



Technical Assistance: The Radio-Internet Climate Technology for Agricultural Resilience: Harnessing the Combined Potential of Radio and Internet (RANETA)

Location: Kebbi State and the Federal Capital Territory, Nigeria

Solution: Developing a radio and internet dissemination system for agrometeorological information to small-holder farmers

UNEP CTCN grant: USD 182,230



Farmers listen to the radio to receive weather information © UNEP-CTCN

Smallholder farmers in rural areas in Nigeria face significant challenges due to increased climate variability coupled with a lack of timely and relevant weather information. This project leverages radio and internet to pilot a system that disseminates crucial agrometeorological information generated by the Nigerian Meteorological Agency (NiMet), to smallholder farmers. It aims to improve climate forecasting, early warning, and decision-making in agriculture, ultimately enhancing food security and livelihoods.



Objectives

- The primary objective is to provide technical support to the Nigerian Meteorological Agency (NiMet) for the dissemination of timely and accurate agrometeorological information to smallholder farmers.
- RANETA helps farmers make informed decisions regarding farming activities such as land preparation, planting, crop management, irrigation needs, and disaster preparedness.



Social Impact

- The project supports a total of 17,105 beneficiaries, comprising of 5,132 and 11,972 direct and indirect beneficiaries respectively. Of these beneficiaries, 25% are women and 30% are youth.
- The project will improve food security and income stability for farming households, and enhance their climate resilience and agricultural productivity, particularly benefiting women and youth by improving access to sustainable farming practices and resources.



Adaptation Impact

- **Enhanced Agrometeorological Information Dissemination and Agricultural Resilience:** The project improves the dissemination of weather information to rural farmers, enabling them to adopt more resilient agricultural practices. By providing accurate and timely information via radio and the internet, the project supports better planning and decision-making, leading to increased crop yields and reduced losses due to extreme weather events.
- **Improved Food Security:** The project enhances food security by supporting the adoption of climate-smart agricultural practices that increase crop productivity and reduce the impact of climate variability on food production.
- **Strengthened Agricultural Systems:** By integrating radio and internet technologies, the project ensures that even the most remote farmers have access to critical climate information, thereby strengthening the overall resilience of agricultural systems.



Innovation & Technology

- Automated Weather Data Dissemination:** The RANETA system utilises custom-built APIs to pull weather data from the existing NiMet database and Sprout (an open-source weather data provider), and automatically disseminates the information (in local language) to farmers via new dissemination channels built.
- Hybrid Radio-Internet System:** Utilisation of combined dissemination channels such as SMS, USSD, Interactive Voice Response (IVR), radio broadcast, internet, and extension farmers, to ensure wide-reaching access to farmers with and without a mobile phone or radio.
- Central Management Capability:** The technology serves as a central hub for managing and disseminating weather information.
- Timely Data Sharing:** Sharing near-real-time data to provide farmers with up-to-date weather forecasts and disaster warnings.
- Capacity-Building Workshops:** Workshops to train farmers on the use of agromet information for making informed agricultural decisions, and sustainable agricultural practices.



Other Co-Benefits

- Improved food security.
- Strengthened social networks among farmers.
- Social inclusion of marginalized demographics including women, youth and people with disabilities.



Replication Potential

- The project shows great replication potential wherever farmers and agribusinesses can benefit from improved timely weather information for better agricultural activities planning. There are about 38 million crop, fish, and livestock small-holder farmers in Nigeria. With access to a mobile phone, a radio, or a connection to a government extension worker, all these smallholder farmers can benefit from the system.

Key Figures

- USD 182,230 project budget
- 17,105 people benefitted in total
- 120 beneficiaries trained through workshops provided within the project
- 23 stakeholders from NGOs, local governments and farmer groups engaged
- The project contributed to the following SDGs:

