



Pilot Program for Climate Resilience

Baixo Limpopo irrigation and climate resilience project

KMC

Knowledge Management Center



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CONTEXT

Mozambique is one of the most climate vulnerable countries in the world. It is the only country in sub-Saharan Africa which is considered at high risk from all three climate hazards: drought, floods and coastal storms. The majority of Mozambicans inhabit rural areas which are prone to weather and climate shocks, they have low adaptive capacities, and they are heavily reliant on climate-sensitive sectors, such as agriculture and livestock. Droughts, floods, and tropical cyclones pose a particular threat to coastal communities, transport infrastructure, and livelihoods that are dependent upon rain-fed agriculture. In 2015, Mozambique was hard-hit by heavy rains and floods in the central and northern regions of the country, and at least 35,000 houses were destroyed partially or completely. Recovery and reconstruction priorities are estimated at US\$ 423 million. The impact in the agricultural sector has led to the losses of at least 103,807 hectares of land, affecting about 112,123 families (Mozambique UNRCO Situation Report 6, April 2015).

In 2008, the Pilot Program for Climate Resilience (PPCR) was approved through the World Bank as one of the Climate Investment Funds (CIFs) to finance the integration of resilience measures into core development planning. An initial amount of US\$ 1.5 million was provided for the implementation of activities in the first phase. In June 2011, a Strategic Program for Climate Resilience (SPCR) for Mozambique was created, and a further US\$ 91 million combined grant and concessional loan funding was made available for its implementation, supported by the World Bank, the African Development Bank (AfDB) and the International Finance Cooperation (IFC).

PPCR overview

The Pilot Program on Climate Resilience (PPCR) is one of the programs under the Strategic Climate Fund (SCF) of the Climate Investment Funds (CIF). It is designed to pilot and demonstrate ways to mainstream climate risk and resilience into developing countries' core development policies and planning. PPCR programs are country-led, and will enable pilot countries to transform country-specific plans and investment programs to address climate risks and vulnerabilities, building on relevant country studies and strategies.

The implementation of the PPCR programs at country level – known as the Strategic Program for Climate Resilience (SPCR) – aims to generate knowledge, learning and lessons to inform the future scaling-up of PPCR interventions across the country and build the resilience of the national economy, as well as all sectors and communities to the risks imposed by increased climate variability.

The World Bank and the Nordic Development Fund are also providing US\$ 25 million for the pilot PPCR projects in Mozambique. In addition to the pilot investments and the technical assistance project, resources from the World Bank and the International Development Association (IDA) of US\$ 150 million are being used to support the institutional and policy reforms of the PPCR.



THE PROJECT

The Baixo Limpopo Irrigation and Climate Resilience Project (BLICRP) is one of the PPCR pilot projects. It is being implemented in Xai-Xai, a district in Gaza Province in the southern region of Mozambique. It aims to contribute to poverty reduction through an added economic value and to provide an infrastructure that is resistant to climate change. The objective is to increase agricultural productivity by developing 3,050 hectares for crop production (cereals and vegetables), and providing marketing and agro-processing services. The project also aims to strengthen the resilience of communities to deal with climate change related events.

The Government of Mozambique (GOM) received a loan from the African Development Bank (AfDB) to finance the project, the total cost of which is US\$ 44 million.

PROJECT COMPONENTS

The project has three components:

A) Infrastructure development for food security amounting to US\$ 36.1 million

The project includes the construction of small units for the agro-processing of vegetables in the seven existing *casas agrárias*, namely Inhamissa, Nhampodzoene, Chongoene, Nhocoene, Siaia, Poiombo and Nhacutseque. These are being rehabilitated and properly equipped with cold chambers and installed with water and sanitation systems. These will provide farmers involved in vegetable processing with storage space for produce, access to agricultural machinery, and a supply of seed, fertilizer, pesticides and other agricultural inputs. The acquisition of equipment for processing vegetables, and the construction of porches to accommodate the equipment is underway. The project is expected to benefit around 4,000 family farmers.



Stores for micro-processing



Unit for processing vegetables, Nhacutse

Ongoing construction of the vegetable processing plant in an area of 2.400 m² in the city of Xai-Xai in Gaza Province aims to maximize the opportunities for trade and increase economic value for farmers in the province.

BUILDING CLIMATE RESILIENCE IN MOZAMBIQUE



Landfilling and fencing of the vegetable processing plant site

In addition, an irrigation system for rice production, covering an area of 1,050 acres, is under construction in Magula block. Work is also in progress to dig the foundations of the pumping station where about 1,600 m³ of soil has been excavated, as well as landfill works for the construction of irrigation channels and drainage in Lezíria.



Construction of the pumping station (Magula block)



Building the foundations



Excavating the drainage canal



Embankment and compaction Indrajeet-Essays

An area of 2,000 ha in the *casas agrárias* will be rehabilitated and constructed for the drainage system, with greater attention to the *casas agrárias* of Nhacutse and Poiombo, which have a total area of 1,100 ha. Also, 43 km of rural road is being rehabilitated and built to allow access to the irrigated areas, even in periods of rain, as well as to facilitate the flow of production.

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B) Institutional development and diversification of agricultural production (US\$ 4.45 million)

This component promotes the production of cash crops, mainly rice and vegetables, to improve farmers' income. In the case of rice, farmers are expected to sign direct contracts with the private sector rice processors that current operate in the area. Some of these processors have been providing farmers with inputs and technical support; the cost of the inputs is less than selling stock.

Two marketing service providers will be hired by the project to support farmers in their production activities and to facilitate access to markets. Service providers will work with farmers to form dedicated groups as well as value added training and post-harvest operations, including cleaning, grading, drying, cutting, packaging and market outreach inside and outside of the country, on behalf of the farmers. The bids are currently at the evaluation phase.

C) Project management (US\$ 3.49 million)

This component supports the management of the project in the implementation of daily activities.

ACTIVITIES CARRIED OUT

An emergency generator (standby) with the capacity of 700 KVA has been acquired, which will provide continuous power to Umbapi Pumping Station, thereby enabling the normal functioning of the station, even during critical periods. The total value of this acquisition was US\$ 270,000.



Machinery for rice harvest, soil preparation and canal maintenance

To support the daily activities of soil preparation and maintenance, 1 bike-leveler, 3 tractors, 1 Long Rich bulldozer, plus 5 bike-combines for rice threshing have been purchased.



HP tractor 95



Motor grader

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Motor bike



5-combine harvesters

In addition, platforms were built to dry cereals (rice and corn) in the seven *casas agrárias*. This will allow for greater preservation of these products. The works cost US\$400,000.



Platforms for rice drying in the *casas agrárias* of Nhacutse (left) and Poiombo (right)

Five processing units have been acquired to equip the vegetable processing plant at Xai-Xai, including a cooling system for the preservation of vegetables to give a longer shelf life. The purchase of this equipment has cost US\$800,000.

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