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Workshop Report on Stakeholder Validation of Selected Adaptation Interventions in Senegal

11 July 2023

Ngor, Dakar, Senegal

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INITIATIVE ON
Climate Resilience

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CGIAR Initiative on Climate Resilience

The CGIAR Initiative on Climate Resilience, also known as ClimBeR, aims to transform the climate adaptation capacity of food, land, and water systems and ultimately increase the resilience of smallholder production systems to better adapt to climate extremes. Its goal is to tackle vulnerability to climate change at its roots and support countries and local and indigenous communities in six low-and middle-income countries to better adapt and build equitable and sustainable futures.

Learn more about ClimBeR here: <https://www.cgiar.org/initiative/climate-resilience/>

Disclaimer

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Executive Summary

Senegal, a country in West Africa and home to over 16 million people is highly vulnerable to the impacts of climate change, which interacts with existing environmental and socio-economic challenges. It is a water-scarce country. Decreasing rainfall frequent and intense droughts are exacerbating water-related impacts of climate change with vulnerable communities in rural areas bearing the highest burden of these impacts. Although agriculture is an important contributor to Senegal's economy, it is largely rain-fed, thus increasing its vulnerability to the impacts of climate change.

Against the backdrop of the increasing impacts of climate change, the CGIAR Initiative on Climate Resilience is setting up a polycentric governance model to enhance resilience against the impacts of climate change in Senegal. The study is part of a broader project titled Building Systemic Resilience Against Climate Variability and Extremes (ClimBeR). ClimBeR comprises four work modules: (1) reducing the risks associated with climate change for agricultural production systems and livelihoods; (2) strengthening the resilience of production systems by recognizing the links between climate, agriculture, security and peace; (3) Developing adaptation tools to inform policy and facilitate investment; (4) Conceptualizing a polycentric and bottom-up governance model. ClimBeR aims to strengthen climate resilience in low- and middle-income countries.

This report presents the outcome of a stakeholder workshop held on 11 July 2023 as part of the project implementation. The workshop aimed to inform stakeholders about ClimBeR, share the preliminary results of the mapping exercise which culminated in an inventory of 31 promising, resilient, transformative adaptation interventions in Senegal, and select 3-4 promising, resilient and transformative adaptation interventions in Senegal from a shortlist of 8 interventions. At the end of the workshop, 4 adaptation interventions, including one recommended by the stakeholders outside the 8 preselected interventions were selected. All the selected projects operate across spatial scales with various stakeholders, including households, community members, civil society and non-governmental organisations, and government officials. Three projects focused on food security, while the fourth focused on natural resource management. The next phase of the project entails a detailed mapping of the selected interventions.

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1. Background and justification

The *Initiative Prospective Agricole et Rurale* (IPAR) is supporting the *International Water Management Institute* (IWMI) in implementing component A, setting up a polycentric governance model, of Work Package 4 (WP4) of the CGIAR initiative on Climate Resilience (ClimBeR). ClimBeR aims to strengthen systemic resilience to climate variability and extremes in low- and middle-income countries.

ClimBeR comprises four work modules: (1) reducing the risks associated with climate change for agricultural production systems and livelihoods; (2) strengthening the resilience of production systems by recognizing the links between climate, agriculture, security and peace; (3) Developing adaptation tools to inform policy and facilitate investment; (4) Conceptualizing a polycentric and bottom-up governance model.

Specifically, work package 4 (WP4) aims to develop a *bottom-up* polycentric governance model for transformative multi-scale adaptation and timely targeted climate investments. WP4 has three components: (1) the design of a polycentric, bottom-up governance model; (2) the development of a *Climate Smart Governance dashboard* to enable farmers, communities and policy planners to plan and implement integrated climate and water risk management interventions; (3) the implementation of the *AWARE* platform for early warning, action and finance to promote integrated multi-scale institutional responses to climate shocks.

A first step in the collaboration between IPAR and IWMI as part of the ClimBeR project was to draw up an inventory of promising, resilient and transformative adaptation interventions in Senegal, and to map the stakeholders involved in these interventions. The IPAR team successfully mapped 31 adaptation interventions in Senegal. A stakeholder workshop was held in Dakar on 11 July 2023 to:

- Inform stakeholders about the ClimBeR initiative,
- Share the preliminary results of the mapping exercise, and
- Selection of 5 promising, resilient and transformative adaptation interventions in Senegal through small workgroup sessions.

Working closely with stakeholders enabled us to complete the mapping of interventions. The next stage of the project entails assessing the performance of the selected interventions to inform the polycentric governance model developed as part of WP4.

2. Workshop methodology and proceedings

To foster inclusive and constructive dialogue, key actors from the following institutions in the field of climate change and food security in Senegal attended the validation workshop at IPAR headquarters:

- The Directorate General for Community Development (DGDC)
- The Community Development Department (DDC)
- The Senegalese Association for the Promotion of Grassroots Development (ASPRODEB)
- The Department of Agricultural Analysis, Forecasting and Statistics (DAPSA)
- The Ecological Monitoring Centre (CSE)
- The Environment and Classified Establishments Department (DEEC)
- The Climate Change Department (DCC)
- The National Council for Rural Dialogue and Cooperation (CNCR)
- The Senegalese Institute for Agricultural Research (ISRA)
- The Executive Secretariat of the National Food Security Council (SE-CNSA)



Figure 1: Workshop Participants (Photo credits: Joseph Diop)

The IPAR team was represented by 4 researchers and its Research Director. The IWMI team, principal coordinator of the WP4 for ClimBeR, was represented by 4 researchers who were connected online. The workshop began with a word of welcome from IPAR's Research Director, **Dr Laure Tall**, who thanked everyone for attending the important workshop. The project coordinator, **Dr Yaye Cor Ndione**, presented the workshop agenda, followed by a round-table introduction of participants. The workshop began with a series of presentations on ClimBeR. These presentations corresponded chronologically to the three objectives of the validation workshop: (1) presenting the ClimBeR initiative, (2) sharing the results of the mapping exercise, and (3) presenting the methodology for the work sessions.

The IWMI team, led by **Dr Giriraj Amarnath**, presented the general outlines of the ClimBeR initiative to the participants. According to **Dr Amarnath**, the innovative and promising approach of ClimBeR lies in its transformative nature, mutually beneficial partnerships, its relentless effort in co-generating solutions for the future and promoting effective coordination. He then presented the specifics of Work Package 4 ('Governance for Resilience') by emphasizing that governance remains an issue to be resolved in many development projects. Hence, by identifying the missing or weak links, the polycentric and bottom-up governance model aims to improve the outputs and outcomes of climate adaptation and food security-related interventions.

This introduction of ClimBeR initiative was followed by a presentation of the **IPAR** research team, coordinated by **Dr Yaye Cor Ndione**. **Dr Ndione** presented the approach taken by her team in mapping transformative, resilient and innovative interventions in Senegal. The IPAR team also explained the 3 selection criteria that were to be used as an evaluation grid for selecting interventions during the group-work sessions. The three selection criteria were as follows.

1. *Nature of the intervention*: To ensure that the selected interventions **lead to transformative adaptation** in the face of climate change. By way of clarification, the IPAR team presented the conceptual framework of transformative adaptation to the participants.
2. *Nature of actors and stakeholders*: To ensure that the selected interventions take into account a framework for multi-stakeholder dialogue and the strengthening of local actors in planning, implementing, monitoring and evaluating activities.
3. *Geographical area of intervention*: To ensure that the interventions selected **meet the specific territorial challenges** related to climate change and food security in the area.

Before the group work sessions, the IPAR team presented a summary of the 8 preselected interventions from the 31-intervention database. These 8 interventions formed the basis for the group work sessions.

3. Discussions

Several points raised during the presentations were of interest to the actors present at the workshop. The participants requested access to the database of the 31 interventions compiled by IPAR to enable a better understanding of the methodology used in selecting promising and transformative interventions. In response to this request, the database was shared with the workshop participants.

The **CNCR** representative mentioned the need to review the selection criteria for promising interventions in Senegal. In response to this question, the IPAR team emphasized that the selection criteria are there to facilitate a collective reflection on the need to better coordinate and govern our climate adaptation and food security actions. In the specific case of the geographical area criterion, it is a question of understanding how a given intervention includes the social and ecological dynamics specific to the area. The **CSE** representative congratulated IPAR on its work in this intervention mapping exercise. He pointed out that the CSE is also working on a mapping exercise and SWOT analysis of interventions as part of another ClimBeR sub-project, which aims to identify the actors working in the creation climate security platform. He emphasized the need for data exchanged between the CSE and IPAR as part of the ClimBeR project.

Next, the **DGDC** representative raised the question of the added value of public-private partnerships, which was reflected in several shortlisted projects. He stressed the importance of involving local players and communities in projects.

Lastly, **Dr Tall** pointed out that the workshop participants could propose other interventions that met the criteria better than the eight shortlisted. This, according to Dr Tall, will ensure that stakeholders' recommendations are included in the data validation.

4. Group Work Methodology

For the group work sessions, the participants were divided into two groups. There were two IPAR researchers in each group to facilitate and transcribe the discussions. Each group comprising a mix of

stakeholders was assigned 4 interventions to deliberate or propose other promising interventions. The group composition and the assigned interventions is shown in Table 1.

Table 1: Overview of the group discussions

Groups	Representatives	Interventions to be considered
1	DEEC, ISRA, CSE and DAPSA	<ul style="list-style-type: none"> • The climate-smart village programme • Integrating climate resilience through the farmer field school approach • The Women in Agriculture and Resilience Project (FAR) • PARERBA
2	DGDC, DDC, SECNSA, CNCR and ASPRODEB	<ul style="list-style-type: none"> • The PROVALE CV • PADAER II • DELTA • The New Resilient Terroirs (NTR)

5. Summary of group work reports

At the end of the group work, the participants selected 5 projects. As suggested, new projects deemed more relevant according to the stakeholders and the selection criteria were selected. During the data restitution phase, the two groups presented five interventions from the participatory workgroup sessions. In conclusion, these presentations validated the choice of the five interventions according to the three selection criteria mentioned above. We provide a summary of the selected projects in the following sub-sections.

5.1. New Resilient Terroirs (NTR)

Mission: To build real bulwarks against food insecurity by diversifying and protecting the livelihoods of vulnerable households.

Objectives of the intervention

- Improving the environment and living conditions in local areas by creating the conditions that make it worth people's while to stay there.
- Promoting a dynamic local economy by producing consumer goods and securing livelihoods.
- Promoting dialogue between regions by exchanging comparative advantages.

Nature of the intervention

The NTR project modifies the ecological and/or social properties and functions of the system in a positive way. In essence, this project makes people more aware of climate change and its negative impacts, which cannot always be measured. This intervention aims to bring about change at different levels to improve people's living conditions. In addition, this programme has introduced new innovative technologies at the household level, such as *le Système d'information sur les ressources de terroirs* (SIRT)¹ and *les Unités mobiles de services agricoles* (UMSA)² facilitate decision-making.

Nature of the actors

NTR is a cross-cutting project that seeks to involve local stakeholders in its implementation. The project sets up multi-stakeholder dialogue frameworks. The project's main implementing partners are MAERSA, ANCAR, SE-CNSA and *Programme des domaines agricoles communautaires* (PRODAC). The local population are the direct beneficiaries of the project and the main actors in its implementation. In addition, young people from the area are in charge of production support. The frameworks for dialogue remain the CRSA (Regional Council on Food Security) and the CDSA (Departmental Council on Food Security). However, these frameworks need to be revitalized and brought up to standard.

Areas of Intervention

The NTR project takes considers the territorial dynamics specific to its areas of intervention in its implementation. The project began in the Sédhiou region and is currently being scaled up in the Senegal River Valley. Each zone's choice of crop or livestock production depends on its capacity and needs. The selection of the Sédhiou region as the first intervention zone for the project is justified from the point of view of its vulnerability to food insecurity and climatic shock. In the case of the NTRs, the selection of intervention zones also considers the food insecurity of households targeted by the project.

5.2. Doolel Mbay

Mission: to strengthen food security, support efforts to adapt to climate change, promote gender equity and reduce poverty through inclusive and sustainable market systems.

¹ The Information System on Local Resources

² The Mobile Agricultural Service Units

Objectives

- Increasing the productivity of small-scale farmers along food value chains;
- Increased employment and business development in the main food value chains;
- Increased access to markets and trade;
- Improving risk management capabilities and climate resilience;
- Greater economic empowerment for women and young people and access to digital technologies.

Nature of the intervention

Concerning the characteristics of transformative adaptation, the project can be considered innovative and relevant. From an innovation perspective, it proposes the development of value chain services (VCS). Specifically, the project will focus on adapting and scaling up previously successful Feed the Future (FTF) activities (e.g. digital tools, contract farming, insurance products) while supporting innovative solutions to deepen the benefits of its interventions for rural households, in particular for women, youth, and the most vulnerable. Ultimately, VCS innovation involves integrating new high-potential value chains, prioritizing social inclusion and achieving scale-up by promoting self-sustaining systems that generate equitable growth, engage key stakeholders and withstand the region's climate shocks.

Nature of the actors

The *Doolel Mbay* project focuses on an inclusive and local approach to development. It works with different types of stakeholders in implementing its activities. These include the Fédération des Périmètres Autogérés (FPA), the Fédération des Producteurs de Maïs du Saloum (FEPROMAS), the Entente de Diouloulou, the MSA, Dimagi, ASPRODEB, IPAR and CNAAS. The project has a fairly broad beneficiary base. For instance, in the department of Podor (Senegal River Valley), the project targets 170,000 households, or 60% of farming households in the intervention zone.

Areas of Intervention

Doolel Mbay covers several areas, all of which are affected in different ways by the adverse effects of climate change. The three agro-ecological intervention zones are (1) the Senegal River Valley, (2) the south of the Sine Saloum in the Groundnut Basin (3) and the Casamance. The project takes into account the variability of these areas by designating specific value chains to be developed in these intervention zones. These are irrigated rice, vegetables (okra, aubergine, sweet potato, etc.) and small ruminants for the VFS. In southern Sine Saloum, the program supports the cultivation of maize, millet, rain-fed rice, vegetables

(okra, aubergine, onions, peppers) and small ruminants. In Casamance, the crops are rain-fed rice, maize, vegetables (okra, aubergine, onion, pepper and sweet potato) and mango.

5.3. Climate-Smart Village Programme

Mission: The project uses a participatory approach to help guide the actions needed to transform and reorient agricultural systems to effectively support development and ensure food security in a changing climate. The project focuses on agricultural productivity, climate resilience and sustainable environmental management.

Objective: Improve agricultural productivity among small-scale farmers through climate-smart technologies. These tools make it possible to strengthen farmers' resilience and reduce greenhouse gas emissions.

Nature of the Intervention

The intervention contributed to change by encouraging producers to adopt practices adapted to climate change at the expense of existing traditional practices, using climate information, leading to comparative experimental studies between farmers' practices and innovative practices, and diversifying through agroforestry and drip irrigation systems using solar energy. In short, this intervention has enabled farmers to use innovative techniques to adapt to climate change. However, the intervention is on a small scale, with two sectors (agriculture and forestry) and 2 villages (Dague Birame and Sikilo). Nevertheless, it has demonstrated the involvement of farmers at grassroots level and a long-term effect thanks to the scaling up in other areas (i.e., Méwane in the Niayes region).

Nature of the actors

The project works with several stakeholders: ANACIM, UCAD, ISRA, Farmer-based Organizations (FBOs), the Prefecture, MAERSA, CSE, AFAO and the World Agroforestry Centre (ICRAF). The project is active in research, training, agricultural production and policy advocacy. There is no formal framework for dialogue, but ISRA and ANACIM have set up a monitoring committee to ensure planning with FBOs, which provides a framework for decision-making. The platform is still active and serves as a reference model for other projects.

Areas of Intervention

This project covers a single agro-ecological zone, the Groundnut Basin. This area is characterized by rainfall variability, water erosion, drought and rising temperatures. It is highly vulnerable to extreme events and is faced with a decline in soil fertility and, consequently, agricultural yields.

5.4. Integrating climate resilience into agro-pastoral production for food security in vulnerable rural areas through the farmer-field-school approach

This project, implemented by the Ecological Monitoring Centre (CSE), and has four components:

- Developing and refining strategies and tools for adapting to climate change based on improved or new knowledge and steering practices for adapting to climate change in agro-sylvo-pastoral systems.
- Capacity building and dissemination of strategies, technologies and best practices for adapting to climate change, at the level of small-scale agro-sylvo-pastoral producers through a growing network of Field Schools (FFS).
- Coordinated integration of climate change adaptation strategies into policies, programmes and projects, and into the development frameworks of the agro-sylvo-pastoral production sectors at national level and in the project's vulnerable areas.
- Coordination and monitoring evaluation.

Objectives: To improve communities' food and nutritional security by developing livelihoods resilient to the effects of climate change. The project specifically aims to facilitate the use of agro-climatic information and the adoption of climate change adaptation practices by agro-sylvo-pastoral producers. It also aims to improve the capacity of the agro-sylvo-pastoral sector to cope with climate change by integrating adaptation strategies into development policies and programmes.

Nature of the Intervention

This intervention is helping to build agro-pastoralists' resilience by strengthening the capacity of 15,000 stakeholders (social dimension) to adopt agro-pastoral practices to improve agricultural productivity and facilitate the integration of agriculture and livestock farming. It has thus contributed to the innovative transformation of agriculture by using new tools for adapting to climate change. The project is being carried out on a large scale in three agro-ecological zones in the forestry, livestock and agriculture sectors. The intervention is taking place on a large scale, and monitoring and support for the producers trained

would have a long-term effect.

Nature of the actors

The players involved in this intervention are the Ecological Monitoring Centre (CSE), the Ministries of Agriculture (MAERSA), Livestock (MEPA), the Environment (MEDD) and Tourism (MTTA), the National Agency for the Great Green Wall (ANGMV), National Civil Aviation and Meteorology Agency (ANACIM), Non-Governmental Organizations (NGOs) such as Agronomists and Veterinarians without Borders (AVSF), Innovation Environment Development (IED/Afrique), Symbiose and Farmers' and Breeders' Organizations.

Intervention areas

The project considers the vulnerability of the agro-ecological zones of the Ferlo (sylvo-pastoral zone), the Groundnut Basin and Eastern Senegal. It was implemented in 17 communes across 7 administrative regions (Louga, Matam, Diourbel, Fatick, Kaffrine, Kaolack, Tambacounda). These areas are characterized by vulnerability to rainfall variability, water and wind erosion, recurrent drought, declining soil fertility and regular transhumance, often leading to conflicts between farmers and herders (sylvo-pastoral zone).

5.5. Citizens and Local Organizations Mobilized for a Better Use of Natural Resources

This project was not part of the interventions pre-selected from the adaptation inventory. Using the selection criteria introduced to the participants at the workshop, they interrogated the database and recommended that this intervention be included among the shortlist of interventions for detailed mapping.

Project objectives

- Strengthen the involvement of local communities and organizations in developing protection strategies and in forest governance.
- Promoting alternatives to logging by promoting and supporting economic activities and local initiatives.
- Develop social communication and advocacy initiatives aimed at decision-makers to improve forest governance at local level.

Project in figures

- Setting up a multi-stakeholder monitoring and citizen certification system for forest governance

involving 11 local authorities.

- Support 20 local environmental initiatives.
- Capacity-building for members of 11 environmental commissions committed to preserving forests.
- Capitalization on forest governance.
- Organization of 11 annual forums at local and departmental level to discuss forest conservation issues.

Nature of the intervention

The COMMUN project is committed to modifying the ecological and social functions of the system as a whole. It seeks to promote greater environmental awareness and to encourage greater involvement of local communities in the governance of forest resources. It is therefore committed to combating timber trafficking and protecting and restoring forest stands. The project aims at restructuring adaptation to the climate by organizing people around new economic activities that reconcile increasing their means of subsistence with the need to safeguard the natural environment. The project also has an innovative aspect. More specifically, local actors are given the tools to design their own projects based on their interests.

Nature of the actors

The COMMUN project is strongly rooted at the local level, and this is reflected in the nature of the actors involved. The project works closely with the local authorities (prefect and sub-prefect). It also includes the decentralized extension services. At grassroots level, the COMMUN project involves local elected representatives, Farmer-based organizations and grassroots community organizations. It seeks to institutionalize the involvement of local communities by setting up a multi-actor mechanism for monitoring and creating citizen certification of forest governance in 11 communes. As frameworks for dialogue, the project uses environmental commissions committed to forest conservation. Finally, every year, the project organizes a consultation forum at local and departmental level to discuss forest conservation issues.

Areas of Intervention

The COMMUN project operates in the agro-ecological zone of Casamance. The project seeks to respond to the physical and human pressures exerted on the ecosystem, such as the uncontrolled exploitation of

flora, which leads to insecurity problems. Climate change is leading to the impoverishment of the population, as well as problems of malnutrition.

6. Conclusion and Next Steps

Although one of the workshop's goals was to select 3-4 promising, resilient, and transformative adaptation interventions, participants identified five interventions. Intervention 5.3 (Climate-Smart Village Programme) was dropped from the final list of interventions because it is currently being implemented on a small scale (only in two villages).

The workshop closed with some final remarks and messages of thanks. **Dr Andrew Okem**, from IWMI, took the floor to thank the actors present for their active participation and IPAR for organizing this validation workshop. The next steps are to complete the mapping of the five selected interventions. The ClimBeR study will then move on to an evaluation phase for the selected interventions, using the questionnaire developed by IWMI and piloted Morocco. The tool will be adapted to the Senegalese context. This evaluation phase will make it possible to assess the performance of the interventions and characterize the interventions according to the conceptual criteria of transformative adaptation. This evaluation work should move the process of conceptualizing the polycentric, bottom-up governance model.