

HANDBOOK OF POWER DYNAMICS IN PARTICIPATORY FOOD SYSTEMS RESEARCH



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FoSTA-Health

Handbook of power dynamics in participatory food systems research

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Contents

Editorial	Handbook of power dynamics in participatory food systems research	3
Briefing note 1	A detailed look at participation in the FoSTA-Health project	18
Briefing note 2	Problem framings and participation: Notes from stakeholder engagements in diverse institutional settings	25
Briefing note 3	Purposeful participation: Navigating differing priorities in transdisciplinary partnerships	33
Briefing note 4	Spaces of participation: Who has access?	43
Briefing note 5	Power and place: Smallholder farmer perceptions and experiences of food systems in rural Tanzania	51
Briefing note 6	Inclusive participation when applying participatory photovoice method	61
Briefing note 7	Project design and coordination for enabling collaboration	67
Briefing note 8	Geography of knowledge production and capacity to do research: Perspective of the semi-periphery	77
Briefing note 9	Collaboration across diverse epistemic communities: Challenges and reflections	83
Briefing note 10	Modelling stakeholder inputs into food system transformation pathways	87
Briefing note 11	Plurality and inclusion: Honouring difference while creating coherent messages	93

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Editorial

Handbook of power dynamics in participatory food systems research

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Introduction

This handbook brings together a collection of briefing notes that discuss **how power dynamics shape food systems and transformations research**. These briefing notes are based on the challenges encountered during case studies conducted within the Food Systems Transformation in Southern Africa for One Health (FoSTA-Health) project between the years 2023 and 2025.

We used the formative accompanying research (FAR) approach to observe different exercises within the project to underscore key challenges in the practice of participatory research methods in food systems transformation studies. These issues are embedded within literature on power and participation, and challenges in stakeholder and collaborative engagements. The briefing notes are therefore intended to give an overview of key topics for consideration when planning and implementing future food systems and transformative change research initiatives.

The briefing notes were put together by reflecting on the experiences across different components of the project, such as national level stakeholder engagements, community level case studies, and food systems mapping exercises. The briefing notes also examine practical aspects of coordination and engagement across a multidisciplinary and multi-regional project such as FoSTA-Health. Members of the FoSTA-Health consortium were invited to put forth

their contributions by thinking iteratively about similar issues encountered in their respective case studies.

This editorial provides the framing for the handbook (and therefore collection of briefing notes). To provide context to all the briefing notes, we begin by describing the FoSTA-Health project and activities. We then outline why this research project requires a specific focus on the challenges of power and participation in food systems transformation research. We continue to explain how we explored power and participation through the process of formative accompanying research, before outlining the core outcome of this process: the handbook and its contents. We conclude with a brief overview of the cross-cutting lessons from this briefing note collection, with a particular focus on the role of problem framings in shaping power and participation.

FoSTA-Health research on food systems transformation for One Health in Southern Africa

FoSTA-Health project is evaluating the One Health outcomes associated with food systems transformation in Malawi, South Africa, Tanzania and Zambia.

Across the Southern African region, a combination of environmental and climatic changes, and external shocks to governance systems, food systems and supply chains (including those resulting from the

COVID-19 pandemic), are creating new challenges for meeting the UN Sustainable Development Goals. These challenges, particularly as they relate to human, animal and environmental health, are interconnected in complex ways. Key transformation agendas in the region include:

- Innovative methods for improving soil health and agricultural practices in maize production systems, as well as efforts to diversify away from maize to improve climate resilience and human and animal nutrition.
-
- Large land acquisitions and investments in irrigation infrastructure and inputs to improve total productivity and excess production for export markets.
-
- The transition from domestic and local level supply of food, such as fresh fruits and vegetables, towards export markets as a means to grow the rural and food sector economy.
-
- Diversification of diets away from the overreliance on cereals to improve nutrition.

In relation to these food system transformations, FoSTA-Health aims to strengthen transdisciplinary and contextual understandings of the interactions between human, animal and environmental health and simulate these interactions, within a novel integrated and participatory modelling framework. By looking across these different components of health and treating them as interrelated objectives that cannot be traded off against each other, FoSTA-Health takes a One Health approach to food systems research. We note that this framing stems from the European Commission’s focus on ensuring food safety for European consumers by better regulating the supply chains in Africa. This holistic approach to One Health was explored through four case studies of food system transformations in Southern Africa:

1 Crop diversification in Malawi: FoSTA-Health works in Southern Malawi in partnership with CARE, Malawi which is implementing the Titukulane project. This project operates across

20 traditional authorities in Mangochi and Zomba Districts, to support the implementation of the Malawi National Resilience Strategy and promote sustainable, equitable, and resilient food and nutrition security for vulnerable households. Titukulane is also supporting farmers in diversification into legumes (soya, pigeon peas, and groundnuts), roots/tubers (sweet potato), fresh fruits and vegetables and small livestock (goats and chickens). Evaluation of these more diverse, holistic strategies is vital to inform future policy and donor support programmes. It thus provides an ideal context in which to investigate transformations in and out of maize and changing agricultural landscapes

2 Diversification into export markets in Tanzania: In Tanga, Tanzania, FoSTA-Health evaluates land management practices and innovations associated with the diversification, particularly away from maize into the production of fresh fruits and vegetables, including for export markets. In this region, the government, private sector and civil society organisation, among others, are promoting key commodity value chains for export, particularly in citrus, avocados, snow peas and spices. FoSTA-Health works with Sokoine University of Agriculture and the African Centre of Excellence for Infectious Diseases of Humans and Animals to explore agricultural practice, market regulation, and livelihood interconnections as they relate to these commodity food crops. We consider how such practices are shaped by the regulation of inorganic fertiliser use (and regional and international organic food standards and markets) as well as food safety regulation within domestic and export markets

3 Landscape change and dietary transitions in Zambia: FoSTA-Health works in Central Province, Zambia, which has seen significant investment in land acquisitions, irrigation and expansion of soyabean over the past 10 years to become one of the largest soyabean producing areas in the Southern African region. This production supports a variety of supply chains including feed for a growing regional livestock sector. In

Zambia, FoSTA-Health’s work focuses on the impact of changing agricultural landscapes in Central Province, particularly on the distribution and risks of pests and disease, as well as on the dietary transitions (including increases in animal-based protein consumption) that these agricultural changes underpin. Research builds on the work by FANRPAN country node organisation the Agricultural Consultative Forum (ACF), University of Zambia, and University of Leeds. To analyse impact on dietary transitions, researchers applied participatory photovoice, and overall, the findings show dietary patterns vary across social demographics but shared a common characteristic of limited diversity.

4 Sustainable beef cattle and pork production practices in South Africa: Livestock production systems and value chains are water, land and resource-intensive, and are also vulnerable to disease and climate shocks. Recent severe droughts in South Africa have impacted livestock production systems in South Africa and farmers are increasingly dependent on the import of feed from elsewhere in the region. This dependency has helped to drive the increase production of soyabean in countries such as Zambia to meet regional demand for livestock feed. FANRPAN Country Node, the National Agricultural Marketing Council have been working through the ‘High quality markets and value chains for small-scale and emerging beef cattle farmers in South Africa’ project to support smallholder and communal farmers to produce and market sustainable (low intensity) and premium beef in Gauteng province. FoSTA-Health draws on the data from this programme, and elsewhere, to understand how such transitions are changing the movement of livestock and the transmission of livestock disease, as well as supporting to more sustainable production practices filter through into accessibility of foods of consumers, and therefore into social and dietary (in)equality.

As is evident in these case studies, the FoSTA-Health team has collaborated with a diverse range of stakeholders in exploring pathways of food system transformation into the future to understand their impacts on health and to inform policy and practice. Such participation with diverse stakeholders has ensured that a range of voices, knowledges and experiences have been incorporated into the project. In addition, the team has sought to widen participation for co-producing knowledges at case study, country and regional scales. Such participation has been embedded within specific research methodologies (e.g. photovoice methods in Tanzania), by seeking input and discussion with stakeholders around food system modelling (the iFEED model) and epistemic mapping, and through broad discussion on emerging results. The approach to stakeholder engagement has not just been about events but also included ongoing engagement often tailored to the needs and requests of the stakeholders with whom FoSTA partners work. Specific fora for such participation include (but are not limited to):

- Two national dialogues held in each country, the first round held in October 2023 and the second between July 2025 and January 2026.
-
- Food systems research week in Leeds (February 2024).
-
- FANRPAN Annual Regional policy dialogue, August 2024 (held in Malawi).
-
- Future Food Systems Workshop, Multiple stakeholder meetings for food systems mapping and ‘Representative Transformation Pathway’ purposes.
-
- Stakeholders focus groups and interviews conducted within the context of specific research activities 2025.

The need to think about power and participation in FoSTA-Health

It is often not enough for research devoted to complex areas such as food systems affected by climate change – the ‘wicked problems’ of today (Chung 2024; Singh 2025) – to be monodisciplinary. Due to the entangled nature of these research problems, interdisciplinary and transdisciplinary approaches are becoming increasingly recognised to be fairly appropriate for addressing these challenges¹. However, as the complexity of these approaches increases, so does the difficulty of cooperation (Bammer 2013). Interdisciplinary and transdisciplinary approaches are time-demanding and resource-intensive. They require sufficient time for the initial phases, for building shared language, trust, and new methods (Bracken and Oughton 2006; Lyall et al. 2013; Tobi and Kampen 2018; Di Giulio 2024; Salmela et al. 2025). Sufficient space is also essential for meaningful stakeholder involvement – whether it is space to select and reach appropriate stakeholder groups, provide value to stakeholders, or justify their involvement (Salmon et al. 2017; Cook and Overpeck 2019; Dudman and de Wit 2021).

Since, the process of knowledge creation in interdisciplinary and transdisciplinary research involves scientists and stakeholders from different fields and positions, the entire collaboration is significantly influenced by power dynamics. Participatory processes aimed at making research outcomes representative and inclusive bring together a plurality of insights from diverse stakeholders. However, these processes also bring along the challenge of assimilating this diversity, reaching consensus and facilitating reconciliation amongst interests, ideologies and research agendas. Politics and power dynamics are crucial elements in this process. These elements could shape the outcomes of research processes by amplifying existing regional, institutional, and disciplinary hierarchies. This in turn determines outcomes

such as which actors get adequate representation in the participatory processes and which voices are reflected in the outcomes.

As in other areas, power in participatory research operates *structurally*, such as through institutional norms and structural inequalities rooted in economic and political systems or racial hierarchies (Yami et al. 2018; Wallerstein et al. 2019; Cadman et al. 2024); *epistemically*, for instance, through the dominance of western-centric and technocratic worldviews (Berry et al. 2019; Egid et al. 2021; Thompson 2022; Clift and Kuzemko 2024); and *relationally*, via uneven power relations within groups (Chilvers and Kearnes 2016; 2020) and expert-layperson dynamic (Jordan et al. 2018). For example, often, ‘experts’ – individuals with formal, institutionalised knowledge who are often privileged over lay or local knowledge – are often over-represented in participatory research (Musch and von Streit 2020). At the institutional level, institutions having historical dominance over academic resources and spaces, many have better access to spaces of participation. This dominance also translates into discursive and epistemological influence in framing research problems.

At a more micro level, structural dynamics of class and identity can bolster or impede participation of historically advantaged or marginalised groups. Indeed, people occupy different positions, based on social categories of difference, such as gender, age, occupation, class, and socio-economic status (Nakamura 2010; Egid et al. 2021). These social differentials often intersect and overlap, implying that participation in research is not influenced by just one dimension (Egid et al. 2021). The position in social hierarchy determines who is included in the space of participation, who is excluded, and how safe and encouraged people feel to participate. In participatory research, unaddressed power imbalances frequently lead to superficial participation (Maru et al. 2009; Eidt et al. 2020).

Another significant realm of epistemic friction in collaborative, and participatory processes is that of framing of research problems. Leventon (2021) notes that within research concerning complex problems such as food systems transformation, different societal groups could have framings that are at odds with one another. This is especially true of the framing of the drivers for food systems transformations. For instance, technocratic framings offer solutions such as the use of artificial intelligence, large-scale mechanisation, monocultures driven by genetically modified seeds, and leveraging economies of scale (Béné et al. 2019; Resnick and Swinnen 2023). The more socially sensitive, agroecological framings foreground the questions such as food sovereignty and security, distributional equity, labour rights, and environmental health (Fritz and Binder 2018; Berry et al. 2019). These divergent framings of the same issue could critically influence the composition of participation spaces.

The *framing* of research problems also shapes how the stakeholders who end up in the participatory spaces receive the project and engage with its objectives. It is important to notice if the framing is relevant to the regional and local understandings of the problem. Additionally, an inaccessible and esoteric framing can end up alienating the participants and have them question the relevance of the project to their area of interest, and problems, or even their ability to contribute to the problem at hand.

Determining who gets access and representation, and whose voices find space in research outcomes is a power laden process, while the researchers are simultaneously riddled by challenges of how to manage these dynamics. There is great concern to ensure that local level power dynamics do not hinder what they consider to be ‘equal’ participation. However, we push the envelope to suggest that it is worth asking, who exercises the epistemic authority to define what ‘equitable’ participation is? The strategies to stakeholder engagement require, on one hand, reflection on researchers’ positionality, as scholars (with their own, often privileged position in social hierarchy) embody power that

can unconsciously reproduce systemic inequities (Muhammad et al. 2015; Sterling et al. 2019). On the other hand, the facilitation and communication with stakeholders must be tailored to cultural context, avoiding imposition of dominant standards (Fritz and Binder 2018; Egid et al. 2021). Secondly, deliberate incorporation of diverse perspectives, with a special emphasis on marginalised voices, is crucial for challenging the power disbalances and mitigating the danger of a “single story” (Thompson 2022). Another essential strategy involves the management of (powerful) gatekeepers. While engaging local authorities, such as traditional leaders, is essential for legitimacy and access, their position in social hierarchy can limit access to marginalised groups or reinforce existing power disparities (Eidt et al. 2020; Egid et al. 2021). Giving voice to less powerful stakeholders while managing the involvement of local authorities remains a challenge, but is essential for equal participation (Suchá et al. 2024).

Exploring power and participation in FoSTA-Health research

In recognition of the importance of exploring power and participation, the practice of Formative Accompanying Research (FAR) lies at the methodological core of this handbook. Formative Accompanying Research refers to reflexive insights on participation and power dynamics based on ethnographic observation of FoSTA proceedings. The idea behind FAR component within FoSTA is to incorporate reflexive perspectives to account for the influences of different positionalities and relative power positions within the project. This objective draws on the traditions of reflexivity in socio-cultural anthropology, theories of standpoint epistemologies in feminist science studies, and literature on participation and plurality in systems transformations.

To respond to these challenges, FAR takes a ‘dynamic positionality approach’, navigating distinct positionalities on the insider-outsider continuum to learn *about, with* and *for* the collaborative teams.

¹ Interdisciplinary research focuses on integration of knowledge from multiple academic fields, while transdisciplinary research broadens the scope of collaboration to include non-academic stakeholders (Wagner et al. 2011; Välikangas 2024).

FAR practitioners take an inside view of collaborative teams, often working as team members to learn *with* collaborative research teams. At the same time, they learn *about* the teams, taking the outsider’s view to leverage upon the distance that this vantage point affords, to fulfil epistemic goals of creating transferable knowledge. The role of learning for the research team necessitates a hybrid positionality, being both on the outside and inside, to be able to grasp the inner workings, but also have the objective distance to be able to support the teams and recommend interventions to modify project design to respond to the challenges (Freeth and Vilsmaier 2020).

Navigating these different positionalities can pose another set of challenges. This includes striking the balance between observation and participation, curiosity and care, and impartiality and investment. Freeth and Vilsmaier (2020) offer three practices as ways to respond to each of these balancing acts. These include the practices of dynamic proximity, critical reflexivity, and embedded relationality. The iterative nature of the FAR practice ensures that the findings are fed back to the project, to provide impetus for critical reflexivity across the team, and throughout the course of project.

The aim of FAR in FoSTA-Health was to mainstream critical reflexivity and make it a consistent practice. This is to ensure that instead of it being an add on step, or an afterthought, the practice of reflexivity is a constitutive step in the design of the project, and its methods (Clifford and Marcus, 2010). The findings were fed back into the overall workings of the project and make the problem framings and execution of research agendas more inclusive. By taking stock of place and context-based power dynamics in different engagement settings, we formulated practical recommendations for promoting equitable participation in food systems research.

About the Handbook of power dynamics in participatory food systems research

Scope and objectives

This handbook on power and participation is the core output of the process of Formative Accompanying Research in FoSTA-Health. In honouring the diversity of disciplines and perspectives of researchers within the project, we wanted to provide space to showcase a range of power-related challenges, and how they were experienced. We therefore had four core objectives for this handbook:

- To document key power and participation challenges in FoSTA-Health, including how they were experienced from the position of researchers in the project.
- To contextualise these challenges within existing literature and knowledge on power and participation in research.
- To explore how these challenges shaped the processes and outcomes of the FoSTA-Health project, and implications for food systems research more broadly.
- To present recommendations and actionable steps for future collaborative and interdisciplinary projects.

To fulfil these objectives, we invited contributions from members of the team, in the form of briefing notes. Emerging from experiences identified within the project, we (the lead authors) outlined a starting set of challenges that we considered important to include within the handbook. We then approached the broader team to ask for members to develop the content, based on their own experiences. At the same time, we invited a broader range of topics to be volunteered from across the team. In total, eleven briefing notes (BNs) were completed, covering the following challenges:

BN1 – A detailed look at participation in the FoSTA-Health project
BN2 – Problem framings and participation: Notes from stakeholder engagements in diverse institutional settings
BN3 – Purposeful participation: Navigating differing priorities in transdisciplinary partnerships
BN4 – Spaces of participation: Who has access?
BN5 – Power and place: Smallholder farmer perceptions and experiences of food systems in rural Tanzania
BN6 – Inclusive participation when applying participatory photovoice method
BN7 – Project design and coordination for enabling collaboration
BN8 – Geography of knowledge production and capacity to do research: Perspective of the semi-periphery
BN9 – Collaboration across diverse epistemic communities: Challenges and reflections
BN10 – Modelling stakeholder inputs into food system transformation pathways
BN11 – Plurality and inclusion: Honouring difference while creating coherent messages

The text of the briefing notes follows a consistent structure. The ‘Overview’ section lays down the challenge posed by power dynamics in the given case study context. The next section summarises the ‘Key recommendations to the project’ to flag the possible ways of addressing the challenges laid down in the briefing note. In the following section, we discuss the observations from the FoSTA-Health research that inform the particular BN. The section on ‘possible impacts of the challenge and current discussion in the literature’ grounds the text in existing scholarship. The final section discusses the recommendations in detail.

By structuring the handbook as a collection of briefing notes, and by providing a common structure to the notes, we intend that the content is useful for researchers, policy makers, civil society organisations intending to use participatory, cross-disciplinary and collaborative research methods in their work. The notes are intended to give researchers and practitioners a texture of the problems that could emerge in project settings. They also provide concrete recommendations, based on experience and broader evidence and theory in the fields of development studies, political ecology and science and technology studies (STS). Readers can choose to select briefing notes that are most relevant for their specific issues or take the handbook as a whole to give a more holistic overview of challenges they might encounter. We particularly note that while we present these challenges in separate briefing notes, there are links and overlaps between them. We are not attempting in this handbook to explain causal relationships between challenges or enforce boundaries between them. The value of the briefing note structure lies in being able to present the breadth of experiences and interpretations of situations. Therefore, while the notes give recommendations for possible ways to respond to the challenges they discuss, it is imperative to note the context specificity of each case, and the positionality of those experiencing the challenges.

Content and overview

The collection of briefing notes discusses some of the key challenges encountered while deploying participatory research approaches in the case studies in FoSTA-Health.

We begin with a detailed description of stakeholder engagement processes in FoSTA Health in **BN1**, and follow this up by peering into the practical challenges encountered when consulting stakeholders from diverse institutional settings, with **BN2** reflecting upon country level stakeholder dialogues in Tanzania, one of the focus countries in FoSTA. The note shows that the prevalence of institutional framing of One Health, in the face of diverse institutional and disciplinary backgrounds, and asymmetries in representation create epistemic challenges that may reinforce existing power imbalances.

The second **BN3** goes on to reflect on how transdisciplinary research and problem framings have a critical bearing on stakeholder selection, and the imperative that participatory exercises are meaningful for all the participants, in terms of their nature and content, and not only the researchers. **BN4** further delves into the challenges of the participatory approach, by discussing how relationships between researchers and research interlocuters define the constitution of these spaces. By conceptualising participation as a set of relational spaces, the note identifies ‘inner spaces’ (where research interactions formally occur) and ‘outer spaces’ (indirectly influencing the formation of inner spaces) and highlights the decisive influence of the latter on the former. **BN5** further explores participatory spaces, by bringing forth the gendered dimensions of participation in photovoice exercises and participatory food systems mapping at the community level. This is followed by **BN6**, that gives us an insight into dilemmas regarding use of technologies such as cameras and mobile phones to study dietary transitions. These technologies along with participatory methods, while touted to be promoting equity, could introduce a new set of pressures on the participants.

BN7 discusses the material constraints, and coordination challenges that arise while putting together a multi-institution consortium such as FoSTA, that spans across institutions in the Global North and South. The authors point to a mismatch between the iterative and evolving nature of such collaboration and the nature of conventional project funding, which often demands fixed deadlines and predefined outputs. **BN8** goes further into discussing regional power asymmetries and relationships across different academic institutions within the project from the perspective of the so-called ‘semi-periphery’ and ‘periphery’, moving beyond a simple Global North-Global South binary. **BN9** documents the practical challenges that arise in coordination and communication with the project partners, and institutions with different organisational styles and work cultures.

BN10 discusses the food systems modelling process in FoSTA-Health and brings out the challenges of assimilating the diverse framings from a range of stakeholders into modelling projections and producing summarised transformation pathways.

BN11 reflects on the challenge of honouring the diversity that arises from the engagement across various categories of difference, while ensuring coherence in project outcomes. It propositions that embracing the plethora of differences that have been brought out in the discussion so far, is one of the first steps towards responding to these challenges.

Overarching reflections on power and participation: The importance of problem framings

In the handbook, we discuss the structural and material issues that enable or hinder participation in research work within FoSTA-Health. We discuss how participatory spaces can be torn along different axes. Additionally, we discuss that structural elements such as gender, class, and other social structures of stratification can significantly shape access to participatory spaces. However, at the same time material factors are also of critical importance, such as which crops are considered valuable (due to ever changing market dynamics, and consumer demand), and which activities within the food supply change are considered lucrative, and hence relevant to the institutional corpus of food systems related knowledge. This goes on to underline that while categories of difference such as gender, class, and historical legacies of oppression continue to be pervasive, and relevant it is critical to be alert to the relational dimensions of social interactions. For instance, women, in general, face the multi-layered burden of gendered marginalisation. However, women from socially disadvantaged groups, by the virtue of class or race, can be further marginalised, carrying the manifold burden of race, class, gender, and other context specific cultural categories of difference.

The briefing notes demonstrate how participation does not automatically translate into voice and representation. There are sharp cleavages along the lines of gender that bifurcate these spaces of participation. Male farmers inhabit these spaces with much more ease and epistemic authority than women, considering their opinions and practices to be worth being paid attention to. However, the experiences of small-holder farmers differ greatly from those of big and influential farmers. Even big farmers might find themselves at a disadvantage vis-a-vis dominant actors such as middlemen, council members, and district level administrators. Further, within the FoSTA-Health project, it was also particularly relevant to focus on framing of

the activities in participatory modelling, as model creation requires technical knowledge that can silence critical questions and challenges (Royston et al. 2023). In turn, participation can be superficial or tokenistic, where stakeholders are included in name only, with little real influence on outcomes (Egid et al. 2021; Leventon et al. 2022). Cooke and Kothari (2007) even talk about the “tyranny of method” in participatory research, where technical procedures favoured by researchers exclude culturally sensitive input (Maru et al. 2009; van Asten et al. 2009; Fritz and Binder 2018).

Beyond questions of structure and materiality, we point also to the role of problem framing, as a core source of challenges in power and participation in the project. In the context of framing scientific issues for public debate, and democratising the production as well as uptake of scientific knowledge, Irwin (2001) argues that institutional framings of issues could narrow down the scope of likely participants. These framings could further restrict the design of the consultation process and reduce the possibility for dialogue. While this structuring could guide the public engagement, it also means that the concerns of the participants are assimilated and confined withing the predefined framing set out by the institutions of authority and might not leave room for tabling the diverse interests of the participants.

When we look across the topics covered in this collection of briefing notes, we point to the role that the One Health concept has by providing such a pre-defined framing. The One Health approach calls for recognising the interlinked nature of problems occurring in human, animal and environmental systems, and devising strategies to respond to these entangled challenges. On one hand, the One Health framing could have a very fruitful impact, as it encourages researchers to take a holistic approach towards food systems. However, at the practical level, this also meant that the researchers had to look for participants and interlocuters who were already attuned with the OneHealth discourse. This meant a focus on identifying actors who were working on initiatives that fall under the purview of OneHealth as defined by the EU/EC. This inadvertently drew

a boundary, albeit loosely, between who gets to participate in the stakeholder engagement process and who doesn't. There is significant flexibility in the interpretation of the term 'One Health'. However, the concept of boundary work suggests that those with scientific and epistemic authority define the realm of relevant knowledge in terms of specific attributes (Gieryn 1983). These defining attributes often correspond to the dominant framings of what counts as admissible knowledge. Leventon et al. (2021) note that in research settings, problem framings, and knowledge often reflect the values of powerful actors. We suggest that in this case, the ability to make epistemic claims is limited to actors who conform to the EU framing of food systems transformations.

Taken together, the contributions in this handbook underline the importance of considering power and participation in food systems transformation research. Because One Health explicitly asks researchers to work across human, animal and environmental domains, and because FoSTA-Health takes an explicitly inter- and transdisciplinary approach to research, it has been essential to consider questions of what counts as relevant knowledge, who is seen as a legitimate participant, and which problem definitions shape both process and outcomes. This is particularly pertinent in a project that includes technical language, diverse institutional contexts, local hierarchies, and normative questions of transformation and desirable outcomes. Through Formative Accompanying Research, FoSTA-Health made these dynamics visible, creating space for reflexivity, learning and adaptation as part of the research process rather than as an afterthought. The briefing notes do not offer universal solutions. Rather, they point to the need to grapple with structural, material and problem framing components of power to understand representation and voice. By documenting both tensions and practical responses, this handbook invites researchers, practitioners and funders to treat One Health both as an integrative concept or boundary object, and also as an opportunity to critically and reflexively engage with power and participation. Such engagement is essential to steer food systems transformation research towards equitable, legitimate, and usable knowledge.

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Briefing note 1

A detailed look at participation in the FoSTA-Health project

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Overview

The FoSTA-Health project was structured to promote and support participation throughout research and dissemination activities. A specific package of work was created and resourced for this purpose. Within this work package, a foundational stakeholder engagement process was successfully implemented to ground the research in lived realities, diverse perspectives, and policy needs across the four focus countries; Malawi, Tanzania, Zambia, and South Africa. This work began with the recognition that sustainable food systems transformation is inherently transdisciplinary and must be co-driven by a broad spectrum of actors operating at local, national, regional, and international levels.

In this briefing note, we outline the approach and activities that the FoSTA-Health project undertook for participation. This briefing note therefore provides the background and description to the other briefing notes within the collection, and as a result, differs in structure. We begin by explaining the baseline that was established within the project, and the structures that were built upon in order to facilitate meaningful participation. We then continue by outlining the FoSTA approach to participation, explaining how we worked with these structures. Following, we outline the activities that were implemented, focussing on the stakeholder mapping and national dialogues. In these sections we explain what happened, and for what purpose. We conclude this briefing note with a reflection (or 'lessons learned') on these structures

and activities. Here, we consider what worked well and what could be considered for facilitating participation in future activities.

Creating structures for participation in FoSTA-Health

At the outset of the project, teams in each country, led by FANRPAN nodes, undertook comprehensive stakeholder mapping and scoping exercises. This process identified key actors from government, civil society, the private sector, farmer organisations, research institutions, and the media. This mapping exercise, informed by principles from actor-oriented theory (Long, 2001), aimed to understand not only who the stakeholders were, but also how their influence, interests, and interdependencies could shape (and be shaped by) food systems transformation processes.

Following the mapping, FANRPAN country nodes convened a series of consultation workshops in each transformation case study area. These dialogues marked the first round of stakeholder engagement and enabled the co-identification of research priorities and the co-design of research pathways, laying the foundation for more inclusive and context-relevant inquiry. Participants contributed to framing the questions that FoSTA-Health would pursue and brought forward nuanced, grounded understandings of systemic constraints and opportunities in their respective contexts.

As a result of these initial engagements, multi-stakeholder transformation case study groups were formally established in each country. These groups served as the core mechanism for collaboration throughout the life of the project. Their composition reflected diversity in sector, scale, and power spanning ministries of health, agriculture, and environment; smallholder farmer networks; youth and women’s organisations; research councils; national and regional agribusiness associations; and grassroots development actors.

These stakeholder groups became political spaces of deliberation (Gaventa, 2006) where knowledge was co-produced, and competing visions of transformation were negotiated. They were instrumental in ensuring that FoSTA-Health did not operate as an external intervention, but as a collaboratively constructed process of learning and transformation. This approach drew inspiration from the Muheza Climate Smart Agriculture Alliance (MCSAA), originally established under the GCRF-AFRICAP programme, which has since evolved into a formal local development organisation.

Embedding context specific approaches to participation

Engagement was guided by the FANRPAN policy advocacy framework, which emphasises locally anchored, multi-stakeholder dialogue as a driver of systemic change. Working with partners such as CARE’s regional and national offices, academic institutions, and the Southern African Business Development Forum (SABDF), the project leveraged pre-existing networks and trust-based relationships to build legitimacy and sustained commitment.

Communications with stakeholders were conducted through locally appropriate protocols, and institutions were engaged individually and respectfully. Initial engagement workshops were convened to establish each stakeholder group’s terms of reference, identify their specific interests, and outline how they would contribute to the co-

analysis of research findings and food systems transformation pathways. These stakeholder groups thus served not only as advisors but as co-researchers and custodians of impact, aligning with the project’s fifth objective: the establishment of long-term communities of learning.

Throughout the stakeholder engagement process, critical reflection on power, participation, and equity was embedded in the methodology. The project team remained attentive to how stakeholder participation might reproduce or challenge existing hierarchies. A deliberate focus was placed on understanding and amplifying the voices of women and marginalised groups, particularly in contexts where structural barriers and social norms had historically excluded them from decision-making in food systems.

To capture the human dimension of transformation, the project also employed ethnographic tools such as oral histories and participatory video, enabling community members to document and narrate their own experiences of food systems change. These tools, along with formative accompanying research (FAR) sessions with work package teams, ensured that stakeholder engagement was not static but adaptive, responsive to emerging insights and capable of evolving alongside the project itself.

Stakeholder mapping: laying the foundation for meaningful engagement

As the first participation activity within the FoSTA-Health approach, stakeholder mapping served as a critical entry point for grounding the project in local political, institutional, and social realities. More than a technical exercise, stakeholder mapping was designed as a strategic and relational process aimed at identifying, analysing, and understanding the roles, interests, influence, and interdependencies of actors within national food systems and One Health landscapes.

Drawing from actor-network theory and the actor-oriented approach (Long, 2001), the mapping process recognised that stakeholders are not static entities but dynamic agents who interpret, negotiate, and shape development interventions based on their positionalities, power, and institutional affiliations. The objective was not simply to catalogue individuals or institutions, but to uncover hidden dynamics of influence, identify gatekeepers and champions, and anticipate potential sources of resistance or support. This approach aligns with broader tools for institutional, political, and social analysis that emphasise understanding the incentives, power relations, and institutional contexts that shape reform processes (Fritz, Kaiser & Levy, 2009).

In each FoSTA-Health focus country, namely Malawi, Tanzania, Zambia and South Africa, FANRPAN nodes led stakeholder mapping processes that were context-specific, inclusive and iterative. The methodology combined desk-based policy and institutional reviews with key informant interviews and consultative meetings. This multi-method approach enabled the identification of both formal actors such as government ministries, research institutions and donor agencies, as well as informal influencers including traditional leaders, farmer networks, media and community health workers, whose roles are often underestimated in conventional engagement strategies.

The mapping process also included a power-interest analysis, which helped classify stakeholders according to their level of influence over policy decisions and their degree of interest in food systems transformation and the One Health agenda. This analysis enabled FANRPAN nodes to develop targeted engagement strategies tailored to different groups ranging from high-influence policymakers requiring strategic advocacy, to community-level actors whose local knowledge was critical for legitimacy and ownership (Bryson, 2004).

Importantly, stakeholder mapping was not treated as a one-off task, but as a living process that would be continuously updated as relationships evolved, political contexts shifted, and new actors emerged. This aligns with the principles of adaptive management and the Problem-Driven Iterative Adaptation (PDIA) framework (Andrews et al., 2017), which emphasizes responsiveness to evolving dynamics and continuous learning.

By starting participation activities with stakeholder mapping, the FoSTA-Health project ensured that subsequent activities such as national dialogues, capacity strengthening workshops, and policy engagements were anchored in a clear understanding of the national ecosystem of actors, their relationships, and their relevance to project goals. It laid the groundwork for building trust, aligning agendas, and fostering genuine co-ownership of the research-to-policy process.

National dialogues: structured platforms for power-sharing

One of the most impactful and politically significant forms of stakeholder engagement under the FoSTA-Health project was the organisation of national policy dialogues, convened by FANRPAN nodes in each focus country. These dialogues moved beyond the conventional format of research dissemination. Instead, they functioned as deliberative spaces where scientific evidence, lived experiences, and policy priorities converged and were subject to negotiation, contestation, and sometimes, reframing.

Across all countries, the dialogues utilised the iFEED tool as a key instrument for receiving and interpreting country-specific input to inform policy processes and multisectoral coordination.

- In Tanzania, the national dialogue focused on integrating One Health into national food systems policy using iFEED to inform climate-resilient policy pathways. Stakeholders emphasised strengthening cross-sectoral coordination and subnational participation. A specific spotlight was placed on the horticulture sector, with discussions around the potential and challenges in avocado, citrus, and spice value chains as drivers of inclusive and sustainable food systems transformation.
- In Malawi, discussions centred around the need to diversify beyond maize-based systems, improve irrigation, gender and power dynamics and address land access challenges. The dialogue used iFEED outputs to visualize trade-offs in food system pathways, supporting smallholder-inclusive, nutrition-sensitive, and climate-resilient agriculture.
- In Zambia, the dialogue examined the growing burden of non-communicable diseases and linked it to changing diets and agricultural practices. It also emphasised livestock health, food safety, and zoonotic disease risks, with iFEED and Representative Transformation Pathways (RTPs) informing preparations for national submissions to COP28.

- In South Africa, stakeholders focused on governance reforms and future-oriented planning. The dialogue addressed the intersections between climate, food, and health systems, with particular attention to livestock production, antimicrobial resistance, and zoonotic threats. In addition, there was a strong emphasis on the horticulture sector, especially the need to address phytosanitary standards and export-readiness. iFEED served as a tool to stimulate intersectoral collaboration and scenario-based thinking.

In development theory, such spaces are increasingly understood through the lens of “invited spaces” (Cornwall, 2002) or “participatory arenas” (Gaventa, 2006), which are created by institutions to involve a range of stakeholders in decision-making processes. However, what makes such spaces transformative as opposed to merely performative is the degree to which they enable power-sharing, collective sense-making, and agenda-setting. In the context of the FoSTA-Health national dialogues, FANRPAN nodes acted as boundary organisations (Cash et al., 2003), positioned at the interface of science and policy. A boundary organisation is one that facilitates collaboration between different communities of practice particularly between researchers and policymakers by maintaining accountability to both, while also creating shared language, expectations, and tools (Cash et al., 2003). Their role was not only to broker knowledge, but also to mediate interests and foster legitimacy across epistemic and institutional boundaries.

These dialogues brought together a broad spectrum of actors: government ministries (agriculture, health, environment, livestock), civil society organisations, research institutions, private sector players, youth entrepreneurs, media, and, where possible, community representatives. The inclusion of diverse stakeholders was not just symbolic. It was rooted in deliberative democratic theory, which holds that legitimate policy outcomes are those that emerge from inclusive, reasoned debate among equals (Dryzek, 2000). By structuring the dialogues to include actors from across sectors and social

positions, the FANRPAN nodes helped to challenge sectoral silos and facilitate multisectoral thinking around food systems and One Health.

Importantly, these dialogues were not devoid of contestation. As Long (2001) reminds us through the actor-oriented approach, development actors interpret and respond to interventions based on their own positionalities, interests, and lived realities. Within the dialogues, tensions often emerged between government and non-state actors, between central ministries and local authorities, or technical experts and community voices. Yet, these frictions were generative, reflecting what Chambers (1997) refers to as plurality of realities, and echoing Cooke and Kothari (2001) cautioning about the politics of participation where outcomes depend not just on who is present, but whose voices are heard and legitimised.

By creating national dialogues as sites of negotiated policymaking, FANRPAN’s nodes enabled context-specific articulation of priorities. In some countries, these dialogues contributed directly to policy reviews or provided framing for national investment plans. In others, they seeded longer-term coalitions and collaborative action. Across all settings, however, they illustrated that stakeholder engagement, when properly facilitated, can transform research from a product into a dynamic process of political and institutional learning.

Lessons for future participation in food systems research

The FoSTA-Health project experience reaffirms several critical lessons on the role of stakeholder engagement and adaptive governance in the implementation of development research. These insights are not only grounded in practice but are also supported by decades of scholarship in development theory.

One of the clearest lessons is the importance of conducting early and inclusive stakeholder mapping.

As emphasised in actor-oriented development theory (Long, 2001), development processes are shaped by the agency, strategies, and power relations of those involved. Identifying stakeholders is not sufficient; understanding their positionality, interests, and constraints is key to designing interventions that are socially embedded and politically realistic. In FoSTA-Health, mapping helped local nodes navigate complex institutional environments and engage with actors whose influence might otherwise have been overlooked.

Secondly, the experience illustrates the importance of flexibility in implementation, a principle at the core of the problem-driven iterative adaptation (PDIA) approach (Andrews, Pritchett, & Woolcock, 2017). Rigid, blueprint-style research agendas are ill-suited to contexts where institutional arrangements and political dynamics are constantly evolving. Development research must be responsive, allowing for adaptation as local realities shift, be it due to policy reforms, leadership changes, or external shocks. In FoSTA-Health, countries that applied flexible engagement strategies were better able to sustain stakeholder participation and align project activities with national priorities.

Another crucial lesson is the need to foster local ownership, echoing participatory development paradigms (Chambers, 1997; Cornwall & Jewkes, 1995). When community actors and policy stakeholders see their knowledge, perspectives, and priorities reflected in project design, they are more likely to engage meaningfully and sustain momentum beyond the life of the project. Ownership is not only a matter of inclusion, but of power i.e who frames the problem, who defines the solution, and who benefits from the intervention (Cooke & Kothari, 2001). The FoSTA-Health project demonstrated that co-creation and mutual accountability were critical for embedding One Health principles within national systems.

The project experience highlights that timing in development is inherently political, aligning with Kingdon’s (2011) “multiple streams” framework. Even the most evidence-rich interventions can falter if introduced outside of key policy cycles

or moments of political opportunity. Conversely, well-timed engagement—aligned with budget planning processes, sectoral reviews, or political reform agendas, can significantly improve the chances of policy uptake. FoSTA-Health nodes that synchronised their activities with national dialogues or regional consultations experienced greater traction and visibility.

Stakeholder engagement in development research must be understood not as a procedural formality or a checklist item, but as a dynamic, evolving process that fundamentally shapes the relevance, legitimacy, and ultimately, the impact of research. It involves more than convening workshops or collecting signatures of attendance; it requires meaningful dialogue, trust-building, and continuous negotiation among actors with varying degrees of power, interest, and influence. As the FoSTA-Health project demonstrated, aligning research with the realities of implementation is not always straightforward. It demands more than good intentions or technical expertise; it requires a deep sensitivity to political context, institutional dynamics, and social complexity.

The project illustrated both the promise and the difficulty of embedding research within stakeholder ecosystems. In settings where engagement was approached as a mutual learning journey rather than a one-sided dissemination exercise, research outcomes were more likely to inform policy discussions, shape local programming, and inspire community ownership. Conversely, where stakeholder engagement was constrained by limited timeframes, resources, or rigid project structures, the disconnect between research aspirations and implementation realities became more pronounced.

In an increasingly complex development landscape marked by intersecting crises in food systems, public health, and climate resilience, the call for integrated, multisectoral approaches is growing louder. Yet such integration cannot be achieved through evidence alone; it must be cultivated through inclusive processes of shared sense-making and collective problem-solving. Stakeholder engagement must

therefore be seen not as an output, but as a strategic and adaptive process, one that is sustained over time and intentionally crafted to accommodate the shifting priorities, pressures, and possibilities within each context.

In this regard, the experiences of FANRPAN’s country nodes offer important lessons and a pragmatic roadmap for others seeking to move from research to action. Their work underscores that transformation is not achieved by delivering findings, but by co-producing solutions in partnership with those who are most affected by them. Only through such approach can development research become not just informative, but truly transformative.

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Briefing note 2

Problem framings and participation: Notes from stakeholder engagements in diverse institutional settings

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Overview

This briefing note attempts to build on the observations pertaining to stakeholder engagements and interdisciplinary collaborations during the national dialogues in Tanzania. To understand the interactions between distinct problem framings of different participants, and the situated practices of knowledge production and information exchange, we use methods of participant observation and multi-sited event ethnographies (Baird, 2017; Priyadharshini, 2003). Using this approach helped us put into perspective the epistemic conflicts experienced by the project team members as well as the power dynamics reflected by the micro-level interactions in the processes of participation.

Key recommendations to the project

- Recognition and documentation of sources of differences in positionalities.
- Provision of a space for respectful discussion and mediation over differences in framings and power positions.
- A project-wide discussion on different framings of One Health, and a primer for future reference.

Specific observations that inform this briefing note

Stakeholder perspectives and food systems mapping in FoSTA-Health

Stakeholder participation has become a critical component of environmental governance in the past decades and is a crucial element of the food systems mapping exercise within FoSTA. As laid down early on in the handbook, the participatory turn in environmental governance focuses on mutual learning, consensus building, and developing a shared problem-framing about the goals (Fischer, 2017). There is immense emphasis on the importance of participatory and collaborative decision-making in policy discourse and academic literature on international governance and post-colonial development studies alike. However, there are significant concerns about the blind spots including power imbalances within participatory processes, asymmetries in representations, and epistemic challenges pertaining to different ways of knowing among participants, researchers, and state and civil society actors (Leventon et al., 2022). These are the challenges and implications we will discuss in this briefing note, through the lens of the observations from the dialogues summarised in the coming sections.

A wide range of interactions between in-country stakeholders and researchers on the FoSTA

team who come from very different institutional backgrounds and disciplinary orientations constitute the scope of the FoSTA-Health project, leading to distinct research and policy priorities. In this briefing note, we discuss how the positionalities of distinct project participants within FoSTA, and their framings of food systems transformations for One Health could shape project outcomes.

FoSTA-Health organised a two-day stakeholder engagement workshop in Tanzania in October 2023. The first day was dedicated to food systems mapping, sessions on women’s empowerment, supply chains and governance and the regulatory landscape in the region. The second day was devoted to the discussions around the representative transformations pathways for the modelling component in FoSTA.

During the food systems activity, the stakeholders gave a range of inputs regarding aspirations for food systems transformations and what could help attain those aspirations– food and nutritional security, technological innovation, exports, self-sufficiency. Our questions required them to think about food systems but using One Health outcomes (defined broadly as the linkages between human, animal and environmental health) as an entry point.

The key ideas discussed here include:

- The responses of the participants to questions aimed at eliciting responses on their understandings of One Health, the barriers to achieving One Health outcomes, the key actors and institutions which are involved in these interventions.
- the role of positionalities of participants, researchers, and state and civil society actors.

Challenges encountered during FoSTA-Health

Below, we summarise some of the observations regarding the interactions between the participants and researchers during the food systems activity. The first sets of observations pertain to the different framings of Food Transformations for One Health.

- In this context, one key observation was that many of the stakeholders were not familiar with the concept of One Health. However, following the introduction by a FoSTA-Health team member they were able to link their existing work with the idea of food systems transformations at the interface of human, animal and environmental health.
- At this point, the shared understanding of the fundamental ideas seemed a little incoherent. As noted earlier, while the stakeholders were not very familiar with the One Health concept, even amongst the researchers there wasn’t much agreement upon what they make of the concept. Not many of us had worked with the concept before. For the Tanzania presentation, we went with three definitions of One Health after much deliberation. In South Africa, another FoSTA-Health team member suggested that we stick to the new **One Health High-Level Expert Panel (OHHLEP)** definition and noted that it’s what they align with and communicate in South Africa.
- Here, it is also important to note some of the framings that undergird the discussions on food systems and One Health within FoSTA. The research proposal for the project notes that, “FoSTA-Health is founded on an understanding – shared across the members of its diverse consortium of partners –that addressing animal, human and environmental health challenges, in the context of current and future climate change and uncertainty, requires transformative food system change” (p.1). The EU call for proposals for the scheme under which FoSTA-Health is funded suggests that the One Health concept can be applied to establish a transformative approach

to increasing sustainable practices in agriculture and improving the overall health and well-being of humans, animals, and natural ecosystems. It notes that there is a need to fill knowledge gaps regarding interactions with different components and especially between human and animal and plant health and strengthen monitoring and evaluation systems to prevent the emergence and spread of pest and diseases with nature-based solutions. While these framings inform the research approaches within FoSTA, they also interact with the framings across different regional and institutional spaces of interaction.

The second set of observations are related to the role of positionalities. They delve into how the research perspectives and approaches within FoSTA are informed by different regional, institutional and disciplinary vantage points.

- For instance, amongst the participants in Tanzania, University of Leeds is an academic research institution, ESRF is a development research think tank and FANRPAN is a policy research network. In addition to the different nature of these organisations, the researchers come with different specialisations and interests since the project has a broad focus.
- There are four distinct system transformation case studies within FoSTA-Health - *Transitions within and out of Maize; Land acquisitions, land and water use change; From domestic to export markets; and Diet diversification*. Within the transformation case studies there are different research foci – for instance, dietary transitions and their impacts on One Health in Zambia, food and trade regulations in South Africa, and Tanzania, One Health outlook of beef and pork sector in South Africa, governance, value Chains and emergent export commodities and women’s empowerment market engagement, and food systems transformation in Tanzania. In Malawi, women’s Empowerment in maize and pigeon pea transitions, agricultural innovation, water resource use and resilience to shocks. This reflects the multiplicity of research interests, disciplinary trainings and institutional affiliations,

and this diversity of orientations translates into multiple entry points to the question of One Health. At this point, there seems to be a lack of coordination or deliberation upon a shared meaning, or shared approach towards the concept, and how it is communicated.

- Further on, researchers and partners tend to have different approaches when engaging with the stakeholders (see **BN3**). In this workshop, university and academia facing researchers seemed to prefer a more hands-off approach to understanding stakeholders view of transformations. Development practitioners and policy research organisations had a more candid approach while engaging with the participants, when they seemed a little lost or confused about how to respond. While we note that this could be also a result of the nature of the specific audience, and facilitators present at the workshop, we felt that it was an interesting observation worth flagging.

Possible impacts of the challenges and discussion in existing literature

Epistemic challenges

The FoSTA project design is aimed at bringing plurality to project outcomes by illuminating different understandings of food systems transformations, emanating from distinct vantage points of stakeholders and researchers. This design leads to challenges of participation and collaboration on different levels. One, there is the challenge of incorporating the diverse voices of stakeholders. Two, there are the challenges presented by the collaboration between diverse participants within the FoSTA team. Literature on plurality and participation notes that spaces of engagement such as the FoSTA-Health project are presented with the challenges of complexity, inclusion, conflict and power (Leventon et al, 2022). Engagement among diverse stakeholders brings forth a plurality of perspectives and different understandings of what critical transformations questions are as well as disagreements upon what the best ways to address those could be (Cuppen, 2012; Freeth and Caniglia, 2020). Similarly, collaborations between diverse disciplines could present the challenge of engagement between knowledge practices, that reveals different epistemic values, assumptions, and units of analysis (Silvast & Foulds, 2022).

Challenges of framing

The epistemic communities of scientific experts and civil society actors facilitating participation have normative commitments to democratisation from the `bottom up. However, these processes could inadvertently contribute to the professionalisation of participation, adding a new layer of technocracy (Chilvers, 2008). Hence, while spaces of participation are ‘opened up’, the power in framing, designing, and representing engagement processes continues to be ‘top down’. This also implies that control over processes of participation and interpreting insights from those rest in the hand of relatively few actors considered as ‘experienced’ and ‘trained’ ‘experts of community’ (Rose, 1999).

The framing of questions of food systems transformations could critically influence research priorities, methodologies, and outcomes. Within participatory processes, these framings are shaped by internal power dynamics and the broader political-ecological contexts within which the processes are embedded (Bixler et al., 2015; Reed et al., 2017 in Leventon et al, 2022). Institutional and environmental histories can also shape the ways in which problems and issues are framed in participatory processes (Bixler et al., 2015; Maat, 2009 in Leventon et al, 2022). Problem framing has a critical role in setting the boundaries of spaces of participation and including or restricting the actors who are a part of the space (Beyers and Leventon, 2021). Based on the observations in the previous sections, we suggest that it is important to be cognisant of the historical context of development and research interventions in the Southern African region and their bearing on framing of questions of transformations in FoSTA. It is also critical to trace the origins of the framing of One Health per se and explore how these historical contingencies are shaping research designs in FoSTA, and participatory research processes at large.

A lopsided system perspective due to asymmetries in representation

It is noted that a mismatch between the context in which participatory governance interventions operate and the institutional context of interventions could create disempowerment, elite capture of processes and their benefits, and negative sustainability outcomes (Rihoy and Maguranyanga, 2007). This could be true for participatory research approaches within FoSTA as the mismatch between the framings and concerns around transformations among the stakeholders and that of intervening research teams could reinforce existing power imbalances. The divergences in understandings of One Health, and lack of adequate engagement with those subjectivities could imply that problem framings get restricted to existing priorities of the researchers. This could prevent us from getting to more robust understandings of linkages between the human, animal and environmental systems. It could also translate into the prioritisations of the

questions such as regulation, zoonosis and food contamination because the definition within the research circles comes from EU and OHLEP based framings of One Health.

Practical actions to address challenges

Reflexive recognition and documentation of sources of differences in positionalities

Based on the observations discussed above and reflections on challenges presented by the same, we note that taking cognisance of the plurality of participatory interactions could help participants to make sense of their location within the process and the relevance and scope of their contributions to participatory governance endeavours (Leventon et al., 2022). This could be facilitated by actively recognising and documenting the sources of political, ideological, and ethical differences between different stakeholders’ positions and differences in the power wielded by different constituencies (actors and institutions) (Voinov et al., 2016). Such a reflexive acknowledgement of positionalities could help us address questions of inclusion, representation, and power imbalances discussed above and assess how they shape project outcomes.

Space for discussion and mediation

A reflexive acknowledgement of different regional, institutional and disciplinary positions must be accompanied by a provision of spaces for respectful discussion and mediation over differences in framings and power positions (Voinov et al., 2016). This could facilitate engagement between diverse knowledge practices across stakeholders, researchers, disciplines and institutions, and a mutual understanding of different epistemic values, assumptions and knowledge practices.

A primer on One Health

It could help to have a systematic project wide discussion on the different understandings of the concept of One Health, among FoSTA researchers and how these framings could impact project outcomes.

While the discussion is bound to bring forth divergent meanings, and different areas of focus, a documentation of the same could help us appreciate this diversity of framings around the concept. We could then compile the themes emerging out of these discussions to develop a document that serves as a primer for future projects engaging with the concept of One Health.

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Briefing note 3

Purposeful participation: Navigating differing priorities in transdisciplinary partnerships

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Overview

This briefing note addresses the need to navigate different priorities and pursue purposeful participation, reflecting on experiences in the FoSTA-Health project. FoSTA-Health is a transdisciplinary and international consortium, funded as a research project and with primarily research objectives, that has also placed considerable emphasis on engaging with external stakeholders.

There is increasing recognition that “wicked” societal problems, such as food systems transformation, defy easy resolution. Problems like climate change do not come pre-sorted into disciplines and cannot be solved by one discipline alone. Addressing them needs new modes of knowledge production, and expertise from diverse disciplines and backgrounds that specialise in different aspects of the wicked problem. Addressing them requires, at a minimum, an interdisciplinary partnership, which involves more than one discipline, or sometimes a transdisciplinary partnership, which involves different disciplinary backgrounds and a combination of research and practice. Collaborative partnerships are helpful in addressing wicked problems, as bringing together different skill sets and diverse experiences is more likely to be successful with the various aspects of the issues (Currie-Alder et al, 2020).

Although there is extensive literature on how to engage stakeholders, it is largely written from the perspective of researchers. This briefing note reflects

on stakeholder engagement from the perspective of one of the non-academic global South-based partners – Kulima Integrated Development Solutions. We have observed inevitable differences in priorities arising on the part of the different groups that are participating within the process – both within the consortium, and with the external stakeholders with whom we work.

The key aim is to be critically aware of “participation of whom and for what?”. If the different motivations for participation are well understood, then it is easier to embrace them so that all parties leave with a satisfactory outcome. As a result, power imbalances within relationships are not exploited. We share here some of the challenges that the FoSTA-Health team encountered during the course of the implementation of the project in Zambia and Malawi. We also present some recommendations for acknowledging and making explicit different priorities so that they can be managed effectively without causing tensions. The focus here is more on working with external stakeholders, complementing **BN11** with the focus on the relationships within the consortium.

Key recommendations to the project

- Stakeholder selection must be purposeful.
- Stakeholder engagement must be creative to allow inclusion.
- Stakeholder engagement must be sensitive to the time burden it places on stakeholders.
- Stakeholder engagement must provide value to stakeholders.
- Projects should have flexibility to meet stakeholder needs.

Specific observations that inform the briefing note

Before presenting observations of how these issues played out, we would like to present the positionality from which we make these observations and recommendations. Kulima Integrated Development Solutions is based in South Africa and works as a boundary organisation, spanning the boundary between research, policy, and practice. Within the FoSTA-Health consortium, we have three team members. One is a geographer based in South Africa whose research and practical interests are in climate change adaptation, with a particular specialisation in southern Africa. Practical interests include conceptualisation, design, applying for funding and monitoring and evaluation of adaptation interventions, with a particular interest in knowledge co-production and strengthening linkages with research. One is a dietitian based in Malawi who has interests in food and nutrition and the application of permaculture as a way of creating healthy food systems from healthy environments for healthy people. One is a biologist with an MBA based in Zambia who has worked on agriculture, decentralisation, social protection, and climate change.

The organisation and the three team members are all well embedded in policy and practice in their countries and the region. We have good networks, familiarity with the policy context, and a commitment to ensuring that research addresses national and local needs and contributes to positive outcomes for society. As a result, for the purposes of stakeholder engagement in the project, we are drawing heavily upon existing relationships. Those relationships will endure beyond the end of the project life, which means that we feel a sense of responsibility for project behaviour and actions, and simultaneous awareness that stakeholders will hold us accountable for the project’s impact in the countries of operation.

Stakeholder engagement has been a key part of FoSTA-Health, as shown by the fact that there is a work package² dedicated to this (see also **BN1**). Stakeholders have been involved as participants in many of the research themes (BNs). This typically asks for their time and effort to participate in interviews, survey and focus group discussions. This type of engagement has been managed individually, albeit in coordination with the relevant thematic work package and country coordination teams. Stakeholders have also been essential for the synthetic part of FoSTA-Health and the modelling framework, through providing inputs to design locally appropriate representative transformation pathways (RTPs) for the modelling framework (see also **BN10**). This part of engagement has been spearheaded through a series of specific multi-day dialogue events, which took place twice in each country and twice regionally over the lifespan of the project. As part of a commitment to impact, stakeholders have also been kept updated outside of the specific dialogue events through individual engagement, whether electronically or in person.

The process of stakeholder consultation brings along different challenges ranging from, deciding which stakeholders to involve ensuring that the process is meaningful for the stakeholders as well as the

researchers. In the context of FoSTA-Health, the identified stakeholders are those who have a stake in food systems transformations for One Health³. Team members had various entry points – but arguably with more experience in food systems in general than in One Health. It was important to build on this whilst also taking care not to rest in the comfort zones of pre-existing knowledge which would have run the risk of selection bias.

Similar selection bias is a risk when planning formal events for engagement as, without careful attention, they can make participation of educated, technical stakeholders conversant in English relatively easier than for other groups, such as community level participants. The sheer range of demands for stakeholder participation across various elements of FoSTA-Health also made internal coordination imperative. Without this, not only was there a risk that the same stakeholders would receive multiple approaches from different members of the FoSTA-Health team, but also that it would create unreasonable expectations in terms of the time and effort required.

It was also important within FoSTA-Health to manage stakeholder engagement. This was necessary not only to reduce burdens placed on stakeholders, but also to ensure that the engagement process was two way and bringing value to the stakeholders as well as just to the researchers (see also **BN9**). Sometimes this arises when stakeholders request researcher input into their own ongoing processes. It is important to reciprocate efforts – although this often poses challenges because of the pre-existing funding and timeline commitments within a project such as FoSTA-Health.

Possible impacts of the challenges and discussion in existing literature

There is already a large body of literature on transdisciplinary research that reflects on how to engage stakeholders effectively, and to anticipate and overcome challenges that may be encountered. This literature is largely written from a researcher perspective; hence we hope that this note adds a different dimension from a practice-based partner. Another consideration is the limitations of project funding. True transdisciplinarity with non-academic, external stakeholders requires their involvement through the process – from problem framing and co-design, to knowledge generation and co-production, to co-dissemination and application (Mauser et al, 2013; Lang et al, 2012). Inclusion throughout leads to the most effective outcomes, but typically stakeholders are less likely to be involved in the earlier stages than the latter ones (Jacobi et al, 2022) (see also **BN7**).

Identifying stakeholders and facilitating meaningful participation

Identifying who to involve as external stakeholders and how to involve them is also covered in the literature. Meaningful engagement requires identifying the relevant stakeholders in the first place, which is often not given sufficient attention (Leventon et al, 2016). “Stakeholders” comprise a heterogeneous group that may comprise public and private actors. Working in a food system context, like FoSTA-Health, Gasparatos et al (2023) also underscore the importance of involving appropriate experts and stakeholders. One assessment of 31 participatory sustainability studies found there is often a systematic over-representation of experts and an under-representation of diverse societal actors in such processes (Musch and von Streit, 2020). It is similarly possible to overlook relevant groups

²Work package 1 of FoSTA health is dedicated to stakeholder engagement.

³One Health is an approach that aims to sustainably balance and optimise the health of humans, animals, plants and ecosystems.

– particularly those who may not have the same technical backgrounds and perspectives of those doing the identifying.

Once stakeholders have been identified, attention needs to be paid to enable their meaningful participation. Managing expectations is important, and this can be accomplished by being very clear about the aim, approach, and expected outcomes of the process (Gasparatos et al, 2023; Lawrence et al, 2022). There are examples of processes being derailed if aims are not clear and expectations not explicit. Veisi et al (2022) found that scientists’ and stakeholders’ expectations on projects were not well aligned, with scientists prioritising scientific outcomes, albeit for broader societal impact, and stakeholders focusing on more practical and useful outputs. In the context of FoSTA-Health, for example, stakeholders are more likely to want to know what the research means for their daily operations, whilst researchers may have more conceptual level priorities.

Ensuring appropriate skills to facilitate participatory processes

An inclusive stakeholder list will mean there is social differentiation and vested interests, and without appropriate management, power dynamics may be (re)produced in participatory spaces. As well as the transparency of aims of processes, having skilled facilitation is necessary. This is to avoid agenda hijacking and also to encourage all actors to participate, particularly those who are less accustomed to the norms and practices of such “invited spaces”. Invited spaces are shaped and controlled by the project, meaning that FoSTA-Health determines who participates and has the scope to create appropriate spaces for that participation to be meaningful (Berry et al, 2019). Having facilitation skills to ensure participation of all can require researchers to expand beyond their traditional remit.

The skill set required to operate in transdisciplinary spaces has also received some attention in the literature. Hofman et al (2025) highlight that

transdisciplinary spaces require different roles, including traditional scientist, self-reflexive scientist, knowledge integrator, knowledge broker, process facilitator, and change agent. Researchers often must take on different and more participatory roles which is often in contrast to their more usual roles in knowledge generation which is further removed from real work action (Bulten et al, 2021). Augsburg (2014) highlights the skills required to “become a transdisciplinary individual”, noting four dimensions. These are an appreciation of an array of skills, characteristics, and personality traits aligned with a transdisciplinary attitude; acceptance of the idea that transdisciplinary individuals are intellectual risk takers and institutional transgressors; insights into the nuances of transdisciplinary practice and attendant virtues; and respect for the role of creative inquiry, cultural diversity, and cultural relativism. Although there has been a focus on reflexivity and awareness of positionality in transdisciplinary work, this has typically focused on stakeholders, with less focus to date on the positionality of researchers (Muhammad et al 2014).

Meaningful evaluation of transdisciplinary approaches

Much discussion has also taken place on how to evaluate or judge the success of transdisciplinary work. This is particularly important, given the diverse backgrounds of different actors is likely to give rise to varied aims and thus varied desired outcomes and metrics of success. However, there is less evidence on the outcomes or metrics of success for experiences of different parties (Brennan and Rondón-Sulbarán, 2019). Binder et al (2015) found that transdisciplinary projects are successful when they are timely, have a common alignment of goals, acceptance of different needs by practice and research communities, and trustful cooperation. Recognising different aspirations and indicators of success is important, with a review of 31 examples (participatory sustainability studies) showing a greater focus on producing directly measurable results rather than promoting possible long-term societal effects (Musch and von Streit, 2020).

Practical actions to address challenges

Stakeholder engagement must be purposeful in terms of who it involves

Push boundaries with identifying stakeholders
For those of us permanently embedded “in the field”, we often have extensive networks in the places where we work, and these networks typically comprise multiple actors in policy, practice, and academia. However, to avoid the risk of falling into the comfort zone of working with existing contacts who, together, may not have fully covered food systems for One Health, in FoSTA-Health we took an active approach to stakeholder identification and updating stakeholder maps throughout the project. This commitment to stakeholder identification also included not just stakeholders with a technical background working in professional roles, but also representatives throughout the food system, including from a diversity of farmers (different genders, farming systems, and scales of operation).

Regularly revisit stakeholder maps to ensure they are updated

An active and ongoing approach to stakeholder identification is important. On the one hand, this reflects our active attempt to realise that food systems for One Health is an emerging and growing field, and thus we must take care not to over prioritise the agricultural entry point, and particular types of agricultural systems within that category. For example, in Malawi, this has meant the FoSTA-Health team engaging with the Capacitating One Health in Eastern and Southern Africa (COHESA) team. COHESA arose out of an interest in livestock health, and thus their stakeholders comprise a different (but related) set. On the other hand, it reflects a dynamic process to keep abreast of changes in the individuals who fulfil particular job roles, which were identified as stakeholders in the first place. This requires active ongoing participation of all team members to capitalise on the different experiences. Although it might be perceived that certain job roles “should” be interested in food

systems for One Health, this can often reflect the individual experiences and preferences of the individuals in those roles. For example, the director of an environment ministry may have a personal specialisation in one field and those personal interests may be reflected in performing their role. Hence one individual may have a soil contamination background, whilst their successor may have a climate change background. In this case, in selecting food systems for One Health stakeholders, it is important to recognise these differences.

Stakeholder engagement must be creative to enable inclusion

Manage “invited spaces”

As well as ensuring identification of a range of stakeholders, FoSTA-Health has been keen to ensure that its “invited spaces” of participation are inclusive (Berry et al, 2019). Much of FoSTA-Health’s engagement took place through invited spaces convened by the project (see also **BN2**). Single spaces, such as workshops, are often desirable to prompt debate, and they are an efficient way of sharing information and gathering inputs. However, in bringing together stakeholders of different backgrounds, such spaces are often defined by unequal power dynamics (see also **BN6**). In FoSTA-Health, efforts have been made to represent the diversity of stakeholders in workshops. In practice, this means that national dialogues have been attended by rural farmers alongside policy makers and practitioners. FoSTA-Health designed each workshop cognisant of the need to manage power dynamics by designing small group activities appropriate to the situation. Diverse inclusion was supported through availability of translation – enabling all participants to make inputs in a language of their choice and was enabled through inclusive facilitation to ensure they have space to make inputs. However, even in these cases, it is possible to speak, and yet not be heard. As a result, the team has not relied solely on workshops as the only mechanism for stakeholder engagement.

Adapt engagement modalities to match stakeholders’ preferences

As part of the ongoing process of stakeholder engagement, team members have supported an ongoing process of communication which also can be more sensitive to different needs and preferences of stakeholders – which often was not through invited spaces. This has been done through individual contact, whether in person, by phone, WhatsApp, or over email, as per stakeholder preferences, to keep people up to date with the progress made, and to seek inputs where required. As one example, small group exercises were convened in late 2023 as part of the food systems mapping exercises. In Zambia, this targeted farmers and practitioners involved in supporting organic and agroecological approaches – to ensure that these perspectives were well represented in the process as there was not sufficient space to permit extensive representation of this group in the national dialogue. These smaller spaces with more like-minded participants can provide safer spaces for inputs and reflections which, when taken with other sources, means the team can ensure it has greater diversity of inputs. The potential downside of this is the possible reduction of direct dialogue between different stakeholders, which can be a positive feature of research projects which are able to convene “less powerful” actors with “more powerful” ones.

Stakeholder engagement must be sensitive to the time demand it places on stakeholders

Thoroughly assess existing secondary sources
Several ways were used to manage the demands of FoSTA-Health on stakeholders and attempt to reduce the time burden. The onus was on the research team to firstly do their due diligence and ensure that they were only seeking stakeholder contact for information that could not be determined from secondary sources, and secondly to internally coordinate requests of stakeholders so that they could be streamlined. In countries such as Malawi, South Africa, Tanzania, and Zambia, where food systems

transformation research has been widely conducted, there are often reports available that detail findings of primary data collection with stakeholders that are relevant. Ensuring these, and relevant secondary sources of data, have been effectively consulted avoids fatiguing stakeholders by asking them for information which is already available.

Coordinate within the team prior to engaging stakeholders

At the same time, if two different researchers intended to interview a particular government stakeholder, the ideal would be for the researchers to coordinate on their interview protocols to avoid repetition (for example, both would be likely to be asking background professional and socio-demographic questions). This would serve the purpose of reducing the time requested of the stakeholder and avoid them being contacted on separate occasions by members of the FoSTA-Health team. However, this is not always easy, as researchers can fear compromising the quality and quantity of data that they collect through such coordination. Trading off data quantity for the effects of the data collection process on people’s lives is critical in such situations.

Stakeholder engagement must provide a value to stakeholders

Consider and address motivations and interests of all stakeholders

The design of a research project and the way it is structured often inadvertently prioritises benefits of stakeholder input to the researchers as opposed to the reverse. Considering value to stakeholders is particularly important when designing engagements. For individual contacts, such as interviews, the key is to minimise time expectations. However, for group events, particularly for large-scale workshops, the key is to consider the motivations and interests of all parties and ensure that everyone is able to depart with something that is useful to them. This often requires careful planning and also sensitivity to stakeholder needs, which can be determined through an ongoing process of engagement.

Manage an ongoing process of engagement

It is often assumed that stakeholder engagement is through high-visibility events such as a workshop. However, in FoSTA-Health our experience has been that the ongoing contact is what has strengthened relationships and built long-lasting vested interests in research projects. In one case in FoSTA-Health, the project sponsored participation of several of our longstanding stakeholders in a regional event (the 2025 Future Food Systems Workshop). During that event, a message went out suggesting that FoSTA-Health team members convene for a group photograph. Many of these longstanding stakeholders – who are not funded members of the research team – chose to join that photograph opportunity. This indicated that they felt part of the FoSTA-Health project team, which had been enabled through the sustained interactions over the project lifespan. Positive feedback was also received from stakeholders, particularly at local level, on repeat visits and engagements. This helps illuminate potential criteria that should be used to evaluate the success of transdisciplinary partnerships in a way that reflects multiple priorities, which is currently known to be overlooked (Brennan and Rondón-Sulbarán, 2019; Musch and von Streit, 2020).

Ensure research findings are communicated back to stakeholders

One example of a bare minimum way of ensuring value to stakeholders is to ensure that research findings are suitably communicated, ideally in a format and through a medium that suits stakeholder needs and allows for feedback. When participating in interviews, for example, stakeholders are often promised by the researcher that they will hear the final outcomes or receive the final report. However, this commitment can fall off the radar of researchers as they prioritise finishing the project-specific deliverables. It takes (minimal) extra effort to create a plain language summary (and ideally to translate this into local languages where appropriate) and ensure this reaches the intended audience. This is essential to maintain good stakeholder relations. It is even more essential for non-academic partners.

This is because their relationship with stakeholders often exists before, and endures beyond, the life of a project. Non-academic partners thus often feel greater responsibility to those stakeholders.

Projects should have flexibility to meet stakeholder needs

Be responsive to emerging opportunities

The consequence of ongoing engagement is that opportunities for stakeholder impact may arise which have not necessarily been foreseen in the project design at proposal development phase. These may not have primary relevance for the research. However, they can be very important in strengthening the relationships which are required for impact pathways to ensure that research is as impactful as intended. When such opportunities arise within research projects, they can cause tensions between researchers who see them of low importance, and non-academic partners who see them as higher importance. As outlined by Veisi et al (2022), above, incomplete alignment of the priorities of researchers and stakeholders is well recognised in transdisciplinary research.

One example in FoSTA-Health was district-level stakeholder mapping. National-level stakeholder mapping exercises were conducted by the project team to identify parties with whom to engage. As outlined above, since food systems for One Health is a new area that brings together different communities of practice, this mapping exercise was important. In Malawi, a similar mapping exercise was conducted at district level with the aim of sensitising district level staff about the potential partners and collaborators they had within their districts with similar interests in food systems for one health. This was done with an initial training course on how to manage simple stakeholder databases online using free-to-access Google software, as well as the kumu.io mapping tool, which is helpful to visualise relationships and connections between stakeholders. There was interest from the district stakeholders in ongoing technical support and backstopping as they built their

confidence and capacity to continue this on their own. Whilst non-academic partners within FoSTA-Health were keen to do this, the time and effort to do so had to be traded off against other research outcomes, on which the project’s success would be evaluated. Ensuring that project teams have similar non-academic partners or sufficient resources available to respond to such requests is essential.

Conclusion

Transdisciplinary research is increasingly being embraced as a way of addressing wicked problems and ensuring that research can be impactful for society. In this briefing note as a non-academic partner in FoSTA-Health, Kulima Integrated Development Solutions has provided some of its own reflections on what matters in such partnerships to promote purposeful participation and how this can create some tensions between the priorities of conducting sound research and leaving meaningful impact for external stakeholders. Having a critically reflexive approach, at least within the team, can be important to surface different priorities and ensure that the prioritisation and design of activities meet varying needs.

What is positive is that the nature of transdisciplinary partnerships and the diversity of participating organisations means that there is scope for each to take a lead on its particular area of interest, whether that is research or impact. Much of the literature on transdisciplinary partnerships to date has focused on how researchers can adapt to play the wider variety of roles that such spaces require (Hofman et al, 2025, Augsburg, 2014). The other alternative, as in FoSTA-Health, is to convene diverse partnerships of different types of organisations so that team members bring different strengths and capacities.

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Briefing note 4

Spaces of participation: Who has access?

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In the briefing note, I am drawing on the experience from data collection in Tanzania that was done in collaboration with other researchers. This text reflects my personal views and interpretations as a researcher. At the same time, I want to recognize the inspirations that I gained through collective daily reflections during the fieldwork. Therefore, to make this distinction clear, when presenting my individual arguments or perspectives, I use formulations such as “*I argue*” while I use expressions such as “*we asked ourselves*” to acknowledge the shared nature of those experiences and reflections.

Overview

In this briefing note, I explore field data collection from the perspective of access to participation in research activities under the FoSTA-Health in Tanzania. I argue that these activities create specific, highly relational spaces of participation (Fritz and Binder, 2018), shaped by the entangled web of relations among researchers, research assistants, village representatives, and participants. For the purposes of this note I go beyond *invited spaces* (Berry et al, 2019) as discussed in **BN3**, and I distinguish between: a) *inner spaces* of participation, marked by direct interaction between researchers and participants within a specific research activity; and b) *outer spaces*, involving those not directly engaged in the research but who influence the formation of inner spaces (e.g. by research assistants, village representatives, and those who were not engaged

in any research activities). I focus on the processes behind participant selection, unpacking hidden dynamics in the communities (i.e. outer spaces) that influence who becomes involved in research activities (i.e. inner spaces). While participant selection is typically viewed as a methodological concern related to results applicability, I suggest that in contexts such as research under the FoSTA-Health project, it also reflects underlying village and community level dynamics that, despite all the efforts, often could remain hidden from the researchers. Thus, this note aims to shed light on the multidimensional relations – from researchers and research assistants to village representatives and potential participants – that shape both *inner* and *outer spaces* of participation.

Key recommendations to the project

- The research team should acknowledge and profoundly reflect on the process of selection of research participants who are invited to the research activities carried out under the FoSTA-Health project.
- The research team might consider applying Ribot and Peluso’s (2003) Theory of Access as a useful analytical lens for unpacking and reflecting the diverse mechanisms that might be influential for both the inner and *outer spaces of participation* that are created under the research carried out in FoSTA-Health.

Specific observations that inform this briefing note

Background on the research activities informing this briefing note

This briefing note is based on the observations made during the oral history interviews carried out in the East Usambara Mountains, Tanzania in February 2024. The oral history interviews were exploring people’s aspirations over the course of their life while tapping into the questions of empowerment and agency. On average, the interviews took on 90 minutes and were carried out with the presence of research assistants who were translating from English to Swahili and vice versa. The participants were compensated for their time by a small amount of money.

The oral history interviews were collected in different villages with different geographical characteristics that were determining, for instance, the crops grown as well as the access to markets (e.g. villages located in uplands and lowlands; more and less accessible villages). During the selection of the potential research participants, we were mindful of balancing out the gender and different age groups. On top of that, we also wanted to equally engage those who were members of a cooperative with the non-members.

Positionality and motivation for the briefing note

During the oral history interviews collection, I entered the space of East Usambara Mountains as a white female researcher from Eastern Europe. While having previous and relatively extensive experience from research in the southern-African region, this was my first data collection in Tanzania, and my

knowledge of the local context was comparatively limited. I was also not familiar with Swahili language which made the data collection and the oral history interviews challenging at many levels – from more direct engagement with the participants in the oral history interviews to the limited ability to meaningfully interact with the surroundings of the research. During the field data collection, I was accompanied by other FoSTA-Health researcher from University of Leeds⁴ (UoL) who already established contacts with the research assistants and other important gatekeepers in the area. In this respect, I was benefiting from this existing research infrastructure and access to research assistants provided by the colleague from UoL. This helped me to get familiarised with the research context and made me more confident in my work⁵.

Still, as I was navigating the data collection as an outsider to the context, I often encountered situations which were unclear or difficult to interpret. Most often, I realised the confusion of those moments in the evenings during reflections with my colleague from UoL. If the unclarity of any situation occurred to me during the day, I sought explanation and additional information from the research assistants. But very often, there was not enough space and time for answering my questions. These recurring moments of ambiguity underscored the complexities of conducting research across cultural and linguistic boundaries. They were also a reminder of my own dependency on the interpretative and mediating roles of the research assistants and other local actors who I encountered during the research.

Possible impacts of the challenges and discussion in existing literature

Interactions between inner and outer spaces of participation

One of the most pressing questions I had (and that remained unanswered) was related to the way how the potential participants for oral history interviews were selected.

During field data collection, we worked closely with two trained research assistant⁶ who were well situated in the research area and who have pre-existing connections to the visited communities. In this respect, the research assistants brought in the data collection process the trust and legitimacy while establishing relationships with the village representatives, other village members as well as the research participants themselves. Simultaneously, we, as researchers, were heavily dependent on the research assistants’ positions, skills and the ability to connect with others that secured us the access to the villages and specific research participants.

Before approaching any potential research participants in each village, the research assistants always first organised a courtesy visit to village representative(s) who got familiarised with our research. Upon receiving the approval to proceed with research activities, in most of the occasions⁷, the village representatives typically identified possible research participants. Consequently, they designated a person who was asked to help us to find and approach the individuals who might be suitable for participation in the oral history interviews (I will further refer to such person as “appointed intermediary”). In case the appointed intermediary was not able to find the potential respondent identified by the village representatives, they usually took us to somebody else.

While the role of the village representatives was clearly defined, the specific position and function of the appointed intermediaries within the village structure were not usually communicated directly to us (researchers). Importantly, this should not be interpreted as a lack of transparency or intention to withhold information. Rather, this may reflect differing expectations or assessments of what information was deemed relevant and important to share. For instance, it is possible that the research assistants did receive this information but did not consider it necessary to pass it along – perhaps to avoid overburdening the village representatives with the lengthy translations from Swahili to English, or simply because they judged the details as non-essential for our immediate task to pursue oral history interviews.

When it came to the actual identification of the potential participants, we provided our research assistants some instruction on the key characteristics of a potential research participant to balance out gender and age diversity as well as to gather input from both members and non-members of the cooperatives. Consequently, this information was passed to the village representatives and appointed intermediary, who took us to the individuals they deemed suitable for participation in the oral history interviews. We usually arrived at the selected individual’s house without being provided with any background information on why the participant was selected. Similarly, as above, this information most likely got lost in the communication among the appointed intermediaries, research assistant and us, rather than being intentionally withheld from us.

These ambiguous situations related to the village representatives, appointed intermediaries and their choices regarding the research participants may be better understood because of pragmatic decisions in a dynamic fieldwork setting, rather than any deliberate omission of information provision. Riding on the

⁴UoL has extensive research connection to the area, and it is a well-known actor in some of the villages we were collecting data.
⁵Importantly, my identity as white, foreign, female academic from an Eastern European institution most likely influenced how I was perceived by the local actors (from participants to research assistants to the village leaders). While I was often seen as a learner or guest, it is possible that my presence carried assumptions of authority, resources, or expectations of formal research, which may have shaped diverse dynamics in ways I could not fully access.

⁶UoL had previous experience with the research assistants and were appropriately paying them for their working time.
⁷There were also rare situations when we wandered around and identified our potential respondents with the help of the research assistant.

fluidity of the fieldwork, we unintentionally handed over the control over who is going to participate in oral history interviews to the village representatives and appointed intermediaries. This resulted in the situation when, simply saying (and coming back to the *inner* and *outer spaces of participation*), the setting of *outer spaces of participation* was far more in control of the formation of *inner spaces of participation* than we, as researchers, were.

Within the *inner spaces of participation*, we met individuals with different life experiences and backgrounds, dealing with all kinds of socioeconomic situations. In many cases, we had a chance to speak with people enjoying specific socio-political status within the community (e.g. members of school committees, village committees, religious leaders, well-known people). While this composition of *inner spaces of participation* ensured that we collected diverse and interesting life histories that were rich in information, we often asked ourselves why specific research participants were identified by the village representatives and approached by the appointed intermediaries, i.e. what ensured their access to the *inner space of participation*.

These situations created a critical tension: while our research design sought balance and inclusivity, the practicalities around research participant identification relied heavily on the decisions and perceptions of local actors, especially the village representatives and appointed intermediaries, whose own criteria remained largely opaque to us. So why the research participants were identified by village representatives and approached by the appointed intermediaries? Was it because they wanted to contribute to our research in the best possible way, hence they searched for possible research participants who had presumably rich life history? Was it because they were somehow familiar with the possible research participant, therefore they did not have to identify and approach somebody who they did not know? Or was it because they wanted to please somebody who holds any kind of power in the community (be it the village representative or the potential research participants themselves)? Or was it just a random selection without any

side considerations on the part of the village representatives and appointed intermediaries and we were seeing something non-existing behind these decisions?

In this sense, we found ourselves delving deeper and deeper into the *outer spaces of participation*, questioning the whole process behind the invitation offered to specific individuals to participate in the oral history interviews. We also discussed the consequences of such situation. First, we questioned whose voices were allowed in the spaces of participation we created while trying to unpack why the research participants gained their access to it. Moreover, as the data collection continued and we started to think of next steps of the research activities (e.g. photovoice), we also started to think of what (new and old) dynamics are we bringing into the communities where the research participants are belonging to.

Practical actions to address challenges

As a researcher with clear research questions in mind, who came to the East Usambara Mountains from the outside, without any prior experience from the area and the knowledge of Swahili, I cannot entangle the complicated web of relations that underlined the question of who had access to participate in the research carried out under the FoSTA-Health project in Tanzania. Therefore, I also cannot make a clear statement whether I managed to ensure equal access to participation in the research activities or whether I rather sealed existing power disbalances within the communities. In this respect, I can only acknowledge and reflect upon the diversity of underlying power dynamics that existed (1) between me, as a researcher, and both the *inner* and *outer spaces of participation*; and (2) between the *inner* and *outer spaces of participation* that might be (and also might not be) a projection of the wider power relations already existing within every village.

Using “Theory of Access” to analyse who has access to participate in research

The formation of and access to *inner spaces of participation* are underpinned by the *outer spaces of participation* that are shaped by the diverse societal dynamics existing within the villages and communities that are extremely heterogenous (Nakamura, 2010). As researchers, we are often coming to such a complex social environment from the outside without profound knowledge of the local setting and language (Merriam et al., 2001; Muhammad et al., 2015). Therefore, navigating the relational spaces of inner and outer spaces of participation and their mutual interactions might be extremely difficult. To this end, I offer application of Ribot and Peluso’s (2003) Theory of Access⁸ as a useful analytical lens for unpacking and reflecting the diverse mechanisms that might be influential for both the *inner* and *outer spaces of participation* that are created under the research carried out in FoSTA-Health.

Ribot and Peluso (2003) define access as the “ability to benefit from things”. Furthermore, they state that this ability to benefit from things is produced by numerous underlying mechanisms that might strengthen or hinder each other and that are extremely intertwined. For examination of the *inner* and *outer spaces of participation*, I found relevant especially *access to knowledge*, *access through social identity*, and *access via negotiation of other social relations*. Below, I demonstrate how I used it for my own reflection.

During the data collection, the *access to knowledge* (i.e. the possession of the specific type of knowledge/information that is desired by the researchers at the

specific point in the research process) could define who was selected by the village representative as the appointed intermediary (as they were probably someone with good knowledge of the community/village). At the same time, the *access to knowledge* could also define who would be identified by the village representative and appointed intermediary as the research participants (as all parties, the researchers, village representatives and the appointed intermediaries will probably desire to approach individuals who will be able to provide information in accordance with their interest). Similarly, the *access through identity* (i.e. social status within the community) could be guiding in prioritizing research participants who held specific political positions within the community (e.g. membership of a school board; membership of a village committee), hence enjoy specific forms of influence. Conversely, those who were lacking such specific social identity could be easily excluded from both the *inner* and *outer spaces of participation*. Finally, the *access via negotiation of other social relations* (i.e. the social relations of patronage, trust, reciprocity, friendship, dependence and obligation) could mitigate the effects of the *access to knowledge* and *access through identity* by putting into the centre other values formative to the how relations among people, and the spaces of participation, can be created. In this sense, the *access via negotiation of other social relations* could be essential for securing access to both *inner* and *outer spaces of participation*, especially in cases when the village representatives would select appointed intermediaries based on the personal relation rather than the two previously mentioned mechanisms of access; and in cases when the appointed intermediaries approached somebody with previously established mutual relations.

⁸ Ribot and Peluso (2003) formulated the Theory of Access to map diverse dynamics and relations that are key to access to resources, with property (land particularly) at the centre. In the symbolic sense, the inner and outer spaces of participation can be operationalised as specific type of resources as well. Within the FoSTA-Health project, for instance, becoming part of the inner spaces of participation was compensated by little amount of money and it could also result into the invitation to other research activities. But being involved in the inner spaces of participation could also lead to non-material and rather personal benefits. At the same time, being formative to the outer spaces of participation could result in some benefits such as recognition from those who eventually entered the inner spaces of participation. Therefore, as suggested by Mosse (2005), participation in the research activities might support empowerment through newly (although extremely interim) relationships with researchers who could provide them access to material and non-material resources.

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Briefing note 5

Power and place: Smallholder farmer perceptions and experiences of food systems in rural Tanzania

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Overview

This briefing note reflects on how power is perceived, experienced, and navigated by smallholder farmers in rural Tanzania, based on a participatory photovoice process within the FoSTA-Health project.

Photovoice created a space for reflexivity and knowledge co-production- but it also revealed underlying gendered and structural power asymmetries that shape access to land, voice, knowledge, and decision-making. This briefing note summarises the findings from the culminating events, reflecting on how power shaped the process and outcomes, and offers recommendations for future engagement.

Key recommendations to the project

- Strengthen participatory approaches that create safe, supportive environments (e.g., gender-separated spaces, facilitation training) to encourage equitable voice.
- Address structural barriers (e.g., access to resources, decision-making power) that reinforce power imbalances between smallholders and local leaders.
- Integrate ecological and human health considerations more strongly in food systems interventions, recognising interconnected vulnerabilities.
- Monitor and reflect critically on how power dynamics between researchers and participants shapes participatory approaches and respond adaptively.

Challenges encountered during FoSTA-Health

Context: Participatory storytelling to explore power and place
Photovoice is a creative participatory action and visual storytelling method that puts cameras into the hands of ‘participants’ - enabling community members to document and discuss their life conditions as they see them and identify and communicate to policy and/or changemakers their concerns and challenges – facilitating discussion on where change is needed lives (Wang and Burris, 1994). In FoSTA-Health, we engaged ten smallholder farmers in a photovoice project in the East Usambara Mountains (EUM) of Tanga Region, Tanzania from March 2023 to March 2024. Note that in the Tanzanian context, the average farm size for smallholder farmers is 0.9 to 3 ha (FAO, 2026). Participants photographed their home, farm, environment and local community in which they live, work and spend free time – providing a culturally grounded and contextually situated site for reflection on visual images, associated meanings and social action (Sutton-Brown, 2014).

Over the course of one year, the photovoice participants met up as a group monthly to share, discuss and reflect on their photos. These meetings were often separated by gender, with five members in each group, so as to explore the gender and social norms which shape livelihoods in the EUM. In addition, individual interviews were conducted at specific stages to explore how each participant was experiencing the photovoice process – reflecting on what, if anything, they have gained or learnt from the process.

The photovoice activity in FoSTA-Health, culminated in two separate events. Firstly, a photovoice exhibition was held during a workshop with local leaders. The photovoice group members had the opportunity to present their selected photographs to representatives from the village, ward and district governments, local development workers, private sector and research institutes. Through small groups, each photovoice

member reflected on the stories, experiences and livelihood challenges represented in their photos, whilst audience members had the opportunity to ask questions. Secondly, a food systems mapping activity was conducted with the photovoice group members. Separated by gender, this activity explored the participants’ understandings and visions of food systems transformations for one-health. This mapping activity utilised photographs taken by the photovoice members to facilitate discussion, with the aim of capturing their perceptions, understandings and experiences of food systems. A final photovoice exhibition was also included in the FoSTA-Health National Dialogue in Tanzania in January 2026 as a way to include farmer voices and priorities in policy discussions. However, it should be noted that this brief focuses on the data collected through the first exhibition and mapping exercise.

Mapping gendered divisions of labour and control: Power & access
During the exercises conducted during FoSTA-Health, the male and female groups mapped the food system, often through the perspective of value chain activities (i.e. land preparation through to consumption). It was notable that for many of the cash crops discussed (cloves in the uplands and cocoa in the lowlands), their ‘food system’ often stopped after the sale of their produce. With little opportunity for value addition, produce was often sold in its raw, unprocessed form. Once the raw crop was harvested and sold - usually to middlemen - farmers had little knowledge of, access to, or benefit from what happened next. In other words, smallholders generally do not participate in or get the benefits from the latter stages of value chains - such as processing, packaging, marketing and export. These stages typically generate greater returns but require capital investment, technical capacity, access to equipment, infrastructure, and connections to formal markets- resources that smallholders, especially women and young people, rarely control. From a power perspective, this exclusion from value addition is not just economic- it is epistemic and political. Farmers’ knowledge is seen as relevant only for production, not for shaping how their produce is used, valued, or regulated downstream. Their roles are confined to the physical labour of cultivation,

while value creation - along with influence and visibility - is concentrated further along the chain.

Interestingly, women were more likely than men to articulate the interconnectedness of human, animal, and environmental health - reflecting a more holistic understanding of local food systems. Whilst both groups discussed the connections between human, animal, and environmental health, though women more frequently discussed day-to-day health concerns and the effects of environmental conservation efforts. In discussions, women frequently linked issues such as the availability of clean water, firewood scarcity, livestock wellbeing, and household nutrition. Women also described the care they provide for livestock- feeding, cleaning shelters, and monitoring health- even though formal ownership of animals typically rests with men. This illustrates a key power asymmetry: women perform essential work that underpins One Health objectives, but are structurally excluded from recognition, decision-making, and resource control.

Furthermore, the gendered division of labour and control was evident in the discussions. Men’s narratives focused heavily on cash crops (e.g., cinnamon, cardamom, cloves), income generation, and environmental management (e.g., charcoal production with minimal forest destruction). On the other hand, women’s narratives emphasised household food security, caregiving roles, and multi-functionality of resources (e.g., water for humans and animals, the use of improved stoves to conserve firewood). Men more readily discussed ownership of seedlings, land management, and business decisions. Women’s discussions indicated they were often users rather than owners of resources, with their economic activities often occurring within informal or domestic spaces (e.g., small-scale food vending).

Discussion on overlaps and complexities of categories of stratification
The photovoice exhibition was envisioned as an opportunity for smallholder farmers to share their lived experiences, challenges, and aspirations with local decision-makers. It created a rare setting where community members and local leaders sat side-by-side to engage in dialogue. For many photovoice participants, the significance of this opportunity was profound. In follow-up interviews, they reflected positively on the experience, citing the value of being included in spaces where they are usually excluded – as expressed by one female participant: *“For me an ordinary person to sit with big people like that - it is a very proud thing”*.

However, analysis of the transcripts from the small groups in which the photovoice members presented their stories and challenges highlights how power shapes these spaces and interactions. Audience members frequently dismissed or diverted attention away from the substance of the stories shared- focusing instead on critiquing the technical quality of photographs, challenging the framing of issues, or offering unsolicited ‘advice’ on what should have been captured differently. Participants’ concerns about lack of stable spice markets, delayed wages, and household resource challenges were often minimised or reframed as individual shortcomings in farming or communication skills. In several exchanges, photovoice members were positioned as passive recipients of expert correction, rather than as knowledge holders in their own right. For example, presenters were told how to better photograph livestock or cropping issues or were asked why they failed to include specific visual evidence (e.g., pests, damaged roots, women at water sources) to evidence the challenges they discussed.

Moreover, power asymmetries within the audience itself were also evident. Village and ward-level leaders frequently deferred to district-level officers or NGO representatives, who dominated discussion and offered prescriptive interpretations. It should be noted that the photovoice exhibition was conducted close to local (village and ward) council elections. As

such, leaders were likely concerned about how the challenges in their representative communities were presented, fearing the consequences for re-election. In this sense, power hierarchies shaped who could speak authoritatively, who was listened to, and who mediated the meaning of photovoice narratives.

Ultimately, while the exhibition opened a space for visibility, it did not produce meaningful engagement with the stories presented, nor did it lead to noticeable follow-up action on the issues raised. This highlights a critical tension in participatory development: inclusion without redistribution of interpretive power risks symbolic participation.

Participation and voice

During the mapping exercise, female smallholders often sought reassurance that their contributions were ‘correct,’ suggesting internalised lower confidence in public discussions. This is despite the evidence that they are very active within agricultural practices, have rich experiential knowledge. These interactions reveal how participation does not automatically equate to power or influence - particularly when deeply rooted gender norms and histories of exclusion shape who feels entitled to speak, whose knowledge is seen as legitimate, and who feels confident in public or mixed-gender settings.

In this context, epistemic power - the power to define what counts as knowledge and who is recognised as a knower - is a key dimension of inequality. The male smallholders spoke confidently about formal agricultural activities (e.g., cash crops, land ownership, marketing), whereas female smallholders’ contributions centred on caregiving, resource conservation, and household food security. These informal care roles are often less likely to be framed as ‘expert’ knowledge in wider development policy and practice, even though they are crucial to One Health and sustainable food systems.

Moreover, discursive power - the ability to frame issues, shape narratives, and influence discussions - remained largely in male or external hands where, for example, the female farmers would deflect to their husbands on management of household

challenges. This dynamic mirrors broader structural asymmetries where rural women, despite their labour, are marginalised in policy, extension services, and development consultations. Without deliberate facilitation strategies to recognise and elevate these forms of knowledge, participatory approaches risk reinforcing existing hierarchies rather than transforming them.

Researcher-participant power relations

Participation is a vague word with varying levels of interaction – from simple consultation to empowerment and citizen control (Arnstein’s ladder, 1969). In FoSTA-Health, we aimed for the latter: for the ‘participants’ to become the leaders – shaping the agenda, timeline and outputs. We encouraged participants to see photographs as stories they authored – giving them control over both the content and how it was shared. However, FoSTA-Health researchers experienced that ‘participatory’ methods are not so simple in practice.

The University of Leeds has an active research presence in the EUM for over 20 years. One of the key findings of Leeds’ research over recent years is that communities and project participants are traditionally engaged in different development interventions as more passive subjects. One of the persistent findings has been that many development interventions in this region adopt extractive or tokenistic models of participation, where local people are either informed or consulted on projects within their communities – rather than being invited to actively participate and contribute their perspectives and priorities throughout project lifecycles. Project design through to evaluation is frequently led by outside experts, with limited community input. This has sometimes resulted in negative social outcomes—such as conflict, mistrust, or elite capture—where benefits accrue to local power holders at the expense of broader equity. For example, during FoSTA-Health data collection, researchers observed conflict between development practitioners and project ‘beneficiaries’ where project aims around prioritising youth and female engagement in project activities had not been sufficiently explained to the wider communities. Reports of favouritism in

selecting project participants (sometimes based on age and/or larger plot size) were compounded with project payments either being delayed or given only to selected participants – resulting in unease both within the project groups and also between participants and non-participants. Male community members (both project participants and non-participants) in particular where unhappy with how the project had been implemented in their village – highlighting the potential dangers when project aims misalign with cultural norms around age and gender dynamics.

Given this legacy, challenging and upending these traditional forms of engagement within the Tanzanian Photovoice activity has proved challenging. Photovoice group members were initially reluctant to suggest ideas or alternatives to the photovoice activity, or to discuss what, if anything, they were not enjoying about the process. This hesitation may reflect deeply internalised expectations of being consulted but not genuinely included.

Possible impacts of the challenges and discussion in existing literature

These dynamics have direct consequences for equity and effectiveness in food systems transformation.

Power and the practice of food systems research

Photovoice exhibitions are often promoted within the literature as ‘empowering’ events which lead to local change – the action part of participatory action research (Teti & Myroniuk, 2022; Liebenberg, 2008). However, findings from the FoSTA-Health project show us how local power struggles shape interaction spaces between smallholder farmers and local decision-makers and remind us that empowerment in participatory methods is not guaranteed by presence alone- it must be supported by practices that value and centre participant perspectives as valid and actionable.

Findings from the FoSTA-Health project show us how local power struggles shape interaction spaces between smallholder farmers and local decision-makers and remind us that empowerment in participatory methods is not guaranteed by presence alone- it must be supported by practices that value and centre participant perspectives as valid and actionable. Power asymmetries observed during the photovoice process underscore how certain voices, particularly those of rural women, are routinely marginalised in food systems research. When participation is shaped by longstanding inequalities in confidence, ownership, or perceived authority, the result is a skewed representation of knowledge.

Research may then prioritise production and commercial value chains - typically narrated by men - while overlooking care-based, informal, or subsistence dimensions of food systems where women play critical roles. These dynamics raise concerns about epistemic exclusion, where lived

knowledge is either undervalued or misinterpreted by researchers. If unexamined, such exclusions risk reinforcing extractive research practices that reproduce the very hierarchies they seek to challenge. In participatory settings, power operates not only in who speaks, but also in who is heard, legitimised, and written into evidence.

Power and the effectiveness of food systems transformation

Transformative change in food systems requires broad, inclusive participation - especially from those most affected by food insecurity, resource scarcity, and health burdens. However, if power imbalances are not actively addressed, interventions risk being ineffective or even harmful. If food systems interventions primarily reflect male-dominated agricultural and commercial activities, women’s needs (e.g., for food security, fuel efficiency, household health) risk being marginalised. Excluding women’s experiential insights can lead to less sustainable outcomes, especially regarding One Health objectives that depend on daily practices (e.g., hygiene, nutrition). Reinforcing the current structures could deepen inequalities, reducing the transformative potential of the development interventions.

Practical actions to address challenges

Addressing power in food systems research

To make food systems research more inclusive and equitable, researchers must actively reflect on and respond to the power dynamics embedded in participatory processes. This begins with recognising that voice, knowledge, and legitimacy are unevenly distributed -often along lines of gender, class, and institutional status.

A common methodological bias in food systems research, for example, is the assumption that the household functions as a unified decision-making

unit, with the male household head representing the views and needs of all members. As a result, household surveys and interviews are frequently conducted only with men, thus overlooking the diverse and sometimes conflicting roles, responsibilities, and experiences of women, youth, and other intra-household actors (Kabeer, 1999; Doss, 2013). This reinforces a narrow, patriarchal framing of rural livelihoods and misses key insights into care work, nutrition, and household-level decision-making that are central to food system functioning.

Creating safer and more equitable spaces for participation requires long-term, trust-based engagement that moves beyond extractive consultations. Researchers should invest in facilitation approaches that centre relational accountability - such as gender-separated discussions, iterative storytelling methods like photovoice, and confidence-building exercises that support the more marginalised voices to emerge.

Redistributing power in food systems transformation

Food systems transformation requires interventions that directly address the structural inequalities underpinning food and health insecurity. This means shifting not only resources but also recognition- valuing unpaid care work, food preparation and household nutrition activities, subsistence farming, and informal economic activity as essential components of the system. Development initiatives must ensure that women and youth have access to land, seedlings, extension services, and markets, but also that their needs, aspirations, daily practices and knowledge/expertise shape how success is defined. Beyond these binary categories, policy and practice must also recognise the diversity and intersectionality of marginalised groups – exploring how gender and youth interact with marital status, age, education and plot size (amongst others). Tools such as participatory evaluation processes - where communities themselves assess what is working - can redistribute power and foster agency.

Development interventions should promote a One-Health understanding through developing community educational tools showing the interconnection between environmental, animal, and human health. These may be tailored separately (and sensitively) for men and women, depending on the specific context. In addition, such conceptualisations should also incorporate community level experience-based understandings of One-Health to broaden the institutional understanding of the concept.

The role of long-term engagement with the participants

Encouragingly, there were signs of change. It was noted that all members grew in confidence in this aspect over the course of the year. During preparations for the photovoice exhibition, more members felt comfortable to suggest ideas for the format and structure, with four members (two men and two women) even volunteering to stand in front of the whole workshop audience to publicly present their photographs and narratives to a broader audience. These findings point to the benefits of sustained engagement with ‘participants’ to build relationships of mutual trust – challenging the researcher/participant power dynamics.

Longer-term engagement enables researchers and community members to move beyond the initial hesitations or performative participation common in short-term projects. Trust, familiarity, and a shared sense of ownership require time to develop - particularly in contexts where extractive research practices have been the norm. By building relationships iteratively over months or years, researchers can better support meaningful co-production, while participants are more likely to feel safe, valued, and willing to take creative and intellectual risks.

Monitor and reflect on power dynamics

Equally important is embedding ongoing participatory reflection and power analysis within research and practice cycles- ensuring that both researchers, practitioners and community members can surface and interrogate how decisions are made, whose voices are amplified, and whose knowledge is shaping the narrative (Cornwall, 2003; Chambers, 2007). Researchers and practitioners should embed regular participatory reflection exercises to surface ongoing issues of voice, inclusion, and representation across gender lines. In this way, participatory research can evolve into a genuinely co-produced space for knowledge generation and learning.

Researchers and practitioners should embed regular participatory reflection exercises to surface ongoing issues of voice, inclusion, and representation across gender lines. Participatory action research methodologies, such as photovoice, hold potential to be used by communities to evaluate and communicate for themselves the successes and challenges of research and/or development interventions - rather than by external project evaluations framed and driven by top-down consultant/NGO workers. Empowering the communities to evaluate what is and isn’t working in the design and implementation of development interventions thus has huge potential – if power dynamics are critically reflected on.

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Briefing note 6

Inclusive participation when applying participatory photovoice method

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Overview

This briefing note reflects on the opportunities, challenges and adaptations that could be incorporated to ensure inclusive participation when applying participatory photovoice method to understand people’s lived experiences. The briefing note draws from my observations from applying participatory photovoice method to understand lived experiences of ongoing food environment transitions in Zambia. The note reflects on the opportunities, challenges and needed adaptations when applying photovoice with regards to participatory community engagements.

Key recommendations

- Proper assistance, and support for the participants by clearly explaining the methods, for example by sharing an explicit photo-list.
- Clear communication of importance of research.
- Ensuring a conducive and safe environment for the discussion of participants’ pictures and observations.

Background

The food environment defined as a central driver of food consumption within the wider food system, encompasses the physical availability, accessibility, social cultural desirability and marketing of food

has been shown to shape dietary behaviours (Holdsworth, 2019; Turner et al., 2018). The food environment across Zambia is undergoing a transition, with potential consequential undesirable change in dietary behaviours as such transitions across Africa, have been shown to promote obesogenic and environmentally unsustainable dietary patterns, and a double burden of malnutrition (Reardon, 2021; Laar, 2022, Ameye et al, 2025). However, the lived experiences in terms of food environment transitions and coping strategies across different socio-demographic groupings (disaggregation based on residence - rural vs urban, urban low-income vs urban middle class; age - young adults vs older adults; and gender – male vs female) within Zambia remain under documented. We applied a participatory photovoice approach to understand these sociodemographic dynamics, and the briefing note draws on lessons learnt from this approach. The photovoice exercise involved three sessions: 1) introductory session of the technique including the ethics/safety of taking photos, 2) six-day community activity where participants took and selected photos, 3) contextualising selected photos through focus group discussions (average time of 120 minutes). The participants were compensated for their time by a culturally and ethically appropriate small amount of money which was valued by local stakeholders. The study was carried out between February and March 2024.

Opportunities

The participatory photovoice technique, whereby participants use photos to document their daily lives and the communities they live, offers several opportunities, which were observed in the current study, such as recording distinct experiences of the participants, and giving voice to the participants (Wang & Burris, 1997). Some examples of these avenues provided by the photovoice exercise are detailed below:

- **Elicitation of unusually difficult experiences:** the photos shared enabled stimulation of an in-depth discussion of social disparities with regards to the impact of food environment transitions, sometimes potentially in a way no other methodology could have brought out the lived experience. For example, one participant from rural context, presented a photo of drying maize in the fields, which sparked discussion around the influence of changing climate on the food environment, as well, social disparities for example with regards to food access. The participant noted:

“Yes, I thought of capturing this dried maize so that maybe we can have a discussion over it, because we used to take three meals a day but now as you can see, maybe even a meal may be impossible for us”(photovoice participant).

- **Empowerment and a voice for research participants:** The exercise gave a voice for participants to reflect on gaps in policies put in place to improve the food environment.

“We don’t know the sources especially the beef sold on open market. We are not sure if that meat is inspected for safety before selling. That too is our source of concern, but I love to eat beef too” (photovoice participant).

Most participants alluded to the exercise as an exposure to changes happening in the food environment, and how it affects the food choices they make. While this could have been positive with regards to potentially improving participants’ food choices, it left the research team contemplating on what should be the minimum time to allow the

photo taking exercise, that documents the prevalent food practices amongst the participants to prevent modification of behaviours which can bias the research findings (in this case, the lived experiences). This is a reflection, which this research could not reliably answer, but critical depending on the objective of the research.

Challenges encountered during FoSTA-Health

Below, I summarise some of the challenges we encountered executing this participatory methodology, and the potential adaptations needed to ensure inclusive participation.

1. Participant selection: need for inclusivity but at the same time several challenging dynamics depending on the context.

- The extensiveness of time commitments the approach requires, in our opinion impacted participant recruitment especially in urban contexts, and consequently this could be having an impact on who participates in research. Mostly our participants were housewives, self-employed with workstations near homes, and very few working in the formal job sector (with contracts of 8am to 5pm). The critical question is how can we make participatory approaches inclusive, by addressing the “time constraint factor” to attract those in the formal workforce? Those in formal job sector, also need their voice to be heard but are often missed out. Secondly, while our “small money incentive” could have been attractive for the rural and low social economic classes, this may not be the case for the middle class. The question is, then how we do innovate incentives to attract urban middle class to participate in participatory research approaches which necessitate longer time commitments?

- **Difficulty recruiting in urban contexts:** compared to urban contexts, research participants recruitment in most parts of rural sub-Saharan Africa, is much easier as most organisations have existing recruitment structures, and often the

populations are used to research exposure. In the current study, we aimed to use our local partner CARE International’s structure to recruit in urban contexts, but as they have minimal ongoing projects in urban contexts, recruitment became a challenge. This could be a general challenge across urban contexts of sub-Saharan Africa. Local village leadership and existing social network structures proved to be very important to realise recruitment in urban contexts. But as noted above, representatives especially among men in the formal job sector remains a challenge. As well, those outside the existing social networks are likely to be missed out. Consequently, this is likely, to be a common challenge in participatory research as mostly existing social networks are commonly applied as a recruitment strategy. **BN4** discusses how spaces of participation are dynamically configured, in their research in the Tanga region of Tanzania, and how that creates challenges in recruiting participants in rural contexts. Nevertheless, engaging local village leaderships is a key recruitment strategy, as these structures are well known and trusted by the target populations.

- 2. **Technology limitations / un-familiarity:** while in urban areas, most participants had and knew how to use smartphones, in rural areas, majority of the participants had never owned a smart phone. Due to this, it was important that the research design allowed a follow-up session during the photo taking exercise, to guide participants on photography techniques. However, the follow-up session, left the team wondering whether, this could have biased the data collection process.

Possible impacts of the challenges and discussion in existing literature

Harley (2012) notes that photovoice method can help generate, “rich, thick data, and is particularly useful for dealing with the ‘unspoken’ and working with marginalised people (p.1)”. However, the use of this method is not devoid of challenges, many of which commonly feature in participatory research methods. Seitz & Orsini (2022) point towards procedural and implementation challenges such as inconsistency in adhering to the method, inconsistent evaluation of outcomes, and inconsistent reporting and adherence to ethical procedures. More importantly, researchers are also presented with methodological and ethical issues such as participation burden, confidentiality, consent, and photographing families and children. Research on implementing photovoice method in participatory research underlines challenges such as participant vulnerability, recruitment difficulties, interpretive complexity, and emotional impact on researchers.

Recruitment difficulties

Lee et al., (2025) discuss the difficulties encountered in the recruitment and retention of participants in photovoice research. The challenges are tied to the fact that the methods need the participants to provide both narratives and personal visual data. They explain that the likelihood of hesitation on the part of participants due to well-founded apprehensions regarding exposure, stigma, and privacy, particularly among marginalised populations.

Challenges in implementation

Seitz & Orsini, (2022) have outlined that the literature discussing the challenges posed to implementing the photovoice method, there is inconsistency in the descriptions regarding adhering to photovoice protocols. This includes challenges of including participants in the process of research design, clearly communicating the objectives of the project to participants, and conducting training sessions for the participants for using cameras for the purpose of the exercise.

Participation burden

Another key concern that the literature raises is that of participation burden, a theme that has been discussed at length in **BN3**. Following from the previous thread, it is noted that the lack of clarity about implementation procedures can lead to missed opportunities, and wastage of participants’ time. Furthermore, our experience in FoSTA suggest that there is also the risk of altering the very fabric of the interactions amongst the participants by introducing an external technology like a camera to record their day-to-day decision-making practices. To address these challenges, Call-Cummings & Martinez (2016) call for the need to take stock of potential unintended consequences to using photovoice and reflecting on the critical epistemological underpinnings of the methods.

Practical actions to address challenges

Coping strategies with regards to applying photovoice across different social groupings:

1. Importance of explicit photo-list: In our study design, we were very explicit with our photo-list which guided participants on the topics to document. This was key, as in our observation, clear explanation of the photo list was crucial, to enable taking relevant photos aligned with the study objectives. Lack of an explicit photo-list, in our observation can result in irrelevant photos, burden the research participants, and make them loose interest in the research. To motivate participation, the photo-list needs to be related to people’s environment, for example, one of the questions in our study, aimed to document, food marketing transitions, but in rural areas, fewer participants took photos on this topic, compared to urban contexts. This could have been due to food marketing exposure being at a more advanced stage in urban contexts, and therefore research participants could relate with the question, while

in rural areas, marketing exposure is still minimal. Additionally, lower response, could also reflect different priorities or urgency of issues.

2. Conducive environment and clear communication of importance of research: creating a conducive environment reduced power dynamics between participants and researchers which, enabled participants to fully express themselves during the photovoice sessions. Examples of tips we used include, using a local language phrase, say “greeting participants in local language”, drinking similar water brands, and moderate clothing. Likewise, in Zambia, social norms, mostly aligned to age and gender power dynamics are still strong. We organised age and gender stratified photovoice sessions, which provided a conducive environment for the would be suppressed categories (women and young adults) to fully participate. We had anticipated challenges regarding taking photos on some sensitive topics particularly on food safety concerns/sources, but we were surprised with the depth of details which were shared. This observation showed that, for participatory research to be effective, clear communication of the research objectives, and how the research will benefit research participants, for example in our case, we explained in a lay man’s language, the linkage to future government policies.

In a nutshell, photovoice remains a powerful tool for empowering communities and highlighting social issues through visual storytelling, but careful contextual adaptations depending on the topic and study setting are needed.

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Briefing note 7

Project design and coordination for enabling collaboration

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Overview

In FoSTA-Health we place emphasis on co-developing a holistic evidence base for food systems transformation. We believe that taking an integrated evidence-based systems-approach can help governments and industry to go beyond the siloed ways in which food and health issues are typically addressed. The success of this depends on being able to replicate that same systems approach in how we organize our research; to be able to work collaboratively and equitably, across geographies, institutions and disciplines. In the project we have made a collective commitment to try to embed principles and practice of knowledge equity and interdisciplinarity in all aspects of our governance, our partnership and team capacity building, our research design and conduct, and our outputs and communications.

Interdisciplinary working is necessarily iterative, evolving, and rooted in learning (Siedlok and Hibbert, 2014). This can be at odds with project funding and associated monitoring and evaluation, which often depends on working to fixed timelines, having clearly delineated responsibilities, detailing itemised budgets, and delivering outputs that are defined at the proposal stages of a project. The imperative to produce pre-determined deliverables at fixed time frames and according to fixed responsibilities can make it difficult to focus resource and time on exploring unexpected research areas or pursuing new opportunities for innovation and impact that emerge over the course of the project. These may emerge from novel and exploratory research or because of changes in external circumstances.

As such, it is important to consider at what points integration and co-design takes place within project cycles, how sufficient flexibility can be built into project plans and activities to allow for iteration and learning, how a shared sense of ownership and responsibility (as opposed to a divided one) can be engendered within a project, how we can prevent imbalances in the participation and contribution of partners, and how to ensure that interdisciplinary intentions survive the practical barriers and monitoring and evaluation requirements that are encountered throughout a research project.

Key recommendations

- Build on ideas and partnerships over the course of multiple projects.
- Aim for co-development before, within and beyond projects.
- Consider matrix structures and shared responsibilities within project design.
- Factor in some flexibility into budgets and request amendments as needed.
- Invest in cross-institutional exchanges, learning and capacity building.
- Create multiple opportunities and varied platforms for input into project governance.

Specific observations that inform this briefing note and current discussion in literature

Project management and collaboration

There is an extensive project management literature that identifies and explains the factors that contribute to effective cross-institutional collaboration. This literature is largely consistent in recognising the importance of clearly defined project roles and governance processes (Chakkol et al., 2018; Pinto et al., 1993), shared expectations, motivations and incentives (Larsson and Larsson, 2020; Dietrich et al., 2010), trust built through communication (Bond-Barnard et al., 2018; Dodgson, 1993), effective conflict resolution mechanisms (Montoya-Weiss et al., 2001), and physical and cultural proximity between collaborators (Moodysson and Jonsson, 2007).

International and multi-sited research projects may be dependent on collaboration between partners that are physically distant from each other and may have quite different cultural and work-related norms (Pischke et al. 2017). Cultural diversity within project teams can bring multiple normative and pragmatic benefits (Egid et al., 2021). Those of us working in Higher Education know, by some combination of experience and intuition, the value of working with others to bridge disciplines, contexts, cultures, and spheres of influence. The FoSTA-Health project is rooted in a multi-stakeholder approach that recognises the systemic nature of food system challenges and understands that addressing these challenges necessarily requires effective collaboration across geographies, sectors, and disciplines (Winskel, 2018; Silvast and Foulds, 2022) (see also **BN3**).

However, these different cultural and work-related norms may, in turn, translate into challenges in creating shared expectations and effective governance processes (Sterling et al., 2019; Freeth and Caniglia, 2020). Moreover, deep-rooted epistemic and geographic power dynamics can represent significant barriers to participation and

equity with collaborations Egid et al., 20201; Suchá et al., 2024. Inequity might manifest in the unequal distribution of effort, the demotion or dismissal of certain contributions, the under-resourcing of a partner, or an in-balance in decision-making power. Of course, what underpins this manifested inequity could be a complex combination of personal and structural factors.

It follows then that in any given project or partnership there are certain things that might be within our means to do to help ensure that our partnerships are as collaborative and equitable as possible, but there are also factors that are outside of our means to affect but that we nonetheless need to be mutually cognisant of. Reflecting openly and critically on collaboration dynamics within a project, and on the structural, interpersonal, epistemic and historical rootedness of these dynamics may be essential for informing actions to make collaboration work effectively. Below is an attempt to reflect on some of the dynamics within the project design and coordination of FoSTA-Health in order to identify practical actions. In particular, we reflect on the standard structures of research project funding and monitoring and evaluation.

Norms of research project design and funding

Interdisciplinarity and multi-actor approaches have become mainstreamed within Horizon Europe calls, including in the topic under which FoSTA-Health was funded. Within the current Horizon Europe pillar 2 work programme on Food, Bioeconomy, Natural Resources, Agriculture and Environment (Cluster 6), the multi actor approach is defined as:

“a form of interactive, transdisciplinary and responsible R&I that aims to make the R&I process more co-creative and inclusive, and thereby its outcomes more co-owned, reliable, demand-driven and relevant to society.... A multi-actor project ensures the genuine and sufficient involvement of a targeted array of actors in co-creation, which serves the objectives of the project proposal... These actors include: i) researchers, ii) farmers / farmers’ groups and associations, iii) foresters / foresters’ groups

and associations, iv) aquaculture producers, v) fishers / fishers’ groups and associations, vi) advisors, vii) food and bioeconomy businesses, viii) other businesses, ix) consumer associations, x) local communities, xi) citizens, xii) civil society” (Horizon Europe, Work Programme 2025, 9. Food, Bioeconomy, Natural Resources, Agriculture and Environment)”

The importance of collaboration across diverse actors and the importance of engaging in meaningful co-development of research is evident across the rationale for and priorities of Horizon Europe funding. There are also multiple and diverse funding schemes and opportunities to access and use resources through the European Union for building communities and engaging in collaborative knowledge exchange.

Standard templates for EU Research and Innovation project design are structured largely for the purposes of monitoring and evaluation, and they necessitate that tasks and deliverables are clearly articulated, and responsibilities assigned to these at proposal stage, with budget justifiable according to the person costs and other resources needed to complete this work. Such structured may also be reflected, to different extents, within the operational procedures of project partners. Although there is often some flexibility within Horizon Europe projects to request amendments to project plans and budgets (this has been somewhat limited with FoSTA-Health owing to the fact that there is a dual funding model with UK institutions funds covered separately through the UKRI guarantee scheme), the performance of projects – and of partners – is largely measured against their delivery of pre-planned outputs, within the requested budget. This can put a lot of the pressure for meaningful co-development, and for getting those co-developed plans right, prior to Research and Innovation projects starting.

Time is always an important limiting factor when it comes to effective collaboration. Project funding calls often necessarily have short deadlines. For Horizon Europe, there is a minimum of three months between the final release of workplans and the first deadlines

for topic proposals, and efforts are made to mitigate against short turnaround times by releasing versions of the workplan – which offer indicative topic details, in advance of this final release. This means that Horizon Europe accommodates a longer lead time on project proposals than many other funding bodies. However, even a six-to-nine-month lead time for proposal development can be challenging if one is aiming to build a brand new consortia of partners and engage in a meaningful process of co-development of a project vision, let alone build relationships, developed shared expectations, understand cultural and working norms, and collaborate on the design of detailed project plans.

Partners have different abilities and capacities to invest time in such pre-planning, in such short windows, and therefore these design features can contribute to differences in power to participate. The time that is invested by partners in developing proposals is usually unfunded and may not be accounted for in individual’s workloads. Particularly for partners whose time must be entirely project funded; proposal preparation becomes out-of-hours, additional work. Furthermore, with an average success rate in Horizon Europe proposals of approx. 17% there can be significant sacrifice involved in investing one’s limited time in a prolonged process of proposal development, as well as significant inequity between those that are resourced and supported to engage and those that do not have access to such resource or support. Participation with such low success rates can be a disincentive for non-academic partners to fully engage in project preparation (or to join consortia at all). Non-academic partners also note that the consequences of not being fully involved in proposal stage can then live through the project if some parties do not feel the same vested interest in the goals that they were not actively part of creating.

Innovations in Horizon Europe funding calls, such as two-stage calls with initial review of outline proposals, and clear transparency around consortium eligibility and evaluation criteria, can help with reducing misspent time and effort at proposal development.

Finding ways to make collaboration work within these structures and norms of research project design and funding can be challenging. Below we attempt to draw out some practical approaches based on our experiences within FoSTA-Health.

Practical actions to address challenges

Building on ideas and partnerships over the course of multiple projects

The time frames over which partnership relationships are built and strengthened may necessarily extend beyond the lifetime of individual projects. Many of the partnerships within the FoSTA-Health project have a historical legacy built over multiple prior projects, such as GCRF-AFRICAP, FSNet Africa and more. This has allowed for building a shared understanding of priorities, values and ways of working that underpin effective collaboration.

Maintaining a continual pipeline of project funding is not always possible and finding ways to keep collaboration active in the absence of such funding, can be key to being well positioned for collaboration when opportunities do arise. Synthesis work that focuses not on generating new fundamental research, but on drawing together and sharing lessons from previous on ongoing complimentary research projects can be valuable for understanding how similar problems are interpreted and tackled in different ways (from different cultural, institutional, disciplinary perspectives) and to develop a more nuanced understanding of an issue. In the [African Food Systems Transformation and Justice GCRF Challenge Cluster](#) we sought to share lessons about how partners and projects working on aspects of food system change in Africa had encountered and conceptualised issues of equity and justice. Engaging with this subject, through a series of semi-structured conversations across partners, ultimately led to us turning our lens inwards and reflecting critically on the ethics of our role as researchers, and the equitable nature of our research methods, a conversation

which is reflected in [this piece by Marina Apgar, Andy Challinor and Chikondi Chabvuta](#).

It is effort that does not necessarily, and certainly not immediately, generate groundbreaking research outputs or score highly on the conventional metrics (e.g. REF) that we use for measuring institutional performance. But they do contribute to a deeper shared understanding of partnership challenges and inequities as well as built trust, the rewards of which (at least at an institutional level), accumulate more slowly and less tangibly. For example, the initiatives described above, although not perfect have helped those of us involved in work across Leeds, FANRPAN and University of Pretoria (among others) to work towards a more equitable and enduring partnership that is the foundation of past and future collaborative work.

It should be recognised that the focus and composition of collaborations will inevitably need to adapt to the priorities and emphasis of new funding calls. As such, full continuity in collaborations, research approaches, and ways of working is rarely possible, or necessarily desirable.

Co-development before, within and beyond projects

The investment in partnerships described above can be important for ensuring that the initial conception and development of new project ideas does not start from scratch and this, in turn, is important because inevitable constraints on co-development that are experienced during proposal development. Even when there is a good lead time on proposal deadlines, it is often unrealistic to build brand new consortia of research partners and to expect that partners, with multiple demands, can put significant time and resource into a co-design process in which the odds of success are often slim.

However, the more detailed or precise the project is (and detailed and precise proposals may have the strongest chances of success), the more important that some of the messier work of collaborative brainstorming, idea sharing, testing, learning and failing happens in the development stages of the work. Effective collaboration happens when there is a

collective shared vision for and shared ownership of the project.

Factoring in co-design into the timeframes and plans of the project itself can be invaluable. In FoSTA-Health, the co-design process is two-fold; internally amongst the consortium partners and externally for stakeholders such as policy makers, non-governmental organisations and farmers. During the project’s launch in South Africa in early 2023, an extensive consultation process engaged multiple stakeholders. Subsequent, in-country dialogues held in Malawi, South Africa, Tanzania, and Zambia aimed to initiate inclusion and collaboration of external stakeholders in the project’s research design and modelling. There are a number of ways in which this co-design has informed and shaped our research plans. For example, our work on collating a tie series database of pork and beef value chains (inclusive of livestock numbers, distributions, movements, disease outbreaks, slaughterhouses, feedlots and more) was a direct response to industry and policy interests expressed at the FoSTA South Africa national dialogue in 2023. The contributions that the project is making supporting Global GAP certification training was developed in collaboration with national dialogue participants in Zambia.

Matrix structures in project design and sharing responsibilities for deliverables

FoSTA has been purposefully designed to have a matrix structure with the intention of breaking some of the siloes of research project governance. In the case of our project, the project is structured along two axes – countries and transformation pathways. We are exploring four different food system transformation pathways across four different countries, with each transformation being explored in two different countries, and in each country two different pathways being explored. We recognise the systemic and interlinked nature of food domains and supply chains across the region, but there are limitations in our ability to research everything everywhere, so this structure affords us multiple and varied windows of insight into the food system. It also ensures that no partners and no activities are able to work in isolation.

Each partner is involved in more than one aspect of research and/or coordination and is likely working with different partners in those different responsibilities. For example, the University of Zambia is involved in both the ecology-grounded research on landscape scale transformations (in partnership with Wageningen and Leeds) and the food science-based analysis of dietary change (in partnership with Leeds, Kulima and Care), both taking place within Zambia. One the other hand, the work on regulation in food systems transformation towards increased export market engagement involves a collaboration of partners from Sokoine, Leeds, University of Nairobi, SABDF and University of Pretoria working across multiple country contexts.

The matrix structure is particularly valuable for ensuring that each project partner is not working in a isolated way on their individual deliverables and it provides greater possibility for, often unanticipated, learning and synthesis across contexts, institutions and research topics/disciplines to emerge through the work.

There has been significant learning through those collaborative research efforts. In Malawi, for example, the co-production process of data collection tools, involving multiple teams, served as a valuable learning platform for individuals initially unfamiliar with methods such as photovoice and participatory community negotiations. Malawi University of Science and Technology (MUST) used the data collection exercise as an opportunity for capacity building amongst their teaching and research staff. Prior to commencing fieldwork, comprehensive and collaborative training sessions were conducted to share ideas and knowledge of data collection tools. Collaborative reflections at the end of each day’s fieldwork – involving an interdisciplinary research team led to some novel and creative ideas for data collection, such as the participatory food budgeting methodology that offers valuable insights into the lived experiences of food environments, the social dynamics of decision making around food, and the nutritional profile of diets. This was a method that we developed and adapted for use in both urban Zambia and rural Malawi within the FoSTA-Health project.

Factoring in some flexibility into plans and budgets (and requesting amendments as needed)

During the grant agreement signing stage of the project, there was a continual request from the funders for us to carefully itemise and fully justify the resource requirements for the project, down to the detail of quantities of laboratory consumables needed for running disease vector microcosm experiments. This sat somewhat at odds with our intention for the research to be codesigned with stakeholders and to be iterative and responsive to the outcomes of our stakeholder engagement.

Being responsive in our research design has often meant having to periodically review and re-budget for research activities and to broker and negotiate between partners over where costs should come from. We take this as an indicative sign of good collaboration. For example, researchers at Leeds, University of Zambia and Wageningen have worked together on shared fieldwork campaigns for ecological data collection. Some of the costs of this fieldwork, (transport, subsistence, research assistants, equipment etc.) are mutual costs. Decisions on cost-sharing and provision of research staff, such as assistants, are not always straightforward. Nonetheless, open discussions among project team have allowed for efficiencies in the distribution of resources and ensuring that fieldwork could proceed. We have had to make requests for amendments to our grant agreements and for permissions for the repurposing and redistribution of funds, and we have been able to justify and get approvals for this, on the basis that our research is adapting to new opportunities and steers from our stakeholders. However, such an approach may also be at odds with the working processes of some project partners who need clarity of what resources they must deliver contractual commitments laid out in the DoA and are counting with certain levels of fixed costs/overheads.

Some things have been more challenging to organise retrospectively. We identified an interesting opportunity to draw on historical data from prior projects involving Care International in our study locations in Malawi to help us to explore a recent

history of changing agricultural livelihoods and dietary choices. However, because this data was collected through a different consortium of actors, under its own governance structure, it has proven difficult for us to broker a data sharing agreement that could allow us access to the raw data collected in these previous projects. It is an experience that reinforces the previous point about the value of investing in long terms partnerships and long terms programmes of work.

Cross institutional exchanges, learning and capacity building

At the University of Leeds, we hosted an African Food Systems Research Week to which we invited project partners with the aim of strengthening partnerships in food trade, market access, livestock production, and safety and quality regulation. Spending time with our visitors at the University Farm and in the Food Science and Biology laboratories on campus stimulated discussions about a variety of potential opportunities. These ranged from ideas about collaborating on research on circularity in multi-sited livestock production systems and exploring complementarities between nutrition and regenerative agriculture, to sharing learning on farrowing crates and post-weaning feed additives in pig farming under different climates, and more.

Individual Exchanges and Fellowships have been organised in a variety of ways across our partners. The Cheney Fellowship scheme has supported Sithembile Mwamakamba to spend time at the University of Leeds to share and further develop her work on multi-stakeholder approaches to policy influence in food systems. The scholarship programme of the Academy for Leadership in International Affairs supported Christian Chomba to spend time at Chatham House to focus on building policy advocacy strategies around crop diversification in Zambia. We have also run split-site PhD projects and researcher affiliations that have allowed early career researchers to embed their research within partner institutions. These exchanges can be valuable ways of building personal relationships and understandings of different institutional environments but can also present challenges for the

individual themselves who inevitably has to navigate a way between different, and sometimes competing, research cultures, norms and expectations.

Creating multiple opportunities and creating platforms for input into project governance

Working within an international team, with different time zones, public holidays and technology challenges, as well as working across different cultures of decision making and hierarchy means that it is particularly important that individuals have multiple opportunities and multiple platforms or forums through which they are able to, and comfortable with, giving their input into project design and governance.

As part of the African Food Systems Research Week at Leeds, we convened a discussion around barriers to collaboration and colleagues from eastern and southern Africa raised a number of acute context-specific constraints that they encounter when it comes to research leadership and effective collaboration, such as ineligibility for some research funding, gaps in infrastructure and facilities, unreliable electricity supply, and barriers to international travel.

Within FoSTA-Health we have experienced technological barriers and had difficulties with the platforms that we have created for communications and information sharing. For example, we have found that Microsoft Teams is not always accessible and sometimes requires too much bandwidth to facilitate calls, we have encountered numerous difficulties with colleagues accessing Sharepoint and being able to get through institutional security barriers to access.

As a result, we have had to find workarounds that often feel clunky and inefficient: such as sharing versions of documents offline (and subsequently reintegrating inputs into shared docs so as not to lose these inputs) or using Whatsapp to have bilateral follow up calls with individuals that haven't been able to join project team meetings. However, we have learnt that efficiency within project management is not always optimal and that aiming for systems that are slick and highly organised

can lead to exclusions of valuable voices. What we have ended up with in FoSTA-Health is a structure that involves a lot of project meetings with various configurations of people, and a lot of effort being put in to documenting, sharing notes, and offering people multiple opportunities for input.

As one example, we have created a rota system for the Research and Innovation meetings that gives everyone a dedicated platform and time to share their work, but we have inevitably had to make continual adjustments to that rota to fit people's circumstances and changing availabilities and have had to record the meetings and share recordings for those unable to join. This coordination is a difficult and laborious task, but we have found there are not easy shortcuts to this without disadvantaging and excluding people (which we have inadvertently done many times).

The practical actions described above are all interrelated and across all of them it is essential that project partners are able to share their experiences of challenges and the things that limit collaboration, making others aware, and having patience to work through them is really important. This level of sharing, and this mutual understanding of collaboration, is perhaps only really achieved when there is investment in building relationships and trust with people over time. It is through those personal relationships that we are also able to apologise, forgive and strive for something better when we inadvertently exclude or act in ways that are not collaborative. Ultimately, accounting for the structural, technological and cultural barriers to collaboration that we might be working within, making space to build individual relationships, mutual understandings and shared expectations and aspirations of a project offers the best basis from which to work as collaboratively as possible.

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Briefing note 8

Geography of knowledge production and capacity to do research: the semi-periphery

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Overview

An essential aspect of research ethics and equitable research collaboration and co-production is an awareness of the persistent inequality in knowledge production, particularly the uneven geographical distribution of research capacities. Unsurprisingly, these systemic imbalances are reflected in projects that involve institutions from different geographical contexts. Discussions on research ethics and the decolonisation of academia are often grounded in postcolonial perspectives, typically framed around a binary distinction between the Global South and the Global North. However, this dichotomy can obscure other relevant positionalities and power dynamics – such as those associated with the so-called academic semi-periphery of Central and Eastern Europe (CEE) or the Global East. While these categories are all inevitable simplifications of a complex reality, they provide a useful analytical lens for examining the experiences and insights that have emerged from the FoSTA-Health project. In this briefing note, I argue for a more nuanced understanding of how research capabilities are shaped by the intersection of individual positionality, agency, and structural constraints. I also suggest potential ways forward to foster more equitable and inclusive research collaborations.

Key recommendations

- Reflect on the prevailing inequalities in knowledge production and research capacity, including how they are reproduced in collaborative projects despite best efforts.
- Regular check-ins and safe spaces for reflection and feedback from all research partners and individual project members throughout the whole duration of the project.
- Consider multiple and nuanced views and power differentials beyond the North-South binary
- Embrace discomfort and failure as inherent parts of the research process

Specific observations that inform this briefing note

FoSTA-Health is a project rooted in equitable and interdisciplinary collaboration, aimed at fostering new partnerships and promoting practice-driven, impactful research. It brings together partners from diverse geographical, cultural, historical, socio-economic, and institutional contexts, working across multiple thematic work packages. This diversity created a unique opportunity to incorporate different perspectives, connect research directly to practice, and learn from one another with the aspiration of a more equitable academia.

The large project scale and diversity also introduced some challenges. These included varying levels of research capacity and funding for fieldwork and travel, which shaped how much time each researcher could dedicate to research design, fieldwork, and data analysis. Due to the large number of research partners, some discussions, cooperation and research visits and exchanges tended to centre around certain project partners, unintentionally giving less attention to others. This can result in uncomfortable emotions such as feelings of failure or regret before, during and after fieldwork.

The observations that informed this briefing note are part of an autoethnographic reflection of experiences from the project, but also the course of my PhD. In this sense, the briefing note also draws on a recently published paper where we discuss some of these ‘uncomfortable’ topics in more depth (Stoker et al. 2025), and which also includes interviews with other Czech researchers.

Possible impacts of the challenges and discussion in existing literature

While the geographies of knowledge production are increasingly diverse, the global academic system remains Anglo-American in terms of language, leading universities, publishing practices, theoretical frameworks, research topics and funding, and is characterised by asymmetrical flows of knowledge, scholars, funds, as well as primary data (Piguet et al. 2018; Düvell 2020; Cascant Sempere et al. 2022; Marginson & Xu 2023; Stoker et al. 2025). Interdisciplinary development (food systems) research demonstrates such persistent patterns of unequal knowledge production, including various hierarchies present in the ‘fieldwork’ of foreign scholars, and, ultimately, the privilege to research global topics and conduct research abroad.

Although important and illuminating, attempts to address these inequalities often remain framed within a postcolonial North-South binary (Bentele & Herzog 2023; Cascant Sempere et al. 2022; Sud and Sánchez-Ancochea 2023). Increasingly, scholars are calling for a more nuanced view (e.g., Červinková 2012; Müller 2020; Jehlička 2021). The North-South dichotomy fails to accurately capture the position and lived experience of scholars based in countries such as Czechia located in the semi-periphery or the wider Global East (Müller 2020).

The semi-peripheral position of Czechia is illustrated by several key characteristics. Czechia does not share the same colonial history of many Western countries. Postcolonial or decolonial academic debates are still relatively limited (Herza 2020). Rather, Czechia belongs to a group of CEE post-communist countries with complex internal postcolonial dynamics and shared trajectories of integration into the global knowledge system. Following the fall of communism, CEE countries became the focus of Western scholars studying post-communist transitions which contributed to its semi-peripheral status (Červinková 2012; Herza 2020).

A key aspect of the semi-peripheral condition is its semi-marginality. Although integrated into the EU, researchers in Czechia and CEE face limited institutional and research capacities compared to their Western counterparts, while also experiencing a kind of ‘epistemic invisibility’ in contrast to scholars from the Global South, who have been – and continue to be – central to decolonial debates.” (e.g. Müller 2020; Jehlička 2021; Sud and Sánchez-Ancochea 2023). Müller (2020: 735-736) describes semi-peripherality as a condition of dual exclusion: “The East is too rich to be a proper part of the South, but too poor to be a part of the North. It is too powerful to be periphery, but too weak to be the centre.” Researchers often face constraints including fewer funding opportunities, weaker social networks, and limited institutional ties to partners in both the Global North and South. Czechia’s semi-peripheral position is also reflected in the limited (but increasing) internationalisation of its universities (in terms of incoming scholars and students from both the Global North and South), as well as its marginal role in production of universally and broadly accepted scientific knowledge and theory. Institutions and researchers are often positioned as sources of data or in the category of area and regional studies (Červinková 2012; Ferenčuhová 2016; Ouředníček 2016; Jehlička 2021).

This brief overview highlights some of the key characteristics of the semi-periphery – and how these inevitably shape the dynamics within international research projects. It should be noted that foreign scholars in the semi-periphery face some of these structural constraints, but their situation involves distinct aspects of positionality and background, and their perspectives may vary. This categorisation is a simplification that also overlooks, e.g. internal peripheries and semi-peripheries and multiple overlapping aspects of identity, positionality, and power. As such, it should be accompanied by acknowledgment and critical reflection of multiple intersecting positionalities (see Stoker et al. 2025).

Practical actions to address challenges

Acknowledge inequalities in knowledge production and research capacity, and how these manifest in practice for more ethical and equitable academia
Adopt a broad view or research ethics that acknowledges the unequal geographies of knowledge production. Too often, ethics proposals and approval processes are narrowly focused on data collection – overlooking the ethical dimensions of collaboration, co-authorship, and internal project dynamics. Research ethics must be understood as entangled with the uneven geographies of knowledge production. Researchers need to recognize nuanced differences in general access to funding, time, networks, and institutional background among project partners. These inequalities are deeply embedded in the structures of global academia and manifest in collaborative projects involving institutions with differing capacities. Critical reflection on these differences requires researchers to challenge the established norms of research practice or funding bodies – and to ‘sit with and in’ the discomfort this may bring (Owen et al. 2022, p. 4).

Establish platform for reflection throughout the whole duration of the project.
Creating space for continuous reflexive practice is essential. While ethical approval processes remain a key part of formal research design, it should be complemented by less formal, ongoing reflexive practice that leaves space for nuance and complexity. Ethical research collaboration should involve constant reflection not only at the start of a project (while securing funding and ethical approval) or at the end, but throughout its entirety. ‘Complaint’ (for everyone involved in the project) can be a powerful method and a source of institutional, relational change (Ahmed 2021).

Consider nuanced power differentials beyond the North-South binary
Truly decolonizing research means actively recognize the epistemic invisibility of the semi-periphery, while also remaining attentive to the many complexities

within all these broad labels: the local and global Souths, Norths, Easts and Wests, including personal aspects of positionality and identity. It means acknowledging that researchers operate within structures that profoundly shape their research capacities. While individual agency matters, so too does one’s institutional setting, funding access, and own positionality (such as gender, race, ethnicity, career stage or age). These structural constraints and intersecting positionalities are not easily resolved, but they should be at least acknowledged.

Acknowledge discomfort and failure as inherent part of the research process
We need to create room – in academia and interdisciplinary cross-cultural research collaborations – for discomfort, failure, and complexity. Inspired by feminist and critical geography scholarship theorizing, utilizing and dealing with discomfort, failure and complaint as a method (Ahmed 2014 & 2021; Petillo 2020; Davies et al., 2021; Owen et al. 2022; Eaves et al. 2023; Sud and Sánchez-Ancochea 2023), this briefing note is a practice in “being uncomfortable”. This means acknowledging the frictions, tensions, and contradictions that inevitably emerge in international research collaborations that involve complex positionalities and power relations. Decolonizing research is a messy, non-linear process. It involves many uncomfortable moments, and ultimately a willingness and ability (as some may be more privileged than others to do the discomforting work) to embrace discomfort and failure as part of ethical, transformative research practice.

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Briefing note 9

Collaboration across diverse epistemic communities: Challenges and reflections

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Overview

In this briefing note we discussed the grounded experiences of CARE international (an international humanitarian agency and a key FoSTA partner) within the project. Its aim is to invite a reflection and analysis over the recommendations and challenges presented. These are mainly focused on implementation and logistics challenges encountered throughout the life of the project. At the same time, it outlines, CARE’s role in supporting these components, while identifying practical impacts and recommending actions for future implementation and learning.

Key recommendations to the project

- Adjust timelines during project design, to allow time for final evidence to be analysed, utilised and strategised as a team, with enough time before the end of the project.
- Budget closures should align with project endline, especially if final knowledge products are to be covered.
- Create task forces to strategise different actions that need to take place in addition to conducting research.
- During project inception, agree on timelines to respond to emails, this way delays can be mitigated.

Specific observations that inform this briefing note

Challenges encountered during FoSTA-Health

- Research fellows and the academic institutions play a key role into when and how research findings could be shared more widely, following journal publication and/or overall publication steps. However, considering the FoSTA project timeline, this created a complex scenario since final reports, publications and CARE project life cycle had different timelines. For example, CARE’s support

concluded before the overall project ended, which further constrained its ability to contribute to and shape final knowledge products.

- Regular meetings at the different working packages existed and were useful, but a more specific coordination taskforce for specific tasks could also be helpful, especially when a project has a diverse and large multi-partner team. In addition to the richness this adds to the project, it can also create its own challenges in maintaining a clear and shared understanding on everything that was happening in such a large project. With multiple work packages and activities unfolding simultaneously across four countries, it was not always easy to track who was leading which efforts or how different areas of work, and partners, connected strategically.
- Delays in email responses or follow-up, occasionally slowed collective brainstorming and timely decision-making for more strategic or cross-cutting actions.

Possible impacts of the challenges and discussion in existing literature

Collaboration between civil society organisations and academia can be symbiotic, as researchers can benefit from the close engagements that civil society members have with stakeholders, and their better understanding of grassroots issues. Civil society members can leverage researchers’ insights to supplement their field-based experiences regarding the issue at hand, and incorporate in their workflow, insights on methods, and analysis of data collected from field. This can be a critical site for co-production of knowledge and practice, on complex issues such as poverty eradication, impact of climate change on agriculture, nutrition and food security, the role of gendered dynamics in food systems transition. However, collaborations between civil society and academic organisations in development research also present multi layered challenges due to differing mandates and objectives of the concerned

institutions. In this section, we discuss some of these challenges as they have been addressed in literature on participatory collaborations.

Distinct epistemic cultures and their impact on institutional norms

Civil societies and academia represent different epistemic cultures and bridging these can be a challenge. Both groups could have different procedures for approaching the research problems, such as hunger and malnutrition, as opposed to academic researcher, both on the epistemic and practical levels. The distinct institutional constraints lead to quite different communities that, while often committed to the cause of development, can have divergent approaches, needing to cater to their respective institutional priorities (Stevens et al., 2013).

The approach of civil society and humanitarian aid organisations is likely to be more action based, rather than exploratory. As noted in **BN3**, grassroots organisations have distinct relationships with stakeholders, since they have a rich experience of working on the ground and have long term engagements and partnerships with stakeholders. They also need to prioritise producing public facing outputs such as infographics, and funder facing outputs such as reports.

Divergent institutional norms, and their impact on outputs and timelines

The challenges in collaboration stem from different epistemic cultures, and institutional norms. These also translate into different incentive mechanisms, hence, methods, approaches and timelines. Academics are likely to be inclined towards long-term theoretical outputs, such as research papers, edited volumes culminating into publication in journals of academic reput (Stevens et al., 2013). Civil society actors such as development NGOs and humanitarian aid organisations need to respond to different set of institutional demands.

Aniekwe et al., (2012) note that, international development, akin to many other domains of public policy increasingly evokes evidence-based logic to derive legitimacy, which in turn demands for impacts that are quantifiable and demonstrable. Additionally, civil society organisations also need to prioritise producing public facing outputs such as infographics, and funder facing outputs such as reports. This creates the challenge of co-producing knowledge that can be credibly translated across contexts that are often seen as distinct (Silvast & Foulds, 2022).

CARE’s ability to support more closely the development of knowledge products post-research was limiting due to project timelines, as CARE had to exit the project before research was final and published. At the same time, regular meetings were helpful in keeping track of the project; however, considering the project being very large, it was challenging to understand how and when to use the evidence generated and strategise this dissemination considering the different partners goals.

Practical actions to address challenges

Advanced planning and continuous connection are key
Planning and conducting field exercises can take longer than anticipated, due to context-related challenges but also teams balancing multiple responsibilities on the ground; with both scenarios changing rapidly and daily. Therefore, to avoid further delays it is key to account for this and plan ahead, by keeping constant follow-ups with in-ground staff, but also to keep activities on track, work with local partners and address any gaps on time. For the latter, reflection spaces can be key to hear from the project participants and supporting staff to learn and adapt as the research moves forward. In addition to this, it is key for roles and responsibilities to be clear to ensure readiness and a smooth implementation of activities in all fronts.

Research timelines and knowledge-needs must be aligned to the project timeline since the project design stage

During project design, create a timeline that enables space within the project life cycle for partners to be able to use the research findings. This might mean to ensure research is ready and/or published with enough time prior to the project ending. However, an existing limitation that exists is lack of control over journals own timelines for publication. So, in here it is key for the FoSTA team to decide on how to make it work around that within the project life cycle.

Create a taskforce which can ease decision-making and provide guidance on how to use research findings at the different project stages

Regular discussion on how the research findings are unfolding, on how research evidence can be used at the different project stages, and on which knowledge products can be developed to fit the different partner goals is key to ensure a smooth and timely use of evidence throughout the project cycle.

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Briefing note 10

Modelling stakeholder inputs into food system transformation pathways

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Overview

In this briefing note, we discuss the challenges of incorporating stakeholder inputs and feedback into the representative transformation pathways, that underpin the iFEED modelling framework and represent the scenarios that capture the imaginaries of food systems transformation in the focus countries in FoSTA-Health.

Systems modelling is a key tenet of knowledge production efforts aimed at understanding the impact of climate change on food systems. Given the complexity of interrelated biophysical, social, and political processes that shape food systems, region and context specific stakeholder input is of critical importance to incorporate nuances and ground up experiences into the modelling process. Modelling processes using integrated assessments of food systems tend to be limited by either heavy reliance on models or a lack of information on food and nutrition security. In the FoSTA-Health project, to overcome these limitations, the iFEED modelling framework supplements mathematical models with in-country knowledge and expert academic judgement to explore climate-smart and nutrition-secure food system futures (Jennings et al., 2022). Through consultation with stakeholders, it adds a range of complex, location-specific processes that shape nutrition security outcomes. Models cannot robustly represent these processes without integrating country-specific knowledge, social science, and ecological context. An integrated assessment framework that combines

stakeholder (including policy makers) and academic expertise with integrated climate-food-emissions modelling can therefore help to bridge the gap between large-scale integrated modelling and policy-relevant outputs (Jennings et al., 2024).

Key recommendations to the project

- Need for deliberation upon the tools for incorporating and reconciling diverse inputs.
- Need for a process of initiation for the participants and modellers prior to the scenario workshops: a brief and accessible primer on modelling, its role in food systems research, scenarios, and Representative Transformation Pathways (RTPs).
- A discussion on the complexity of the chosen models.

Specific observations that inform this briefing note

Stakeholder perspectives and modelling in FoSTA-Health

During the stakeholder dialogues held in the focus countries in Southern Africa, FoSTA-Health researchers conducted an exercise to seek stakeholder inputs for determining the Representative Transformation Pathways (RTPs) that undergird the iFEED integrated assessment framework. The observations here aim at capturing how different actors (researchers and stakeholders) situate their roles in food systems transformations vis-a-vis the modelling activity. In Tanzania, we conducted the RTP activity on the second day of the stakeholder dialogue organised in Morogoro by ESRF. (It was preceded by activities on day one, which were dedicated to food systems mapping, sessions on women’s empowerment, supply chains and governance and the regulatory landscape in the region). The engagement activity invited the participants to identify the transformations that they aspire for, identify obstacles to the said transformations and suggest solutions and ways to overcome the obstacles. For each of the three transformations they chose, the stakeholders needed to identify 3 obstacles, 3 ground up solutions. In this briefing note, we shed light on the nature of responses of the stakeholders to questions regarding transformation pathways, as well as their reflections on what food systems futures could look like and their experiences and aspirations during the exercise we conducted.

Challenges encountered during FoSTA-Health

Below, we summarise some of the observations regarding the interactions between the participants and the researchers.

- To begin with, participants were unfamiliar with the concept of modelling and scenarios, and were introduced to a lot of new terminology and concepts, such as transformation pathways, aspirations etc. They seemed to be struggling with catching up within a short frame of time.
- According to the observations, the participants found it difficult to envision transformations, or what the food systems or nutrition scenarios might look like 20 years down the line.
- The exercise required the participants to follow a predefined sequence. It felt that the stakeholders struggled a little in confining their responses in such a structured fashion. For instance, A problem, like overcoming malnutrition over a time horizon of 30 years, could have multiple barriers and obstacles and solutions. But the participants were required to sticking to identifying three of those. Another example is that of ‘cultural norms’. Participants emphasised that cultural norms around food production and consumption to be a key factor influencing nutritional outcomes, but they also felt that those were enmeshed with multiple elements such as land use that is in turn connected to policies and technology use.
- The question that arises is that given the polyvalent and multi-layered nature of the barriers and challenges and multipronged solutions to them is it possible, or even desirable to sort them into a linear sequence? Another questions that this leads to is, how do other components of the project inform or interact with the modelling component?
- During the last module of the exercise, the participants were required to come up with a newspaper front page that reflected the state of food systems in 2050. The participants struggled a bit to wrap their head around it or envision changes that were expected to materialise in the future, given the adversity of the issues they were grappling with at the moment.

Possible impacts of the challenges and discussion in existing literature

1. Challenges for incorporation of stakeholder perspectives

The access to multiplicity of voices from distinct stakeholders presents the modelers, planners and policymakers with the challenge of reconciling and arbitrating between diverse and often competing positions, making it difficult to reach, “acceptable consensus, or justifiable decisions” (Voinov et.al, 2016, p.197). This underlines the need for a discussion within FoSTA, on the hands-on aspects of incorporating diverse inputs such as the tools, methods, and processes that could help meet the challenges of participatory environmental modelling. Further, taking cognisance of these dimensions of food systems modelling and stakeholder consultations could help us explore how modelling may reinforce dominant agendas, and close alternative imaginaries of the future.

2. Prioritisation of some framings at the expense of others

The struggles with the processes of incorporating the nuances of stakeholder inputs and conflicting viewpoints, and the need for comprehensive tools prompt us towards looking into the power dynamics inherent in consultation processes. These contestations and power relationships can be observed in key areas (Royston et al., 2023) such as:

- (a) framing of questions and problems
- (b) framing of scenarios and solutions.
- (c) structural assumptions and
- (d) definition of quantitative data inputs.

These challenges necessitate a closer introspection regarding the practices of stakeholder consultations for feeding into transformation pathways, and assessment of which voices are likely to be represented in these narratives, as well as what level of detail can be achieved and what phenomena can be appropriately represented. In the next section, we suggest some practices that could support this process.

Practical actions to address challenges

1. Deliberation on tools for facilitating equitable participation and reconciling diverse inputs

Given the diversity of the human dimensions informing participatory modelling processes, it is argued that it is hard to come up with fixed solutions for smoothening out the process for incorporation of stakeholder input. However, there is a possibility of devising adaptable processes, and tools (such as digital media and visual tools) that are in touch with dynamic knowledge inputs and local project specificities to facilitate meaningful engagement with participants. Some of these approaches discussed by (Voinov et.al, 2016) include:

- designing of the participation exercise with help of inputs from the participants,
- using tools that they are familiar and comfortable with,
- having a compensation mechanism in place to incentivise participation could facilitate meaningful engagements during the workshops.
- a database of participants in modelling exercises (with prior informed consent) that could document their contributions could serve as a tool to give them a sense of representation and ownership in the process.

2. Pre-workshop consultations and comprehensive and accessible introduction to modelling processes and terminologies

While it could help to have an introductory presentation or an interactive dissemination media, it runs the risk of being a one-sided process that the stakeholders would struggle to associate with. We feel that it could help to have some pre-workshop sessions or surveys before the actual scenario / transformation pathways workshop. This could help the modellers/ or those facilitating the workshop design a brief primer on the modelling process to familiarise the participants with the technicalities and rationale of the exercise in a way that is in line with their

expectations and fine tune the activity to be cognisant of the issues that are important for the participants. An example of this could be:

- an overview of past modelling efforts,
-
- a discussion on relevance of outcomes of modelling efforts to the issues that the stakeholders flag in pre-workshop discussions.

3. Discussion on the appropriate complexity of the chosen models and its implications

The complexity of a systems models refers to the level of detail to which a model, or modelling framework can represent physiological processes, or the interaction between them. Often, different sub-models are included to add details to a framework to account for biophysical, socio-metabolic and socio-cultural processes (Klien et al, 2024). As discussed in the observations, there is an evident mismatch between the complexity of the issues as articulated by the participants and the extent to which the modelling exercise is designed to incorporate the same. We suggest that this is critical and warrants deliberation. This discussion could be had during the pre-workshop process or as a part of a dedicated session prior to the workshop.

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Briefing note 11

Plurality and inclusion: Honouring difference while creating coherent messages

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Overview

This briefing note addresses the role of power in navigating plurality in FoSTA-Health, while creating integrated, interdisciplinary research findings and policy-relevant outcomes. Plurality recognises the diversity of worldviews and values that different disciplines and stakeholders bring to understanding problems. It provides space for all to exist, even where there are tensions between them. Allowing for pluralism is particularly important when working on the creation of sustainability solutions (see e.g. Pascual et al., 2021). In FoSTA-Health, there is a broad range of stakeholder and disciplinary perspectives, with work carried out in different locations with various approaches to understanding food systems (itself a pluralised concept). Bringing these perspectives together to create clear, easy to understand research findings runs the risk of simplifying or subordinating some perspectives to others in the name of integration. The briefing note unpacks how FoSTA-Health encountered such challenges and provides practical recommendations for honouring difference while creating coherent messages.

Key recommendations

- Establish and foster conditions in research projects for active listening and curiosity-led debate. Such practices lead to joint navigation across different understandings, rather than arguing for a single, coherent understanding.
- Allow time and space for researchers to sit with discomfort and engage with radically different ways of thinking and knowing.
- Working with boundary objects can provide concrete ways to integrate across knowledge communities but needs to be facilitated in ways that navigate power relations between individuals. Artistic or creative approaches can be particularly helpful here.

Specific observations that inform this briefing note

In FoSTA-Health, there is a broad range of stakeholder and disciplinary perspectives, with work carried out in different locations with various approaches to understanding food systems (itself a pluralised concept). Multiple researchers each took their own academic interests forwards into research themes that contributed in some way to understanding food systems transformation. As these dispersed across the four countries (Malawi, South Africa, Zambia, Tanzania), and the four transitions

(*Transitions within and out of Maize; Land acquisitions, land and water use change; From domestic to export markets; and Diet diversification*); there was significant potential for creating non-commensurate outcomes and perspectives on food system transformation. In addition, a key component of all research included engaging with stakeholders and the use of participatory methods. Thus, further diverse ways of seeing and thinking about the world were introduced.

It became important to recognise, through the project that common terms, such as food systems, might not be understood in the same way by all participants in the project. Or, where a shared understanding was held, perhaps different perspectives or understandings shaped which parts of a system a participant was focussing on or considered important. Examples of different systems understandings included systems as a value chain, systems as a policy/legislative framework, and implicit systems underpinning modelling processes. All these perspectives contribute to navigating complexity and transformative change, but may not fit together neatly.

As a Horizon funded project, FoSTA-Health produces useable results that should contribute towards realising EU policy goals. This includes a framing of a food system that is implicit in the Farm to Fork strategy (as a value chain). Furthermore, the project is expected to bring the diverse research foci together into big-picture findings. To a significant degree, this integration is done through the use of the modelling framework iFEED, which requires some pulling of the diverse understandings into a framework that attempts, yet struggles to fully match or represent the embedded epistemologies and worldviews (see also **BN10**). A danger in trying to pull plural understandings together for a single coherent message is that it simplifies or subordinates some understandings to others, or bridges incommensurable results in the pursuit of a single message.

Possible impacts of the challenges and discussion in existing literature

Plurality is widely recognised as a necessary condition for finding pathways to sustainability (and included within this One Health). Plurality includes honouring a range of methodological and disciplinary approaches to investigate challenges (von Wehrden et al., 2017). It also extends to the incorporation of different worldviews, epistemologies and values; these may reveal diverse understandings of a problem, its construction and possible solutions (Caniglia et al., 2021). Within the context of FoSTA-Health, plurality could also refer to the diversity of spaces within the project for participation (Leventon et al., 2022) (see also **BN4**).

Importantly, plurality is not just about including diversity but requires addressing the power that some worldviews hold. Indeed, domination of western-centric, positivist approaches to ‘science’ and its role in policy has marginalised some forms of knowledge and subordinated it to others (Turnhout et al., 2021; Watson & Huntington, 2008). In short, it ensures we interpret everyone else’s worldview within a narrow understanding of the world that serves dominant actors. Such marginalisation serves to preserve the status quo in the science-society relationship and act as a barrier to creating transformations to sustainability (Turnhout, 2024). The pursuit of pluralism and inclusion in our understandings is therefore an essential principle in transforming systems for sustainability (IPBES, 2024; Pascual et al., 2021).

Despite recognising the need for plurality, achieving it is a practical challenge and often creates significant discomfort for those involved. The framing of ‘epistemic living spaces’ helps to explain the dimensions and factors that shape the different worldviews that participants bring into a collaboration such as FoSTA-Health (Felt, 2009). These dimensions include the epistemic, social, symbolic, and spatial; collectively they intertwine to interact and shape the way we view and think about

the world and are relevant to all people, whether academics or not (Felt, 2025). Discomfort occurs when one is asked to engage in a world view that is too different to their own within one, or multiple, of these dimensions (Freeth & Caniglia, 2020; Knickel et al., 2023). When the discomfort is too great, the tendency is for collaboration to break down, and/or for the dominant actor to push their views on the other (Freeth & Vilsmaier, 2020). Indeed, navigating such differences within a joint research project requires the individual members of the team to confront and engage with their own worldviews and the way that relates to dominant framings (Augsburg, 2014).

Boundary objects are often deployed to help ameliorate discomfort and find constructive ways to collaborate with plurality. Boundary objects can be concepts (such as systems) that are shared by team members, and serve to allow an unpacking of difference and similarity, and find ways that different knowledges contribute to creating bigger understandings (Abson et al., 2014; Benn et al., 2013). They can also be objects or tools that are co-created across the project team (such as models and their parameterisation) (Cuppen et al., 2021). However, boundary objects themselves, their framing and use are not apolitical or devoid of power. They can themselves be used to create and maintain power dynamics (Hawkins et al., 2017; Huvila, 2011). Artistic, creative, and design-led approaches have been shown to be powerful ways to navigate power and plurality (Carpenter & Horvath, 2022; Heras et al., 2021; Peukert & Vilsmaier, 2021).

Honouring diversity while producing coherent, integrated outcomes thus becomes more about the process and culture of the collaboration, rather than the tools used (see also Nieuwenhuis et al., 2021). Practical wisdom and virtue ethics can inform such a culture and provide capacities to navigate conflicting values and unequal power within knowledges (Caniglia et al., 2023). Applying practical wisdom in such a context includes cultivating care, and embracing humility, but also recognising when to employ strategies and interventions to address

power, or find ways through complexity (Caniglia et al., 2023). How, what to do, and when will depend on context, the set of people in the room, and the style of the person seeking to bring together plural knowledges (Chambers et al., 2022). Importantly, regardless of the approach used, all involved should be discussing how their work matches and differs, rather than arguing for a neat, singular solution.

Practical actions to address challenges

Establish and foster conditions in research projects for active listening and curiosity-led debate. Such practices lead to joint navigation across different understandings, rather than arguing for a single, coherent understanding.
Honouring plurality is about the process and culture of the collaboration. It is particularly important that there is a culture of curiosity in each other’s work rather than everyone arguing for the acceptance of their own understandings by others. Setting working norms that acknowledge plurality and power, and set guiding principles for the team’s research praxis can be helpful in launching a culture of curiosity. Such norms go beyond a how-to guide, and extend into how the project creates safe(er) spaces for shared exploration, discomfort and disagreement between participants with different perspectives and power.

Allow time and space for researchers to sit with discomfort and engage with radically different ways of thinking and knowing.
Navigating plurality can be difficult and uncomfortable for the collaborators in a team. They will encounter ways of thinking that they are not familiar with, and that might not fit well with their own understandings and training in what counts as legitimate ‘science’. Sitting with this discomfort will require time and space, particularly if researchers can use this to learn more about what is making them uncomfortable. Discussion and learning spaces (such as the research and innovation forum in FoSTA-Health) are particularly important for people to learn from each other. Ideally, all team members

(researchers and practitioners alike) should have time to engage in such spaces, both as a participant and as a presenter.

Working with boundary objects can provide concrete ways to integrate across knowledge communities but need to be facilitated in ways that navigate power relations between individuals. Artistic or creative approaches can be particularly helpful here.

Deploying interventions, such as boundary objects, can be useful to explore integration across plural knowledges. Concepts or tools/approaches can serve to pull knowledge together and explore how different knowledges fit or don’t fit, together within the boundary object. Systems thinking and modelling have both provided such a function within FoSTA-Health. However, no boundary object is apolitical, and there will always be the chance that it can be used in ways that create or reinforce hegemonies. They should therefore be deployed within collaboration processes that have a commitment to navigating power and plurality. Artistic, creative and design-led processes can help navigate such tensions towards transformative outcomes.

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