

Strengthening the development of decision-relevant climate information: The impact of engaging in AMMA-2050 on partnering researchers

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Country / Region:	Senegal, Burkina Faso, France, UK
Project or Programme:	AMMA-2050
Relevant Area of Change¹	2. Strengthening scientists' capacities to develop decision-relevant climate information 4. Approaches that support co-production of decision-relevant climate information and enable channels for on-going dialogue between the providers and users of climate information.

Type/purpose of case / story <i>(Please note that more than one box may be marked if relevant)</i>	Learning	X
	Illustrative	
	Comparative	
	Representative	X

Introduction (suggested 10%)

This case study documents changes in partnering AMMA-2050 researchers' awareness of the importance of directly engaging with decision-makers to jointly develop decision-relevant climate information. The project has afforded researchers the opportunity to participate in and develop a range of participatory approaches, witnessing first-hand how greater appreciation of specific decision-making contexts and working with decision-makers enables the development of climate-information that can better support decision-making.

FCFA has focused on strengthening climate-resilient development in Africa through improving climate science, reinforcing the capacity of African researchers and co-producing climate information to support specific decision-making processes.

AMMA-2050 researchers have highlighted how engaging with the project has strengthened their ability to produce decision-relevant climate information (FCFA Logframe Outcome Indicator 1 and Output 4.2) not just in terms of technical capacities, but also in more effectively engaging with decision-makers to better appreciate their needs and develop more useful science. This engagement has also resulted in indirect benefits for some researchers, including career promotion.

From the outset, AMMA-2050 has been monitoring changes of partnering researchers' capacities for developing decision-relevant climate information. Key Informant Interviews (KIIs), including a scorecard adapted from the Tracking Adaptation and Monitoring Development (TAMD) methodology², were employed to develop a project baseline in 2016, and repeated with adapted questions in 2018 and 2019. Findings from KIIs were triangulated with evaluations from stakeholder meetings and trainings, reports, personal testimonies and the CCKE-led annual survey of Early Career Researchers (ECRs).

KIIs in 2016 highlighted that 'almost a third of researchers interviewed had no consultation with national or local decision makers. More than half of the EU-based researchers had no consultation with national and regional decision makers, and more than two-thirds no consultation with local decision makers'.³ The baseline also noted considerable differences between Burkina Faso and Senegal concerning the existence of regular

² <https://www.iied.org/tracking-adaptation-measuring-development-tamd-framework>

³ Visman et al (2016), p8.

channels for dialogue between decision makers and climate information providers, with climate change frameworks being much more developed at some decision-making levels in Senegal.⁴

The change story (suggested 30%)

African Early Career Researchers (ECRs) have greatly valued the scientific skills afforded through the project, as demonstrated in KIIs, AMMA-2050's 2018 impact case study (Bamba et al, 2018), end of visit reports, training evaluations and the programme's annual ECR survey. Amongst other areas, the project has strengthened researchers' technical capacities to develop Intensity Duration Frequency (IDF) curves and climate metrics.

Besides enhancing technical skills, established and early career researchers have recognized that engagement in AMMA-2050 has strengthened their capacities in a broad range of additional areas including:

- **Engagement with climate science and scientists:** Some agricultural researchers had not worked with climate scientists before, had not used climate data in their research before, or had limited prior access to climate data;
- **Engagement with decision makers:** Most researchers – including both established and early career researchers - had limited or no previous direct engagement with decision makers. For some researchers, engagement with decision makers was an important motivation, driven by altruism. For some researchers, the engagement also resulted in career promotion. One researcher in Senegal noted that 'I think that we were given a promotion through the work with AMMA-2050' (*'Je pense que nous avons été donné une promotion avec le travail d'AMMA2050'*, KIIS04, 2019).
- **Working across institutions and disciplines:** researchers recognized the value of 'being part of a network of experienced and skilled researchers' (*'l'appartenance à un réseau de chercheurs expérimentés et très outillés'*, KIIBF14, 2018 and 2019). Researchers welcomed the networks the project afforded amongst both climate scientists, as well as with researchers across water resources, water and sanitation and agriculture.
- **Different ways of undertaking and managing research projects;** and
- **Different ways of communicating and evaluating scientific results:** researchers appreciated the range of approaches employed including *café scientifique* and Theatre Forum.

Researchers actively engaged in a range of stakeholder engagements, including:

- a joint forum with the BRACED Zaman Lebidi project on how climate information can support local government decision making⁵,
- meetings with the Fatick Comité Régionale du Changement Climatique (COMRECC, Regional Committee on Climate Change) in 2017 and 2019, and national decision makers in Senegal in 2018 and 2019⁶,
- meetings with Mayors and national decision makers in Burkina Faso in 2016 and 2018⁷, and
- a joint workshop with West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL) in 2018 on 'Operationalising the links between researchers and policymakers in West Africa'.

Within these fora, climate scientists were supported to employ and develop a range of participatory approaches - including Participatory Impact Pathways Analysis, exercises for conveying the probabilistic nature of climate information and 'café scientifique' - to share, discuss and receive feedback from decision-makers engaged in the project's pilot studies. Researchers appreciated first-hand the importance of employing approaches that enable deeper understanding of decision-makers' concerns, existing knowledge sources, institutions and processes, and for these to inform research focus.

The final annual meeting gave researchers the possibility to share their research and learning as well as to engage with each other and other project members around challenges and opportunities of working across

⁴ Ibid, p8.

⁵ Visman et al (2017).

⁶ Faye et al (2018).

⁷ Karamibiri et al (2018).

disciplines and engaging with decision-makers. This session offered a space for collective reflection and learning. This time is a key step in the process of co-production of knowledge as it contributes to creating a common ground across researchers of different disciplines and decision-makers, through which individuals and groups engaged in sharing their experiences can resolve complex challenges collaboratively (Keen et al, 2015).

Analysis (suggested 30%)

Of the 12 AMMA-2050 researchers (half of whom are early career researchers) with whom KIIs were undertaken over the course of the project, 11 felt that engaging in AMMA2050 had partially or completely (average score 2.7 out of maximum 3) improved their capacities to deliver research that can advance responses to climate variability and change. In evaluating the joint 2018 WASCAL-AMMA2050 workshop, 'all participating scientists considered the workshop either very useful or useful in improving their ability to provide research that supports responses to climate variability and change'⁸. Decision-makers engaged in AMMA-2050 have also recognised the utility of the project's outputs and appreciated the strengthened capacities afforded through project activities. In KIIs both decision-makers assessed the value of project outputs and engagement at 2 from a range of 0-3 (Visman, 2019).

'The diversity of the AMMA-2050 consortium strengthened my capacities to work in a group. Regular skype meetings for sharing results organized by work package leaders and discussions during annual meetings enabled me to learn about new working approaches for long-lasting improvements in my capacities (throughout the project). As a young researcher, I also learnt a lot about project management, through scientific and financial reporting systems. I also learnt about other ways of sharing, communicating and evaluating scientific results, like theatre forum, questionnaires, meetings with partners etc.'

La diversité d'un consortium AMMA-2050 a renforcé mes capacités à travailler en groupe. Les réunions Skype de partage de résultats régulièrement organisées par les leaders des groupes de travail et les rencontres pendant les assemblées annuelles m'ont permis de découvrir des nouvelles approches de travail et de mettre à niveau de façon permanente (tout au long du projet) mes capacités. En que jeune chercheur, j'ai également beaucoup appris sur la gestion de projet, à travers les mises en place des rapports scientifiques et financiers. J'ai aussi découverts d'autres formats de partage, de vulgarisation et d'évaluations des résultats scientifiques comme le théâtre forum, les questionnaires, les rencontres avec les parties prenantes etc. (KIIS17, 2019).

The project's KII findings are supported by the responses of the 7 AMMA-2050 researchers that responded to the programme 2019 ECR survey. On average, these ECR respondents rated the extent to which participating in the project contributed to their capacity and confidence to deliver high quality, decision-relevant research as 2.9 out of 4. They recognised that they had received valuable training in a range of physical and social sciences, as well as proposal development and communications. They requested further support in these areas, as well as in continuing the scientific networks and stakeholder engagements that had been enabled within AMMA-2050⁹.

Recognition of the need for researchers to work more closely with decision makers

Engagements with decision makers has altered perceptions, with some researchers prior to the project, considering that this was 'not part of their job' ('*C'est pas mon bulot.*', KIIS04, 2019). Through the project, researchers have been 'forced to do stuff that is useful, as well as interesting' and 'prioritise science questions that might help decision makers more directly'. (KII06, 2018 and 2019). For some researchers, the engagement also resulted in career promotion. One researcher in Senegal noted that 'I think that we were given a promotion through the work with AMMA-2050' ('*Je pense que nous avons été donné une promotion avec le travail d'AMMA2050*', KIIS04, 2019) (Visman, 2019).

⁸ CEH and WASCAL (2019), p21.

⁹ Raw data shared by CCKE in November 2019, report ongoing.

Even by 2017, researchers participating in stakeholder engagements testified to the changes the project was having on their outlooks and understanding:

'The joint BRACED/AMMA2050 workshop in Ouagadougou gave me my first experience talking to forecast users and decision-makers first-hand about the challenges they face integrating climate information into their adaptation plans. This opportunity was invaluable to my research. The most important individual learning experience was the ability to better understand how decision makers view climate information...As climate scientists, we need to work more closely with impact scientists and decision makers to ensure that potentially important meteorological findings can be communicated easily and precisely. Improving resilience to climate change is a multi-faceted problem. Whilst meteorological science is a very important part of this process, it cannot exist separate to other research areas or dedicated actors in West Africa. Integrating climate with information on vulnerabilities and other risks can provide long term improvements for people across West Africa whose lives and livelihoods are directly impact by climate. The personal relationships fostered by the BRACED/AMMA2050 workshop will contribute to this lasting legacy.'

Testimony from Dr Rory Fitzpatrick, University of Leeds in 2017¹⁰

'In my work as a scientist with a focus on the West African climate, I often refer to the vulnerability of West African populations to drought, floods and other climate extremes. Unfortunately, most scientists prefer to remain among themselves and that is exactly why the joint AMMA2050/BRACED workshop was an excellent opportunity for me to step out into the real world and engage with the people who might one day practically apply the research I am working on. The interaction with stakeholders and decision makers adds another dimension to how research should be undertaken. Research questions are often selected based on the likelihood of them receiving funding, the availability of data and methods, as well as personal interest. However, confronted with people who are struggling with very concrete problems in their everyday life and with uncertainties in their future, the most pressing research questions arise out of necessity. I never used to think about how research results can be shared in a format to be of actual use to local communities... Workshop discussions made me realise that my and others' research is largely useless if our insights cannot lead to positive change for local communities. For research to be successful, it is not enough to publish in high impact journals. It also involves being aware of the fixed deadlines of decision makers and the conflicting needs of the population. It requires daring to talk to people outside of the scientific sphere and trying hard to communicate complex scientific topics in an understandable way, even when struggling with the language.'

Dr Conni Klein, Centre for Ecology and Hydrology¹¹

Over the course of the project, researchers repeatedly noted significant changes in understanding of their role in supporting climate-resilient development. One researcher noted that 'The project has completely changed me. I am more aware of the difficulties of transferring science to decision makers...We are confronted with the problem. I directly see the difficulties of communicating, to simplify some messages without losing the complexities and also the challenges of transferring laboratory science to applications. My perspectives are completely different through engaging with AMMA-2050'. (KIIEU03,2019)

Another noted that through projects like AMMA2050 you can 'start to see you can have an impact with your research'. Noting the importance of using a range of methodologies for engaging with decision makers, 'We can't work alone as scientists. Working with local knowledge, we can have an impact on decision making'. 'You have to change your way of doing science. You need to stay a good scientist but develop other competencies' and recognise that this takes time. Scientists also need to be aware of the ethics of undertaking this kind of work and need 'to learn to do it properly'. Researchers need to 'make an effort to understand, to work together but retain you own (respective) competencies'. (KIIEU01, 2019).

Learning (suggested 30%)

Within initiatives seeking to strengthen the integration of climate information within decision-making, it is important to measure changes amongst both researchers and decision-makers. It is important to recognize

¹⁰ Visman et al (2017), p10.

¹¹ Ibid, p10.

that changes are required in the governance of prioritizing climate research, as well as the process of co-producing climate services.

While requiring sufficient resourcing, the KII scorecard undertaken with a cohort of researchers and decision makers over the course of a project does provide a methodology for identifying both quantitative and qualitative data on changes in technical capacities and co-production approaches. KII findings can be triangulated with data from other forms of monitoring, including evaluations of stakeholder engagement meetings and trainings and personal testimonies.

Decision-makers and researchers participating in the joint 2018 WASCAL-AMMA2050 workshop on operationalizing the links between researchers and policymakers in West Africa highlighted vital issues in enabling climate information to better support decision making, including:

- strengthening researcher training on policy;
- the importance of including decision-makers from the inception of research, enabling the 'co-development of research topics with development actors' and including 'impact for decisionmakers within research', and
- putting science-policy interface closer to the centre of future science proposals.
- a need for further training on communication and tools that support science-policy dialogue¹².

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¹² CEH and WASCAL, p21.

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