainy seasons accompanied by decreases in agricultural production. Variations of standardized absolute maximum temperatures in Kigali are alarming.

Rainfall is particularly important as rain-fed agriculture dominates food and cash crop production in Rwanda;



many of the poorest and most vulnerable communities depend on rain for their livelihoods. Rainfall variability both within and between seasons is a fundamental factor that creates production uncertainty. This is a priority NAPA project due to its direct relationship to poverty reduction goals, food security, and observed climate changes. It aims at reducing both the vulnerability of the Gishwati ecosystem and the Nile-Congo watersheds, while positively affecting food security, health conditions through better nutritional status, and environmental sustainability.

Project Activities and Expected Impacts

Climate risk assessment and forecasting: The project increases coordination, collection, and analysis of data. Focus is on strengthening the current information infrastructure for sound scientific analysis of trends in climate change and its socioeconomic impacts, and thus increasing the capacity of communities and institutions to adapt. Benefits are derived from a range of innovative climate-based analytical tools and software that allow for a far greater understanding of the temporal and spatial agricultural implications of short- and long-term climatic variability and thus allow stakeholders to develop tailored climate risk management strategies.

Climate change adaptation planning and response strategies: Focus is on correcting the underdeveloped response mechanism of the Rwandese early-warning system. Improved information is provided in appropriate formats to policy makers and communities. Activities aim at promoting the use of robust science for the formulation of adaptation strategies in the present and future. An early-warning and response approach is used to increase capacity to identify, predict, and, most important, respond promptly to long-term droughts and floods and also to sudden and damaging climate events, which have begun to increase. Capacity increase is also developed for climate-resilient decision making from the national to the local levels.

Demonstrations of adaptation practices in the Nile-Congo crest watersheds and Gishwati ecosystem: Restoration of the ecosystem on which the communities' economic activities heavily depend through short-term measures to address immediate

risks, including the reversal of maladaptive practices and the application of selected agricultural techniques that contribute to improved integrated catchment management practices aimed at restoring the natural buffering capacity. Medium- to long-term measures aim to build both human resources and institutional adaptive capacities to sustain project impacts: (a) design and implementation of a capacity development program to equip communities with necessary knowledge and skills, and (b) establishment of an institutional framework at a watershed level where adaptation solutions can be negotiated among different stakeholder groups. The framework is integrated into the regional development and land-use planning.

Knowledge management, public awareness, and dissemination of lessons learned and best practices: Local and national knowledge on adaptation is developed. This component is designed to ensure that adaptation efforts demonstrated through this project can be sustained and replicated through greater public and private engagement, involvement, and knowledge on good practices. Lessons are shared through the Adaptation Learning Mechanism (ALM) Web platform.

Synergies and Coordination

The project is harmonized with the One UN pilot initiative in Rwanda, which brings the UN agencies together and covers specific outputs under the United Nations Development Assistance Framework (UNDAF) Result 4 *Management of environment, natural resources, and land is improved in a sustainable way*. This work is jointly supported by United Nations Environment Programme (UNEP) and UNDP, among other agencies, and can become another flagship case of achieving synergy effects by One UN.

The project can also identify synergies with a GEF project *Building Capacity for Sustainable Land Use and Management in Rwanda* and a UNEP managed GEF Strategic Priority on Adaptation (SPA) project *Integrating Vulnerability and Adaptation into National Development Policy and Planning in Southern and Eastern Africa*. Outputs of these projects can reinforce each other to establish an effective land management system against land degradation and climate change impacts.

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