



COMOROS

Adapting Water Resource Management in Comoros to Increase Capacity to Cope with Climate Change

| LEAST DEVELOPED COUNTRIES FUND | |
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| LDCF grant | \$3,850,000 |
| Cofinancing | \$5,600,000 |
| NAPA completion | November 2006 |
| Inclusion in LDCF Work Program | June 2009 |
| Expected CEO endorsement | April 2010 |
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| GEF Agency | United Nations Development Programme (UNDP) |
| Other executing partner | National Direction of Environment and Forests, Ministry of Agriculture, Fisheries and Environment |

Comoros comprises three islands in the Indian Ocean: Grand Comoros, Anjouan, and Moheli. It is a Highly Indebted Poor Country (HIPC), ranking 136 of 177 in the Human Development Index (HDI) in 2004. The natural resource–related sectors of agriculture, fisheries, forestry, and sand and coral mining contributed nearly half of the GDP in 2004; the remainder came from remittances, construction, and small-scale industry and commerce. Between 70 and 80 percent of the population engages in subsistence farming, and agriculture, e.g., vanilla, ylang ylang, and cloves, generates 98 percent of export revenue. At present, national agriculture production accounts for only 40 percent of the country’s food needs, the remainder of which is imported. With population growth outpacing economic growth, the government struggles to provide basic social services and must cope with a chronic deficit. Most of the Millennium Development Goals (MDGs) are off track.

Comoros is already facing the effects of climate change. Comoros’s National Adaptation Programme of Action (NAPA) reports a rise in annual temperatures of about 1 degree Celsius over the past 30 years and a shortening of the rainy season from six months to two to three months. Over this same period of time, the frequency of cyclones has increased, inflicting serious economic and human costs. The Intergovernmental Panel on Climate Change (IPCC) estimates sea-level rise at about 4 mm a year. At the same time, the mining of sand, gravel, and coral is leading to extensive coastal erosion. In the past 20 years, 90 percent of the beaches have disappeared on Grand Comoros, increasing the island’s vulnerability to sea-level rise.

Water resource management presents a serious challenge to the government. Both changes in temperature and rainfall patterns, such as prolonged dry seasons, affect the quantity and distribution of water resources. Water quality is also a serious



problem in Comoros. Along the coast, a projected 20-cm rise in sea level by 2050 is likely to produce increasing levels of saline intrusion in coastal aquifers, which will particularly impact Grand Comoros, where coastal boreholes are the only source of water. On the island of Anjouan and Moheli, rivers are the only source of water supply. As temperatures rise and rainfall run-off into rivers fall, water quality on the two islands will become significantly compromised.

Project Activities and Expected Impacts

The objective of the LDCF project in Comoros is to reduce the risk of climate change on lives and livelihoods from impacts on water resources. Building on the NAPA assessment and the Second National Communication, begun in early 2008, the project addresses the country's vulnerability to climate change by focusing on the project site and capacity building. This is important, as institutionalizing the ability to monitor climate change assures greater sustainability by creating the ability to continue to understand ongoing changes to climate.

The project includes the following three components:

Component 1. *Support institutional development to integrate climate change into water resource management:* Capacity development like knowledge development, training, and equipment is needed for stakeholders such as the institutions in charge of water management, community structures involved with water resource management, and the national water supply company. In the project planning phase, a rapid needs assessment is conducted in order to develop a capacity development plan based on priority needs. A coordinated cross-government policy process is strengthened to consider changes needed to water management policy and regulatory and fiscal instruments to manage the effects of climate change. These efforts build upon existing plans to develop a Sustainable Development Commission and Water Management Policy, supported by the UNDP. Project results are analyzed through this coordinated policy process for their implications on national water and adaptation policies.

Component 2. *Demonstration of pilot water interventions that can mitigate climate change risk, targeted to vulnerable communities:* This component focuses on technologies to improve water access and quality that simultaneously mitigate climate change,

such as soil conservation measures, water harvesting, and remedial work on existing boreholes. An Integrated Water Resource Management (IWRM) plan is followed. This approach is particularly important in Comoros, where, because of the country's small size, fresh and saline water sources must be managed in a coherent way. Lessons learned on the cost-effectiveness and sustainability of the measures undertaken inform the work undertaken in Components 1 and 3.

Component 3. *Development of knowledge products to communicate results to policy makers and the international community:* Knowledge products are developed on lessons learned for policy makers, communities, and donors, and a national knowledge platform is developed to retain and facilitate learning from project implementation. The project also contributes learning from the Comorian experience to the Adaptation Learning Mechanism (ALM) and IW Learn, in particular on the question of adaptation financing needs and on efficient ways of allocating public financing into adaptation.

The most significant barriers to ensuring climate change-sensitive water management policy and investments are the scarcity of baseline data, the inability or near inability of the general populations and the government to pay for water provision, underdeveloped regulations and policy instruments at the national and island level, and low levels of human capacity to implement these policies. The project addresses these constraints by working in a complementary manner to baseline investments made by the UNDP and the GEF in the area of water resource management.

Synergies and Coordination

Project activities are linked to number of initiatives currently underway or planned in Comoros, including an African Development Bank (AfDB) project addressing water supply concerns; a United Nations Environment Programme (UNEP) programme Preparing for the threat of Sea Level Rise and Adapting to Water Stress with activities in Comoros; a French Development Agency (AFD) project to map underground hydrological resources on the three islands; a UNDP/Bureau of Crisis Prevention and Recovery integrating climate risk management into disaster risk reduction policy; and a GEF SIDS Integrated Water Resource Management (IWRM) project, which provides support for developing an IWRM plan in Comoros.

For More Information

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