

Introducing the FSNet-Africa model

Strengthening African capacity to tackle Africa's wicked development challenges

- By guest editors

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The challenges inherent in the Sustainable Development Goals (SDGs) are interconnected and complex (United Nations, 2018). Overcoming these challenges requires adopting solutions that transcend conventional silo approaches and actively promote inclusivity (El-Jardali et al., 2018). However, these approaches are not the norm, and deliberate efforts are needed to disrupt traditional approaches to development. Research activities also need to adapt so that they are underpinned by capacity development, knowledge management, and partnerships of co-production, communication and coordination (Lamptey et al., 2024).





Introduction

Academic institutions and researchers are facing increased pressure to demonstrate the social and economic impact of their research (Păunescu *et al.*, 2022). However, formal training on the skills required to achieve impact, for example through influencing policy or practice, are not provided in typical Master's or PhD curricula (Mentz-Coetzee & Sienart, 2022). A new cadre of researchers with different and more diverse skills who are able to collaborate across disciplines and outside of academia is needed.

Background

FSNet-Africa was funded by the Global Challenges Research Fund (GCRF) through the partnership between UK Research and Innovation (UKRI) and the African Research Universities Alliance (ARUA). The lead partner institutions were the University of Pretoria (South Africa), the University of Leeds (UK) and the Food and Natural Resources Policy Analysis Network (FANRPAN) (pan-African). The project was implemented from January 2021 to December 2023.

FSNet-Africa aimed to conduct research that was relevant to African food systems and could translate into tangible outcomes and impact. The project aimed to strengthen the capacity of African early career researchers to conduct the transdisciplinary research that could achieve these changes. It also aimed to enhance the networks of researchers: between disciplines, across career phases, across Africa, between Africa and the world, and between academia and society.

Twenty early-career researchers (within ten years of their PhD) from six African countries (Ghana, Kenya, Malawi, South Africa, Tanzania and South Africa) were selected to participate in a two-year structured fellowship programme. Each Fellow was employed at one of ten academic partner institutions. Fellows came from diverse research disciplines with the prerequisite that their research within the fellowship should focus holistically on African food systems.

Why focus on African food systems?

Food is central to development, and food systems are interlinked with multiple SDGs. One of Africa's key challenges is ensuring that there is adequate, safe and nutritious food for the world's population that is produced in an environmentally and economically sustainable manner (Ingram *et al.*, 2023). In 2022, 735 million people were reported to be in a state of chronic hunger, and an estimated 2.4 billion people were unable to afford safe and nutritious diets (FAO *et al.*, 2023). Following the Covid-19 pandemic, which exacerbated pre-existing vulnerabilities within food systems, calls were made for urgent and coordinated action (FAO *et al.*, 2020).

Designing for impact

The FSNet-Africa fellowship was designed as an experiential research capacity development programme where capacity strengthening was undertaken whilst research project implementation was ongoing. Structuring the programme in this way facilitated learning through practice. Fellows could apply newly acquired skills and knowledge in real-world research settings, better positioning them to retain and build upon their competencies over time (Kolb *et al.*, 2017).

The capacity strengthening aimed at embedding five key skill sets: project management, responsible research, research methods, research impact and



communication. These competencies are essential for conducting research across disciplines and with stakeholders outside of academia (O'Donovan, 2022; Guimarães *et al.*, 2019; Jackson *et al.*, 2022).

There were seven primary interventions where Fellows' capacities were strengthened, including summer schools and a stakeholder engagement dialogue. Additional training was provided online as needed. The content of the different training events was aligned with the phases of the research project cycle – conceptualisation, implementation and dissemination. For example, orientation was targeted at helping fellows conceptualise their ideas. A summary of the skills areas, fellowship events, and the fellowship timeline is shown in Figure 1.

Mentorship for enhanced networks within academia

Mentorship and enhanced networks play a critical role in the professional development of early-career researchers, particularly in the context of an increased emphasis on collaboration. By fostering mentorship and building robust networks, early-career researchers can expand their career prospects, increase visibility and leverage these connections to access funding opportunities. Networking facilitates the exchange of knowledge and collaboration across disciplines, institutions and regions, promoting a culture of shared learning and innovation (Jackson *et al.*, 2022; Termini *et al.*, 2021).

Each Fellow was supported by at least one mentor from one of the African academic partner institutions and one from the University of Leeds. The two mentors were chosen in combination to provide different disciplinary insights into the team. Each Fellow was also supported by a University of Pretoria researcher whose primary role was to expand the Fellows' networks within the institution. Each research team represented between three and five research disciplines. The structure supported intra-Africa networks, as the African mentor was not from the same institution as the Fellow, and enabled networking across career phases.

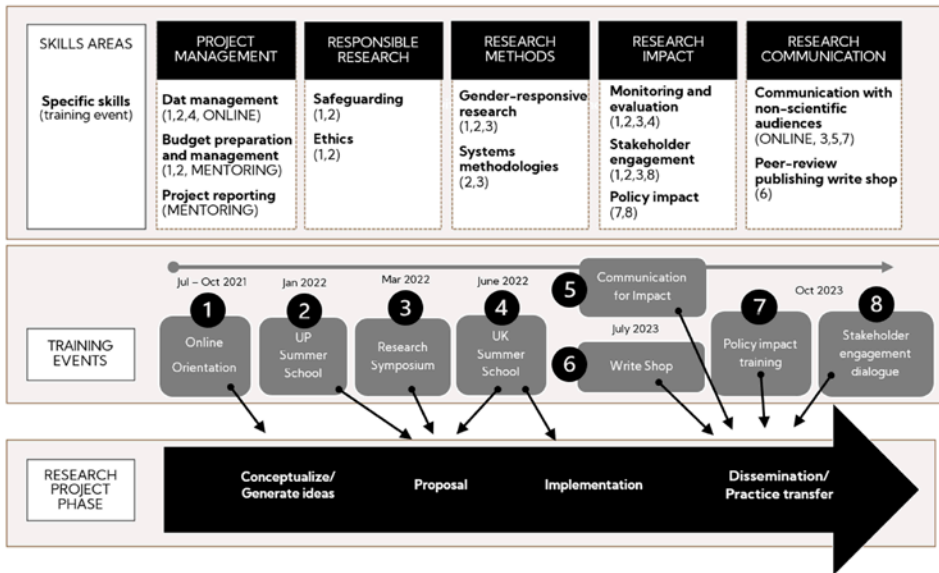




Networks beyond academia

A critical feature of the fellowship was the stakeholders’ role in the research process. From orientation, when fellows were conceptualising their research ideas, they were tasked to collaborate with food systems stakeholders to define the research they would undertake. Engaging stakeholders throughout the research project implementation cycle, from inception to dissemination of research findings, has multiple benefits (Boaz *et al.*, 2016), enabling greater potential for uptake into policy and practice (Warren *et al.*, 2020).

Figure 1: Illustration of Fellows research project implementation with capacity building interventions



Throughout the research process, there were specific points at which Fellows were able to receive feedback from stakeholders. FANRPAN was primarily responsible for facilitating these engagements as a boundary-spanning organisation. Boundary-spanning organisations operate at the interface between different sectors, disciplines or communities. They facilitate collaboration among diverse stakeholders, bridging gaps and facilitating communication, knowledge exchange and cooperation across various boundaries (Christ *et al.*, 2018).

In three specific projects stakeholders have committed to integrating the research findings into policy and practice. After FANet-Africa’s initial project ended, additional funding was committed by the universities of Leeds and Pretoria to support five Fellows in collaborating with stakeholders in the implementation of their ongoing activities. For most Fellows, involvement with stakeholders reshaped their research practices, prompting them to incorporate these approaches into their training of PhD and Master’s students.

Lessons learnt

Analysis of project-level monitoring and evaluation indicates the fellowship helped Fellows develop a wide range of skills required for transdisciplinary research. Comparing skills levels prior to and after the fellowship, results show that 80% of



Fellows improved their capacity to conduct gender-responsive research, 75% improved their capacity to engage stakeholders in research and monitor research impact, and 60% improved their ability to engage with policy audiences.

These individual-level capacity changes are now influencing institutional changes. For example, one Fellow lobbied to integrate science communication into the PhD curriculum at their institution. The institution has taken this forward, and the Fellow will deliver the course in the 2024 academic year. In another example, researchers used their training on ethics and safeguarding to champion policy changes within their institutions. Three institutions are currently implementing these changes.

While ongoing stakeholder engagement throughout the research cycle is ideal, research can still yield benefits and impact if stakeholder perspectives are considered at some point in the process. At the stakeholder engagement dialogue, the final event of the fellowship, farmers who had not previously been involved in the fellowship expressed the view that the research that was shared provided valuable insights that will inform their operations.

The FSNet-Africa model is transferable to other development challenges and can be applied in PhD and Master's training programmes.

Critical features include the integrated experiential capacity strengthening and project implementation approach, the mentorship model, the focus on research and complementary skills, the focus on communication outside of academia and the engagement of stakeholders throughout the research process. Projects of such intensity ideally require at least three years of implementation and depend on a skilled project management team.

Conclusion

The FSNet-Africa model is one of many science-policy interface models that can enhance collaboration across disciplines and between academia and broader stakeholders. Early evidence suggests that specific capacities have been strengthened within the FSNet-Africa project to conduct research across disciplines and with stakeholders outside academia. The model was presented during a side event at the World Food Prize Borlaug Dialogue and has been taken up as a case study in the FAO Guidance On Strengthening National Science-Policy Interfaces For Agrifood Systems. With the growing demand for collaboration and partnerships, such models need to be institutionalised to disrupt the silo mentality and advance collective action. FSNet-Africa has created a critical mass of researchers equipped with the tools to advance this approach and reshape development across Africa. **NA94**

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