



CANADA-UNDP
Climate Change Adaptation Facility



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BUILDING ADAPTIVE CAPACITY AND RESILIENCE TO CLIMATE CHANGE IN THE WATER SECTOR IN CABO VERDE



Rising temperatures and persistent rainfall deficit are severely affecting Cabo Verde's water sector. Climate change modelling suggests that rainfall could further decrease by up to 20% by the end of this century.



CONTEXT

Since 2007, Cabo Verde has graduated from the list of Least Developed Countries and is now on track to achieve most of the Millennium Development Goals. Yet, climate change can potentially reverse these development gains. In fact, rising temperatures and persistent rainfall deficit are severely affecting the country's water sector. The National Adaptation Programme of Action (NAPA) considers climate risks to freshwater resources as the most significant constraint on Cabo Verde's development. Climate change modelling suggests that rainfall could further decrease by up to 20% by the end of this century. Even in the more immediate planning horizon, climatic changes over the next 10-20 years are expected to bring seasonal water shortages at a number of economically important sites and year-round shortages elsewhere. Overall, these changes are expected to have a significant negative impact on water resource availability and agricultural productivity on the islands, especially for vulnerable farmers.

In response to concerns about water security, the Government of Cabo Verde, with financial support from the Global Environmental Facility's Least Developed Countries Fund (LDCF), partnered with UNDP to address the three adaptation priorities outlined in the NAPA related to these conditions – integrated water resources management, modernization and diversification of agricultural production for food security, and integrated protection and management of coastal zones. From 2009 to 2013, the LDCF project achieved tangible results; however, additional efforts were needed to address the challenge of food security, as one of the major manifestations of changing water availability. In 2013, the Government of Canada agreed to provide additional funding under the new Canada-UNDP Climate Change Adaptation Facility (CCAF) to build on and scale up the results of the LDCF project. The new phase focuses on the most vulnerable populations, identified through a comprehensive baseline study undertaken in 2013. The CCAF project aims to reduce the negative impacts of climate change on food security in these communities, and ensure that water availability, supply and quality is maintained in the face of changing climatic conditions.

Proposed Interventions

Under the Canada-funded phase of this project, the following concrete and innovative adaptation measures are being implemented in Cabo Verde:

- 1. Integrating climate change risks and adaptation measures into key national policies, plans and programmes for water resource management** - Climate-proofing policy and strategic documents, economic valuation of climate-related impacts and adaptation measures, and establishment of early warning systems for the water sector;
- 2. Demonstrating adaptation practices for water resource management** - Water use efficiency measures for production of climate resilient crop, water recycling and the use of treated waste water for agricultural production, renewable-energy-based water mobilization, and cloud water harvesting for agricultural production; and
- 3. Disseminating lessons learned and best practices** - Strengthening an applied research programme on climate-smart agriculture, identifying traditional knowledge on climate-resilient agriculture for extension and training programmes, and developing water resource monitoring systems to measure water use and determine sustainable extraction rates at local levels.

EMERGING LESSONS

To effectively identify the most vulnerable communities, it is important to assess data related to a range of factors from information on livelihoods and assets, to social capital, ecosystems and family issues. This same data can also be used to measure impact of project interventions, since it can be compared over time, both before and after implementation.

Undertaking the participatory design and planning of demonstration projects with beneficiary communities is very time consuming in the short term, but establishes increased ownership and sustainability of project outcomes in the long term.

Key Achievements to Date

Key achievements under the LDCF project have been scaled up under the CCAF project as demonstrated below:

- **A site-level food security, climate change vulnerability, and gender assessment and mapping exercise** was completed, to both build capacity of technical staff on food security and agricultural statistics related to climate change, and establish a database of information on climate change vulnerability and food security;
- **A series of community-led demonstration projects** have been identified in the most vulnerable communities and designed through a participatory rural assessment and planning process;
- **Technical sessions** were held for community and rural extension workers on issues, such as public health in the reuse of treated waste water for agriculture, and an exchange visit to the Canary Islands organized to learn best practices on this issue;
- **Extensive research and testing** conducted on the adaptation and productivity of different varieties of crops under different conditions, as well as corn and forage production with recycled treated waste water. Drawing on the research findings, training and technical assistance is now being provided to farmers to implement demonstration plots; and
- **15 transmissions of the radiophonic programme** 'climate change and food security in focus' were conducted to raise awareness on the importance of climate change for food security.

"Here we have water only twice a week, which undermines planting of carrots," said Ms. Maria 'Katy' Zaidy Soares Barbosa. Katy, a farmer in Tarrafal on the island of Santiago, is working with extension workers to apply findings from research and testing (on resilient crops) conducted by the National Institute for Agricultural Research and Development.



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