

# Rwanda National Project (Iteganyagihe Ryacu): reflections and observations

**By Livingstone Byandaga, Senior Research Associate, Alliance of Bioversity International and CIAT**

In Western Rwanda, unusual weather events make it more and more difficult for smallholder farmers to plant and harvest crops successfully and make a living. The rainy season is unpredictable, and heavy rains can lead to flash flooding that destroys crops. Farmers have found that they can no longer rely on traditional forecasts and need new ways to decide when to plant and what crops to choose.

The WISER programme had already started to help provide early warnings for farmers, funding new Doppler radar technology for Rwanda's meteorological infrastructure. The radar was particularly targeted at remote areas that tend to experience heavy and damaging rain showers and was able to provide information at seven-minute intervals. The main weather information provider in the country, Meteo Rwanda, partnered with a private phone company to transmit forecasts to farmers at least once a day.

Iteganyagihe Ryacu (IR) aimed to build on this and other projects to ensure that farmers were always able to receive timely and relevant information that they understood in order to help them manage climate risk more effectively. IR also aimed to set up an impact-based early warning system across Rwanda. With timely early warning services in place, farmers could take action if heavy rains were predicted – or indeed if drought was also forecast.

IR trained meteorologists in next-gen forecasting techniques to bolster the capabilities of Meteo Rwanda. The project also collated weather information

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stretching back 30 years, helping to inform seasonal forecasting and make weather information better contextualised and robust.

To disseminate weather information across regions and ensure that it reached farmers on the ground, the IR project built on two previous weather projects which had already put a reporting system in place, with farmer promoters across the country able to reach out to farmers on the ground level.

The project also aimed to use different communication channels to spread news of forecasts and early warnings to farmers. We had intended to source TV screen displays to use in different locations, such as local administrative offices, hospitals, and other locations where people gathered. However, the coronavirus pandemic hit the nation's supply chains, which meant we couldn't roll out screens across the country.

Thankfully we were still able to take advantage of radio listeners' clubs, which are active in around 14 districts across the region. At the clubs, listeners get together and discuss programmes including the weather forecasts, sharing details with people who may not have radios themselves. By harnessing the clubs, we were able to reach many more people with timely information.

The project also used SMS messaging on mobile phones to reach farmers, as well as social media platforms like WhatsApp. The flow of information wasn't just one way, as we wanted to ensure that we constantly harvested feedback from farmers to make sure they were happy with the information they were receiving. We developed a feedback system known as '5Q', where farmers were presented with five quick questions to gauge their response to how they received information, if the information was in a dialogue they could understand and so on and used these responses to continue to develop services received from Meteo Rwanda. The intention was to make sure we didn't just produce a service for people, but we co-produced the service, thanks to feedback and learnings from the farmers.

We also addressed the early warning services, engaging with audiences on the ground who would use the early warning product. Before IR, we found that farmers didn't always know what to do when they received a warning, so we collaborated with them to find out what information would be most appropriate for them.

The warnings cover both flooding and drought – extreme events that can happen across Rwanda. Sometimes farmers hadn't been getting context-specific information

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that would help them make decisions, such as what variety of crop to grow, for instance, or the planting window they should follow.

A survey at the end of the project demonstrated that farmers feel much more confident now about making the right decisions with the information available to them. Some farmers told us it was like a miracle. Before, they hadn't been producing any crops at all, perhaps planting in the wrong period, or losing an entire crop to floods. Now, they were able to grow and harvest successfully.

Co-production was key to this success. Understanding what people on the ground needed was essential. We also had to make sure that the format that weather information was delivered in was helpful to end users too. Asking farmers for feedback didn't just help make sure the service suited them, it also helped to engage them and encourage them to trust Meteo Rwanda as many farmers had previously followed more traditional forecasting methods that lack a scientific basis.

Since the project finished, we have found that farmers are still using the weather information and early warnings, and indeed many have become ambassadors for the service. But there is more that could be done. To make the project truly sustainable, it would be invaluable to have continuous capacity assessments for users such as farmers to make sure that information continues to be shared and acted upon, and that there aren't any gaps. Sometimes with a project like this one, after training has been carried out, people that have been trained at National Meteorological and Hydrological Services such as Meteo Rwanda can leave or move on, which can compromise its effects.

Speaking personally, I found the project to be a great success. Working with people who were using weather information really helped to focus people's minds on whether they were truly serving the community and delivering to people's expectations. All in all, the project increased the climate resilience of 1,340,775 people across Rwanda, which is a wonderful achievement and shows how powerful working together for change can be.

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