# THE GAMBIA

## Strengthening of the Gambia's Climate Change Early-Warning Systems

| LEAST DEVELOPED COUNTRIES FUND | |
|---|---|
| LDCF grant | $1,056,000 |
| Cofinancing | $2,015,000 |
| NAPA completion | January 2008 |
| PIF clearance | August 2008 |
| Expected CEO approval | November 2009 |
| Expected implementation start and completion | December 2009–October 2011 |
| GEF Agency | United Nations Environment Programme (UNEP) |
| Other executing partner | Department of State for Fisheries and Water Resources |

From the late 1960s to the present, The Gambia has experienced the impacts of climate change as a negative trend in rainfall, which has placed tremendous pressure on natural resources and ecosystems. Observations also show changes to spatial patterns and temporal changes in rainfall in the last 60 years, including increased frequency of heavy rainfall above 50 mm/day, and a record number of lowest and highest rainfall years. Most of the current trends in rainfall are expected to continue for the coming decades, making The Gambia highly vulnerable to flooding and drought disasters.

The need to strengthen early-warning systems for extreme events by integrating climate change information applications has been clearly demonstrated in The Gambia. Climate information ranging from seasonal forecasts to longer-term climate change projections need to be coupled with baseline social, ecological, and economic information that indicate vulnerabilities in key sectors. Climate information is required, for instance, to monitor and respond to climate-influenced diseases and health problems, design drainage infrastructure, and support land-use planning, for example, to help farmers anticipate adverse climate conditions before the onset of planting seasons.

### Project Activities and Expected Impacts

While The Gambia has already implemented some measures and policies for early warning and

disaster prevention, they do not adequately address the consequences of climate change. Furthermore, effective people-centered and climate change-adjusted early-warning systems require risk knowledge, monitoring and warning services, dissemination and communication, and response capability. The Gambia's capacity gaps are apparent in each of these areas.

This project, therefore, strengthens the foundations for effectively monitoring, communicating, and responding to climate-related risks. This effort includes both urgent and immediate needs for addressing climate variability as well as longer-term capacities to respond to future climate changes. The project is structured around three components that address the four elements of effective people-centered early-warning systems mentioned above.

Responding to the inadequacy of the existing hydrological and meteorological networks in providing sufficient high-quality data for a fully operating early-warning system, the first component addresses additional capacity needs necessary to operate a national early-warning system. This includes training of senior-level hydrological and meteorological personnel to develop the skill sets necessary for data analysis and transformation into early-warning information; upgrading the capacity of hydrological and meteorological networks, for example, new/upgraded hard- and software; maintaining archives, including quality control and digitization of historical data; obtaining systematic social and environmental data for vulnerability analysis; and securing institutional mandates for collection and analysis of vulnerability data.

The second component addresses the fact that people often fail to heed warnings from early-warning systems since the warnings do not address their values, interests, and needs. Messages are often insufficiently targeted to the users and do not reflect an understanding of the decisions stakeholders need to make to respond to the warning. Individuals may perceive the warning as irrelevant or find it impossible to heed, for example, because they are reluctant to abandon the assets upon which livelihoods such as livestock depend, or that have personal importance such as belongings. Furthermore, most warnings are delivered to the whole population through the media and are not tailored to the needs of individual groups. Through project funding, professionals in weather, climate, and hydrology are trained to produce information products to meet the planning and operational needs of the various user groups in the country, thereby ensuring that urgent warning information goes the "last mile" to reach all vulnerable populations in a timely manner. Also, capacity-building sessions on the production and interpretation of weather, climate, and hydrological information are held with the various user groups in order to ensure understanding and use of the information. Appropriate and effective means of disseminating the various information products to the various user groups are also developed and implemented through a number of concrete demonstration activities.

The third component reinforces existing regulations and laws, and builds institutional capacity to manage climate risks and factor these in to planning and zoning decisions. This is achieved by systematically reviewing relevant policies for climate sensitivity and subsequently revising them to factor in climate change adaptation needs.

### Synergies and Coordination

The project draws on lessons, tools, and climate predictions from a number of recent regional assessments, including: Development of Regional Climate Change Scenarios for Sub-Saharan Africa, Assessing Global and Regional Climate Change Scenarios for West Africa, and Capacity Building in Analytical Tools for Estimating and Comparing Costs and Benefits of Adaptation Projects in Africa. Furthermore, the project coordinates its activities with work done under the UN Inter-Agency Working Group for Disaster Reduction, established in 2005.

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