



Responding to climate change

UGANDA



LOCATION: 22 districts in Uganda



PROJECT NAME: Strengthening Weather and Climate Information Services in Uganda (WISER)



GOAL: Improved resilience of vulnerable people through the improved generation and use of weather and climate information services. Working in partnership with local and national partners¹ and funded by DFID through the UK Met Office.²



DURATION: 18 months (August 2018 – December 2019)

OVERVIEW

Uganda is known as a country blessed with a climate that supports productive ecosystems and biodiversity – a potential advantage over other countries in food production, tourism and the services sector. However, in recent years climate change has seen rising temperatures, as well as more erratic and extreme weather events. We're already seeing evidence that these are taking a disproportionate toll on Uganda and in particular its poorest communities. The impacts of climate change (droughts, floods, storms, heatwaves, landslides and unpredictable rainfall seasons) have had serious consequences on agricultural production, food security, forests, water supply, infrastructure, health systems, incomes, livelihoods and overall development.

Timely and accurate weather and climate information is fundamental for enhancing agricultural production, food security and incomes. For smallholder farmers who rely on rain for their agriculture and don't have access to irrigation, accurate information is critical. Many farmers have used traditional methods of forecasting rainfall, which may have worked in the past, but are less reliable now because of climate change. Rains are coming at different times than they were previously and their intensity is changing, making it much harder for smallholder farmers to plan for the planting of crops. Modern climate and weather information, based on science, could provide invaluable information to smallholder farmers who practice rain-fed agriculture – but this information has largely not been available to them.

Barriers to weather and climate information

Smallholder farmers in rural Uganda faced many barriers to making effective use of the weather and climate information produced by the Uganda National Meteorological Authority (UNMA). The prime barrier was language, with forecasts provided only in English rather than in the mother tongues of the people of Uganda. Even for those who could speak and understand English, the information that was provided was highly technical and difficult for people

to understand and make use of. Also, the information was not disseminated widely or through channels that would make it accessible to most people, particularly those in rural areas. Reports also failed to include any advice on what to do as a result of the information, and so even if it could be understood it wasn't particularly helpful or useful to most of those receiving it.



¹ Small holder farmers, agricultural extension officers, schools, health centres, Uganda National Meteorological Authority (UNMA), Office of the Prime Minister (OPM), Makerere University.

² <https://www.metoffice.gov.uk/about-us/what/working-with-other-organisations/international/projects/wiser>

³ The final evaluation report received a score of 66 which means that it is rated "good" evidence quality according to the BOND evidence principles. https://www.bond.org.uk/monitoring-and-evaluation/monitoring-and-evaluation-tools#evidence_principles

WHAT THE PROJECT DID

The Strengthening Weather and Climate Information Services in Uganda project (aka WISER) supported UNMA to improve and share information on weather and climate, and also to provide advice on crop suitability, farming calendars, agricultural practices and soil and water conservation techniques for crops such as coffee, maize and beans in 22 districts. Stakeholders generated simple seasonal meteorological information, including agro- and hydro-meteorology data. At quarterly national meetings, UNMA experts along with agricultural specialists reviewed forecasts and developed advisories for various sectors. The forecasts were translated into commonly spoken languages and broadcast through wider channels such as email, public gathering, social media, local radio programmes and women's groups.

In addition, World Vision acquainted selected district officials, farmers' associations, other local organisations and the media with the seasonal weather forecast information and collected feedback on its access and use. We also partnered with other NGOs to disseminate the information and gather feedback on the usefulness of the forecasts.

RESULTS

The project reached 200,504 people (120,352 women and 80,152 men) directly with improved, translated weather and climate information, through a variety of channels, including radio, community meetings, notice boards and through government agricultural extension staff. Over 80% of them reported taking positive actions to improve their resilience as a result of access to the weather and climate information – an increase from 60% who took action as a result of weather and climate information at the baseline. Not only has this number increased significantly, but the quality of the forecast information and its accessibility in local languages has also improved during the project lifetime.

At the beginning of the project only 13% of farmers felt that forecasts were accurate and relevant, but by the end of the project this had increased to 78%. The project was able to improve the quality of forecasts and so make them much more usable and relevant for smallholder farmers in planning their agricultural activities.

Over 160,000 of the farmers who were directly reached have adopted new practices to increase their resilience to climate hazards. The main practices adopted were: choosing specific crop varieties to plant; planting on recommended dates; pest control measures; soil conservation techniques; and tree planting.



COVER: Wesily, 10, Uganda, lost his 4 siblings when his home was flooded during the Bundibugyo floods. ©2019 World Vision/Joanitha Asiimire

FAR LEFT: A community worker displays a forecast on a local government notice board for the use of farmers and government agricultural officers. ©2019 World Vision

LEFT: Flooding in Bundibugyo district, Uganda. Climate change is causing more intense rainfall, leading to more frequent flooding. In 2019's floods, 17 people died and 1,035 families lost their homes. ©2019 World Vision

ABOVE: Farmer James shows off the maize he has harvested. With support from World Vision, he learned the proper methods of growing maize and when it is best to harvest to get the greatest yields. ©2019 World Vision/Fred Ouma

BACK PAGE: Nayibinga, 4, picks tomatoes from her grandfather's garden. These tomatoes provide an essential source of vitamins and anti-oxidants, helping Nayibinga and her siblings to grow up healthy and strong. ©2019 World Vision/Fred Ouma



Significant improvement in access to weather and climate information, **from 60% at the start of the project to 90%.**



78% of people asked, believed that the weather and climate information received was accurate and relevant (an increase from 13%).



161,807 farmers are less vulnerable to climatic hazards.



81% of farmers surveyed are now using sustainable agricultural practices as a result of better and more timely access to weather information (up from 60% at baseline).

CHALLENGES AND SOLUTIONS

The main challenge facing the project has been the microclimates that exist in particular locations. These can be different from the forecasts produced for the rest of the district for a particular season. It is not currently possible to have enough detail in forecasts to take into account local variability in rainfall distribution. This meant that some communities did not trust the forecasts, and this potentially could have spread further mistrust across other local communities. In order to mitigate this and enable communities with a specific microclimate to be better prepared, we held sessions in communities, addressing the issue of microclimates, and provided examples of villages located on the windward side of the highlands as places where the forecasts may not be as accurate. This helped to rebuild the trust in the forecasts and climate information.

World Vision UK

World Vision House, Opal Drive,
Fox Milne, Milton Keynes, MK15 0ZR
worldvision.org.uk

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World Vision believes that by working together with children, their communities, and our supporters and partners, the lives of the world's most vulnerable children can be transformed. As a Christian organisation, we aspire to reflect God's unconditional love in all we do.

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