



Technical Assistance: Using mobile technology to scale up digital collection and processing of climate observations for adaptation

Location: Malawi (national)

Solution: Mobile technology utilization to improve climate information

UNEP CTCN grant: USD 205,324



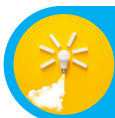
The cycle of climate data collection and use in Malawi © UNEP-CTCN

Increased frequency of extreme weather events, like floods and droughts, poses significant challenges to climate resilience in Malawi. This project improves the collection and use of climate data using simple mobile technology, and integrates such data in existing climate information systems. The project improves adaptation efforts by facilitating more accurate weather forecasting, impact modeling, and disaster risk management.



Objectives

- The primary objective is to enhance Malawi's capacity to collect, digitize, and analyze climate data using simple mobile and computing technologies.
- The project targets local communities, government agencies, and other climate data users by providing them with tools and training to improve data collection and climate adaptation efforts.



Social Impact

- The project is supporting a total of 470 beneficiaries, including 208 direct beneficiaries and 265 indirect beneficiaries.
- Among the direct beneficiaries, 35% are women. The indirect beneficiaries also include 52% women and 10% youth.
- Climate insights strengthened by the project help contribute to improved access to water, understanding climate risks, and increasing agricultural productivity.



Adaptation Impact

- **Enhanced Climate Information Services and Disaster Risk Management:** The project improves the capacity to collect and analyze climate data, which is essential for accurate weather forecasting and early warning systems. This leads to better disaster risk management and informed decision-making for climate adaptation.
- **Improved Agricultural and Water Management:** By providing accurate and timely climate data, the project supports better agriculture planning and water resource management, reducing vulnerability to climate variability.
- **Effective Data Integration:** The project ensures that data collected through mobile phones is integrated with existing meteorological and hydrological systems, enhancing the overall effectiveness of climate information services.



Other Co-Benefits

- Higher density and integration of Malawi's hydrometric observation network.
- Scaled up and cost-effective adoption of viable technologies
- Increased community engagement in adaptation.



Innovation & Technology

- Mobile Data Collection: Use of free SMS and WhatsApp to collect weather and climate data from across remote areas.
- Cloud-Based Databases: Implementation of cloud computing and AI to manage, process and analyze climate data, ensuring easy access and insights.
- Integration with Existing Systems: Ensuring compatibility and integration with existing meteorological and hydrological data systems.



Replication Potential

- The project demonstrates a high potential for replication in any context where adaptation and disaster risk management can benefit from enhanced climate information services and resilient hydrometric networks using technology that is affordable, readily available, and simple to use.

Key Figures

- USD 205,324 project budget
- 470 people benefitted in total
- 40 technical experts have been reached by the project training events and materials
- 14 events organized as part of the project, 8 of which was climate technology RD&D related
- 6 governmental institutions, 1 private sector actor and 2 NGOs are trained as part of the project
- 6 different technologies to be transferred or deployed as part of the project
- The project contributed to the following SDGs:

