



Ministry of Transport Works Supply
and Communication



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GLOBAL ENVIRONMENT FACILITY

STRENGTHENING CLIMATE INFORMATION AND EARLY WARNING SYSTEMS FOR CLIMATE RESILIENT DEVELOPMENT AND ADAPTATION TO CLIMATE CHANGE IN ZAMBIA



Objective

This project aims to strengthen climate monitoring and weather forecasting capabilities, early warning systems and available information for responding to climate shocks and planning adaptation to climate change in Zambia.

Background

Zambia is working to reduce vulnerability to climate change, natural and man-made disasters, and environmental degradation. Various parts of Zambia are prone to floods and droughts, which are expected to increase in frequency and severity as a result of climate change. Rural Zambian communities, the majority of which comprise small-scale farmers, are particularly at risk because of their dependence on rain-fed agriculture and natural resource-based livelihoods such as fishing and livestock rearing. At present, the meteorological observation network in Zambia is limited in its capability to produce the required climate information to support risk management in the short or long term.

To increase Zambia's ability to adapt to climate change, it will be necessary to improve the production of climate information, to facilitate monitoring and prediction of slow-onset hazards such as drought and rising temperatures, as well as rapid-onset hazards such as floods. This information must be disseminated to end users by means of suitable Early Warning Systems (EWS).

The Climate Information and Early Warning Systems (CIEWS) project aims to increase the geographic coverage of meteorological observation stations in Zambia and activate communication channels for dissemination of severe weather warnings, as well as implementing two-way community based early warning systems in three flood- and drought-prone districts, namely Gwembe, Mambwe and Sesheke.

Overall, the project seeks to: (1) implement early warning systems for better planning, preparedness and coordinated responses to disasters; (2) integrate climate change risks into programming and policies;

and (3) enhance livelihoods of small scale farmers by addressing environmental awareness and management capacity.

Rationale

This project responds to priorities and actions identified in Zambia's National Adaptation Programme of Action (NAPA), which explains the need for installing technologies as well as developing the necessary systems for climate-related information to be integrated into decision making processes. The technologies installed to achieve these aims will increase the capacity of the national early warning system to forewarn and rapidly respond to extreme climate events. The overall goals of the project are to strengthen the climate monitoring capabilities of the Zambia Meteorological Department (ZMD), to improve early warning systems for floods and droughts, and to make more information available to enable timely responses to climate shocks as well as to facilitate planning for adaptation to climate change in Zambia.

It is expected that as climate change unfolds, the frequency and intensity of climate-related shocks will increase; therefore, improving EWS is one important way to adapt to a changing climate. Furthermore, improving EWS also provides benefits for long-term planning and helps national meteorological and hydrological services build capacity to service multiple sectors, such as land-use planning, agriculture, hydro-electric power generation and infrastructure development.

The project has two intended outcomes:

Outcome One

Enhanced capacity of the Zambia Meteorological Department (ZMD) to monitor and forecast extreme weather and climate change

This will be achieved by installing additional automatic weather observation stations to supplement ZMD's existing network. The network will be expanded using a phased approach, ensuring each phase of installed equipment is fully operational before the next phase of

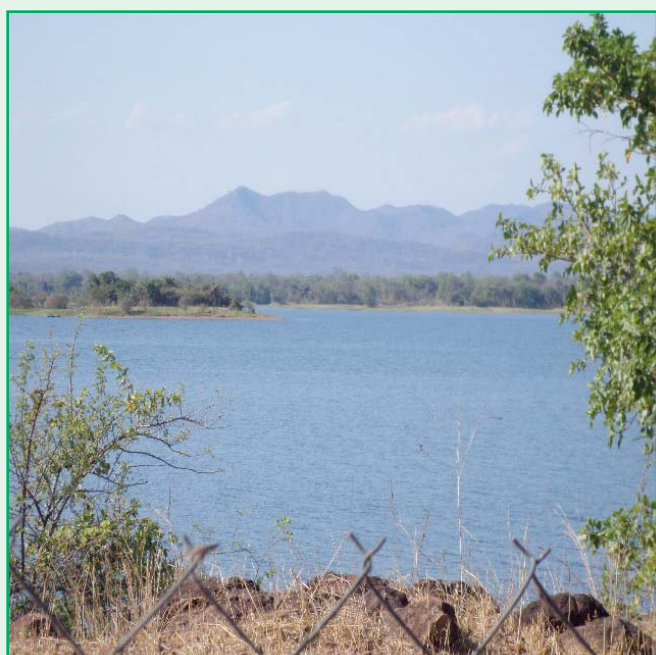
equipment is installed. Districts that are highly prone to floods and droughts will be prioritised for installation of automatic weather observation stations. Modern forecasting facilities will be installed at the ZMD headquarters to facilitate the processing and analysis of weather data in order to generate localised weather and climate forecasts.



Outcome Two

Efficient and effective use of hydrometeorological and environmental information for making early warnings and long-term development plans

This outcome will be achieved by developing technical capacity to apply the information generated by the modernized weather and climate observation and information management systems established under Outcome 1. Outcome 2 will support the timely circulation of relevant weather and climate information to end users.



What are the intended benefits to users of weather and climate information?

- Weather and climate information shall be tailored to specific sectors - agriculture, aviation, water, health, tourism, road and rail transport, and energy.
- Farmers will receive sufficient advance notice of adverse weather and advice on how to prevent or minimise damage to their crops. Farmers will also be able to communicate their own observations to ZMD and DMMU.
- Long-term climate forecasting will support development planning, particularly for the climate-sensitive sectors listed above.
- A larger network of weather observation stations will enhance accuracy of weather forecasts.

About the partners

The project is financed by the Least Developed Countries Fund (LDCF). The LDCF finances the preparation and implementation of National Adaptation Programmes of Action (NAPAs) in response to climate change adaptation needs in least developed countries. The LDCF is part of the Global Environment Facility, which is a partnership for international cooperation where 183 countries work together with international institutions, civil society organizations and the private sector, to address global environmental issues. The United Nations Development Programme, as a GEF implementing Agency, is managing the implementation of the CIEWS project.

The CIEWS project in Zambia is one of 11 such projects in sub-Saharan African countries. Project oversight is provided by the Multi Country Support Programme to Strengthen Climate Information and Resilience Development in Africa (CIRDA), based at the UNDP regional office in Addis Ababa, Ethiopia.

The Executing Entity of the CIEWS project is the Zambia Meteorological Department, under the Ministry of Transport, Works, Supply and Communication.

The implementing entities of the project are:

- Disaster Management and Mitigation Unit
- Department of Water Affairs
- Water Resources Management Authority
- Ministry of Agriculture and Livestock
- Ministry of Health
- Central Statistics Office
- National Climate Change Secretariat

Project Management

The Project Office is based at ZMD and is supported by a national task team comprising representatives of the executing and implementing entities.

The National Climate Change Technical Committee serves as the Steering Committee of the project, providing overall guidance and ensuring effective collaboration with other climate change projects in Zambia.



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FOR FURTHER INFORMATION, PLEASE CONTACT

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