Socially inclusive climate information services in Kenya

Mid-year report 2023

Philip Miriti | Renee Bullock

CGIAR

AICCRA
Accelerating Impacts of CGIAR
Climate Research for Africa

Socially inclusive climate information services in Kenya

Mid-year report 2023

Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA)

June 2023

Philip Miriti
Renee Bullock

About AICCRA reports
Titles in this series aim to disseminate interim climate change, agriculture, and food security research and practices and stimulate feedback from the scientific community.

About AICCRA
Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) is a project that helps deliver a climate-smart African future driven by science and innovation in agriculture. It is led by the Alliance of Bioversity International and CIAT and supported by a grant from the International Development Association (IDA) of the World Bank.

Contact us
Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA). Email: aiccra@cgiar.org

Contents

Acronyms

AICCRA	Accelerating Impacts of CGIAR Climate Research for Africa
ASDSP	Agricultural Sector Development Support Program
CDM	County Director of Meteorological Services
CIS	Climate Information Services
CSA	Climate Smart Agriculture
KMD	Kenya Meteorological Department
MAM	March-April-May
OND	October-November-October
PSP	Participatory Scenario Planning
RLG	Radio Listening Groups
SCAO	Sub-County Agricultural Officer

Introduction

This report summarizes three activities that were implemented to support socially inclusive scaling of climate information services (CIS). These activities included a workshop, radio programs and field visits. A workshop titled 'Strengthening climate networks to support community capacities', two piloted radio programs and field visits to climate observers are described. Collectively, these activities build capacity and learning with and among climate networks.

Climate downscaling to improve agro advisory content

AICCRA activities are planned in coordination with Kenyan climate experts and embedded in national and regional climate downscaling processes. A key activity in downscaling climate information from national to local level is Participatory Scenario Planning (PSP). The PSP is designed to enable access to, understanding, and collective interpretation of seasonal climate forecasts and associated uncertainties into locally relevant information that is useful for decision-making and planning by farmers. It seeks to create an approach for regular dialogue and engagement of all actors, including users, to co-develop and deliver climate services that are responsive to user needs (CARE International, 2018). PSP supports collaboration in the design and delivery of context-specific and relevant climate information services by working with national meteorological services, value chain stakeholders, and government departments in climate-sensitive sectors like agriculture, water and energy, local communities, and organizations. PSP also supports the inclusion of stakeholder-focused climate information services in agriculture and development. PSPs are implemented in all 47 counties of Kenya with support from the Agricultural Sector Development Support Program (ASDSP).

Stakeholder engagement and collaboration is critical in generating and disseminating socially inclusive CIS. Our work is aligned and in coordination with the Kenya Meteorological Department (KMD), which provides timely and relevant weather and climate information to guide agricultural activities and conservation of the natural environment (KMD, 2023). Timely dissemination ensures that farmers will have adequate time to make decisions about their farming activities. Early warnings and seasonal forecasts are decision-making support tools that should be matched to local realities to ensure sustained livelihoods and development in a changing climate.

Climate observers are important stakeholders in KMD networks. They record and share rainfall data with KMD that informs county and zone-specific forecasts. Their data complements and increases the coverage of rainfall data collection, which is important to better tailoring CIS content. They engage in the PSP processes, contribute to and codevelop the agroadvisory content alongside county and ward level extension agents. Their engagement enhances the potential of the agroadvisories to reflect local practices, such as common and well-performing varieties. The climate observers share the agroadvisories in their communities and therefore are an important and locally valued source of information in rural locations.

Socially inclusive CIS

The Kenya Cluster gender strategy articulates key activities in five thematic areas, including digital platforms, risk assessments, and long-term adaptation planning to increase resilience, CSA technology packages, business models and value chains, and capacity development. Bullock and Katothya's (2022) findings provided guidelines to develop a socially inclusive CIS framework. While local demand for climate services has increased, few access climate advisory services, and even fewer use the information to plan their farming activities. Gender-based constraints also influence women's and men's differential access to and uptake of services. Radio was perceived as the most accessible, reliable, and easiest source to access information. Scaling CIS requires having multiple dissemination channels, expanding learning networks, facilitating access to resources, and increasing women's agency in decision-making. The strategy details a socially inclusive communication strategy that relies upon five key mechanisms to increase CIS reach and uptake. Specific to each channel are activities that enable opportunities to better tailor context-specific information to meet the demand of local women and men in their communities.

Dissemination channels and gender activities include:

1. SMS messages

    a. Tailor content to meet gendered information needs

2. Radio broadcasts

    a. Tailor content to meet gender-specific needs through live talk shows and radio drama

3. Radio listening groups

    a. Pilot radio broadcasts and learn from gender and age-disaggregated groups to assess radio impacts and solicit recommendations on how to improve content for future seasons

4. Farmer field days

    a. Enhance the capacity of KMD volunteer observers through AICCRA networks

5. Network building

    a. Establish and strengthen networks between County officials, volunteer observers, and AICCRA participants.

Workshop (Strengthening climate networks to support community capacities)

The workshop was held in Kitui town, Kitui County . The main objectives of the workshop were to:

1. Strengthen and establish climate information service networks

2. Codevelop context-specific agroadvisory content for Kitui county

Participants included KMD National and County level staff, KMD Climate observers, and county and ward-level extension agents. In total, 12% of the participants were youths, and 38 % were women. The summary table for workshop participants is shown in Appendix 2.

Breakout sessions were created to understand climate networks and their opportunities and challenges. Feedback in the plenary was given.

Information sharing:

*   Information is commonly shared in community public meetings, church, youth, women's and self-help groups, and use of phone and social media such as WhatsApp groups. They also rely upon social gatherings such as fundraising events and print media such as posters.

*   There is increased demand and reliance on CIS because of climate change. Access to CIS has been enhanced due to the devolvement of meteorological services at the county level. The presence of local vernacular radio and television stations has facilitated access to CIS among youth, women, the elderly, and people living with disabilities. Climate observers gain new skills and experience by supporting KMD and are often known within the community.

Climate observers' challenges include:

1. Lack of adequate airtime to share rainfall data with KMD and with community members

2. Mistrust and negative attitudes about CIS in the community

3. Reliance upon traditional methods e.g., observing animal sounds, insects, and wind direction

4. Poor mobile network coverage and certain community members lacking access to mobile phones and radio

5. Inadequate capacity building opportunities and limited capacity to mobilize community members for meetings

6. Difficulty in interpretation and understanding of agro-advisory pamphlets as a result of illiteracy levels among community members

To enhance and scale volunteer climate observers' networks, the participants recommended:

1. Implement inclusive seasonal workshops involving local administrators and village elders

2. Create and provide branded materials to climate observes so that their roles are clear in the community

3. Provide adequate and timely funds for airtime, transport, and a stipend

4. Involve local administration officers, chiefs, and village elders in creating CIS awareness and sensitization in the community

5. Implementation of training of trainers model for climate observers to reach more people

6. Working with collectives and enhancing coordination and collaboration

7. Improve infrastructural conditions and network coverage to improve access to information

Breakout sessions were organized to develop content for agro advisories based on the forecast for the area and relevant agricultural and livestock advice needed. Participants were divided into two groups based on the sub-counties in Kitui County. Each group was comprised of the Sub-County agricultural officers (SCAOs), the County Director of Meteorological Services (CDM) for Kitui County, and the head of the livestock program in Kitui County.

1. Kitui East, Kitui South, and Mwangi North

2. Kitui Central, Kitui West, Mwingi West, Kitui Rural, and Mwingi Central

Following the discussion, each group presented their work in plenary. This was later used as content for radio programming.

The workshop provided valuable input for the planned next steps. These are detailed below.

1. Maintain and expand climate volunteer observers by strengthening their capacity and enhancing their reporting mechanisms to support KMD forecasting that enables farmers to make informed decisions in the face of climate change.

2. Plan a capacity-building workshop with all volunteer climate observers from Kitui, Makueni, and Taita Taveta counties to promote peer learning and create synergies among the volunteer observers across the counties to improve implementation of activities.

3. Develop a mobile application for volunteer climate observers with a smartphone and a simple messaging application for volunteer climate observers with a feature phone. This would simplify the recordkeeping of rainfall data and enhance data sharing with KMD.

4. Integrate rainfall data from ICRISAT's issued rain gauges with KMD data to increase KMD's overall forecasting capabilities to develop better context-specific agro advisories.

5. Develop methodologies to evaluate the impact, effectiveness, and reach of the radio programs to document impact and identify opportunities and challenges that can be useful in improving future CIS radio programs

Piloted radio programs

Radio is a popular medium through which farmers can access forecast and weather information and agricultural and livestock advice. County FM is a local station that broadcasts in the local language of kiKamba. We partnered with County FM to develop two types of programs. The first was a live talk show in which the KMD County Director and an agricultural expert shared the forecast for the MAM 2023 season. They provided zone-specific details about anticipated rainfall and, based on that, recommended certain crop varieties and practices. Following 15 minutes of sharing this information, call-ins from audience listeners are invited. The talk show program was aired for one hour in three different episodes at 8 pm on 20th March, 14th April, and 9th May 2023. The time selected was informed by GeoPoll analysis that indicate that at 8 PM the estimated listenership is 110,000 (GeoPoll, 2023).

The second piloted program was a drama in which household members make decisions in response to the MAM 2023 forecast, which predicts lower-than-average rainfall. The skit, approximately 12 minutes, was acted out by a local drama group, also in kiKamba language, on Kamba FM. The drama emphasized the need for collective planning to better prepare for the season. Practices such as planting drought-tolerant crops, investing in water harvesting and conservation measures, and learning from neighbors were included. In the household, both husband and wife work with their eldest daughter to plan for the season, thereby addressing the importance of supportive or complementary intrahousehold dynamics.

Both programs will be reviewed through planned sex and age-disaggregated radio listening groups (RLGs) later in 2023. The purpose of the RLGs will be to 1. assess relevance for farmers, 2. ease of understanding, and 3. whether the content affects household behaviors and, if so, how. Feedback will be incorporated into the OND season radio programming.

Donkeys are valued in drylands and are often used to carry water for long distances. ILRI/R. Bullock

Field visits to climate observers

Field visits were made to two climate observers, Mary Samson and Isaac Stephen. The field visits aimed to see how climate observers work and better understand their livelihoods.

Mary Samson, a climate observer in Kitui County. ILRI/R. Bullock

Mary Samson is 65 and has been a volunteer climate observer for 15 years. Mary shared her experiences with climate change that has brought about inadequate and erratic rainfall and prolonged droughts.

She champions climate-smart agriculture in her community and has engaged in multiple capacity-building activities. Mary and her husband have hosted demo plots, and they grow sorghum, millet, and green grams. A challenge is the quelea birds that often come to eat sorghum and millet, which may lower her farm yields.

Mary Samson shows her sorghum harvest. ILRI/R. Bullock

She has also implemented water conservation practices such as terraces, mulching, and a vertical garden for green leafy vegetables such as spinach, kale, and black nightshade.

Mary owns three goats and one donkey. She mixes sorghum flour and water to feed ducks and chicken.

> *'Sorghum has a lot of energy which makes chicks grow fast. After eating the mixture, you see ducks love sorghum.'*

Mary is active in community groups and runs a community water project. In another table banking group, members buy livestock, like goats, for one another.

Mary and her husband earn income from tailoring in a nearby market. She has an extra sewing machine at home where she works while often also managing farm activities. She is passing on her skills by training young girls to sew clothes.

Stephen Isaac, a climate observer in Kitui County. ILRI/R. Bullock

Stephen Isaac is 35 and has been a climate observer since 2019. He showed us his rain gauge that wasprovided through Kenya Cereal Enhancement Programme KCEP. He monitors and shares the information with KMD and other community members. He reports the rainfall level to a county KMD officer at 9:00 am daily during the rainy season. Due to low rainfall, farmers in his village have not harvested in the past four years. People must resort to buying food from other areas. 'During the last OND 2022 season, the recorded rain was about 10mm; the following day, it was less than 10mm, so seeds cannot germinate with such rainfall. After that, in January, on the 3rd and 4th of 2023, we got rainfall of about amount 19 mm, but it was already too late for the seeds to germinate.'

Isaacs's family members were supportive of his choice to be an observer. 'My brothers are comfortable with it; whenever I measure rain, I can share with them and tell them that the rain cannot sustain maize or beans and tell them the kind of crops to plant. Whatever I plant, they also plant the same'.

He shares the rainfall data with community members in a few ways: 'I am always in some organizations, such as self-help groups, and I share information through such groups. I share information through WhatsApp groups, at chief's barazas, and when I get some time during funerals, I can share the information with the attendees.'

Isaac's interest in agriculture began in high school, where he chose agriculture as one of his study subjects. He keeps a dairy cow and local breeds of cattle and goats, chicken, and two donkeys. He transferred some animals to another location due to the scarcity of animal feed because of the late arrival of rain.   In the past, Isaac has planted drought-tolerant crops like sorghum, green grams, and cowpeas on his farm.

Stephen Isaac shows his home garden that is irrigated through rainwater harvesting techniques. ILRI/ R. Bullock

Appendix[1]

Appendix 1: Workshop agenda

14 March	
14:00	Introduction: AICCRA
14:30	Networks breakout sessions
16:00	Tea
16:15	Network breakout sessions
17:00	Closing
15 March	
09:00	Recap and feedback from network breakouts
09:15	Radio content breakout sessions
10:00	Tea
10:15	Report back
11:00	Campaigns and women and youth
12:00	Next steps: action points
12:30	Closing

Appendix 2: Summary of workshop participants

Participants	Youth	Non- youth	Women	Men
Volunteer Observers	5	26	14	17
KMD		2		2
Sub-County Agricultural Officers (SCAO)		4		4
Agri- Nutritionist		1		1
Head of livestock program-Kitui County		1	1	
Sub total	5	34	15	24
Total workshop participants	39			

1. The workshop was carried out in Kitui town, Kitui County. The county has a total land area of 30, 420 sq. Km and a total population of about 1,136, 187 composed of 549,003 men and 587,151 women. The region is predominantly arid and semi-arid and lies in the lower Eastern part of the country where the main source of livelihood is pastoralism and agropastoralism. The rainfall in the county is often inadequate and erratic which necessitates the use of irrigation for food production. The main crops cultivated include cereals such as sorghum, maize, and millets; pulses such as green grams, cowpeas, and pigeon peas; root crops such as cassava, sweet potatoes, and arrow roots; industrial crops such as cotton, sisal, and sunflower. The main livestock types reared include cattle (beef and dairy), poultry (indigenous and exotic), goats (meat and dairy), and sheep. The county consists of eight sub-counties namely, Mwingi North, Mwingi West, Mwingi Central, Kitui West, Kitui Rural, Kitui Central, Kitui East, and Kitui South. Uptake of CIS is low in certain wards in Kitui, the use of traditional methods by men and women as sources of climate information is common. Some local farmers access and use CIS to plan farming activities, such as the choice of crops and seeds, when to plant, and how to conserve soil.

References

Bullock, R. M., and Katothya, G. 2022. Understanding gendered access and uptake of climate services to develop socially inclusive programming in Kenya.

CARE International. 2018. A practical guide to participatory scenario planning: seasonal climate information for resilient decision-making.

GeoPoll. 2023. Market research in Kenya. GeoPoll. (Available at: https://www.geopoll.com/kenya-market-research-panel/).

KMD (The Kenya Meteorological Department). 2023. About us: Our department. (Available at: https://meteo.go.ke/about-us/our-department).
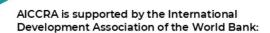
About AICCRA

Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) is a project that helps deliver a climate-smart African future driven by science and innovation in agriculture.

It is led by the Alliance of Bioversity International and CIAT and supported by a grant from the International Development Association (IDA) of the World Bank.

Discover more at aiccra.cgiar.org