



# RCSA: Bringing Climate Services to People Living in Rwanda's Rural Areas



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## Aim of the project

### **The Rwanda Climate Services for Agriculture (RCSA) programme**

seeks to transform Rwanda's rural farming groups and the economy by improving climate services and agricultural risk management at local and national government levels in the face of a variable and changing climate.



## Dates

October 2015–December 2019



## Countries

Rwanda



Community members in Kayanza District, Rwanda, discuss the seasonal forecast during a presentation on the Rwanda Climate Services for Agriculture Project. (Source: A. Nyandwi/MINAGRI Rwanda, 2017)

## Aim of co-production:

The Rwanda initiative includes four key approaches to co-production: (i) at the level of project design; (ii) at the community level through a structured participatory communication process; (iii) at the national institutional level working with the national meteorological service and agriculture sector agencies; and (iv) embedding an iterative process to collect, aggregate and prioritise farmer feedback into climate service planning. Co-production aimed to improve the suite of climate information products available to the agriculture sector; overcome capacity constraints on both the supply and use of services, and ensure sustainability after the programme ends.

## Context:

The programme was designed to be implemented at a national scale, and had no pilot phase. This limited opportunity for face-to-face dialogue and co-learning among farming groups and climate information providers. Instead, the project partners acted as an intermediary network to accelerate co-learning, and to build capacity on both sides.

## Who was involved and what were their roles?

The project is led by the **CGIAR Research Program on Climate Change, Agriculture, and Food Security** (CCAFS). CCAFS project leaders, based at the **International Center for Tropical Agriculture** (CIAT) in Rwanda and the **International Research Institute for Climate and Society** in New York, act as intermediaries among the various national and international partner institutions and facilitate the co-production processes.

CCAFS/CIAT facilitated training for agricultural extension staff and volunteer Farmer Promoters in the **Participatory Integrated Climate Services** (PICSA) process. In Rwanda, Farmer Promoters are volunteer community members who are trained to be farmer-to-farmer extension agents. The Farmer Promoters, in turn, then train and facilitate farmers to use and understand weather and climate information through the PICSA process.

At the provider level, national institutions – **Meteo Rwanda** and the **Rwanda Agriculture Board** (RAB) – were engaged with the planning process. They also interact continuously with IRI through knowledge exchange and learning. The project supports Meteo Rwanda to design, deliver and incorporate user feedback into a growing suite of weather and climate information products and services tailored to the needs of agricultural and food security decision-makers. IRI hosted multiple engagements/training workshops with Meteo Rwanda to produce new climate information products used in the PICSA process, and products identified by RAB for government-level agricultural planning.

## How was co-production done?

The Rwanda initiative includes several key approaches to co-production. First, the project was designed by an agricultural research-for-development network (CCAFS) that has enough expertise in agricultural development and climate science to span the boundaries between agricultural user needs and Meteo Rwanda. Planning involved several workshops, where team members and local key partners gathered to develop the project's vision and guiding principles, devise work plans and timelines, and plan monitoring and evaluation activities, among others (Munyangeri et al., 2017).

## What was co-produced?



- **A platform for co-production at the micro scale:** The project was successful in helping implement a mechanism (PICSA) to support interaction of farmers and their local advisors at a large scale. Through this process, the project has demonstrated the feasibility of scaling up participatory communication and planning. To date, over 1 600 government staff and volunteer farmer promoters have been trained who have, in turn, trained more than 130 000 farmers in the PICSA process.
- **A suite of climate information products:** Meteo Rwanda now has one of the most advanced suites of online climate information products, tailored to the known needs of farmers and other agricultural decision-makers in Africa.



## Benefits of the co-production approach

- Co-production has played a role in creating and improving the climate services value chain in Rwanda.
- Co-production led to a change in perception in valuing other stakeholder knowledge at institutions. For instance, Meteo Rwanda has learned how to better work with many stakeholders, including farmers.
- Knowledge exchange and co-development has influenced IRI's work on maprooms. For example, it has become clear that offering some aspects of the maprooms in local languages is important for uptake.
- Co-production has built IRI's capacity to tailor maprooms to specific country/project needs.
- The confidence and knowledge of Meteo Rwanda has been significantly increased through the co-production approach.
- Through partnerships with local NGOs, the PICSA approach is being introduced in the Joint Action Development Forums (JADF) of local district governments. The introduction of PICSA into existing community programs through faith-based organisations such as the Catholic Church is a clear indication of PICSA's impact and reach.

## Co-explore need

The PICSA approach, which was the core farmer climate service delivery vehicle used in this programme, is an example of co-production on a micro scale. The process brings together farmers and trained intermediaries to collaboratively identify options and management decisions for their particular local context. PICSA uses historical climate records, seasonal forecasts and participatory decision-making tools to help farmers identify and plan livelihood options that are suited to their local context, including climate. This process builds farmers' capacity to understand climate information, and engages farmers and their advisors in collectively identifying and implementing management responses to climate information. The process utilises a training-of-trainers approach to scale up. At the outset, agricultural professionals received training; they, in turn, trained and supported Farmer Promoters. The Farmer Promoters then trained farmers to use and understand climate information. This process intends to build the credibility and legitimacy of climate information among rural groups.

The project is adapting PICSA to use improved seasonal forecasts, at a scale that is useful for agricultural decision-making. Forecast graphs are presented in a way that shows the probabilities associated with any threshold (e.g. minimum rainfall to meet crop demand) that might be relevant to management options (so-called probability-of-exceedance format). The training builds on a participatory approach developed at IRI and piloted successfully in Kenya, Zambia, Senegal and Tanzania (Hansen, 2016). That leads farmers through a stepwise process that helps them relate their collective memory of past agricultural seasons to time-series graphs. Farmers then understand the probability-of-exceedance format, and the probabilistic nature of the seasonal forecast, in other words, that something like an El Niño can shift the probability of rainfall during an upcoming season (Hansen et al., 2007).

## Build common ground; co-develop solutions

A significant component of the effort focuses on working with Meteo Rwanda to expand the products that it provides, and their underlying data, based on farmers' climate information needs and requirements of the PICSA approach. The project builds on the IRI's Enhancing National Climate Services (ENACTS) approach, which focuses on the creation of reliable climate information suitable for national and local decision-making. The ENACTS approach integrates local observations and global monitoring data. For example, rainfall products are created by merging satellite data with station observations to provide greater accuracy smaller scales – both in terms of time and geographical space (Dinku et.al., 2017).

The project is supporting major changes to the kinds of climate information that the national meteorological service provides freely and routinely. The ENACTS approach addresses gaps in climate information and also serves the needs of the expanded PICSA process.

As PICSA expanded to use the new, seasonal, 'flexible forecast' format, this change partially defined the products that Meteo Rwanda developed with the support of the project.

## Lessons to learn from:

- **The need for investment in capacity:** For co-production to improve climate services, users must have capacity to effectively articulate demand for improved climate information products and services that may not yet exist, and NMHS must be prepared to change the services they provide in response. Capacity constraints on the demand and the supply sides must be addressed for co-production to be effective.
- **Iterative co-production process:** A typical one-time, survey-based needs assessment is not enough to adequately capture user (farmer) needs. However, an iterative co-production process that captures and aggregates users' evolving demand as they gain experience has proven to be beneficial.
- **Process of communication:** Climate communication processes, such as PICSA, can provide a platform for interaction between farmers and information providers, giving farmers a voice with the intermediaries who work with them, and supporting their decision-making processes.
- **Diversity of approaches:** Co-production of climate services for farmers at the national scale requires different processes than the face-to-face dialogue that is feasible at a pilot scale. In particular, co-production requires institutions that can legitimately capture, aggregate and prioritise farmers' needs.
- **Wide range of stakeholders:** Bringing together the national extension service, RAB, Meteo Rwanda, and boundary experts led to significant changes in the products and services that were offered.
- **The feedback process:** Processes are important for bringing out the users' voice in improved climate services.

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