Summary of FCFA’s work in Senegal

Future Climate for Africa (FCFA) aims to generate fundamentally new climate science focused on Africa, and to ensure that this science has an impact on human development across the continent. FCFA’s work in Senegal focused primarily on AMMA-2050’s pilot study to support climate-resilient agriculture. Alongside improving the quality of scientific climate information, AMMA-2050 sought to support the use of this climate information within (sub-state) regional and national decision-making contexts.

About AMMA-2050

The African Monsoon Multidisciplinary Analysis - 2050 (AMMA-2050) team aimed to increase understanding of the regional climate of West Africa and how it will change, applying this knowledge to practical development questions.

AMMA-2050 aimed to improve understanding of how the West African monsoon will be affected by climate change in the coming decades – and help West African societies prepare and adapt. AMMA-2050 conducted pilot studies that were focused on the issues of urban flooding in Ouagadougou (Burkina Faso) and climate-smart agriculture in Senegal, both issues being of significant societal concern.

Key climate science messages from AMMA-2050 indicate that the Sahel region will continue to become hotter while more intense rainfall will become more frequent.

In Senegal, the most likely scenario is a reduction in seasonal rainfall by 2050, though an increase cannot be ruled out.

The impacts of climate change in this region are likely to result in reduced yields of key crops, including sorghum and millet, placing pressure on rural livelihoods in Senegal and across West Africa.

Utilising participatory approaches seeking to support co-production, AMMA-2050’s work in Senegal focused on bridging climate science and decision-making processes in the agricultural sector.

AMMA-2050 used a variety of innovative methods to foster co-production of knowledge and support inclusive dialogue between stakeholders, including Theatre Forum, the Plateau Game and participatory modelling.

Highlights from Senegal
Improving scientists’ capacity to produce relevant climate information for Senegal

Along with producing high quality climate science for the agricultural sector (see Climate Portal), AMMA-2050 project engagement was aimed at improving the technical and engagement capacities of researchers to produce decision-relevant climate information. This included strengthening the ability of African researchers to deliver climate metrics using tools that can directly support Senegal’s agricultural and infrastructural planning and policies.

The approach to research taken by AMMA-2050 resulted in researchers having strengthened capacity to; engage with decision-makers, co-produce relevant climate information, work across institutions and disciplines, undertake and manage research projects, and to communicate and evaluate scientific results. Over the course of the project, AMMA-2050 researchers engaged with the Fatick Comité Régionale du Changement Climatique (Regional Committee on Climate Change) and through the Projet d’Appui Scientifique aux processus de Plans Nationaux d’Adaptation (PAS-PNA) supported the process informing Senegal’s National Adaptation Plan.

Engagements throughout AMMA-2050 in Senegal have led to decision-makers at (sub-state) regional and national levels recognising the utility of the climate science outputs from the consortium.

Co-producing climate information for climate resilient agriculture in Senegal

AMMA-2050 adopted a Participatory Impact Pathways Analysis (PIPA) as an overarching framework to guide project engagement and support co-production processes. The emphasis on co-production was focused on bringing together various stakeholders from different disciplines, sectors and decision-making levels to support medium-term decision making. This was done through building common ground between stakeholders as a basis for co-exploring the climate information needs of different groups, as well as for co-developing and co-delivering solutions to emerging climate-related risks.

Some of the key approaches AMMA-2050 employed to support co-production include the Plateau Game, participatory modelling, and theatre forum. The Plateau Game was used by AMMA-2050 partner Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD) as an approach to share emerging understanding about climate-related risks, identify adaptation options, debate policy, and inform and validate modelling results. This was followed by Participatory Modelling which allowed decision-makers and agricultural professionals to review and input knowledge into the project’s bio-economic modeling. The Plateau Game and Participatory Modelling enabled modelers to test the impacts of different policy interventions and gain deeper appreciation of decision-making contexts.

Theatre Forum was employed by CIRAD, Institut de Recherche pour le Développement (IRD) and Institut Sénégalaise de Recherches Agricoles (ISRA) to support dialogues between research, policy, and practice. A play was developed by a multidisciplinary team together with a national Theatre Forum group, Kaddu Yarax, and informed by research to identify key tensions and important areas for multi-stakeholder dialogue. The approach was able to build common ground between different stakeholders while conveying and exploring complex concepts such as climate uncertainty, and the causality and impacts of decisions. The theatre forum initiated vital conversations on roles and responsibilities in the process of climate adaptation, exploring the capacities of stakeholders to take responsibility for the consequences of their actions. Internally the Theatre Forum also reaffirmed the commitments of AMMA-2050 researchers to strengthen stakeholder engagement in future research, as well as demonstrating a powerful tool to support this process. AMMA-2050 Theatre Forum was captured in the video entitled ‘I ’am / J’acclimatise therefore I am / J’acclimatise donc je suis’.

The processes employed in AMMA-2050’s work in Senegal enabled decision-makers to identify variables of interest within climate models that were previously overlooked by modellers (e.g. consideration of wind strength). Co-production was also effective in allowing researchers and decision-makers to jointly explore the relevance of different adaptation options and policies, as well as challenging researchers’ underlying assumptions and strengthening their understanding of decision-makers’ specific climate information needs.
Selected Additional Resources


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