

Evidences

Study #3199

Contributing Projects:

- P263 - RPL EA: Regional and national engagement, synthesis and strategic research
- P363 - Climate Services for Agriculture: Empowering Farmers to Manage Risk and Adapt to a Changing Climate in Rwanda
- P266 - [Flagship Leader] FP4: Engagement, synthesis and support

Part I: Public communications

Type: OICR: Outcome Impact Case Report

Status: New

Year: 2019

Title: Rwanda district agricultural officers use national climate services to match seed to local conditions for 88,000 farmers and provide supplemental irrigation water

Short outcome/impact statement:

District agronomists, trained to understand Meteo Rwanda's online Maprooms, are using climate information to improve their services to farmers. In the Western highlands, agronomists used climate information to match crop varieties to local conditions, providing more suitable hybrid maize seeds to 87,872 farmers. Using crop water deficit calculations based on climate information, Bugesera District authorities provided supplemental irrigation water, pumped from a lake into a lined reservoir, to enable 188 farmers with supplemental irrigation to cope with prolonged dry spells.

Outcome story for communications use:

District agronomists in Rwanda, trained to access, understand and use the advanced suite of online climate information products and tools available through the national meteorological agency, Meteo Rwanda, are now using this information to improve the services they provide to farmers.

From analysis of local historical climate information, District Agronomists in the highlands of Western Province realized that the crop seed varieties that had been distributed to farmers were not well adapted to local conditions. They identified maize hybrids that better matched the local climate, and distributed the improved seed to 87,872 farmers.

The Bugesera District Agronomist, Eastern Province, also used climate information to calculate how much irrigation water would be needed to meet crop requirements during drought conditions. Based on this calculation, authorities pumped from a lake into a lined reservoir, or "damsheet," to provide supplemental irrigation water to 188 farmers to protect their crops through prolonged dry spells. CCAFS has worked with Meteo Rwanda since 2016 to fill gaps in their historical records, and provide a rich suite of high-resolution historical analyses and seasonal forecast information, in the form of online "Maprooms." The newest addition is a Climate Summary for Local Government that provides simplified access to the most commonly used set of climate information products for a specified district or sector.

Three training workshops, held in March, April and December 2019, trained about 150 national and local agricultural professionals to understand, information and analyses in the Maprooms, and use them for agricultural decision-making. Participants represented MINAGRI, RAB, Eastern Agric Grain Council, One Acre Fund, Rwanda National Police, NGOs, media, academia, provincial directors of agriculture and district development programs, and District Agronomists from all 30 districts. The work was led by a consortium of CCAFS partners, including CIAT, IRI, University of Reading, ILRI and ICRAF; under the WISER Iteganyagihe Ryacu project funded by DfID, and the Rwanda Climate Services for Agriculture project funded by USAID. Based on the success of the initial training for government personnel in March, the Rwanda National Fund for Environment (FONERWA) provided funds for the April training.

Links to any communications materials relating to this outcome: <Not Defined>

Part II: CGIAR system level reporting

Link to Common Results Reporting Indicator of Policies : No

Stage of maturity of change reported: Stage 1

Links to the Strategic Results Framework:

Sub-IDs:

- Enhanced capacity to deal with climatic risks and extremes (Mitigation and adaptation achieved)

Is this OICR linked to some SRF 2022/2030 target?: Too early to say

Description of activity / study: <Not Defined>

Geographic scope:

- National

Country(ies):

- Rwanda

Comments: <Not Defined>

Key Contributors:

Contributing CRPs/Platforms:

- CCAFS - Climate Change, Agriculture and Food Security

Contributing Flagships:

- FP4: Climate services and safety nets

Contributing Regional programs:

- EA: East Africa

Contributing external partners:

- Ministry of Agriculture and Animal Resources (Rwanda)

CGIAR innovation(s) or findings that have resulted in this outcome or impact:

Built on Agriculture and Food Security Maprooms, and indirectly on PICSA.

Innovations:

- 1310 - Agriculture and Food Security Maprooms (<https://tinyurl.com/2kobktw6>)

Elaboration of Outcome/Impact Statement:

District Agronomists in Rwanda, trained to access, understand and use the advanced suite of online climate information products and tools available through the national meteorological agency, Meteo Rwanda, are now using this information to improve the services they provide to farmers.

From analysis of local historical climate information, District Agronomists in the highlands of Western Province realized that the crop seed varieties that had been distributed to farmers were not well adapted to local conditions. They identified maize hybrids that better matched the local climate, and distributed the improved seed to 87,872 farmers (1).

The Bugesera District Agronomist, Eastern Province, used climate information to calculate how much irrigation water would be needed to meet crop requirements during drought conditions. Based on this calculation, authorities pumped from a lake into a lined reservoir, or “damsheet,” to provide supplemental irrigation water to 188 farmers to protect their crops through prolonged dry spells (2).

CCAFS has worked with Meteo Rwanda since 2016 to fill gaps in their historical records (3), and provide a rich suite of high-resolution historical analyses and seasonal forecast information, in the form of online “Maprooms” that present information as maps and localized graphs (4). The newest addition is a Climate Summary for Local Government that provides simplified access to the most commonly used set of climate information products for a specified district or sector: the most recent seasonal forecast; monitoring graphs showing recent rainfall conditions; monthly and dekadal summaries of the annual cycle; and a range of analyses of historical rainfall characterizes, including estimated rainfed growing season onset and cessation dates, in time series and probability formats (5).

Three training workshops, held in March, April and December 2019, trained about 150 national and local agricultural professionals to understand, information and analyses in the Maprooms, and use them for agricultural decision-making (6-9). Participants represented MINAGRI, RAB, Eastern Agric Grain Council, One Acre Fund, Rwanda National Police, NGOs, media, academia, provincial directors of agriculture and district development programs, and District Agronomists from all 30 districts. The work was led by a consortium of CCAFS partners, including CIAT, IRI, University of Reading, ILRI and ICRAF; under the WISER Iteganyagihe Ryacu project funded by DfID, and the Rwanda Climate Services for Agriculture project funded by USAID. Based on the success of the initial training for government personnel in March, the Rwanda National Fund for Environment (FONERWA) provided funds for the April training (7).

References cited:

1. Letter from District Agronomist regarding seed distribution outcome. Uploaded at <https://cgiar.sharepoint.com/:f:/r/sites/CCAFS/CRP%207%20Management/Reviewing%20and%20Reporting/Annual%20Reporting/TL%20and%20RPL%20Technical%20Reporting/2019/Internal%20Evidences/P263/Evidence%203199?csf=1&e=MF056y>
2. Letter from Bugesera District Agronomist regarding irrigation outcome. Uploaded at <https://cgiar.sharepoint.com/:f:/r/sites/CCAFS/CRP%207%20Management/Reviewing%20and%20Reporting/Annual%20Reporting/TL%20and%20RPL%20Technical%20Reporting/2019/Internal%20Evidences/P263/Evidence%203199?csf=1&e=MF056y>
3. Siebert, A. et al., 2019. Evaluation of ENACTS-Rwanda: A new multi-decade, high-resolution rainfall and temperature data set—Climatology. Int. J. Climatol. 39(6): 3104-3120.
4. Meteo Rwanda Maproom landing page: <http://maproom.meteorwanda.gov.rw/maproom/>
5. Climate Summary for Local Governments: <http://maproom.meteorwanda.gov.rw/maproom/Summary/index.html>
6. Quarterly Report to USAID, January - March 2019. https://pdf.usaid.gov/pdf_docs/PA00WFP6.pdf
7. Annual Report to USAID, October 2018-September 2019. https://pdf.usaid.gov/pdf_docs/1d09deb5ab244f7997ddf5b9d4001f06.pdf
8. WISER East Africa newsletter - March 2019. <https://drive.google.com/file/d/1SooLM7leDHIuLDHAWAf6qV217jDIRbzL/view>
9. Workshop Report: Participants pledged to scale-up the skills and knowledge on “Rwanda Climate Maproom” to tens of thousands. <https://drive.google.com/file/d/1SooLM7leDHIuLDHAWAf6qV217jDIRbzL/view>

Quantification: <Not Defined>

Gender, Youth, Capacity Development and Climate Change:

Gender relevance: 0 - Not Targeted

Youth relevance: 0 - Not Targeted

CapDev relevance: 2 - Principal

Main achievements with specific **CapDev** relevance: The two bilateral projects have capacity development for Meteo Rwanda and other government agencies as key objectives. Training for national and local government, to access, understand and use climate information products that the projects supported Meteo Rwanda to develop, lead to the outcome.

Climate Change relevance: 2 - Principal

Describe main achievements with specific **Climate Change** relevance: Climate services directly support climate change adaptation. USAID and DfID project funding are associated with climate change adaptation.

Other cross-cutting dimensions: No

Other cross-cutting dimensions description: <Not Defined>

Outcome Impact Case Report link: [Study #3199](#)

Contact person:

Desire Kagabo, Research Scientist, CIAT-Rwanda. D.Kagabo@cgiar.org