



VANUATU

Increasing Resilience to Climate Change and Natural Hazards

LEAST DEVELOPED COUNTRIES FUND	
LDCF grant	\$3,000,000
Cofinancing	\$3,210,000
NAPA completion	December 2007
Inclusion in LDCF Work Program	November 2008
CEO endorsement	November 2009
Implementation start and completion	February 2010–December 2014
GEF Agency	The World Bank
Other executing partner	Vanuatu Meteorological Service

Vanuatu comprises about 80 islands with a land area of 12,336 sq. km spread over 1,300 km from north to south in the western Pacific Ocean. It is located in the “ring of fire” and the “cyclone belt” of the Pacific. Its archipelagic characteristics, together with limited financial and technical capacity, make it extremely vulnerable to a range of natural hazards. Since 1939, Vanuatu has experienced 124 tropical cyclones, 45 of which carried hurricane-force winds. Cyclones typically occur during the warmer months between November and April, but Cyclone Rita in May 1991 and Cyclone Gina in June 2002 occurred out of season.

Vanuatu is also affected by the cycles of El Niño, which brings changes in precipitation patterns associated with increased mean temperatures leading to drought, and La Niña, which brings increased rainfall. Of the 111 countries on the Commonwealth Vulnerability Index (CVI), Vanuatu is ranked the most vulnerable. Climate scenario models and historical trends suggest warmer and drier conditions in the future in much of Vanuatu, although some parts of the country may receive more rainfall due to the greater frequency of tropical depressions and storms likely to develop around the islands. Cyclones are also likely to become more intense and frequent. El Niño-type conditions associated with prolonged dry seasons may become more frequent.

The country’s vulnerability is further heightened by a number of socioeconomic factors. The economic base is narrow, comprising a large subsistence agriculture sector and a small monetized sector. Some 65 percent of GDP comes from small-scale agriculture, with the balance coming from fishing, offshore financial services, and tourism, which is becoming the main foreign exchange earner. The domestic market for agricultural products is limited. About 80 percent of the population is rural and depends on agriculture, although productivity is quite low.

Climate change is likely to impact all sectors, especially agriculture, water, coastal and marine resources, infrastructure, and tourism. Agriculture is entirely rain-fed and is susceptible to changes in rainfall distribution. Intense and prolonged rainfall could damage seedlings, result in greater run-off and soil erosion, and encourage conditions that promote pests and diseases. Drought combined with higher temperatures could increase thermal stress on plants. Projected increases in sea surface temperatures and increased ocean acidification are likely to put pressures on the marine food chain, particularly reef systems and other calcifying organisms such as planktons. Livelihoods associated with these marine food chains will be negatively impacted. The incidence of vector-borne diseases such as malaria and dengue fever,



and water-borne diseases such as dysentery and diarrhea, are likely to increase and shift in distribution.

Project Activities and Expected Impacts

There is a high level of awareness among key stakeholders in Vanuatu of the above-described risks. Vanuatu is the only Pacific Island Country to have completed both a National Adaptation Programme of Action (NAPA) and a National Action Plan (NAP) for Disaster Risk Reduction (DRR). A recent Global Fund for Disaster Risk Reduction (GFDRR) stock-taking exercise, built on the NAPA and the NAP, also identified the relevance of the links among climate change adaptation, and disaster risk reduction for the Pacific Islands. Furthermore, the government is committed to following through on the Hyogo Framework to integrate the management of climate change adaptation and disaster risk reduction. Additionally, there is a commitment to merge the National Advisory Committee on Climate Change (NACCC) and the National Disaster Management Committee (NDMC). The Vanuatu LDCF project is designed to be consistent with the strategies above and to (a) address the main climate and weather related hazards facing Vanuatu; (b) address immediate priorities already identified through the NAPA, NAP, and other consultation processes, such as the GFDRR stock-take; (c) support the country's sustainable development priorities; (d) take account of the existing and potential capacity for implementation; and (e) increase the likelihood of achieving results.

The overarching goal of this project, which is cofinanced by the European Commission (EC), is to mainstream climate change adaptation and climate-related disaster risk reduction into core aspects of the Vanuatu economy and resource management systems through the following components:

Component 1. Mainstreaming climate change adaptation (CCA) and DRR at national, provincial, and community levels: Activities include incorporating CCA and DRR into policy, planning, fiscal, and budgetary processes at all three levels; increasing awareness and education to foster links among national, provincial, and community levels of governance on CCA and DRR; strengthening the integration of CCA and DRR at the institutional level; and improving organizational arrangements.

Component 2. Strengthening capacity in data analysis, mapping, and vulnerability assessments: The main activities include strengthening and applying capacity in the capture and analysis of geophysical, hydrological, and climate-related data; hazard risk mapping; climate forecasting and dissemination; and vulnerability assessments.

Component 3. Implementing climate resilience measures in targeted sectors: The indicative list of actions is consistent with addressing the "ridge to reef" characteristics of small island ecology: linking to the threatened livelihoods of vulnerable communities, scaling up successful practices, and highlighting the importance of the issues to the economy and the likelihood of success. The activities include enhanced resilience of watersheds through integrated water resource management; increasing adaptive capacity of coastal communities, especially related to water security; building capacity for mainstreaming DRR and CCA in land-use policies, plans, and regulations in support of the Ministry of Lands; enhancing climate and disaster risk management in the tourism sector by preparing hazard risk profiles for a range of existing tourism facilities in vulnerable areas, developing guidelines for the tourism sector for future infrastructure and facilities development, such as designation of tourism development zones and building codes; and demonstrating the benefits of DRR and CCA through selected activities.

The sectoral activities are supported by cross-cutting activities from Components 1 and 2. Specific sites for implementation are carefully selected based on risk profiles, with the expectation of scaling up and replication to other parts of the country in a future program.

Synergies and Coordination

Several project activities are closely linked to an agriculture project to be supported by the European Commission (EC), which encourages increased climate resiliency. The proposed project is included in the regional GEF program *Pacific Alliance for Sustainability (GEF-PAS)*. Vanuatu is currently implementing several projects that aim to reduce its vulnerability to climate change while contributing to the country's wider sustainable development goals. The LDCF project is closely coordinated with these activities to ensure optimization of synergies and avoidance of duplication. These projects include for example: *Pacific Islands Global Climate Observing System (PIGCOS)*; promotion of renewable energy through the implementation of the *Rural Electrification Master Plan (REMP)*; the promotion of *Renewable Energy Efficiency and Greenhouse Gas Abatement*; *Pacific Island Renewable Energy Project (PIREP)*; the *National Implementation Plan (NIP) for Persistent Organic Pollutants (POPs)*; the *Vanuatu Strategic Action Program for International Waters Project (IWP)*; Disaster Risk Reduction (DRR) and Disaster Management (DM) through the National Disaster Management Office (NDMO) with an associated National Disaster Plan. The project is particularly closely coordinated with the United Nations Development Programme (UNDP)-GEF regional project *Building Resilience to Climate Change* under the GEF-PAS.

For More Information

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August 2009
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