

Technical Report No. 7: Considering how Gender and Inclusion have been addressed within AMMA-2050

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Photo on front cover: The woman farmer depicted in the Theatre Forum play, from the film 'J'acclimatise, donc je suis' (Source: Guistaw Fall)

Publishable Summary

This technical report assesses how gender and inclusion have been considered within the African Monsoon Multi-disciplinary Analysis (AMMA-2050) project, as well as the overarching framework of the Future Climate for Africa (FCFA) programme, of which AMMA2050 is part. The report assesses address of gender and inclusion across project design, research methodologies, capacity building and monitoring, evaluation and learning.

While gender and inclusion related to researcher capacity building were included from the inception of the FCFA programme, the importance of addressing these issues within project pilots and tools and outputs for decision makers was raised once the research projects had already been developed.

All FCFA research consortia have undertaken pilots enabling climate information to support specific decision-making processes. The focus for AMMA-2050 pilots were, from the outset, prioritised as being directly relevant to marginalised social groups: strengthening climate-resilient subsistence agriculture in Senegal and flood-resilient planning for Ouagadougou city. The participatory research methodologies employed within the project (including Participatory Impact Pathways Analysis, the Plateau game, participatory modelling and Theatre Forum) have enabled local, (sub-state) regional and national decision-makers to inform and consider research findings. While project findings have been able to inform city-level, (sub-state) regional and national decision-making processes, programme and project design limited the resources available to address and seek to overcome climate-related risks for marginalised groups, including women.

Ongoing review has recognised the need for future programming to strengthen application of research and address issues of gender and inclusion, with efforts strengthened in these areas even within the programme's interim transition phase.

Acronyms

AMMA2050	African Monsoon Multi-disciplinary 2050
BRACED	Building Resilience and Anticipation to Climate Extremes and Disasters
CCKE	Coordination, Capacity Development and Knowledge Exchange Unit
CIRAD	Centre de Coopération Internationale en Recherche Agronomique pour le Développement
DFID	Department for International Development
FCFA	Future Climate for Africa
2IE	l'Institut International de l'Eau et de l'Environnement
HIW	High Impact Weather
KCL	King's College London
KII	Key Informant Interview
Logframe	Logical Framework
MEL	Monitoring, evaluation and learning
NAP	National Adaptation Plan
PIPA	Participatory Impact Pathways Analysis
WISER	Weather and Climate Services for Africa

Considering how Gender and Inclusion have been addressed within AMMA2050



Photo: Parliamentarians and researchers at AMMA-2050 meeting June 2019 discussing the key results from AMMA-2050 research (Source: Beth McKay, FCFA/CCKE).

1.0 Introduction

Women are often disproportionately impacted by the effects of climate variability, extremes and change due to inequitable access and utilisation of resources such as income, social networks and education (McOmber et al, 2016, Sustainable Development Goals, Paris Agreement). Women and marginalised groups possess critical knowledge and are developing innovative inclusive solutions to mitigate climate change impacts. Moreover, gender-responsive, inclusive climate policy and actions can uphold, promote and integrate women's rights (Duyck et al, 2017). However, if gender and inclusion do not inform the focus, methodology and evaluation of research, there is a risk that research addressing climate-related risks will maintain, exacerbate or create new inequalities (Dazé and Dekens, 2017).

This note seeks to assess the degree to which African Monsoon Multi-disciplinary Analysis 2050 (AMMA-2050) project has sought to address issues of inclusion and gender within research design and methodologies, capacity building and monitoring, evaluation and learning (MEL). To frame this assessment, the note first outlines the framework for analysis and the approach to gender and inclusion within the wider Future Climate for Africa (FCFA) programme, of which AMMA2050 is part.

2.0 Framework for analysis

In considering inclusion and gender within the development, implementation and implication of findings from AMMA-2050, this note draws on frameworks developed by the National Adaptation Plan (NAP) Global Network (Dazé and Dekens, 2017) and King's

College London (KCL) within the UK DFID supported Building Resilience and Anticipation to Climate Extremes and Disasters (BRACED) project in Burkina Faso (McOmber et al 2016). As proposed within the AMMA-2050 2017 Gender Equality statement, whilst focused on gender, the assessment equally considers the importance of wider inclusivity, and giving 'equal consideration to any individual or group that could be considered as marginalized or falling outside of the mainstream focus'¹.

KCL BRACED developed a framework to support consideration of the project's gender equity objectives and the degree to which the project's approaches promote gender sensitivity, gender mainstreaming and gender transformation, across institutional capacity, and research and project implementation. In a complementary framing, the NAP Global Network likewise promotes understanding of approaches for initiatives to move from gender-sensitive to gender-responsive or transformative approaches, across planning, implementation and monitoring and evaluation, as well as institutional arrangements, capacity development and information sharing.

Building on these framings, this technical report reviews how the overarching FCFA programme and, more specifically, the AMMA-2050 project have considered gender and inclusion within planning and intention, research methodologies, capacity development and MEL (as outlined in Table 1, below).

Table 1: A framework for assessing integration of gender in research promoting climate-resilience <i>(combining the KCL/BRACED and NAP Global Network approaches)</i>			
	Gender sensitive approach	Gender mainstreaming	Gender transformative approach
	Collection of data that enables assessment of gender inequity and the social implications of these inequities	Integration of gender through research design, implementation and analysis	Analytically assess research data to recommend transformative solutions to gender inequalities
Planning and intention			
Research methodologies			
Capacity development			
Monitoring and evaluation			

3.0 Gender and Inclusion in the Future Climate for Africa Programme

The FCFA programme was designed prior to the Gender Equality Act and initial planning documents included limited focus on gender and inclusion². Not mentioned in

¹ Fox and Warnaars (2018), p1.

² Gender and inclusion were not, for example, included in the September 2016 policy brief on Barriers and opportunities for Scientific Capacity Development on climate change in Africa or the CCKE (2014) FCFA Inception report.

the programme's Theory of Change, the logframe limited focus on gender and inclusion to monitoring the gender of researchers and 'boundary agents'. The initial programme logframe included indicators related to continental origin of scientists and boundary agents (Output indicators 4.1, 4.2, 4.3), with indicators for 4.1 and 4.3 disaggregated by gender (Output indicator 4.1 (3) and 4.3 (3)).

In its 2016 review of the programme, DFID identified the need to extend gender-related monitoring to also cover both direct and indirect gender inclusivity in pilot activities and outputs, ensuring that these are designed in ways to enable the engagement, address the needs of and are accessible to women and marginalised groups³. The review also required the programme's scientific capacity development strategy to prioritise female researchers and its outreach/impact strategy to consider gender equality in its design⁴.

Two logframe indicators were extended to ensure consideration of gender and inclusion considerations within pilot studies and tools (Output indicators 2.1 and 3.1). In 2017 the CCKE also developed a programme Approach to Gender and Marginalised groups and required all research consortia to develop gender and inclusion statements and use these as a basis for annual review.

Table 2: Areas of FCFA work through which gender and marginalised group's inequalities may be addressed, and the related FCFA responses⁵

Research to improve understanding of climate	Output 1	Collect data on number of woman contracted under Pillar 1 (climate science) of FCFA
Co-produced pilot studies to demonstrate integration of climate information in decision-making	Output 2	Each consortia must produce a statement on the role of gender in their pilot studies, to be revisited annually
Tools and products to support integration of climate information in decision-making	Output 3	Output 3 calls for "evidence of gender consideration" in the production of user relevant climate information products. CCKE Unit to take potential impact on gender inequality into consideration when producing programmatic knowledge products
Capacity development of African users and producers of climate information	Output 4	Disaggregate number of African researchers and 'user groups' by gender. Ensure capacity development activities target women.
Impact case studies	Output 5	Not essential, but gender and inclusion is one of the areas of change for potential impact case studies, Impact case studies only became an output requirement in 2017.

Guiding principles within the 2017 Draft FCFA Monitoring, Evaluation and Learning (MEL) framework included that 'Collaboration amongst research consortia and the CCKE shouldPromote inclusive research which recognises and seeks to engage those whose lives and livelihoods are most directly affected by climate change' and that 'Programme partners recognize that to better support medium-term decision

³ DFID FCFA Annual Review (2016), p6-9.

⁴ Ibid, p24.

⁵ CCKE (2017) FCFA Approach to Gender and Marginalised groups, (draft), p4.

making, climate change information should...Be accessible to all including marginalized groups, recognising the importance of employing channels of communication which are trusted by and have reach across different sectors, social groups and levels of governance.’⁶ The MEL Framework identifies one of the programme’s focal areas of change as ‘Deepening understanding about those approaches to climate science research and strengthened integration of climate risks within medium-term decision making which enable active participation and address of the specific concerns of women and marginalised groups’. While the status and use of the FCFA MEL framework in informing research consortia work is unclear, identification of inclusion and gender as one of the principal areas of change to be monitored across the research consortia highlighted this as a potential focus area for the Impact Case Studies that each consortia were required to produce.

In guidance for developing activities for the 2019-2021 transition phase taking place as climate resilience-related investments are brought together under an overarching ‘umbrella’, DFID noted it was desirable that activities to be undertaken during the transition period ‘Demonstrably advance good practices on gender, disability and inclusion’⁷.

Table 3, below, employs the framework from Section 2 to considering how gender and inclusion have been addressed within the FCFA programme. Those elements included from programme inception are in regular script. Those areas added during revision of the logframe following the 2016 programme review and once projects were already underway are in italics.

Table 3: Assessing integration of gender in FCFA programming			
	Gender sensitive approach	Gender mainstreaming	Gender transformative approach
	Collection of data that enables assessment of gender inequity and the social implications of these inequities	Integration of gender through research design, implementation and analysis	Analytically assess research data to recommend transformative solutions to gender inequalities
Planning and intention	Gender and inclusion not addressed within programme Theory of Change or considered focus areas for research or coproduction /pilot methodologies from programme outset. Gender inclusivity limited to monitoring the gender of African researchers engaged across the programme.	<i>2016 DFID review requires address of gender across programme policies and logframe.</i>	

⁶ FCFA (2017) MEL Framework, p7.

⁷ DFID (2019), Slide 2.

Research methodologies	<i>Output 2: Co-produced pilots: each consortium required to produce an annual statement on the role of gender in their pilot studies.</i> <i>Output 3 calls for “evidence of gender consideration” in the production of user relevant climate information products. CCKE Unit to take potential impact on gender inequality into consideration when producing programmatic knowledge products.</i>		
Capacity development	Logframe Outputs 4.1 and 4.3 require monitoring of the gender of African researchers engaged in climate research and decision makers/user institution representatives involved in capacity building activities.	<i>FCFA Mobility and Innovation Funds prioritises support for women researchers.</i>	
Monitoring and evaluation	Projects required to monitor gender of researchers engaged in climate research and user institutions involved in capacity building,	<i>Projects required to address gender and inclusion within pilots and outputs (Outputs 2 and 3). Consideration of how research approaches address marginalised/ gender proposed as a focus area for the impact case studies each project required to provide.</i>	

4.0 Gender and inclusion in AMMA2050

Section 4 considers how AMMA2050 addressed gender and inclusion within project design, research methodologies, capacity development and monitoring and evaluation.

4.1 Project design

From proposal development, climate-related risks for marginalised groups have been a focus for research in both AMMA2050 pilot studies. With programme management initially prioritising investment in infrastructure and major export crop, AMMA-2050 was required to justify its research on pearl millet. The third largest cereal in West Africa and a staple food for 50 million people across the Sahel, pearl millet is a rich source of micronutrients and performs better than other cereals under high temperature, low soil fertility, and limited rainfall. In focusing on pearl millet and climate-resilient agricultural practices, AMMA-2050 addressed issues directly related to marginalised groups and small-scale farmers in Senegal. In Ouagadougou, research has considered the impacts of current and future High Impact Weather (HIW) for the future development of the city. Even before the major flooding of September 2009, residents of flood zones around the dams of Ouagadougou city were experiencing floods during the rainy season and were considered a priority for the Ministry of Urban Planning and Housing.⁸ Research in Burkina Faso has also

⁸ Karambiri (2018), p15

strengthened understanding concerning the characteristics of those people living in flood-risk areas. Pilot research focus has thus strengthened understanding about the climate-related risks facing specific marginalised groups and the need for this to inform infrastructural development and adaptation strategies.

AMMA2050 identified guiding principles in the 2016 project kick-off meeting⁹ and, as subsequently required by programme management, drafted a Gender Equity statement in 2017. While focused on gender, this statement requested AMMA2050 project members to 'give equal consideration to any individual or group that could be considered as marginalized'. It included a series of practical actions for project leads designed to integrate consideration of gender across project design, methodologies, capacity development and monitoring, evaluation and learning (Fox and Warnars, 2017).

In its 2017 and 2019 annual meetings, specific time was identified for AMMA2050 colleagues to discuss the ways through which their research is or could address issues of particular relevance to women and marginalised groups (either through the focus of research or the processes through which research is undertaken). Partners identified how gender and wider inclusivity could be supported within:

- *Research prioritisation*, considering geographic areas or climate metrics of specific relevance to women and marginalised groups. For example, women and marginalised groups often live in areas known to be at risk of flooding, with flooding enhancing health risks. Women undertake agricultural activities during the hottest part of the days and will be more exposed to the increases in temperature which climate models predict. Further, as noted by a researcher in Senegal: 'Information about soil fertility is particularly relevant to women. They have less fertile soil and will be the people more affected by this (the impact of climate change on soil fertility)'. Minimum temperatures disproportionately affect vulnerable people, including children and older people, with women often the primary care givers for both groups;
- *Engagement in stakeholder engagement activities*, for example, promoting women's active participation in meetings and surveys in culturally sensitive ways and ensuring that outputs are communicated through channels and in formats and language accessible to marginalised groups;
- *Ensuring that women benefit from capacity-building opportunities*; and
- *Inclusive decision-making processes*, considering how inclusive decision-making processes are and how issues of specific relevance to women are addressed within development planning.

4.2 Research methodologies

AMMA2050 has employed a wide range of methodologies to undertake research in ways that directly engage decision makers and researchers at national, (sub-state) regional and city, and institutional levels. Participatory methodologies employed have included:

1. *Participatory Impact Pathways Analysis (PIPA)*.

⁹ AMMA-2050's guiding principles include recognise that climate information should 'be accessible to all including marginalized groups'. AMMA-2050 MEL Framework (2017), p3.

PIPA encompasses a series of participatory exercises where researchers and decision makers together: undertake problem trees to identify the specific issues that the project could address, vision project aims, map relevant existing stakeholders and networks that need to be engaged, and develop a plan, or outcome logic model, of how they propose achieving the project's agreed aims. The pathways approach recognises the need to: (i) listen to people's different framings of the risks that climate change poses; (ii) encourage different people's participation in decision-making; (iii) co-develop pathways to achieve 'climate-proofed' development.¹⁰ The University of Sussex led PIPA exercises in the Fatick region, Senegal, and within a joint AMMA2050/BRACED Zaman Lebidi workshop in Ouagadougou on how climate can support local government planning. In both cases, PIPA was employed to provide an overall framework for guiding project engagement.

2. *The Plateau game.*

The Plateau Game enables participants and researchers to share knowledge and explore practical and policy options. Each plateau – or board – represents several farmers' fields, adapted to reflect farmers' perception of space, soil type, equipment and other factors (D'Aquino, 2016).¹¹ Researchers from Centre de Cooperation Internationale en Recherche Agronomique pour le Développement (CIRAD) employed the Plateau Game with farmers and farmer networks to share information about climate change, evaluate changes in farmers' strategies and identify adaptation options, debate policies and validate a bio-economic model of farming systems in the Peanut Basin.

3. *Participatory modelling*

Participatory modelling affords 'an explanatory space for decision-makers to test the impacts of different policies and for researchers to better appreciate decision-making contexts'¹². In Senegal, workshops enabled (sub-state) regional decision-makers and agricultural professionals to review and inform the pilot's bio-economic model of farming systems.

The bio-economic model and Plateau Game employed for the Senegal pilot accounted for labour and resource allocation and access to markets across gender and marginalisation and how these are likely to evolve with changes in the production system in response to changes in the biophysical and economic environment. Projections of temperature increase suggest labour becoming harder for women than men. Likewise, the impacts of dry spells can be greater for women in agriculture, due to their different roles in production (and hence greater exposure), and their differing access to resources, when constrained by dry spells.

Ongoing analysis at CIRAD suggests that, in the drier part of the soudano sahelian zone (400-600 mm rainfall annually under current climate), men often migrate out of rural areas for at least for a part of the year, searching for off-farm jobs in cities and leaving women and young people in charge of most cultivation tasks. This tends to reinforce the difference between women and men regarding the degree of exposure to extreme temperatures. But on the other hand, further north, i.e. in the southern part of the sahelian zone (300-400 mm under current climate), permanent migration

¹⁰ Carter et al (2019), p61.

¹¹ Ibid, p62.

¹² Ibid, p62.

of men out of Africa tends to be more prevalent and the cash transfer from these men in Europe to their family left at home results in women being rather better-off, and able to have the cultivation tasks done by temporary workers (who are mostly men coming from other regions of Senegal).

4. *Theatre Forum*

Theatre Forum promotes dialogues between actors on an equal basis. It comprises 'three main stages: (i) Actors play a story inspired by real facts and existing tensions; (ii) A moderator then invites debate to bring out feelings, interpretations and proposals to resolve tensions; (iii) Spectators then come to replace one or more of the characters to test possible solutions and collectively discuss them. The other actors remain in character, improvising their responses.'¹³

AMMA-2050 partners worked with the Senegalese Theatre Forum group Kaddu Yarax to develop a play highlighting 'the importance of all actors being aware of the inter-connected, long-term implications of their current decisions and actions'¹⁴. Theatre Forum was used to open spaces for discussion on issues raised through project research amongst a wider series of audiences. As evidenced by the quotes below, Theatre Forum has provided a framework for debate allowing everyone to express their point of view on what has been presented, independent of the balance of power existing in the audience and beyond the constraints of formal meeting with pre-allocated, limited speaking time.

While women participated in the Theatre Forum sessions, there were no women-only audiences (as has been done in other projects employing this approach). To raise consideration of gender, partners created the character of a woman farmer for the AMMA-2050 play. This character challenged audiences on how her point of view is or is not taken into account by other villagers and actors.

Reflections from partnering researchers on issues raised within the AMMA-2050 Theatre Forum

"Les changements climatiques concernent tout le monde et à tous les échelles. Il est important d'établir ce dialogue, un dialogue permanent et régulier pour qu'il y ait de la Co-construction et également un Co-partage."

'Climate change concerns everyone at all levels. It is important to establish this dialogue, an ongoing and regular dialogue that enables co-construction and equally co-sharing'.

Partnering researcher in Senegal

¹³Ibid, p62.

¹⁴Ibid, p61.

Reflections from partnering researchers on issues raised within the AMMA-2050 Theatre Forum

'AMMA2050 est une rupture dans la façon dont nous menons la science sur les changements climatiques. C'est-à-dire que traditionnellement les climatologues faisaient leur travail à côté ils y avaient les sociologues qui travaillaient qui après allé rendre compte les décideurs. Le travail avec les décideurs et les bénéficiaires, le dialogue entre la science et la population vulnérable entre la science et ceux qui prennent les décisions - le travail-là est partie intégrante qui est mené dans AMMA. On a essayé d'aller un peu plus loin en mettant en place un dialogue avec les bénéficiaires et les décideurs étaient partie intégrante de la recherche en elle-même. Pour moi c'est quelque chose qui est innovant. La force du théâtre forum à travers le jeu.. reprend tout le processus de développement de service climatique de la recherche à son usage.

Le théâtre forum permet d'aider les physiciens qui étaient en général dans leur bureau ou avec ses instruments sur le terrain de vivre, de mieux appréhender: Quel est la situation des bénéficiaires? Comment fonctionne nos décideurs ? Quels sont ses intérêts?'

"AMMA2050 is a break in the way we undertake climate science. That is to say that traditionally climate scientists did their work, then there were social scientists who did their work, who then went to report the decision makers. Work with policy makers and beneficiaries, the dialogue between science and the vulnerable population between science and those who make the decisions - this work is an integral part that has been undertaken in AMMA. We tried to go a step further by setting up a dialogue with the beneficiaries and the decision-makers being an integral part of the research itself. For me it's something that is innovative. The strength of the Theatre Forum, through the play, represents the whole process of developing climate service, from research to use.

Theatre Forum helps physicists who were usually in their office or with their instruments on the ground, to better understand: What is the situation of beneficiaries? How do our decision makers work? What are their interests?'

Partnering regional climate scientist

5. Socio-economic surveys.

2iE undertook a survey of 243 households living in flood zones of Ouagadougou and developed 'a flood-vulnerability index'. This determines how the areas at risk of flooding vary dependent on whether the focus is social, economic, environmental or physical vulnerability¹⁵. The results enable decision-makers to identify differences in risk across zones, livelihoods and housing types.

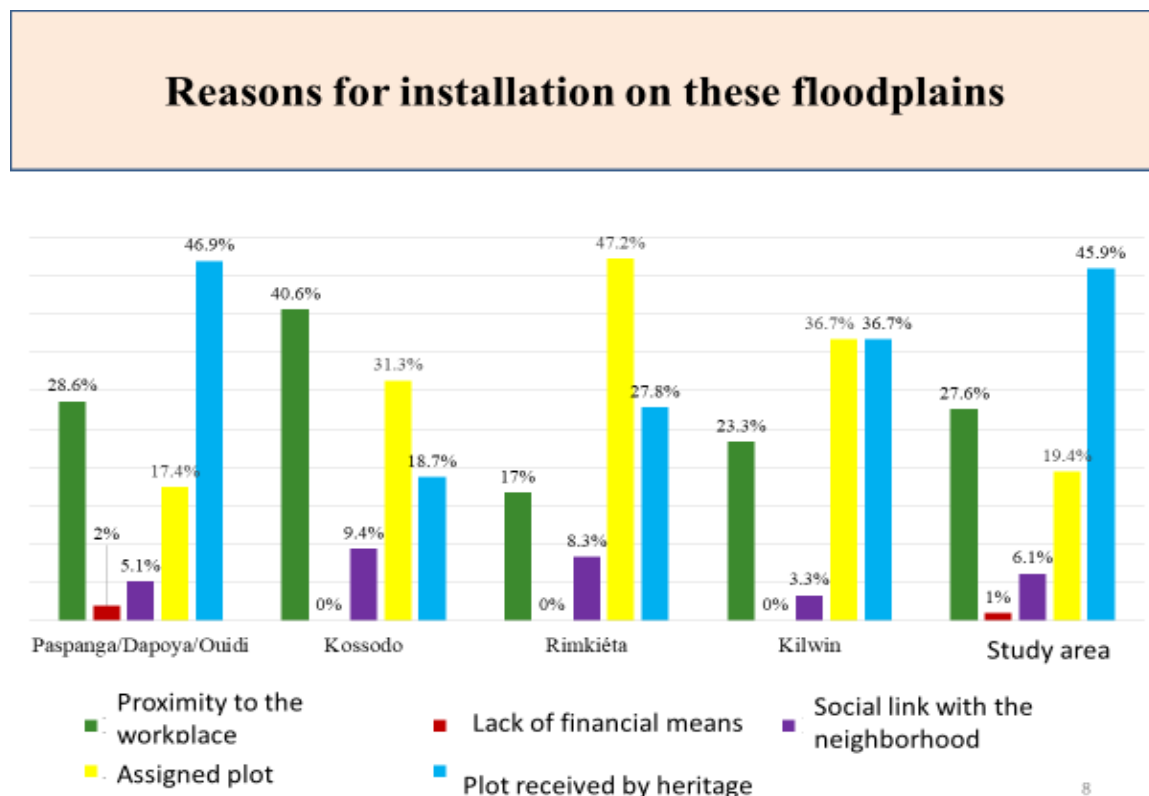
Further surveys of 196 households to identify the occupancy patterns of floodplains revealed that "the main reason for the occupancy of floodplains by the households surveyed is the inheritance of the land parcels". (see Figure 1, below, Bologo/Traoré et al, 2019)

Other surveys undertaken to assess the effects of flooding on the health of populations living in flood-prone areas have revealed that populations living in these areas are exposed to waterborne diseases such as simple and severe malaria (according to the classification of health centres), intestinal parasitosis, skin diseases, dysentery and bloody diarrhea. Analysis of the health data of the Dapoya, Paspanga and Kossodo

¹⁵ Karambiri (2019), p40-47.

districts, which are located in flood-risk areas and depend respectively on the Baskuy and Nongr Massom health districts, identified that consultations for waterborne diseases increase from 37-43% in February to 70-75% in September (during the annual rains) (Bologo/Traoré et al, 2019).

Figure 1: Reasons for installation on floodplains in Ouagadougou.
Bologo/Traoré et al (2019) Analysis of occupancy logics and practices in flood risk areas in the city of Ouagadougou



4.3 Capacity development

Many AMMA-2050 researchers are aware of the need to actively promote the number of women coming into science. They have noted the lower entrance rate for women in secondary education and that addressing this requires significant cultural changes. Partnering institutions, including West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL) and Université Félix Houphouët-Boigny (UFHB), Côte d'Ivoire, sometimes actively encourage female applications.

5 of the 15 African researchers supported within AMMA2050 have been female. This is an important achievement, while not meeting the FCFA programme target of 50% being female.

Across 13 AMMA-2050 stakeholder engagements, female participation averaged 24%¹⁶. 32% of participants in the 2018 joint AMMA2050-WASCAL workshop were women, 24% of the participants in the 2018 meeting with Mayors in Ouagadougou

¹⁶ Findings from assessing AMMA-2050 workshop evaluation forms.

were women, while no women participated in the small, high-level meeting in Senegal that took place in May 2018. To address the lack of female participation in stakeholder meetings in Senegal, efforts were made to ensure greater inclusion for the final project meeting in June 2019. Invitations were targeted to female decision makers and a group of female parliamentarians were present and actively participated.

As documented within one of AMMA-2050's 2019 impact case studies, researchers have welcomed the opportunity for engagement with stakeholders that the project has afforded them. For some researchers, despite extended periods focused on African climate science, the project has been their first opportunity for such direction discussion with decision makers. This has heightened awareness of the need to deepen appreciation of decision-making processes and tailor the types and formats of climate information for specific decision-making contexts.

Researchers have also appreciated the range of tools and approaches employed across the project to support participatory discussion. In addition to the research approaches noted in section 4.2 above, project workshops have employed a range of exercises to support understanding amongst non-technical participants of key climate concepts and impacts across sectors of focus. Exercises to support understanding and use of seasonal terciles were, for example, included within the joint BRACED/AMMA2050 workshop in Ouagadougou in February 2017¹⁷. Café scientifique, where decision makers participated in a series of small-group discussions on each of the AMMA-2050 products or tools, were employed in the Mayoral meeting in Ouagadougou in May 2018. Participants highlighted their preference for such approaches enabling informal and direct discussion¹⁸.

4.4 Monitoring and evaluation

The following table outlines how AMMA-2050 proposed consideration of gender and inclusion within the project's Monitoring, evaluation and learning (MEL) framework.

¹⁷ Visman et al (2017).

¹⁸ 2iE, (2018).

Table 4: AMMA2050 monitoring to meet FCFA programme gender and inclusion requirement				
FCFA programme logframe requirement	Programme logframe requirement related to gender and inclusion	Monitoring approaches employed within AMMA-2050		
Output 1: Research to improve understanding of climate	Collect data on number of women contracted under Pillar 1 (climate science) of FCFA	Partner reporting.	KII question for researchers in 2016 and 2018 on how partnering institutions consider impact of climate change on marginalised groups, and in 2019 on the degree to which AMMA2050 approaches have taken into consideration the impact of climate change on marginalised groups. Topic for review within annual meetings in 2017 and 2019.	KII question for decision makers on inclusion of climate-affected people within monitoring and evaluation in 2016 and 2018, and in 2019, on how AMMA2050 has informed consideration of climate change impact on marginalised groups.
Output 2: Pilot studies	Each consortium must produce a statement on the role of gender in their pilot studies, to be revisited annually	Partners drafted a gender equality statement in 2017. Discussion on gender and inclusion in 2017 and 2019 annual meetings. Partners developed this note on gender and inclusion in 2019.		
Output 3: Tools and products to support integration of climate information in decision-making	Output 3 calls for “evidence of gender consideration” in the production of user relevant climate information products.	Partners continuously review how the focus and outputs of their research address issues of inclusion and gender (see sections 4.1-3), including within annual meetings in 2017 and 2019.		
Output 4: Capacity development of African users and producers of climate information	Disaggregate number of African researchers and ‘user groups’ by gender. AMMA2050 Innovation and Mobility Fund protocols prioritise support for women researchers.	Drawing on partner reporting, evaluation questionnaires, CCKE annual ECR survey.		
Output 5: Knowledge products and Impact case studies	Not essential, but gender and inclusion is one of the areas of change for impact case studies	Theatre Forum, which provides a space for discussion amongst all actors as equals, is the focus of a 2019 impact case study.		

Key Informants Interview questionnaires have included a question on the extent to which, and how, decision makers and researchers consider the impacts of climate change on marginalised groups, including women. As noted in Table 5 below, in Key Informant Interviews, decision makers rated their own consideration as high in 2017 and 2018 (selecting either ‘partially’ or ‘completely’), with both decision makers and researchers rating AMMA2050’s consideration of gender and inclusion as low (or ‘somewhat’) in 2019.

In identifying how climate change impacts on marginalised groups, including women, decision-maker key informants in Ouagadougou noted the following issues: loss of homes and life, health issues and the difficulties of accessing clean drinking water. Decision-makers also identified constraints linked to insufficient rains as including lack of water for market gardening and agriculture. Key informants highlighted how both drought and flood impact on livelihoods, leading to continued poverty and sometimes migration.

	Decision makers		Researchers	
Key Informant question	In your monitoring and evaluation, to what extent do you include those people directly affected by climate? (2017 and 2018)	To what extent have AMMA2050 outputs or approaches informed your consideration of how climate change impacts on marginalised groups, including women?	To what extent does your organisation consider the impact of climate change on marginalised group, including women	To what extent have AMMA2050 outputs, approaches and research integrated and addressed consideration of how climate change impacts on marginalised, including women?
Informants were asked to select between not at all (0), somewhat (1), partially (2) or completely (3).	23 Key informants in Ouagadougou and Senegal average rating: 2/partially in 2016, 15 Key informants in 2018, average rating 2.3 / partially	15 Key Informants in Senegal and Ouagadougou, average rating 1.3 / somewhat	7 key informants in 2018, average rating: 2.1 /partially. If considering only EU based researchers, rating: 1.8 /somewhat	7 key informants in 2019, average rating 1.1/ somewhat

In supporting and monitoring multi-actor engagement and processes of co-production over the course of the project, decisions and actions were also measured against equity. In this context, equity is seen as ensuring that information, tools and project outputs, aimed at reducing climate risks and improving adaptability, did not result in increased risks for other or different actors, especially women. Partners have integrated this in a framework for analysing co-production of climate products to inform decision-making under uncertainty.

5.0 Assessing how AMMA-2050 has addressed issues of gender and inclusion

Table 6, below, employs the framework from Section 2 to considering how gender and inclusion have been addressed within AMMA-2050. Consideration of the assessment is included in the text following the table.

Table 6: Assessing integration of gender in AMMA2050			
	Gender sensitive approach	Gender mainstreaming	Gender transformative approach
	<i>Collection of data that enables assessment of gender inequity and the social implications of these inequities</i>	<i>Integration of gender through research design, implementation and analysis</i>	<i>Analytically assess research data to recommend transformative solutions to gender inequalities</i>
Planning and intention	Research has modelled the impacts of climate changes on agriculture (in Senegal) and urban development (in Ouagadougou). The pilots have enabled consideration of some of the ways these impacts affect different social groups.	Research focused on climate-related risks facing marginalised groups: small-scale farmers in Senegal and those living in flood-prone areas in Ouagadougou. Gender equity statement developed. Some consideration of gender and inclusion within annual project review.	
Research methodologies	Socio-economic surveys in Ouagadougou strengthen understanding of the characteristics of those people living in flood-prone areas.	Gender and inclusion integrated within participatory modelling and the Plateau Game. Understanding from socio-economic surveys can inform infrastructural investments.	PIPA and Theatre Forum hold the potential for enabling the marginalised to have a voice in informing planning and address structural inequalities.
Capacity development	Monitoring of researchers supported, and stakeholder engaged in meetings and trainings, disaggregated by gender.	Efforts made to promote inclusion within mobility and innovation funds, and ensure consideration of gender within invitation for stakeholder meetings.	Strengthening understanding of key climate concepts and impacts across sectors may enable decision makers to inform research prioritisation and highlight their information requirements.
Monitoring and evaluation	KII question on how decision makers, partnering research institutions and AMMA2050 consider impact of climate change on marginalised groups.	Monitoring of researchers supported, and stakeholder engaged in meetings and trainings, disaggregated by gender. Preference afforded to women researchers applying for project-administered innovation and mobility funding.	

While inclusion and gender have ‘been a motivator’, for example informing the decision of metrics of focus for the project’s Climate Atlas (KII with researcher in UK), ‘(t)he project did not focus on gender, and we would have monitored impact on gender and inclusion differently if integrated in initial planning.’ (KII with researcher in Senegal). Research partners are aware of some of the challenges related to inclusion and gender. Indeed both the projects pilots, strengthening climate-resilient agriculture in Senegal and flood-resilient planning for Ouagadougou city, are directly relevant to the marginalised social groups. Research partners welcomed considering inclusion and gender within annual project review, but with these issues not being part of the initial project design, opportunities to directly address barriers to inclusivity have been limited.

This assessment shows that, to fully identify the challenges as well as the opportunities of a gender- and inclusion-focussed approach, there is a need to fully integrate these within programme and project design, including across MEL processes. While not fully included within initial FCFA planning, gender and inclusion have been integrated from the inception of the programme’s transition phase. Recognising the project’s need to strengthen inclusivity, AMMA-2050 is developing a module on gender and inclusion to be included within its capacity building workshops with decision makers in Ouagadougou and across a number of regions in Senegal. Integrating gender, inclusion and equity within efforts to strengthen climate-resilience has the potential to open new spaces for engagement with actors across sectors, disciplines and scales, fostering the multi-actor relationships which, in turn, can enable emerging understanding of climate-related risks to more effectively support decision-making at all levels.

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