



# Workshop Report

**Climate Risk Management in Agricultural Extension (CRMAE) Curriculum: Training of Trainers for Senegal's Agricultural Extension System**

March 2023



**AICCRA**  
Accelerating Impacts of CGIAR  
Climate Research for Africa



## To cite this workshop report

Grossi A, Braun M, Hansen J, Trzaska S, List G, Worou N, 2023. Climate Risk Management in Agricultural Extension (CRMAE) Curriculum: Training of Trainers for Senegal's Agricultural Extension System. AICCRA Workshop Report. Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA).

## About AICCRA

Accelerating Impacts of CGIAR Climate Research in 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. Explore AICCRA's work at [aicra.cgiar.org](http://aicra.cgiar.org)

## Contact Us

Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA). Email: [aiccra@cgiar.org](mailto:aiccra@cgiar.org)

**Photos:** Amanda Grossi

**Disclaimer:** This workshop report has not been peer reviewed. Any opinions stated herein are those of the author(s) and do not necessarily reflect the policies or opinions of the IRI, donor agencies, or partners. All images remain the sole property of their source and may not be used for any purpose without written permission of the source.



## **Abstract**

A nine-day training of trainers (ToT) workshop on the Climate Risk Management in Agricultural Extension (CRMAE) curriculum was convened from March 6-15, 2023, in Saly, Senegal with the country's main extension and advisory service (EAS) providers from both the public and private sectors. The workshop, which was organized as part of the World Bank's Accelerating the Impact of CGIAR Climate Research for Africa (AICCRA) project, brought these EAS providers together to train them on a new co-produced and competency-based curriculum to build foundational knowledge and skills to manage climate risk in agriculture. In particular, the curriculum aims to help EAS providers to take advantage of best-available and location-specific climate information products and tools in Senegal, including those freely available and accessible online through the National Agency for Civil Aviation and Meteorology (ANACIM) to better plan for, manage, and respond to a changing and varying climate.

## **Keywords**

Senegal; agriculture; climate change; climate variability; food security; capacity development; climate-smart agriculture

## About the Authors

**Amanda Grossi** is a Senior Staff Associate at the International Research Institute for Climate and Society (IRI) of the Columbia Climate School. Within the AICCRA project, she is the IRI's Regional Manager for Africa where she coordinates the IRI's activities at the country-level in Ethiopia, Kenya, Zambia, Ghana, Mali, and Senegal. In this role, she provides critical support to the development and delivery of capacity building initiatives and digital innovations, including those associated with the IRI's Enhancing National Climate Services (ENACTS) approach.

**Melody Braun** is a Senior Staff Associate at the International Research Institute for Climate and Society (IRI) of the Columbia Climate School. With a multidisciplinary background in Earth science, sustainable development and adaptation to climate change, her work focuses on the design and support of strategies to improve the integration of climate information into decision making processes to increase preparedness, response, and resilience to climate impacts.

**James Hansen** is a Senior Research Scientist at the International Research Institute for Climate and Society (IRI), Columbia Climate School. With a background in Agricultural Systems, his work focuses on improving the management of climate risk and the use of climate information for farmer livelihoods, agricultural development, and food security in the developing world. Dr. Hansen served on the leadership team of the CGIAR research program on Climate, Agriculture and Food Security (CAAFS), leading its Flagship 4 Program on Climate Services and Safety Nets from 2009 to 2019.

**Sylwia Trzaska** is a Senior Staff Associate and climate scientist at the International Research Institute for Climate and Society (IRI) of the Columbia Climate School.

**Geneva List** is a Senior Staff Associate at the International Research Institute for Climate and Society (IRI) of the Columbia Climate School.

**Nadine Worou** is the AICCRA-Senegal Coordinator based at the International Livestock Research Institute (ILRI) in Dakar, Senegal. In this role, Dr. Worou provides leadership and guidance, ensuring the delivery of outputs and outcomes for AICCRA's activities in Senegal, including partnerships strengthening and the generation and dissemination of knowledge from research and innovations. She has more than 20 years of experience working on climate change challenges, system modelling, and forest resource management.

## **Acknowledgements**

The Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) project is supported by a grant from the International Development Association (IDA) of the World Bank. IDA helps the world's poorest countries by providing grants and low to zero-interest loans for projects and programs that boost economic growth, reduce poverty, and improve poor people's lives. IDA is one of the largest sources of assistance for the world's 76 poorest countries, 39 of which are in Africa. Annual IDA commitments have averaged about \$21 billion over circa 2017-2020, with approximately 61 percent going to Africa.

The Climate Risk Management in Agricultural Extension (CRMAE) curriculum and its associated capacity building activities represent a collaborative effort made possible by the participation and exchanges between public and private actors in Senegal's agricultural advisory system, and led by the project partners, in particular the National Agency for Civil Aviation and Meteorology (ANACIM), the Senegalese Institute of Agricultural Research (ISRA), the National Agency for Agricultural and Rural Council (ANCAR), the Network of Farmer and Pastoral Organizations of Senegal (RESOPP), University of Sine Saloum El-Hâdj Ibrahima Niass (USSEIN), Alioune Diop University of Bambey (UADB), MLouma, Jokalante, the International Livestock Research Institute (ILRI), AfricaRice, and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT).

# Highlights



1

Strengthening the capacity of next users, particularly agricultural extension and advisory service (EAS) providers who work to support farmers to adapt to a changing climate, is crucial for **enhancing access to climate information services and validated climate-smart agriculture technologies** in Senegal.



2

From March 6-15, 2023, a **nine-day training of trainers** workshop on the Climate Risk Management in Agricultural Extension (CRMAE) curriculum was implemented in Saly, Senegal with public and private EAS providers.



3

A total of **18 participants representing public and private agricultural extension and advisory service providers**, including two participants from Mali were capacitated on the CRMAE curriculum and developed a **roadmap for its pilot** in May 2023.



4

**The competency- and skills-based curriculum will be piloted at three sites in three different livelihood zones** in Senegal in May 2023, led by those trained at the workshop. The sites are Thies, Bambey, and Kaolack. The participants from Mali who partook in the training will lead their own national consultative workshop to **adapt the curriculum to the Malian context**.



5

**Curricular materials** including a Reference Guide (textbook), Facilitators Guide (Teachers' Guide), PowerPoint materials, and activity sheets **will be finalized based on feedback** to ensure those trained are well-situated to implement the pilot of the curriculum with extension staff. **Two webinars on the ag-data hub and iSAT advisories will be organized** for the trainees.



6

The **hands-on, practical curriculum** will equip EAS providers in Senegal with foundational skills and knowledge—including on best-available climate information and digital innovations—to help farmers manage climate risk in the agricultural sector.

# 1: Introduction

The Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) project aims to enhance access to climate information services and validated climate-smart agriculture technologies in Africa, to help these countries strengthen the resilience of their agricultural sectors to the threat posed by climate change. Strengthening the capacity of next users, particularly agricultural extension and advisory service (EAS) providers who work to support farmers in Senegal and five other target countries, is crucial for achieving this goal.

Towards these ends, the AICCRA project has been working to co-design and co-implement curricula targeting the agricultural extension systems in each of the six AICCRA target countries to build foundational knowledge and skills to manage climate risk, including Senegal. These curricula aim to help EAS providers to take advantage of best-available and location-specific climate information products and tools in their countries to better plan for, manage, and respond to a changing and varying climate.

They also aim to pragmatically support the tailoring and communication of such information to meaningfully inform on-farm agricultural decision-making and build wider resilience of the agricultural sector.

To advance these goals in Senegal, the AICCRA project has since 2021 worked closely with national and private sector partners to co-develop a curriculum aimed at improving climate risk management in agricultural extension (CRMAE). This has been done under the leadership of the National Agency for Civil Aviation and Meteorology (ANACIM) in particular, which is mandated with providing weather and climate information, and for stewarding the use climate services for agricultural development and other climate-sensitive sectors and communities, and with technical support from the International Research Institute for Climate and Society (IRI) of the Columbia Climate School.

Moreover, it has involved collaboration and iterative dialogue and co-production processes amongst a wide set of actors representing Senegal's EAS providers, including the Senegalese Institute of Agricultural Research (ISRA), the National Agency for Agricultural and Rural Council (ANCAR), the Network of Farmer and Pastoral Organizations of Senegal (RESOPP), University of Sine Saloum El-Hâdj Ibrahima Niass (USSEIN), Alioune Diop University of Bambey (UADB), MLouma, Jokalante, the International Livestock Research Institute (ILRI), AfricaRice, and International Crops Research Institute for the Semi-Arid Tropics (ICRISAT).



*Participants of the Climate Risk Management in Agricultural Extension (CRMAE) Curriculum Training of Trainers for Senegal's Agricultural Extension System workshop pause for a group photo in Saly, Senegal.*

This competency-based curriculum, consisting of a 10-day short course targeting field extension staff, is comprised primarily of two documents and their associated teaching and learning materials. These include the course Reference Guide (textbook) and Facilitators' Guide (Teachers' Guide), to which national institutions, development partners, and private actors all contributed to the co-design through workshops held in May 2022 (Braun et al., 2022) and November 2022 (List et al., 2022), and through periodic Working Group meetings established for this purpose.

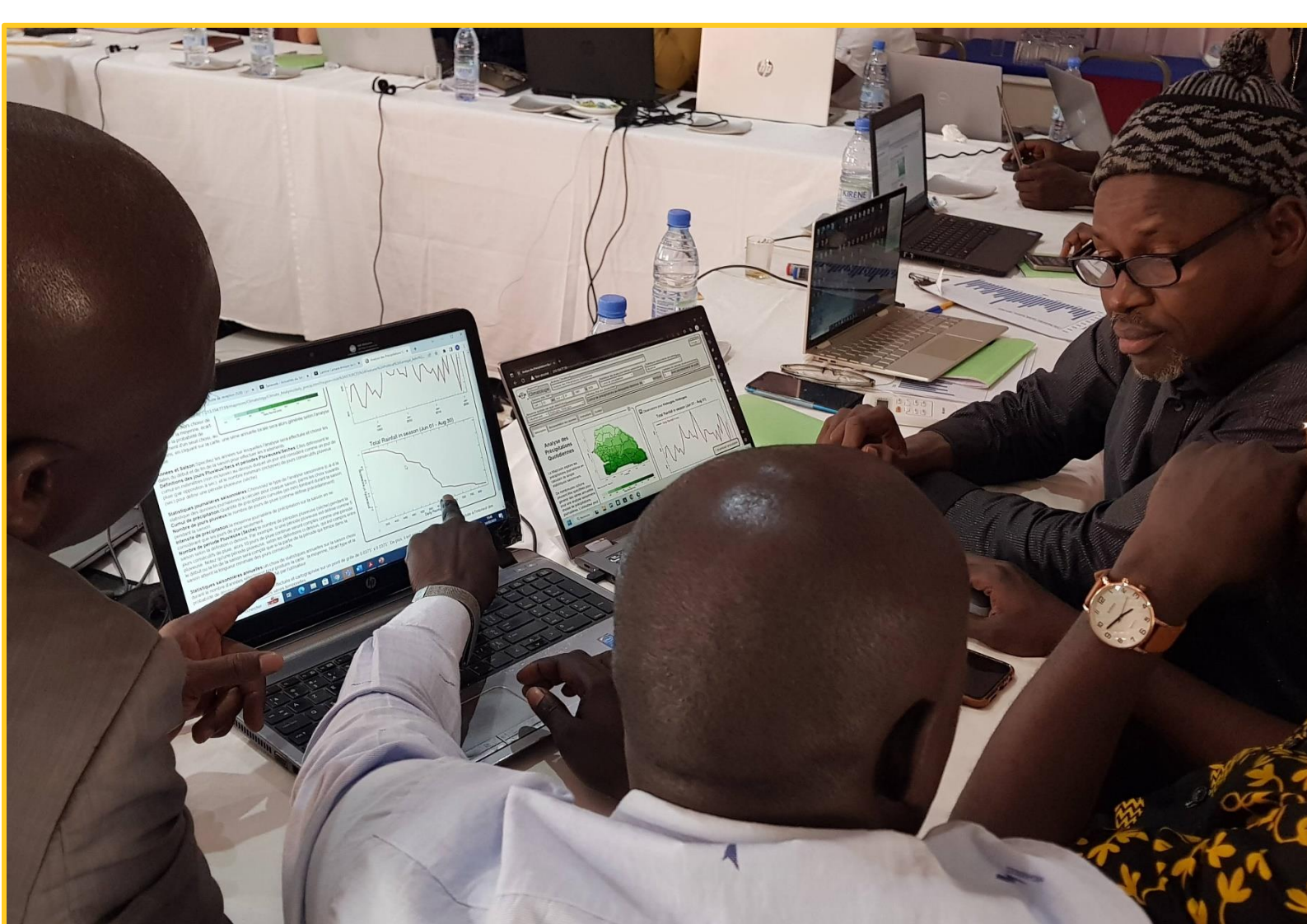
The design of Senegal's extension curriculum was heavily informed by and made possible through the lessons learned and experiences gleaned from the of curriculum co-design process in Ethiopia through the Adapting Agriculture to Climate Today, for Tomorrow (ACToday) Columbia World Project (Grossi & Dinku, 2022b) and AICCRA project initiated in

2021 and for which capacity building was carried out in both 2022 (Grossi & Dinku, 2022a; Grossi et al., 2022a; Grossi et al., 2022b) and 2023 (Grossi et al., 2023).

Following on these co-productive processes, the AICCRA project organized a nine-day training of trainers (ToT) with representatives from the main organizations in Senegal providing EAS to farmers from March 6-15, 2023, in Saly, Senegal.

This workshop aimed to prepare those trained to facilitate a pilot of the curriculum at three sites (Thies, Bambey, Kaolack) in three different livelihood zones in Senegal in May 2023, prior to the start of the rainy season.

*Participants from ANCAR, MLouma, and UADB work together during a group activity as part of Module 2 (Climate Information and Tools Available for Agriculture) to navigate and understand the forecast from ANACIM's online suite of Maproom products.*





## 2: Approaches and Methods

### Workshop Structure and Participation

Towards its overarching goal of training Senegal's public and private EAS providers on the CRMAE curriculum in preparation for its May 2023 pilot, the training of trainers (ToT) workshop entailed detailed presentation and demonstration of all content and hands-on activities that comprise the competency- and skills-based course. It also incorporated dedicated time for feedback after each of the course's four modules to ensure the IRI team which led the technical development of the curriculum could fine-tune it and make any necessary final adjustments.

A full list of the 18 participants is available in **Box 1**, though in brief, representation included:

#### *National Institutions*

- The National Agency for Civil Aviation and Meteorology (ANACIM)
- The Senegalese Institute of Agricultural Research (ISRA)
- 

#### *Farmer Organizations*

- The Network of Farmer and Pastoral Organizations of Senegal (RESOPP)



*During an exercise as part of Module 3 (Climate-Sensitive Agricultural Decisions), a participant from Jokalante practices drawing a decision-tree to analyse a decision of whether or not to pursue insurance based on a given forecast.*

### *Educational Institutions*

- University of Sine Saloum El-Hâdj Ibrahima Niass (USSEIN)
- Alioune Diop University of Bambey (UADB)
- Ecole Supérieure des Sciences Agricoles et de l'Alimentation (ESSA) of L'Université Amadou Mahtar Mbow (UAM)

### *The Private Sector*

- MLouma
- Jokalante,

### *Development Partners (International Organizations)*

- the International Livestock Research Institute (ILRI)
- AfricaRice
- The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT).

Two participants from Mali were also included in the ToT, with an eye towards knowledge sharing and scaling between West African countries.

The list of trainers and support staff for the workshop can be found in **Box 2**, and the full agenda for the workshop can be found in **Section 6 (Agenda)**.

*A participant from ANCAR works to graph past rainfall amounts in a participatory seasonal forecasting planning workshop activity as part of Module 4 (Integrating Climate Services into Agricultural Extension)*



## Curricular Modules

An outline of the four-module CRMAE curriculum covered during the workshop is summarized herein and is also depicted in *Figure 1*:

**Module 1:** *Climate Basics* provides foundational knowledge about climate concepts, data and common data analyses, and forecasts. A basic understanding of climate from this module provides necessary background and context for subsequent learning about the types and use of climate information to improve agricultural risk management. It also prepares participants to address client farmers' questions and concerns about weather and climate. The module includes probability concepts that are foundational for understanding and managing risk, and for interpreting and using climate information to support risk management.

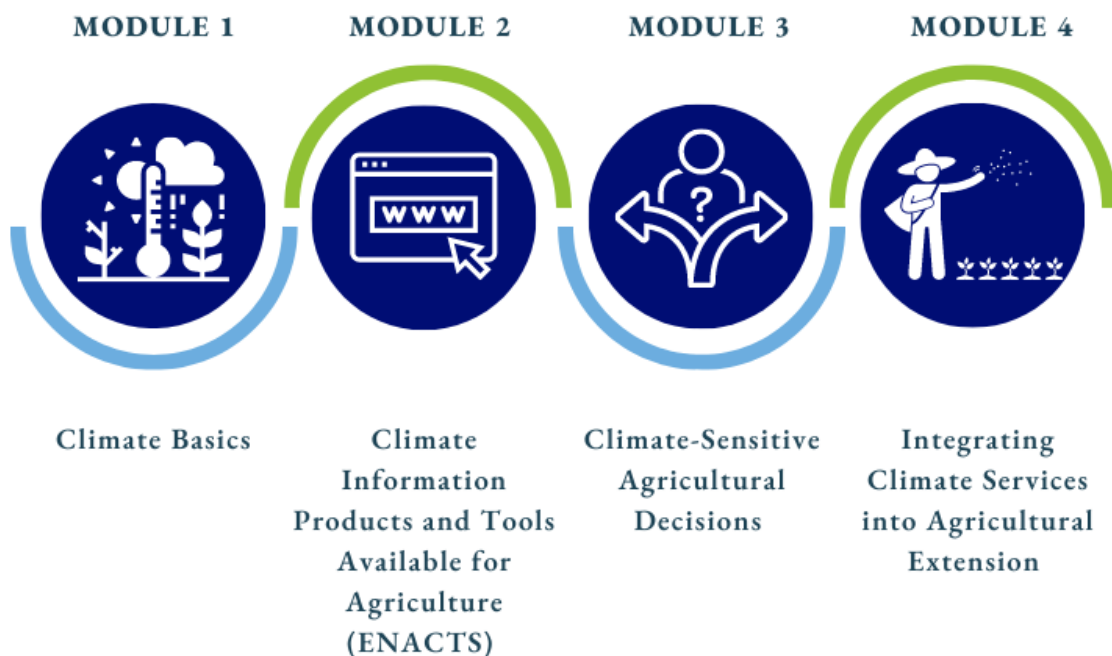
As such, both the local and global factors that affect Senegal's climate are explored within this module. It also includes a unit that provides an introduction to the basics of reading and interpreting a map or graph, and exercises to expose participants to the most

common climate maps and charts they are likely to encounter in their work.

**Module 2:** *Climate Information Products and Tools Available for Agriculture* provides an overview of relevant weather and climate information products and services that are [or will soon be] available through the National Agency for Civil Aviation and Meteorology (ANACIM). It teaches participants how to navigate and use relevant historical, monitored and forecast information products available through ANACIM's web page (ANACIM, 2023) and online climate information products (Maprooms).

**Module 3:** *Climate-Sensitive Agricultural Decisions* strengthens participants' understanding of the interaction between climate and farm decision-making. It enables them to perform basic analyses of climate-sensitive farm management decisions under uncertainty. A number of factors, in addition to crop and livestock productivity, influence farm management decisions, particularly at seasonal and longer time scales.

**Figure 1:** CRMAE curriculum modules. The four component modules of the Climate Risk Management in Agricultural Extension curriculum targeting extension staff build upon and reinforce each other.

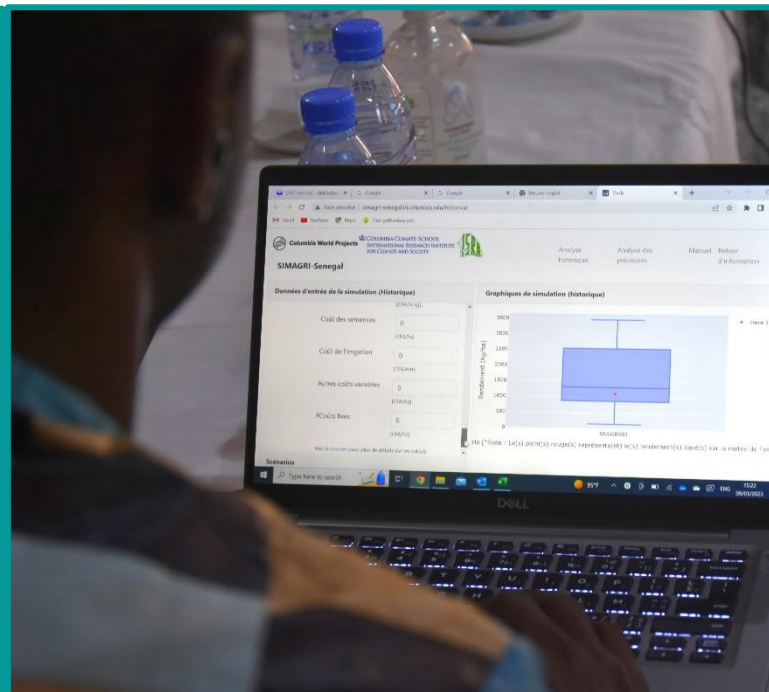


To equip participants to provide appropriate support and guidance to their farmers, the module builds understanding of factors that lead to different management decisions by different farmers and under different climate conditions.

**Module 4: Integrating Climate Services into Agricultural Extension (Communication)** equips participants to bring climate services into the services that they provide their client farmers. Building on learning from the other three modules, Module 4 equips them to lead farmers in a participatory seasonal planning workshop, informed by historical and seasonal forecast information.

The course concludes with development and presentation of plans to integrate climate services into extension activities with participants' client farmers. These plans address: information and support needed for key climate-sensitive management decisions; differing needs of different types of farmers; communication, training and support strategies; annual calendar of climate service activities; and monitoring and responding to feedback.

*Adama Faye of the Senegalese Institute of Agricultural Research (ISRA) presents the SIMAGRI decision support tool and a hands-on exercise that ISRA developed to help EAS providers explore the main functionalities of the tool. Digital tools like SIMAGRI are key for translating complex climate information into terms that support strategic decision-making around crop production. SIMAGRI is a user-friendly tool developed to help users such as agricultural technicians and extension staff to translate both historical climate and downscaled forecast information into agricultural and economic terms for decision-making. It does this by enabling the exploration of different "what-if" scenarios with various inputs (including weather, soil conditions, fertilizers, and planting dates) to estimate yield and determine optimal management practices and their costs.*



# 3: Key Results and Findings

All 18 participants actively partook in the lectures and activities of the CRMAE curriculum ToT. The CRMAE content was very well-received by both Senegalese and Malian participants. The Malian participants who were attending the Senegal ToT as observers and in support of knowledge and experience sharing appreciated the content and structure to such a degree that they are organizing, in conjunction with the AICCRA-Mali team, a national curriculum consultative workshop modelled after those conducted in Senegal to adapt the CRMAE curriculum to the Malian context from July 5-7, 2023.

Despite this, participants did give concrete and specific areas of feedback, by module, which are summarized below:

## Module 1 Feedback

The feedback for Module 1 included the following requests for amendments or additions:

- Focusing the content more on Senegal. Though comparing and contrasting Senegal with other countries in Africa is valuable for perspective, participants wanted to see more intra-country comparison between climatic zones, such as comparing the south and north of the country.
- Inclusion of local vocabulary and terminology for basic climate concepts
- Inclusion of more climate change concepts (and not just climate variability), as extension agents may be asked to explain these concepts to farmers. Though the curriculum focuses more on short-term climate variability and pragmatic use of climate information for decision-making at shorter scales (such as before a season), participants still requested that, for the sake of completeness and awareness, climate change concepts also be touched on in more depth.
- More in-depth discussion of how local factors such as geography, topography, and the environment affect climate in Senegal, including more detailed discussion and description of Senegal's specific agro-ecological zones.
- Emphasis of other climatic variables besides rainfall in the content. Participants and especially ANACIM noted that examples and exercises heavily emphasized rainfall, while temperature, wind, solar radiation, and evapotranspiration are also important climatic variables with agricultural implications that extension staff should be aware of.
- Inclusion of more Senegal-specific research and evidence on the pathways by which climate is impacting agriculture and livestock, such as the addition of a case study (Ex: What crop or livestock maladies have certain zones experienced as a result of too much or too little rainfall? What are the impacts of long dry spells on crops and animals in Senegal?)
- Reducing the complexity of Excel calculations, as Excel competencies and computer skills are not that advanced amongst extension staff. Participants also noted that collated answer keys to Excel exercises and others covered in the course would very important for effective

implementation, such as in a Facilitators' Guide (Teachers' Guide)

their favourite, in support of modernizing and supporting digital agriculture in Senegal.

In terms of exercises, participants appreciated greatly dissecting and analysing an actual bulletin from Senegal's Multidisciplinary Working Group (GTP), which was very practical for understanding and communicating what climate information is available, what variables are included, the scale at which information is available, and at what lead times. Participants noted that this exercise was very useful in thinking critically about climate-informed decisions and the kinds of information and lead timing that is needed to inform them, as well as gaps in this regard.

During this exercise, there was unanimous request by participants to put GTP bulletins online on ANACIM's website to make them more accessible for different users such as those in agricultural extension.

### Module 2 Feedback

Participants very much appreciated the hands-on, practical nature of Module 2 and especially exploration of the freely available and accessible online information tailored for the agricultural sector through ANACIM's Maprooms (ANACIM, 2023). Many participants cited this aspect of the course as

### Module 3 Feedback

During Module 3, participants from ISRA had the opportunity to present the SIMAGRI decision support tool and an exercise that they co-designed for the training of trainers. Participants appreciated greatly the value of SIMAGRI as a discussion support tool for agricultural planning, and especially its enterprise budgeting functions, which are very practical for understanding the economic implications of certain farm choices and profitability. They noted, however, that more investment would be required to make this tool operational in Senegal beyond a teaching tool (inclusion of more sites, more crops, etc.) and articulated a strong demand to make this happen.

### Module 4 Feedback

The participatory seasonal planning workshop exercise was very well-received by participants, some of whom role-played as extensionists and some of whom role-played as farmers during this full-day activity. The concepts brought out during this exercise and especially comparing rainfall data to farmers' memory of rainfall and crop production which

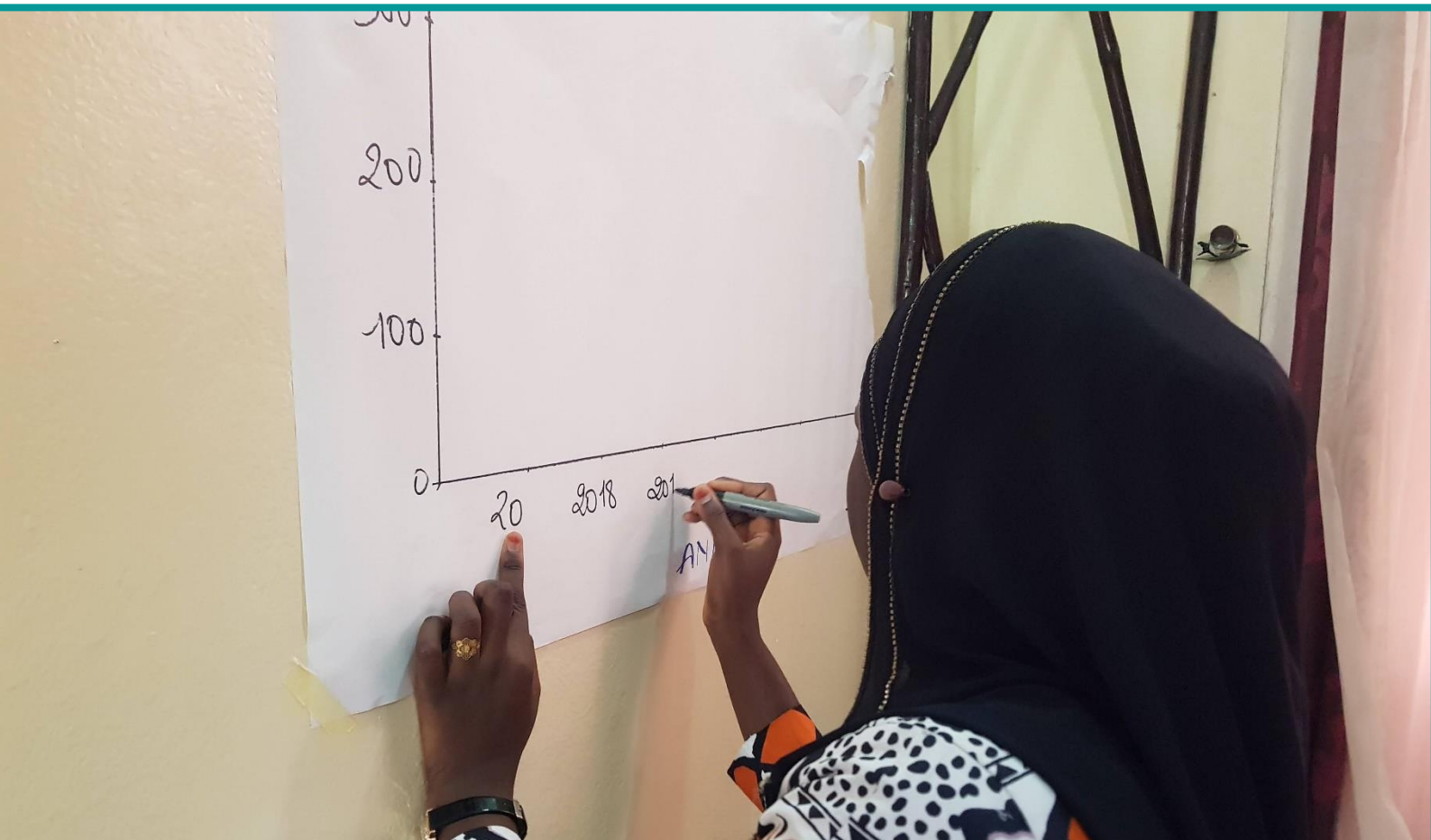
*During the workshop, detailed feedback was gathered after each Module on its pertinence, appropriateness for the learner profile of an extension agent, and the quality of facilitation, using post-it notes and/or discussion. Pictured here, participants discuss these aspects of Module 1 (Climate Basics) and its sub-components to identify areas that need improvement and areas that participants particularly found useful and should be reinforced.*



showed respect for local knowledge while integrating with ANACIM's "scientific" information were very much appreciated and were also valued for their practical nature.

In terms of good practices for field implementation, participants noted that it would be valuable during graphic exercises to have graduated cylinders or buckets to explain simple concepts such as rainfall measurements and how data is collected. Holding these items up next to a bar graph, coloured in blue, for example, would reinforce how such measurements are taken and what the bars represent.

*A participant from ANCAR prepares a graph during a Module 4 participatory seasonal forecast planning exercise. Part of this exercise includes plotting rainfall for the previous 5 years, and comparing memory against historical ANACIM data, to better understand concepts such as climate variability.*



# 4: Conclusions and Recommendations



*A trainee from ANCAR examines ANACIM's Daily Precipitation Analysis Maproom. This Maproom explores historical daily precipitation by calculating simple seasonal statistics, for any given area.*

In terms of the way forward, in addition to incorporating the feedback outlined in the *Results & Findings* section into the curricular materials, participants agreed on the following roadmap for the piloting of the CRMAE curriculum:

## **Pilot Sites:**

The pilot will take place at three sites in three different livelihood zones of Senegal:

- CERAAS in Thies in the Niayes region
- ANCAR in Kaolack in the Peanut Basin
- UADB in Bambey in the silvopastoral region

## **Pilot Timing**

The pilot will take place over 8 days from May 8-16, 2023.

## **Pilot Targets and Quantities**

Each pilot site will target 25 extension staff for a total of 75 extension staff to be trained. Sites will strive to have at least 35% female participation, though females are under-represented in agricultural extension staff in Senegal, and this may be challenging. According to an in-depth study of Senegal's extension system commissioned by USAID (Franzel et al., 2018), women only make up just 10.9% of Senegal's extension and advisory service staff working at the local level.

## **Support Materials for Pilot**

To successfully implement the pilot, participants requested:

- A complete (and translated to French) Reference Guide (textbook)
- A Facilitators' Guide (Teachers' Guide) with guidance on timing, links to relevant materials (PowerPoints, activity sheets), the structure of the training program, and guidance and recommendations for good practices for implementation, especially for group activities.
- Corrected and finalized PowerPoints based on feedback given during the ToT.



## **Monitoring, Evaluation, and Learning**

A robust monitoring, evaluation, and learning (MEL) plan will be co-developed by the IRI and AICCRA team to better understand the outcomes and impacts of the curriculum, to improve its implementation, and to inform its scaling.

The strategy will seek to understand the outcomes and impacts on the trainers, those trained (the extension staff), and ultimately farmers.

## **Follow-Up Webinars on the Ag-data Hub and iSAT**

Lastly, while important digital innovations such as ANACIM's Maprooms and the SIMAGRI decision support tool were presented and explored in detail during the ToT, there were two important AICCRA innovations that were not able to be presented during the training—Senegal's new ag-data hub and iSAT advisories that are salient for communication and tailoring of climate information.

To bring extension staff current on these two important platforms and tools, therefore, the IRI, in collaboration with the AICCRA team will organize two recorded webinars on these topics, where the trainees can learn more about these innovations, with the goal of extending then this knowledge to their pilot participants at each site.

## **Adaptation and Scaling of the CRMAE Curriculum to Mali**

The two Malian participants, who were invited to partake in Senegal's CRMAE ToT to foster learning and cross-border knowledge sharing, emphasized strongly that the curriculum and its content are also high-need for Malian EAS providers and were enthusiastic about sharing what they had learned in the ToT more widely.

They will, therefore, work closely with the AICCRA-Mali team to organize a national

curriculum consultative workshop from July 5-7, 2023, to jump-start the country's own process of adapting the CRMAE curriculum to the Malian context.

The SIMAGRI decision support tool was also well-received, and the Mali participants had detailed discussions with the IRI team about the data requirements and processes required to calibrate and adapt this decision support tool to the Malian context. Preliminary discussions revealed that the necessary data, including a national soil map, to calibrate the system for major crops exists.

In this regard, Malian participation in Senegal's CRMAE ToT spurred South-South learning and has initiated the scaling of the curriculum and possibly some of its component tools such as SIMAGRI to a new West African country.

## 5: List of Participants and Trainers

### Box 1

**List of Participants: CRMAE Curriculum Training of Trainers for Senegal's Agricultural Extension System  
(March 6-15, 2023)**

No.	Name	Gender	Organization/ Structure	Contact
1	Ababacar Sy Diallo	M	RESOPP	Ababacarsydiallo7@gmail.com
2	Ousmane Sarr	M	RESOPP	Ousmane.sarr@resopp-sn.org
3	Folorunso Akinseye	M	ICRISAT	f.akinseye@cgiar.org
4	Yakhya El Hadji Thior	M	ISFAR/UADB	Yakhya.thior@uadb.edu.sn
5	Sadibou Sow	M	UADB	Sadibou.sow@uadb.edu.sn
6	Thierno Aliou Tall	M	ANCAR	thiertal@gmail.com
7	Aboubacar Sidy Sonko	M	MLouma	assonko@mlouma.com
8	Diabel Ndiaye	M	ANACIM	diabel.ndiaye@anacim.sn
9	Mbaye Diop	M	ISRA	mbdiop@gmail.com
10	Cheikh Thiaw	M	USSEIN	Cheikh.thiaw@ussein.edu.sn
11	Babacar Faye	M	USSEIN	Babacar.faye@ussein.edu.sn
12	Babacar Seck	M	Jokalante	Babacar.seck@jokalante.com
13	Nogaye Gaye	F	ANCAR	no2gaye93@gmail.com
14	Bassirou Sine	M	CERAAS/ISRA	esayas.lemma@moa.gov.net
15	Adama Faye	M	ISRA	bassirou.sine@isra.sn
16	Amadou Ndiaye	M	ESSA of UAM	Adama.faye@isra.sn
17	Salif Doumbia	M	Institute of Rural Economy (IER) of Mali	Salif.doumbia@ier.ml
18	Aboubacar Diallo	M	AfricaRice (Mali)	Ab.Diallo@cgiar.org

There were a total of 18 trainees, one of whom was a woman (6%) and 4 (22%) of whom were youth (under the age of 35). A total of 16 trainees were from Senegal, while 2 were from Mali.

**Box 2****List of Facilitators: CRMAE Curriculum Training of Trainers for Senegal's Agricultural Extension System  
(March 6-15, 2023)**

No.	Name	Gender	Organization/ Structure	Position/Title	Email
1	Melody Braun	F	IRI	Senior Staff Associate	mbraun@iri.columbia.edu
2	Amanda Grossi	F	IRI	Senior Staff Associate	amanda@iri.columbia.edu
3	Sylwia Trzaska	F	IRI	Senior Staff Associate	syl@iri.columbia.edu
4	James Hansen	M	IRI	Senior Research Scientist	jhansen@iri.columbia.edu

# 6: Agenda

Monday, March 6	
Morning	<p>Opening and Welcome Remarks</p> <p>Overview of ToT Schedule</p> <p>Overview of Module 1: Basic Climate Knowledge and Concepts</p> <p>Presentation: Basic Climate Concepts (1.1)</p> <ul style="list-style-type: none"> <li>Discussion and quiz: Climate change vs. climate variability vs. weather</li> </ul> <p>Presentation: Main drivers of Climate of Senegal (1.2)</p> <ul style="list-style-type: none"> <li>Review and discussion of examples of climate characteristics of Senegal</li> </ul>
Afternoon	<p>Presentation: Climate Data and Information (1.3)</p> <p>Discussion: Global mean temperature time series</p> <p>Exercise: Simple climate analysis (Excel)</p> <p>Wrap-up and summary of Day 1</p>
Tuesday, March 7	
Morning	<p>Quick review of Day 1 (5 mins)</p> <p>Presentation: Seasonal Climate Forecasting (1.4)</p> <p>Group activity: Interpreting a Seasonal Climate Forecast</p>
Afternoon	<p>Group activity: Using Maprooms to assess crop cultivar suitability</p> <p>Discussion: Module 1 feedback</p>
Wednesday, March 8	
Morning	<p>Quick review of Day 2</p> <p>Overview of Module 2: Climate Information Products Available for Agriculture</p> <p>Presentation: Overview of Products Available through ANACIM</p> <p>Group activity: GTP Bulletin for understanding basic climate terms</p> <p>Demonstration: The ENACTS Maprooms (2.2)</p> <p>Group activity: Navigating through Climate Maprooms (historical analysis and monitoring)</p>
Afternoon	<p>Discussion: Module 2 feedback; refining hands-on activities</p>
Thursday, March 9	
Morning	<p>Quick review of Day 3</p> <p>Presentation Analyzing Farmers' Options with Crop Models and Decision Support Tools (Jim or Mbaye)</p> <p>Presentation and demonstration: SIMAGRI (Mbaye, ISRA)</p> <p>Presentation and demonstration: The iSAT decision support tool (Babacar, Jokalante)</p>
Afternoon	<p>Group activity: Using SIMAGRI to analyze crop management options</p>

	Wrap-up and summary of Day 4
Friday, March 10	
Morning	<p>Quick Review of Day 4 (5 mins)</p> <p>Overview of Module 3</p> <p>Presentation 3.1. Understanding Climate-Sensitive Agricultural Decisions (<i>Décisions agricoles sensibles au climat</i>)</p> <p>Group activity: Supporting farmers' climate-sensitive decisions</p>
Afternoon	<p>Presentation 3.2. Decision making under uncertainty (<i>Prise de décision dans l'incertitude</i>)</p> <p>Exercise: Decision trees</p> <p>Wrap-up and summary of Day 5</p>
Saturday, March 11	
Morning	<p>Quick Review of Day 5 (5 mins)</p> <p>Presentation 3.3. Farm-level options for managing climate risk (<i>Prise de décision dans l'incertitude</i>)</p> <p>Group activity: Index insurance game</p> <p>Discussion: Module 3 feedback</p>
Afternoon	<p>Overview of Module 4</p> <p>Presentation 4.1. Rural climate service communication strategies (<i>Stratégies de communication du service climatique rural</i>)</p> <p>Group exercise: Rural climate service communication strategy for a given context</p>
Sunday, March 12—no workshop (rest)	
Monday, March 13	
Morning	<p>Quick review of Day 6 (5 mins)</p> <p>Presentation: 4.2. Farmer participatory seasonal forecast training and planning workshop (Atelier de formation et de planification des prévisions saisonnières avec la participation des agriculteurs)</p> <p>Group activity: Seasonal forecast workshop practice and field day preparations</p>
Afternoon	Group activity: Seasonal forecast workshop practice and field day preparations (continued)
Tuesday, March 14	
Morning	Seasonal Forecast Training: Communication and Planning Workshop Process (part 1), FIELD DAY (4.2)
Afternoon	Seasonal Forecast Training: Communication and Planning Workshop Process (part 2), FIELD DAY (4.2)
Wednesday, March 15	
Morning	Discussion: Module 4 and Field Day feedback

	<p>Discussion: Potential integrative planning activity. How can climate services best be integrated into the broader scope of extension and advisory service activities?</p> <p>Discussion: Overall impressions, ideas, and feedback on the revised CRMAE course experience</p>
<p>Afternoon</p>	<p>Planning for May 2023 pilot:</p> <ul style="list-style-type: none"> <li>• Site selection and group division amongst sites</li> <li>• Logistics</li> <li>• Participant Selection</li> <li>• Monitoring, Evaluation, and Learning (MEL) Plans</li> <li>• Communications Strategy</li> <li>• Planning for Debrief Workshop (following May 2023 pilots)</li> <li>• Defining the program</li> <li>• Logistics (location, date, etc.)</li> </ul> <p>Workshop close – ANACIM</p>

# References

ANACIM Climate Data Library Maprooms, 2023.

Available at: <http://213.154.77.59/maproom/index.html>

Braun M, Trzaska S, Hansen J, Grossi A, Konte O, Ndiaye D. 2022. Senegal Capacity Development Priorities for Climate Services. AICCRA Workshop Report. Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA).

Available at: <https://hdl.handle.net/10568/119783>

Franzel, Steven; Ndiaye, Amadou; and Tata, Joyous S. (2018). Senegal: In-depth Assessment of Extension and Advisory Services. Developing Local Extension Capacity Project. USAID, Washington D.C.

Available at: <http://rescar-aoc.org/wp-content/uploads/2018/04/DLEC-Senegal-In-Depth-Assessment-Extension-Final.pdf>

Grossi A, Dinku T. 2022a. Training on Climate Risk Management in Agricultural Extension (CRMAE) for Ethiopian Meteorological Institute (EMI) staff from Regional Meteorological Service Centres (RMSC). Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA).

Available at: <https://hdl.handle.net/10568/122036>

Grossi A, Dinku T. 2022b. From research to practice: Adapting agriculture to climate today for tomorrow in Ethiopia. *Frontiers in Climate*. 2022 [cited 2023 Jun 15];4.

Available at: <https://doi.org/10.3389/fclim.2022.931514>

Grossi A, Dinku T, Hansen J, Trzaska S, Nsengiyumva G. 2022a. Climate Risk Management in Agricultural Extension (CRMAE) Refresher Training. Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA).

Available at: <https://hdl.handle.net/10568/119798>

Grossi A, Dinku T, Hansen J, Trzaska S, Nsengiyumva G. 2022b. Climate Risk Management in Agricultural Extension (CRMAE) for Ethiopia's Agricultural Technical Vocational Education and Training (ATVET) Program. Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA).

Available at: <https://hdl.handle.net/10568/119799>

Grossi A, Dinku T, Hansen J, Belay B, Demissie T, Solomon D. 2023. Climate Risk Management in Agricultural Extension (CRMAE) Curriculum: Training of Trainers and Adaptation to the ATVET Program. AICCRA Workshop Report. Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA).

Available at: <https://hdl.handle.net/10568/130735>

List G, Trzaska S, Braun M, Hansen J, Grossi A. 2022. Senegal Climate Risk Management for Agriculture Curriculum Design Workshop. AICCRA Workshop Report. Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA).

Available at: <https://hdl.handle.net/10568/126800>



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.



**Citation:**

Grossi A, Braun M, Hansen J, Trzaska S, List G, Worou N, 2023. Climate Risk Management in Agricultural Extension (CRMAE) Curriculum: Training of Trainers for Senegal's Agricultural Extension System. AICCRA Workshop Report. Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA). Available online at [aiccra.cgiar.org](http://aiccra.cgiar.org)

**Research supported by:**

