
REPORT OF STAKEHOLDERS WORKSHOP FOR SHARING AND IDENTIFYING AGRICULTURAL TECHNOLOGY OPTIONS TO COPE AGAINST CLIMATE CHANGE

**« Expect extreme, adapt practices, manage risk and control
the impacts of climate change on the Senegalese Agriculture
by 2050 »**



Photo from the National Broadcasting TV RTS1

Organized by Senegalese Institute for Agricultural Research (ISRA)

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OVERVIEW

The workshop "**Expect extreme, adapt practices, manage risk and control the impacts of climate change on the Senegalese Agriculture by 2050**" is a joint initiative of two projects that contribute significantly to the emerging debates on prevention the effects of climate change, food security and sustainable development in Africa:

- The **CaSA project** (Carbon Soils for Sustainable Agriculture in Africa) led by ISRA, in partnership with UCAD, UGB and the CSE aims is to identify land management practices that can allow both to increase agricultural production and to increase carbon storage in soils. Carbon sequestration in soils contributes both to sustainable land management and to achieve the emission reduction of greenhouse gas emissions targets and the improved food security.
- The **AMMA-2050 project** (African Monsoon Multidisciplinary Analysis of 2050) seeks to understand how the climate will change in the coming decades, and how that information could be more effectively used to support development in West Africa. The knowledge gained through this project will be used to improve understanding of the future development of water resources, floods and agriculture at the national and subregional level.

GOALS

The overall objective of the workshop was to exchange with stakeholders on the issues of climate change (climate projections by 2050 and strategies to put in place) to bring out the needs of stakeholders in terms of technological options to be considered in policy development and growth in the agricultural sector. More specifically, the workshop aims to:

- Present risks / impacts of changes of the African monsoon and identify / prioritize means to needs (5-10 years) and long term (40 years) for a better consideration in agricultural policies;
- Discuss strategies for sustainable management of land and particularly for carbon sequestration related strategies and management of the fertility of agricultural soils

PARTICIPANTS

About fifty seven national actors of senegalese agriculture sector attended to the 2 days meeting in Senegal, Mbour: members from civil society, the main farmers' organizations, government structures of representatives (Ministry of Environment and Sustainable Development, Ministry of Agriculture and the rural equipment), local elected officials,

metrological and climatic national agencies, agricultural advisors, research institutions, universities and NGOs.

CASA network and the AMMA-2050 Consortium from Burkina Faso, France, Great Britain, Madagascar also attended to the workshop and helped give sub regional African and international dimension.

POINTS OF DISCUSSIONS

Four themes were addressed in the meeting:

- Sustainable land management and carbon sequestration for adaptation and mitigation of climate change
- Crop improvement and genetic resources conservation to climate change by 2050
- Practices and adaptation strategies for resilient agriculture to climate change by 2050
- Perception of uncertainty in the forecasts and climate scenarios for taking medium- and long-term decisions

MAIN OUPUTS

Members of the CASA network and AMMA-2050 consortium by holding the two-day reflection of sharing contributed with all the actors in the Senegalese agricultural sector to relevant news discussions on mitigation and adaptation to changes climate, food security and sustainable development of the most vulnerable populations.

Together, we discussed the impact of climate change on agriculture and ways to encourage better to "predict extreme, adapt practices, risk management and master the impacts of climate change on Senegalese agriculture by 2050".

Together, we identified agricultural technology options (climate information, adapted seeds and resilient practices) they believe could help tackle the effects of climate change and meet their dietary needs and nutritional in short, medium and long term.

Together we have "played" with the decision for the decade and how to reduce the uncertainties in this decision

Together we initiated the development of an information note to policy makers and other stakeholders who have not participated in the workshop. This validation of current note contains key recommendations and guidelines from groups discussions and plenaries.

Together we discuss prospects of development of a research program on adaptation strategies of agriculture to climate change

EXPRESSED NEEDS

Participants expressed their thoughts on several agricultural sector and particularly challenged research to address them in a co-productive manner.

Protection of natural resources

Bush fires are a scourge that undermines the ecosystem balance and the preservation of biodiversity. Despite a monitoring and early warning with the MODIS sensor CSE is expected to research the development of models of development bushfires. In addition, village conventions of protection of natural resources, deferred grazing, reforestation and bocage benefit from being evaluated by the research.

- Water Resources Management

Several initiatives are underway including the construction of water storage dams, the reuse of wastewater, anti salt dykes construction. However, the mobilization of the rainwater surplus (flooding) to agricultural production areas and the use of supplemental irrigation should be investigated.

- Management of soil resources

Some techniques such as zai, stone barriers, half-moons, deductions collinear, etc. have already proven themselves in the protection and rehabilitation of degraded soils in the Sahel. However, with the widespread decline in soil fertility, research must focus on the regeneration of soils through the use of organic matter on a large scale.

- Protection and plant adaptation

It is suggested looking to establish an updating varietal cards. In addition, research should provide guidance on the new tools that are available (Future Farms, Participatory Integrated Climate Services for Agriculture (PICSA), the artificial rain, the use of renewable energy (solar, wind) and Stewardship of modern biotechnology (role BI). the performance of plants grown to promote medium and long term must take account of climate scenarios.

- Sustainable management of agro-biodiversity

Creating a seed bank for the conservation of biodiversity appears to be a major concern of the stakeholders. Research should thus work to develop a formal seed sector to satisfy the demand for quantity and quality. In addition, the informal sector (peasant seed) should be supported for seed production.

- Farming practices

It is expected that the research an economic evaluation, social and environmental practices and ongoing documentation of farmers' knowledge as well as on adaptation of seed reserve. Agroecological techniques should be promoted for better management of sustainability.

- Use of climate information

It is urgent, at the institutional level climate and weather data collection structures, to define a data-sharing framework that is necessary for the development of reliable modeling tools. At the farmer level, the conditions for integration of climate information in agricultural practices and the development of monitoring tools pasture and water points should be further developed.

CLOSING REMARK

It is with great satisfaction of the participants and organizers that work ended with a clear interest in strengthening networks and different platforms (CCAFS, ROPA, CCASA AMMA and CASA-2050, SREC, etc.), converge thoughts and efforts toward the development of a national research program for better integration of climate information in national policies and strategies or sub-regional.