

Resisting drought with new crops and water harvesting



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Here in Nalazi, nature is dry, very dry. When the rains come, the soil is wet all over, but in a while, everything is gone. No one is harvesting water. Mrs. Eufrazia Moiane shows a modern looking concrete water harvesting system for animals. The pump was destroyed decades ago. Our community would be happy to have any training or support. We really need water to improve our livelihoods. The drought causes scarcity of drinking water and losses of crops and cattle.

Nalazi with a population of 11,000 people, surviving on small-scale, rain-fed agriculture, is one of the remote zones of Guijá District in Southern Mozambique, where the Government, through the Ministry for Coordination of Environmental Affairs and with support from UNDP and the Global Environmental Facility, is soon launching a project on coping with drought and adaptation to climate change.

The aim of the project is to reduce drought vulnerability in farming and pastoral communities by guaranteeing water supply and by training the communities to grow drought-resistant crops, like sweet potato, cassava or sorghum. Women will be trained to preserve natural fruits such as marula, massala, tinhiri (*Sophora inhambansis*) and Tinwambo (*Sponea aquatica*)

for sale in markets. The project will also help improve the communication lines to make

weather forecast and climate information available to communities.

The project sites, Mbala-vala, Nhanguenha, Nalazi & Chivonguene communities, belong to the semi-arid regions of the Limpopo River Basin. These are among the poorest and most drought-prone areas of the country. According to observations by the National Disaster Management Institute, 2,600 of the 75,000 inhabitants of Guijá suffered from food insecurity in February 2010.

The national meteorological data affirms the knowledge of the communities: the onset of the rain is later and later, the dry seasons get longer, the temperatures are altering, and the droughts have become more frequent.



Due to some unexpected rains in May the maize fields look reasonably good now, but before the next rains - that may only be in January - the land will be totally dry, and we will be suffering. Last year the drought was quite severe. That is why our community survives now with only maize, some beans, and wild vegetables, explains Paulina Siteo

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from Chivonguene.

Her biggest wish for the project is to re-open and fix the irrigation channel that would run water from the Limpopo River to the fields. The natural channel was destroyed and blocked with sediment during the 2000 floods.

According to Paulina Siteo hardly anyone in Chivonguene has tasted sorghum, cassava or sweet potato but she is pretty sure that people are willing to have one of the demonstration fields in Guijá.

The current coping strategies of the communities used during the droughts are not adapted to the environmental changes: When it gets very hard, says Mr. Jose Muchanga, we cut trees to produce charcoal that we sell to be transported to the capital. Some of us go hunting and others may try to complement their livelihoods by going to the nearest town, Chokwe, for temporary work.



Project Coordinator Samora Zuma, is happy that the pilot communities and district officials are behind just before the project launch: "Our plans will be included in district plans. We will start with water. We will open and clean dams, lagoons and channels and build concrete water harvesting and storing systems that have already been tested in semi-arid regions of Brazil. Then we will set the demonstration fields with drought-resistant crops. And above all, we will train people on the impact of climate change and adaptation measures."

At a later stage, this 3-year project with a total budget of \$ 960,000, will build up nurseries and seed banks, train farmers to make fodder for feeding the livestock in times of drought, train to monitor bush fires, provide the district with climatic information and a meteorological post, build wells with solar power pumps, and encourage the replication of good results around the country.

The partners of the Ministry for Coordination of Environmental Affairs in this project include the Ministry of Agriculture, Ministry of Public Works and Housing, National Institute of Meteorology, National Institute of Disaster Management, the Mozambique Red Cross and Samaritan's Purse.

UNDP is supporting similar projects in Chicualacuala in Mozambique and in various African countries like Zimbabwe, Kenya, and Ethiopia.