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Capacity Strengthening as a Pathway to Drive Food Systems Transformation Towards Sustainable Healthy Diets

Reflections from the CGIAR Research Initiative on Sustainable Healthy Diets through Food Systems Transformation (SHiFT)

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The CGIAR Research Initiative on Sustainable Healthy Diets through Food Systems Transformation (SHiFT) combines high-quality nutritional and social science research capacity with development partnerships to generate innovative, robust solutions that contribute to healthier, more sustainable dietary choices and consumption of sustainable healthy diets. We build on CGIAR's unparalleled track record of agricultural research for development, including ten years of work on food systems and nutrition under the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH), particularly under the research flagship Food Systems for Healthier Diets.

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Table of Contents

Figures

Tables

Abstract

Food systems are failing to provide sustainable, healthy diets that promote health, environmental sustainability, affordability, and cultural acceptability, leaving over three billion people unable to access such diets. Following calls for transformation after the 2021 UN Food Systems Summit and subsequent international dialogues, there is growing recognition of the need for systemic approaches to accelerate food systems transformation (FST). However, many stakeholders remain uncertain about how to implement effective changes, highlighting the need for sustainable development pathways that integrate health, environmental, and inclusion goals. This paper explores what capacities are needed for driving FST, emphasizing the need to strengthen skills and competencies in individuals, organizations, and societies to achieve transformative goals.

Based on the capacity-strengthening experiences of the CGIAR Research Initiative on Sustainable Healthy Diets through Food Systems Transformation (SHiFT) in Bangladesh, Ethiopia and Vietnam, the paper examines SHiFT's capacity-strengthening practice used. Key questions addressed include identifying stakeholders who need transformative capacities, the capacities required for different roles, and strategies to inspire meaningful implementation.

The reflections on capacity-strengthening trajectories for food system actors in Bangladesh, Ethiopia, and Vietnam underscore the need for tailored, inclusive, and adaptive approaches that address the unique dynamics of each food system. Seven guiding principles emerged: contextualizing within political and economic landscapes; employing adult-based, experiential learning; timing of capacity strengthening interventions; navigating power dynamics; embracing emergence and flexibility; fostering diversity; and stimulating personal agency and leadership. These principles highlight the importance of co-creation, continuous reflection, and iterative adaptation, ensuring capacity-building efforts are relevant, effective, and transformative. By exploring practice-based and case-based insights, this paper contributes to understanding how targeted capacity strengthening can support meaningfully to FST.

Keywords: Capacity- strengthening, food system transformation, food systems, transformative change, stakeholders

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Abbreviations and acronyms

Alliance	Alliance of Bioversity International and CIAT
BNNC	Bangladesh National Nutrition Council
CC	Country Coordinator
CCU	Country Coordination Unit
EPHI	Ethiopian Public Health Institute
FBDG	Food-Based Dietary Guidelines
FNS	Food and Nutrition Security
FPMU	Food Planning and Monitoring Unit
FST	Food Systems Transformation
GBD	Global Burden of Disease
GIS	Geographic Information System
IFPRI	International Food Policy Research Institute
IPSARD	Institute of Policy and Strategy for Agriculture and Rural Development
MoA	Ministry of Agriculture
MoH	Ministry of Health
NIN	National Institute of Nutrition
SHD	Sustainable Healthy Diets
SHiFT	Sustainable Healthy Diets through Food Systems Transformation
SP	Strategic Partner
ToT	Training of Trainers
UNFSS	United Nations Food Systems Summit
VAAS	Vietnam Academy of Agricultural Sciences
WSER	Wageningen Social and Economic Research
WUR	Wageningen University and Research

1 Introduction

1.1 Why Capacity Strengthening is Important for Food System Transformation

Food systems are failing to provide sustainable, healthy diets which promote health, are environmentally sustainable, and are accessible, affordable, and culturally acceptable (FAO, WHO, 2019; FAO, IFAD, UNICEF, WHO, WFP, 2021). Currently, three billion people cannot afford such diets, contributing to all forms of malnutrition and 11 million premature deaths annually (Hawkes, Ruel et al., 2020; FAO Global Burden of Disease (GBD) 2017 Diet Collaborators, 2019). There is a growing call for transformation, especially after the 2021 United Nations (UN) Food Systems Summit, dialogues in the Food Systems Summit +2, and the most recent UN Climate Change Conference in 2023, articulating the need for transitions in food systems to deliver human health and wellbeing while maintaining the stability of the earth system (Moallemi, Hall et al., 2024). There is a need for stakeholders to harness over two decades of sustainability transitions research to develop and implement systemic approaches that can bridge the gap between theory and action to accelerate the transformation of global food systems (Moallemi, Hall et al., 2024). Yet, the current lack of clear guidance has left many actors uncertain, skeptical, and discouraged about the prospects of achieving this critical goal (Béné & Abdoulai, 2024).

To mobilize actors and generate traction in current policy debates on how to achieve food systems transformation (FST), sustainable development pathways that specifically focus on food systems are required. These are food systems development pathways explicitly focused on healthy, nature-positive and inclusive food systems. Literature on socio-economic modelling generally defines FST pathways as sets of measures (technological advances that lead to efficiency gains, management practices, demand changes such as dietary shifts and so on) that lead to the goal. They elicit the biophysical and technical feasibility of FST and potential trade-offs among multiple food system objectives, notably between health, environmental and inclusion goals. These FST pathways used in modelling are meant to provide decision-makers with possible combinations of policy options to achieve more inclusive FST (Gaupp, Ruggeri Laderchi, Lotze-Campen et al, 2021).

As noted by Leeuwis et al. (2021) and Armson (2011), systems do not exist as objective realities, but rather as constructs used to make sense of complex phenomena. Different strands of systems thinking are suited to different problem situations—ranging from simple to complex—each grounded in specific epistemological foundations. Understanding these underlying perspectives is especially crucial in messy situations, such as FST, where individuals and even collectives may hold vastly different views of the same situation.

This also applies to food systems: they are complex and exhibit several key features, as described by Leeuwis et al. (2021). First, they have emergent properties, where the whole is more than the sum of its parts. Second, interactions between people are essential components. Third, food systems are diverse, with different actors and networks coexisting and working differently even within the same geographical space or value chain (Mangnus, 2019; Mangnus & Vellema, 2019). Fourth, these actors often have partial and differing views of the system. Fifth, food systems are marked by high uncertainty, lack of agreement on goals and self-organization, where changes emerge without central steering and control. Lastly, food systems demonstrate dynamic stability, meaning they are resistant to change while continuously evolving.

Transformation in food systems, following Leeuwis et al. (2021), involves governance efforts to shift undesired outcomes, such as poor nutrition, towards desired goals like food security and sustainability. Key strategies include fostering diverse innovations, leveraging successful practices, protecting niche-level innovations, analyzing societal trends, destabilizing dominant regimes, identifying leverage points, and building coalitions for collective action. Additionally, accelerating FST requires transformative trans-disciplinary research approaches (Den Boer et al., 2021), characterized by co-design and co-production between different stakeholders and knowledge integration. This requires new actor roles and sets of competences. It should be accompanied by broader capacity building strategies to stimulate the implementation of transformative research practices. Therefore, strengthening competences – i.e. the energies, skills and abilities of individuals - of food system stakeholders is an agreed critical foundation to accelerate systemic change. Many food system initiatives integrate capacity development in their actions to influence thinking, organizing and acting. It is considered as a condition for the inclusive pathway for FST development through partnering. That is, in order for public private partnerships to deliver upon their potential (improved stakeholder inclusion and democracy, leveraging partnership resources and capacities, and increased efficiency for inclusive development), specific capacities need to be applied to the partnering process (Vellema, Schouten & Den Tulder, 2020).

This, along with the complexities of achieving sustainable healthy diets (SHD) (Gaudd et al., 2021; Béné & Abdoulia, 2024) guiding food systems transformation, requires specific competencies, but the question remains: who should possess these capacities and what are these capacities? Achieving the desired transformative changes through capacitation presents a [significant] challenge, as it requires investment in a diverse range of anticipated capacities tailored to the various roles that food system actors are expected to fulfill. Questions emerge concerning what competences should be acquired to facilitate transformation towards SHD; what capacity building strategies are required for which stakeholders, and at what level; what amplification processes are needed; and how to inspire different food systems actors to implement these competences in a meaningful way for the relational work of systems change. In addition, questions about whether similar competences and capacity building strategies work across different contexts, spatial and temporal scales remain. In short, building an understanding of the transformative role people can adopt in the food system through learning, engaging and (re)shaping practices is important (Mehmood, Marsden, Taherzadeh et al., 2020; Pereira, Drimie, Maciejewski et al., 2020). Stories about the particulars of capacity strengthening, the strategies adopted and the underlying assumptions relating to pathways to transformative change are important.

Building on a practice-based and case-based exploratory approach of capacity strengthening, this paper unpacks: What are the key features of food system transformative capacities? Who needs them? Is there merit in strengthening the capacity of a specific target group to take on transformative roles? And finally: how can we strengthen them?

1.2 Capacity Strengthening: an Evolution in Framing

The terms, capacity building, capacity development and capacity strengthening are often used inter-changeably (Kinghorn, 2021) in discussions in the fields of social sciences (Molinengo, Stasiak, Freeth. 2021), development studies (Venner 2015), life and environmental sciences (Wamsler, Osberg, Osika, Hendersson, & Mundaca, 2021), human geography (Oosten, 2021), business and leadership (Dentoni, Bitzer & Pascucci, 2016) and psychology and health (Kjellström & Andersson, 2017; Kegan & Lahey, 2019). Researchers and practitioners generally agree that transforming societal norms, public policies, market incentives, organizational processes and political systems requires developing different ‘soft’ and

technical capacities (Mirzoev et l 2022, Venner 2015, Woodhill, 2010). There is no consensus on the definition of capacity development; however, its framing has evolved over the years.

The terminologies are part of a historic evolution in the field of organizational development that started in the 1990s with the aim to support national capacity by building organizations with strong management, infrastructure and implementation mechanisms (Venner, 2015). Using the business sector as an organizational model, the international community started 'capacity building' to close identified gaps. During the 2000s, the term capacity building changed to 'capacity development', acknowledging existing capacities of partner organizations. Given that the focus was primarily on the sustainability of the organization to implement donor programs, capacity development projects became management-centered and the tools applied to monitor progress described capacity in terms of linear developmental stages of growth (nascent, emerging, mature). The rise of systems thinking in 2010 was another turning point for the framing of capacity development, as organizations became increasingly seen as comprised of actors operating within an intricate web of relationships, pressures, and incentives. The term 'capacity strengthening' reflected an awareness of the dynamics of local systems and emphasized networking and relationships with multiple stakeholders. It was broadly defined as the process through which individuals, organizations and societies obtain, strengthen and maintain their capabilities to set and achieve their own development objectives over time (UNDP 2015, World Bank Institute, 2003). Recent calls to decolonize international aid and the attention to diversity, equity and (social, gender) inclusion have inspired developments such as localization (or locally-led development); moving beyond technical abilities to include social capital, experimentation, learning, and adaptation; resilience (the capacity to address and mitigate systemic shocks and stresses); and new performance measurements (focusing on organizational behaviors and practices as opposed to strategies and structures). This shift in thinking underpins the term 'capacity sharing' which emphasizes social equity in the process of capacitation and takes the form of mentoring. Areas of focus are adaptive learning, resilience, and building/maintaining social capital (partnerships and collaborations) (Kinghorn, 2021)

This paper uses the term 'capacity strengthening', acknowledging that any process of capacitation builds on existing capacities with a clear intention of adding value by building insights, knowledge, skills and competencies. While the authors fully support a capacity sharing approach, this term was not used when designing the interventions on which this paper reflects. Capacity sharing is, however, the next iteration of our case study's interventions. The reflections of this paper are an attempt to enrich our approach as facilitators of capacity-strengthening processes and share our learning with the wider academic and practitioner community as we step into increasingly complex future realities.

In order to put capacity strengthening for FST into its theoretical context, we reviewed various publications on individual and organizational capacities for sustainable transformations, with a focus on the food system. As capacity strengthening is a dynamic process involving multiple actors (individuals, groups and organizations) at various levels (from local to global) across various sectors (public, private, civil society, knowledge institutes), we adopted a trans-disciplinary exploration. The papers reflected insights from the fields of social sciences, life and environmental sciences, human geography, business and leadership, psychology, and health, and provided a rich overview of the overlaps and linkages between the various fields. The review explored the key features of food system transformative capacities, the actors targeted to acquire these capacities, and the approaches by which these capacities are strengthened. Section 1.3 details the insights from this literature, which we reflect upon further, based on the approach used and learnings from our case study.

1.3 Capacity Strengthening and Transformative Capacities

The 'key features of food systems and sustainable transformative capacities' identified in the literature can be coalesced into ten clusters of capacities (Table 1). The literature refers to food system and sustainable transformative capacities being built and applied at organizational level, within multi-stakeholder/multi-sector partnerships and through leadership programs. Several papers focused on transformative capacities at the individual level, emphasizing 'inner capacities' as an integral part of food system transformative capacities.

Table 1: Key Features of Food System Transformative Capacities

1.	**Complex systems:** work at different levels (events, behavior, system structures, cultural change, individuals, their consciousness, and mindsets).
2.	**Awareness:** presence, attention, self-awareness and self-reflection, psychological/ cognitive flexibility and resilience, meta-cognition, emotional processing and regulation, critical consciousness, openness, life-long learning, self-motivation.
3.	**Meaningful insight:** perspective-taking/seeking, sense-making, equitable thinking, integrating different ways of knowing; ability to reflect on plurality of values and different perspectives ('reflexivity'), values-based courage; consensus building; facilitating inclusivity.
4.	**Connection:** compassion, empathy, kindness and generosity, building and maintaining cross scale (micro-macro) relationships, building trust; interpersonal and collaborative capacities, leadership, team skills - ability to engage in and foster collective practice, engaging with diversity, communication (listening, persuasive speaking).
5.	**Facilitation:** Process facilitation, facilitating discussion, meaning making, reflective discourse and deep learning; turning learning into outcomes and translating learning outcomes into practice (from niche to regime).
6.	**Visioning:** anticipatory/ futures thinking, working with and through resistance to change, risk-taking, change agency, innovation, self-efficacy.
7.	**Agency:** empowerment and related qualities/ skills that can foster and enhance cooperation, the co-creation of meaning and action-taking, advocacy, increased involvement, mentorship, networking, political/civic engagement, serving as a resource.
8.	**Purpose:** activation and reflectivity of one's values, sense of purpose, intentions and responsibility, future orientation, intrinsic value orientation and associated meaning-making, senses of equity, solidarity, and reciprocity.
9.	**Skillful improvisation:** taking on different roles such as a reflexive facilitator/ critical analyst; change agent; intermediary/knowledge broker; (self)-reflexive scientist; (process) facilitator; capacity builder; expert in learning; project manager.
10.	**Leadership**: negotiation and consensus building, storytelling, strategic framing, lobbying, establishment of new contractual relations, network weaving (bonding, bridging and linking), selection and inclusion of stakeholders, conflict management, enabling others, issue awareness, political process awareness.

Source: Authors' own elaborations

When reflecting on the question of 'who needs food system transformative capacities?', specific professional groups are usually mentioned such as researchers, policy makers, monitoring and evaluation experts, or high-level leadership ('management') (Otieno, Niewolny, Archibald, Schenk & Nunoo, 2023; Callahan, 2019). Other papers refer to professionals in general or those active in the science-policy or research-practice interface (Den Boer, Broerse & Regeer, 2021; Molinengo, Stasiak & Freeth, 2021). The capacities are presented as 'roles' that individuals can take up to support FST regardless of their profession or expertise.

The literature provided various ways of 'how the food system transformative capacities can be strengthened' that is in terms of practices, spaces and approaches. Table 2 and Figure 1 summarize approaches and practices to strengthen food system transformative capacities.

Table 2: Ways to Strengthen Food System Transformative Capacities

1	**Ownership:** facilitate the process so as to make participants co-owners of the process and empower them to lead it; **Action/real life change**: facilitate or participate in the learning process and in the actual experiments, policy formulation; **Experiential learning** such as participatory, place-based, project-based and problem-based deep-learning approaches (Den Boer et al., 2021).
2	**Facilitating social learning amongst multiple perspectives**, naming and presenting 'troublesome knowledge', debunking assumptions, beliefs and 'one size fits all' generalizations, engaging program beneficiaries (local actors) in generating and owning the evaluation outcomes and learning (Otieno et al., 2023).
3	Creation and maintenance of spaces for **societal learning** as a core activity of process-oriented approaches. Critical issues: ownership, sustainability, power and action (Wittmayer, 2014).
4	**Collaborative learning; organisational learning; social learning; interactive learning** through effective arrangements, process conditions, and the emergence of necessary functions of innovation systems. Arrangements for organisational learning: horizontal flows of knowledge, vertical integration of a value chain, intermediary agents creating links between knowledge producers and users. Process conditions: reciprocity and the expectation of meeting again (because know-who and know-how cannot be easily translated into codes that other actors understand (Morgan, 2004); trust to accelerate interactive learning (providing all actors with access to thicker and richer information) generated by a mutually understandable language developed in dialogues or other face-to-face communication, especially important for diverse cultural backgrounds (von Krogh et al., 2000, in Van Mierlo & Beers, 2020).
5	**Partnering** as a practice that allows actors to use skills, tools, knowledge and techniques to be transformative and to achieve practical ends. Partnerships can use an intervention repertoire that enables them to create, maintain or disrupt institutions that feature arrangements that reinforce inequality or induce exclusion (Mair et al., 2012). New modes of working and governing are labelled as 'proto-institutions' (Lawrence et al., 2013; Lawrence & Suddaby, 2006). Proto-institutions can be of a temporary or intermediate nature, but still be there for long enough to influence the institutional structures underlying the nature of doing of business or trade (Vellema et al., 2020).
6	**Disruptive ways of capacity building** that include **co-learning** processes for developing individual and systemic agency (Lotz-Sisitka et al. 2015) in (Svare, Gjefsen, den Boer & Kok, 2023).
7	Design principles: **learning activities that respond to the actual challenges** and learning needs of those involved at successive stages of the transition; creating room for **unstructured moments** and dialogical spaces that allow participants to propose and explore topics of interest, address ongoing concerns and creative experimentation; building on individuals' capacity to **codesign their individual learning paths** and the importance of designing learning systems that give individuals the flexibility to make productive choices (Svare, Gjefsen, den Boer & Kok. 2023).
8	**Contemplative practices** (mindfulness, compassion, nature connection, somatic bodyworks, NVC, self-reflection); **psychological and cognitive-behavioral** based practices, coaching; **transformative spaces and communication practices** (dialogues, group discussions and deep listening and non-violent communication facilitation practices and communities of practice to apply learning, deepen understanding and amplifying change); **transformative education and leadership practices:** experiential learning, theory U-informed and arts-based learning, development of agency and a transformation of oneself (Legrand et al, 2022 and Wamsler et al, 2022 and Den Boer et al., 2021).

Source: Authors' own elaborations

Figure 1: Principles and Practices Strengthening Food System Transformative Capacities

Green: practices, spaces and approaches for building food system and sustainability transformative capacities
Orange: principles guiding the strengthening of transformative capacities
Source: Authors' own elaborations

The principles guiding practices of strengthening of food system transformative capacities, such as context-specificity, respect and equity, power dynamics, cultural relevance, working with a variety of consciousness practices and approaches, evidence-based approaches and plurality of knowledge are captured in green (Legrand et al., 2022).

These insights about the features of food system transformative capacities, the actors targeted to acquire these capacities, and the approaches of strengthening the capacities, are sensitizing ideas that we further reflect upon in our case study.

2 Methodology: a Case-Based Approach

Our research initiative departed from the ambition to be cognizant and responsive to in-country research needs and to conceptualize its research activities in collaboration with stakeholders in the country. Therefore, the initiative adheres to what is described as 'transformative research', aiming 'to advance and facilitate processes of societal change by developing possible solutions and supporting their implementation through inter- and transdisciplinary research practice' (Meisch, 2020, p. 8). For researchers to be able to work in this space requires process expertise. Process expertise, as explored and described by Molinengo, Stasiak & Freeth (2021), consists of knowledge of process design (the content) for planning collaborative arrangements with policymakers in advisory settings (the operational context) by facilitating knowledge co-production among involved actors (the process). Process expertise, in other words, offers advice on the process for designing collaboration in collaboration.

Inspired by the case study approach Molinengo et al. (2021) used to explore process expertise, our case study employs a self-reflective case narrative that 'prioritize[s] the narrator's own meaning making' (Becker & Renger, 2017; p. 141). Using a self-reflective case narrative, we seek to demonstrate the adaptive processes and actions applied in the capacity-strengthening trajectories implemented by ourselves under the CGIAR Research Initiative on Sustainable Healthy Diets through Food Systems Transformation (SHiFT), (see Box 1). Self-case narratives allow representation and explanation of the actions and events undertaken and enable the narrators to integrate them into meaningful and temporal patterns linked to the specific implementation contexts *(*Fabry, 2023, Molinengo et al., 2021*).* The approach permits illustration of the nature of interactions between the authors (the narrators) and the actors participating in the capacity-strengthening activities (the narrated) (Fabry, 2023).

2.1 The Case: Capacity Strengthening in Sustainable Healthy Diets through Food Systems Transformation (SHiFT)

This working paper is based on the capacitation and capacity-strengthening experiences of the CGIAR Research Initiative on Sustainable Healthy Diets through Food Systems Transformation (SHiFT) (see Box 1). Since its start in 2022, SHiFT has strengthened the capacities of actors engaged in the national food system transformation (FST) processes in Bangladesh, Ethiopia and Vietnam on various critical FST concepts and practices. As members of the team responsible for capacity strengthening. The authors examine their own capacity-strengthening practice used in SHiFT by reflecting on the different actions implemented with stakeholders to describe the following: the elements of capacity strengthening that matter; for whom they matter; and what is needed to strengthen capacities. These insights contribute to understanding the approaches and processes of building individual or collective capacities; and the skills, knowledge, and resources required to inspire and mobilize stakeholders to engage meaningfully in transforming food systems to provide SHD.

Drawing from experiences of designing and delivering tailored capacity-strengthening trajectories for actors in Bangladesh, Ethiopia and Vietnam, this paper illustrates the following: 1) Ascertain that technical, processual, and anticipatory (focusing on outcomes) competencies can be acquired in different contexts. 2) Highlight the diversity of capacity-strengthening strategies adopted, and the diversity of co-

design principles aimed at strengthening capacities of multiple (groups) of actors, at multiple levels, aspiring to learn about Food System Transformation for Sustainable Healthy Diets (FST for SHD) at scale. 3) Reflect on how to best navigate vested interests and needs of different actors within the system, and how to deal with power dynamics. 4) Reflect on the possible pathways by which capacity strengthening could contribute to the systemic transformation necessary for SHD.

Box 1: Sustainable Healthy Diets through Food Systems Transformation (SHiFT) 2022-2024

SHiFT is a CGIAR research initiative led by the International Food Policy Research Institute and the Alliance of Bioversity International and CIAT in close collaboration with Wageningen University and Research and with contributions from the International Potato Center. SHiFT's main goal is to ensure SHD for everyone, everywhere through FST. Working closely with local, national, regional, and global partners, SHiFT uses an innovative, consumer-focused perspective to understand how to increase demand for and access to SHD through FST. SHiFT combines high-quality nutritional and social science research with development partnerships to support innovative solutions that contribute to healthier, more sustainable dietary choices and consumption of SHD.

SHiFT works in collaboration with stakeholders in Vietnam, Ethiopia and Bangladesh and involves them at multiple stages of the food system, from individual consumers to businesses that sell food and employ workers, on to decision-makers at the national or subnational level. In each country a few strategic partners (SPs) actively engaged in the FST processes in the respective countries were selected for close collaboration: two in Bangladesh, three in Ethiopia, and three in Vietnam.
The initiative's activities span five focus areas, or work packages (WPs), that intersect and inform each other:

- Consumers and their food environments
- Micro, small, and medium enterprises and the informal sector
- Governance and inclusive food systems
- Trade-off scenario analysis
- Catalyzing FST

At the core of SHiFT is the focus on ensuring stakeholder engagement and building capacity through the co-generation and use of insights on potential innovations; understanding barriers to change and power relationships among relevant stakeholders; and identifying and negotiating potential trade-offs and synergies in FST. Through the Work Package (WP) on Catalyzing FST (WP5), researchers are engaging in national food systems processes to identify, co-design, support, and learn from context-specific pathways for FST toward SHD. In each country a country coordinator supports this process and acts as a linking pin to the SPs. WP5 recognizes that there is no single solution to deliver SHD for all—instead, context-specific pathways for transformation need to be identified, co-designed, and supported at the national level to transform food systems toward SHD.

WP5 has three major objectives: (1) Engage in national multistakeholder consultative processes to develop and support FST; (2) monitor and document FST in the target countries; and (3) develop capacity to engage in, support, and monitor FST toward SHD.

Source: https://www.cgiar.org/initiative/sustainable-healthy-diets/

2.2 Shaping SHiFT's Capacity-Strengthening Approaches and Trajectories

SHiFT's capacity-strengthening approach consisted of a multi-layered, dynamic framework designed to empower country coordinators (CCs) and SPs engaged in FST processes in Vietnam, Ethiopia, and Bangladesh. By leveraging mentorship, structured assessments, collaborative design processes, and interactive training programs, the approach stimulated both individual and organizational growth to promote FST for healthier diets.

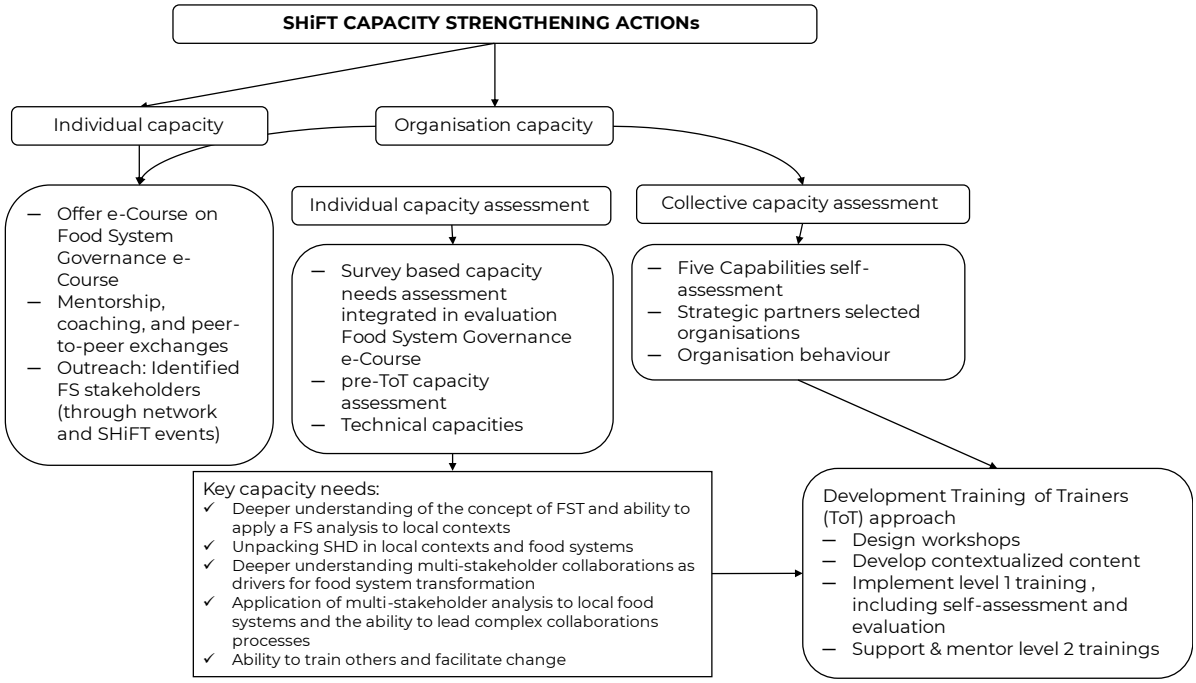
SHiFT's capacity-strengthening approach was to do the following: (1) Reach out to SHiFT stakeholders with an individual learning offer in the form of an e-course on food system governance for SHD (De Groote, Olaerts, Herens et al., 2023). (2) Co-design a Training-of-Trainers (ToT) curriculum with SHiFT's strategic partners (SPs) and other national actors invested in FST, in response to requests from SHiFT.

(3) Contextualize the curriculum to the country specific FST challenges and the learning needs of the selected pool of Level 1 trained facilitators. (4) Provide mentoring and support to the country coordinators (CCs) and the Level 1 trained facilitators in the rollout of the ToT to different stakeholder groups and sub-national audiences.

In parallel, SHiFT explored FST capacities at the level of the SPs in each country to build insights of the functional capabilities present at their level, and to understand which capabilities could be supported to become better positioned actors in steering and supporting changes FST. Capacity strengthening often tends to focus on individual level capacities. However, facilitating systemic change draws attention to the importance of simultaneous nurturing of collective learning for capacity strengthening of individuals, within and across organizations and networks which recognize the indistinct boundaries and amplification potential to system level outcomes (Mirzoev et al., 2022). From a desired food system outcome perspective, such as SHD, the capacities to facilitate normative transformation are dynamic capabilities; organizations and networks should be able to integrate, create and reconfigure their internal and external resources in rapidly changing environments (Leemann & Kanbach, 2021, Teece et al., 2007). The need was highlighted to understand the dynamics in different contexts to develop the right individual, organizational and network capacities to support transformation towards healthy and sustainable food systems.

Thus, SHiFT's capacity-strengthening trajectory consisted of a combination of individual and group level actions (see Figure 2). Under the umbrella of SHiFT Work Package 5 (WP5), a team was formed focusing on and specialized in the design, implementation and delivery of the different capacity-strengthening actions, driven by Wageningen Social and Economic Research / Wageningen University and Research (WSER/WUR) (i.e. the authors of this paper). The different actions are further explained in the following sections.

Figure 2: SHiFT Capacity-Strengthening Actions



Source: Authors' own elaborations

2.2.1 Mentorship, Coaching, and Peer-To-Peer Exchanges

At the core of SHiFT's capacity-strengthening approach lies a mentorship, coaching model tailored to the emerging needs of the country coordinator. Through bi-monthly calls with WP5 co-leads, the country coordinators exchange experiences and receive constructive feedback. This interaction was complemented by targeted country visits, where the WP5 team provided hands-on guidance and direct support. For instance, feedback on initiatives like the FST Partnership in Vietnam and Ethiopia's Food System manual and facilitation guide helped refine in-country strategies and multi-stakeholder collaboration. 'Share Fairs' and exchange visits between the three countries created space for peer-to-peer exchanges and built a professional network of actors involved in FST processes.

2.2.2 Organizational Capacity Self-Assessments

In SHiFT, collaborative governance processes are recognized as critical for normative food systems transformation. Collective action and emerging multistakeholder partnerships in FST action plans of the focal countries were notable. SHiFT contributed to supporting the FST processes by strengthening capacities of the SPs to guide food systems transformation. A first step in strengthening capacities was building an understanding of the capacity assets to leverage and the needs that each SP held which could be strengthened to increase their ability to translate 'new' learnings and support transformative pathways in the country.

Assessment of organizational capacity assets and needs was conducted using a tool and protocol developed by WSER/WUR adapted from the Five Capabilities Framework (ECDPM, 2011). 'Capabilities' refers to the collective abilities and processes that organizations, networks or systems must successfully understand and shape situations, harness opportunities and reinvent resources in pursuit of shared goals in the rapidly changing operating environments (Mirzoev et al., 2022, Vu 2020, Teece et al., 2007). Capabilities integrate various technical-oriented and function-focused capacities that are important for effective initiation and sustained implementation of interventions towards identified goals, such as FST for sustained healthy diets. 'Technical capacities' comprise the specific expertise and knowledge required in a particular field, for example, in agriculture, nutrition, trade and public administration (Aryeetey & Namukolo 2020); 'functional capacities' are the core competences including managerial, logistical, relationship building, learning, norms and values that are needed for effective implementation of solutions (OECD 2011). These capabilities are all required at multiple interacting and intersecting levels of governing food systems within countries and across geographical boundaries.

Box 2: Implementing the Five Capabilities Framework approach for self-assessment

Based on the Five Capabilities Framework, a structured interview questionnaire was developed as a tool to assess capabilities at this moment in time. The tool was used by all SPs in the SHiFT initiative (N=8). The five capabilities chosen were: 1) capability to commit and act; 2) capability to relate; 3) capability to deliver results; 4) capability to adapt and self-renew; and 5) capability to achieve coherence.

For each of the five capabilities, a statement was given. Respondents were asked to reflect and allocate a score using a four-point scale to indicate how accurate the statement was for their organization. 1) very poor or non-existent; 2) poor or some elements exist but needs major improvements; 3) satisfactory but room for improvement; and 4) excellent. Scores were translated into spider diagrams, which were used in discussions about which of the capabilities should be focused on for strengthening.

Source: Authors' own elaborations

The organizational self-assessment tool was developed for the assessment and continuous monitoring of the extent to which SPs in SHiFT proactively supported processes that would radically change the food systems in their country towards providing SHD. The Five Capabilities Framework was selected for the

tool as it assesses capabilities to commit and act, deliver results, relate with key actors, adapt and self-renew, and achieve coherence. The framework provides complementary multi-actor views on the capacity to change across very diverse conditions (see Box 2). Through this structured assessment, SPs collectively reflected upon their abilities, highlighting their strengths and identifying areas for growth, thus enabling targeted interventions.

2.2.3 Designing the Training of Trainers (Tot) Program

SHiFT recognized the pivotal role of localized and context-sensitive training. The ToT program, led by WSER/WUR began with collaborative design workshops, which defined the ToT's objectives, outlined the related content and the capacities to train, identified stakeholder groups/organizations to be trained, and closed with an agreed process for participant selection. In partnership with in-country food system experts, the training materials were validated and adapted to address specific local challenges. SHiFT's CCs worked closely with SHiFT's SPs to select the appropriate participants, send out communications, and prepare materials and training venues.

2.2.4 Implementing the ToT Program

The implementation phase combined diverse methodologies to maximize impact. **An online e-course on food system governance** was facilitated for selected ToT participants across Vietnam and Ethiopia to create a common language and baseline knowledge of FST for SHD. This e-course introduced concepts of FST, governance, SHD and multi-stakeholder collaboration. In parallel, the ToT team led by WSER/WUR (WSER/WUR ToT team) delivered interactive **online plenary sessions** that provided an overview of the national ambitions for food system analysis, unpacked the above concepts in local contexts, and introduced tools and methodologies on food system and multi-stakeholder analysis. The online sessions were also meant to build connections among ToT participants and stimulate the formation of a group of peer supporters.

Upon successful completion of the e-course and having attended a critical number of online sessions, participants qualified to attend the three-day face to face workshop. Before the workshop, participants assessed their confidence and perceived abilities in key skill areas through an online **individual self-assessment survey.** The outcome was used by the trainers to finetune the three-day program, for instance by spending more time on topics and skills highlighted by the participants' self-assessments.

The three-day face-to-face workshop built on the governments' approved National Action Plans (in the case of Vietnam) or the food system manual (in the case of Ethiopia). While these documents focused on the 'what' (what is a food system transformation, and what do we want to change and achieve?), the ToT workshop focused on how to support this transition. The main purpose of the ToT was to build a pool of trained facilitators equipped to facilitate learning processes on FST with different stakeholders in the food system. The workshop program contained three building blocks, each offering contextualized knowledge and participatory group exercises around the sub-national food systems using context-specific challenges provided by the local food system experts in the design phase[1].

1) **Food system analysis:** strengthen food system analysis skills by applying the knowledge and insights gained in the e-course and online sessions to local challenges in local food systems.

[1] Examples of case study challenges were lack of accessibility to affordable nutrient dense foods; reducing environmental footprint while ensuring availability of animal sourced foods; food safety for urban consumers; and the engagement of food retailers and MSME in FST.

2) **Multi-stakeholder analysis and the science of collaboration:** strengthen multi-stakeholder analysis and collaborative capacities to build and maintain effective collaborations for FST. Topics included how to navigate the partnership cycle, how to ensure inclusion, and working with power.

3) **Facilitating change:** building practical skills on how to influence institutions and facilitate change in organizations and groups of people, using appropriate didactic interventions in learning processes. Topics included inter- and intra-personal skills such as self-awareness, empathy, communication, and facilitation.

At the end of the three days, the participants, now trained facilitators of FST for SHD, prepared and presented a draft training program targeting a specific target group. This plan was reviewed by the other participants who provided feedback and suggestions. To gauge impact, a post-ToT evaluation and self-assessments provided critical insights into participants' growth, the program's effectiveness, and areas for improvement.

2.2.5 Rolling out the ToT Program

The next stage of the program was the rollout of the ToT program to a wider group of food system actors. This followed a multi-layered approach. One track was the standard ToT approach: the L1 trainers each contextualized the ToT to local stakeholders' needs and delivered the curriculum to different groups, thereby expanding the pool of trained facilitators for FST. However, not all stakeholders can or want to be trainers. Another rollout track was through sensitization workshops or projects as a base to disseminate knowledge, using selected topics of the ToT. The rollout was also considered an engagement tool, bringing various stakeholders together to analyze their food system and reflect on collaborative efforts to move towards a common food system goal aligned with national ambitions, taking existing institutions and power dynamics into account. By adopting this non-linear approach, the ToT has the potential to achieve more than enlarging a pool of trainers and trained participants. It can influence the thinking and subsequent discussions around FST at various levels and stay open to feedback to make the ToT curriculum ever more relevant for diverse food system actors.

3 Experiences From Practicing Capacity Strengthening in SHiFT

Capacity strengthening is a multifaceted process that operates across multiple dimensions, requiring targeted approaches to address challenges and opportunities at individual, group, and institutional levels. To facilitate reflection and learning from our experiences in co-designing and implementing capacity-strengthening interventions, we highlight country-specific insights at three levels: at individual level, group level, and institutional level. At the **individual level**, the project employed principles of single-loop learning, which emphasize acquiring new skills and improving existing practices. This level focused on equipping individuals with technical expertise and adaptive capabilities essential for addressing immediate challenges within their professional contexts. At the **group level**, the emphasis extended to double- and triple-loop learning, fostering critical reflection on underlying assumptions, norms, and systemic barriers. By engaging groups in iterative discussions and collaborative problem-solving, the project sought to build collective capacity, enhance intergroup synergy, and cultivate transformative approaches to shared challenges.

At the **institutional level**, capacity strengthening was framed within broader organizational systems, addressing structural and procedural inefficiencies while promoting resilience and adaptability. Interventions at this level aimed to embed learning within institutional practices, ensuring long-term sustainability and scalability. This chapter synthesizes the project's key findings, presenting an integrated analysis of the experiences and outcomes achieved at these three levels. By documenting the insights gained from country-based implementations, the narrative seeks to provide a base for reflection and learning benefitting practitioners, policymakers, and researchers seeking to design and implement effective capacity-strengthening initiatives.

3.1 Supporting Capacities at the Individual Level

The design, implementation, and facilitation of the e-course on food systems governance for 252 participants at the start of SHiFT sparked a lot of interest on the processes of partnerships, governance, and transformation of food systems for healthier diets. First launched in November-December 2022, this e-course was designed to create a common language and knowledge base among the SHiFT partners and other food system stakeholders across the three countries; and to help in facilitating continuous dialogues about food systems transformation for Sustainable Healthy Diets (FST for SHD). Of the 252 registered participants, 127 actively participated in the e-course and online platform (see Table 3). In total, almost a quarter of the participants (n=60) completed the full e-course.

Table 3: Overview of the E-Course Participants that Earned their Certificate in 2022-2023

Country	Participants	Active participants (% of total)	Certificate (% of total)
Bangladesh	78	38 (49%)	14 (18%)
Ethiopia	75	44 (59%)	27 (36%)
Vietnam	99	45 (45%)	19 (19%)
Stakeholder group	**Participants**	**Active participants (% of total)**	**Certificate (% of total)**
Government	113	62 (55%)	31 (27%)
Knowledge and education	55	24 (44%)	11 (20%)
International organization	52	28 (54%)	13 (25%)
Private sector	19	6 (32%)	3 (16%)
Civil society	8	4 (50%)	0 (0%)
Farmer organization	5	3 (60%)	2 (40%)
Total	**252**	**127 (50%)**	**60 (24%)**

Source: Curatr Social Learning Platform

WSER/WUR's WP5 researchers also conducted an evaluation to understand questions and needs that arose from the course. The evaluation of the e-course (De Groote et al., 2023) revealed that participants of the e-course gained valuable insights about food systems and their transformation. Many reported a better understanding of key concepts, the complexity of food systems, and the need for systems thinking to address challenges holistically. They also recognized the importance of multistakeholder partnerships, emphasizing collaboration and cross-sector engagement as essential for driving meaningful change. Participants also provided feedback on both content and learning methods, highlighting areas for improvement. They sought deeper insights into food safety, health-nutrition links, consumer behavior, addressing income disparities in food systems, and how to apply the food systems thinking. Many wanted more practical examples, case studies, and actionable guidance to implement FST effectively. There was also interest in cross-country learning and exploring governance models. Suggestions for learning methods included more interactive sessions, face-to-face training, skill-building in communication and data analysis, and tools to foster engagement, such as live discussions and hands-on activities. In short, a strong desire was expressed for follow-up activities:

- Face-to-face training: a need for a physical training with dedicated time for experience sharing and the ability to practice and learn process skills and competencies.
- Turning FST theory into action: providing clear case studies and examples of FST to translate concepts into implementable activities and action plans.
- Groupwork with peers to practice the use of food systems analysis tools such as the tools described in the Food Systems Decision-Support Toolbox (Posthumus et al., 2021).

The course was reopened in 2023 with additional content on multi-stakeholder collaboration for FST and SHD. Whereas in the first round the net was cast wide to recruit participants in the countries concerned, in the second round the selected ToT participants were the specific target group, but other participants were not excluded. In Vietnam, 30 participants enrolled in the e-Course and in Ethiopia 34 participants. During the live plenary sessions, the presentation and comparison of the different National Action Plans (NAPs) developed following the UNFSS dialogues, their similarities and differences in thematic focus points and action plans, showed the importance of contextualization of transformation pathways for each

country. This also enriched participants in the diversity of pathways and process towards sustainable and healthy diets. For a full timeline and overview of the capacity strengthening activities see Table 4.

3.2 Supporting the Capacities at Collective Level

While the e-course was based on single loop learning (are we doing things right?) and focused on building individual knowledge to contribute towards FST, the organizational self-assessment and the ToT's interactive online sessions and workshops moved SHiFT's capacity-strengthening approach to sense making and double and triple loop learning (are we doing the right things? What does this mean or tell us?). It focused on building collective capabilities at 'group' level to act and influence transformative change. The groups we refer to here could be place based (geographic boundary/country), within a social setting (a community or organization), or in a team setting (within a project/program).

3.2.1 Organizational Capability Self-Assessment

WSER/WUR's ToT team conducted capacity assessments with representatives of each of the SPs in Bangladesh, Ethiopia and Vietnam, using the adapted Five Capabilities Framework, with the following objectives: 1) Identify capacity assets and challenges of the SP organizations to inform the development of context-focused capacity-strengthening strategies. 2) Spark dialogues in the organizations about the processes and milestones to consider in shifting towards effective collective action. 3) Inform decisions about which capacities were to be supported in the organization per country. The framework was applied to explore the ability of the SPs to sense opportunities and threats to changing the food systems operation and utilize the opportunities to transform capacities and resources to support shifts systemic changes towards SHD.

The Five Capabilities Framework is a self-assessment instrument, implemented as a structured groups interview. WUR and representatives of the SHiFT Country Coordination Unit (CCU) facilitated focus group discussions with representatives of the SPs in Bangladesh, Ethiopia, and Vietnam (see Table 4).

Table 4: Implementation of the Five Capabilities Self-Assessment

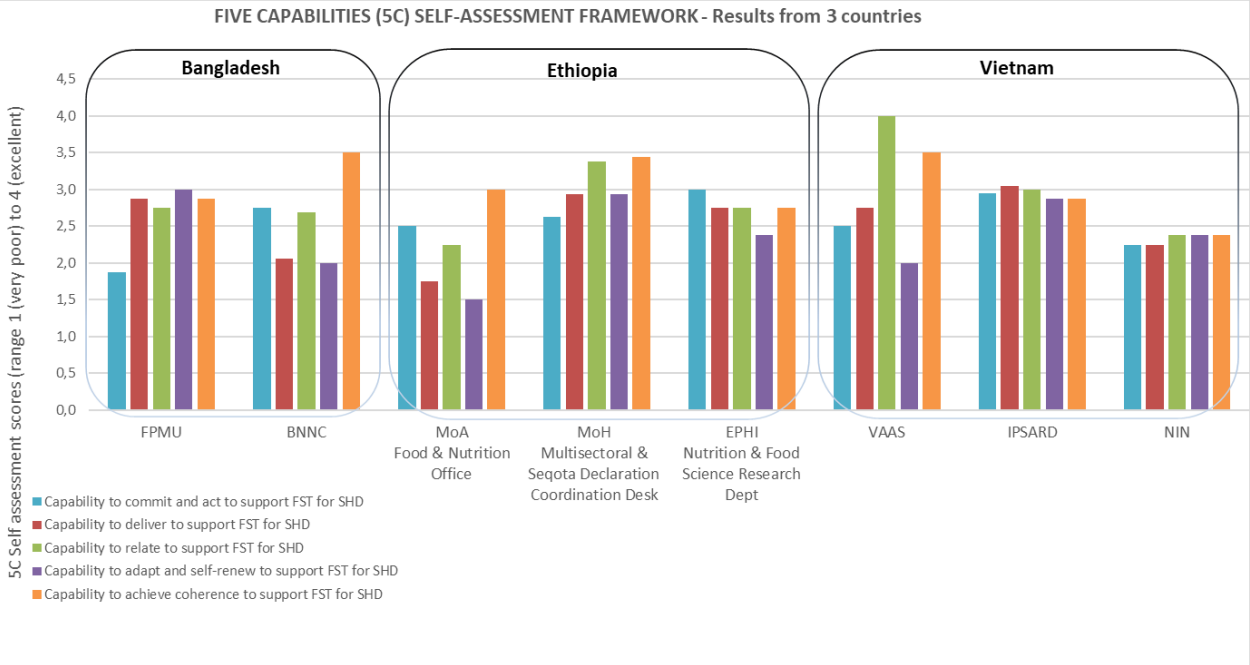
Country	Organization	Representatives	Date of assessment
Bangladesh	Food Planning and Monitoring Unit (FPMU)	Research directors and researchers (food security, food and nutrition policy, food safety)	June 2024
	Bangladesh National Nutrition Council (BNNC)	Medical doctors, nutrition researchers	
Ethiopia	Food and Nutrition Office of the Ministry of Agriculture (MoA))	Nutrition officers/researchers	Oct 2023
	Multisectoral and Seqota Declaration Coordination Desk of the Ministry of Health (MoH)	Health and nutrition advisors and managers	
	Nutrition and Food Science Research Department of the Ethiopian Public Health Institute (EPHI)	Nutritionists	
Vietnam	Vietnam Academy of Agricultural Sciences (VAAS)	Agronomists, agro-ecologists	July 2023
	Institute for Policy and Strategy for Agriculture and Rural Development (IPSARD)	Research directors and researchers (food security, food and nutrition policy)	
	National Institute for Nutrition (NIN)	Nutrition officers/researchers	

Source: Authors' own elaborations

Each capability had four statements that participants reflected upon, allocating a score that indicated how accurate the statement was for their organization. For each capability, representatives of the SPs were asked to read each statement individually and allocate a score based on a four-point scale (score 1: poor or non-existent; score 2: poor; score 3: satisfactory; score 4: excellent). and then discuss with others representing their organization, to arrive at a jointly agreed score. Next, they collectively agreed on the rationale for the allocated score for contextual insights. These steps were repeated for all the four statements under each capability. In total 20 statements were discussed in small focus groups, ranging from four to seven participants. Lastly, scores allocated per statement were aggregated to calculate the overall average score for each capability.

All the average scores were plotted in a representation graph, e.g., spider or bar graph (see Figure 3) to illustrate the status of each capability. The resultant graphs formed the basis for all SPs to collectively reflect upon and identify their priority objectives and strategies for capacity strengthening, discuss how to leverage and sustain their existing capacity assets, and to agree on a potential performance monitoring plan. It is important to note that allocated scores reflected the opinions of representatives involved at the point of administering the self-assessment. The average scores also pointed to the processes to strengthen and opportunities to leverage at a specified time in an organization to support transformative processes in the food systems. The facilitators guided the group to reflect and make sense of the final score and the rationale. In cases where participants did not reach consensus about the final, facilitators steered the dialogue to reach agreement and took note of the areas of contention.

Figure 3: Five Capabilities Self-Assessment Scores by Organization and Country



Source: Authors' own elaborations

Overall, all SPs in the three countries scored the defined five capabilities at a relatively satisfactory level, average scores across countries ranging from 2.4 (capability to adapt and self-renew) to 3.0 (capability to achieve coherence). This can be seen as an indication that the SPs involved in SHiFT felt themselves engaged, capable and to some extent well equipped to participate in the process of FST for SHD. At the same time, they clearly indicated areas for improvement.

In Bangladesh, the Food Planning and Monitoring Unit (FPMU) and the Bangladesh National Nutrition Council (BNNC) exhibited differences in their capabilities. FPMU scored higher on the capability to delivering results and adapting to change, while BNNC scored higher on the capabilities to achieve coherence and stakeholder relations for FST. Both entities have long-standing collaboration with diverse stakeholders, focusing on nutrition (BNNC) and food systems (FPMU), and actively engage in policy development, governance, and monitoring at national and subnational levels.

In Ethiopia, the Multisectoral and Seqota Declaration Desk, Ministry of Health (MoH) prioritized the capability to commit and act especially with regards to data-driven decision-making. While the sector has clear visions and strategies in various sector policies, and has information management systems to track sector performance, it struggles to utilize routine lower-government level data effectively. MoH convenes different stakeholders to dialogue about food systems and nutrition, but key challenges include weak private sector engagement, unclear role divisions between MoH and the Ministry of Agriculture (MoA) in FST, and insufficient governance structures at all levels. MoH seeks SHiFT's support in designing multi-stakeholder platforms, including sharing experiences from other countries about the design and operations of multi-stakeholder partnerships, and harmonizing nutrition groups from national to grassroots levels. The MoA highlighted the need to strengthen the capability to adapt and self-renew to strengthen the sector's involvement in the FST agenda. While Ethiopia's FST roadmap exemplifies the MoA's ability to mobilize and engage different actors in developing strategic policies, the challenge is to translate that into practice and to adapt work procedures and enhance learning and data utilization. The

Ethiopian Public Health Institute (EPHI) identified adapting and self-renewing as a key area for capacity strengthening.

In Vietnam, the Vietnam Academy of Agricultural Sciences (VAAS) and National Institute for Nutrition (NIN) prioritized the capability to commit and act, while all three SPs – the Institute for Policy and Strategy for Agriculture and Rural Development (IPSARD), VAAS and NIN - emphasized the need to strengthen their capacities to adapt and self-renew. NIN also prioritized the capability to relate, and IPSARD the need to further develop the capability to deliver for cascading FST processes to subnational levels. Challenges include integrating ambitions from the Sustainable Food Systems National Action Plan (SFS NAP) into sector policies, weak multi-sectoral M&E systems, and a lack of cohesive narratives and initiatives on FST.

Across countries, challenges include limited knowledge integration, insufficient monitoring systems, and gaps in internal learning and bottom-up processes. National ambitions for FST often still lack clear implementation pathways and indicators to assess progress. SHiFT's role could include defining FST indicators, enhancing governance structures, and aligning global narratives with national initiatives for effective implementation. The SPs mentioned supporting some aspects of the food systems, such as nutrition in health care, marketing and – particularly in Ethiopia and Vietnam - agroecological transitions. While there is global and regional momentum about transforming food systems, more work and clarity is necessary within national governments to ensure these ambitions are effectively translated at different implementation levels.

3.2.2 Visioning for Organizational Capacity Strengthening

From June to September 2024, the WSER/WUR ToT team facilitated interactive sessions (face-to-face in Bangladesh, hybrid in Ethiopia and online only in Vietnam) with SPs in all countries, focusing on their roles in advancing the FST towards provision of SHD. Participants reviewed their Five Capabilities self-assessments, envisioned their roles by 2030, and mapped activities, outcomes, and required capacities. Each partner created a (online) mind map to visualize their vision.

Left: Visioning workshop in Bangladesh

SPs identified organizational changes, capabilities to strengthen, necessary support, and key actors for driving SHD. While their current mandates address issues relevant for SHD, implementation is limited and lacks prioritization. SPs emphasized the need to strengthen human resources, institutional capacities, and financial allocations for these agendas. They outlined explicit capacity-building needs and approaches (see Table 5). FST and SHD were recognized as new concepts for all partners. In the action planning sessions SPs in the three countries focused on developing capabilities across two key areas:

- Capability to commit and act: this focuses on strengthening food and nutrition systems through targeted actions and strategic planning. Key actions identified included training and support for developing a national action plan for nutrition, improving food and nutrition structures, supporting implementing strategies on postharvest management, food safety, nutrition-sensitive agri-food system, and cascading food and nutrition security (FNS) guidelines to regional levels. Research and evaluation studies prioritizing FST and SHD should be integrated in the work, which should also address climate change mitigation and adaptation.

- Capability to deliver: this emphasizes building the skills, knowledge, and resources necessary to advance FST and SHD. Key actions identified included capacity development through research, training in SHD and research methodologies, and strengthening financial management and resource mobilization. Training programs should cover GIS-based evidence generation, food-based dietary guidelines (FBDG), and nutrition-sensitive agriculture (NSA) to promote healthy food production and consumption.

In the action plans a skewed interest towards the more concrete and technical skill building is emerging, expected to translate into improved action and performance in support of FST for SHD. The other three capabilities examined in the organizational assessments emphasize the importance of stepping beyond routine operational tasks to create space for reflection. This involves evaluating oneself and the organization in relation to other actors and dynamics within the broader environment. For many organizations, this represents a departure from their usual ‘action-oriented’ approach. However, such reflective practices are proven to deliver significant social returns on investment, fostering deeper insights, improved collaboration, and more effective strategies conducive for supporting transformative change processes. Defining and monitoring food system changes and SHD is essential for actionable steps and effective progress tracking. Reflection, learning, and data-driven decision-making remain weak areas for partners and are priorities for skill development.

Table 5: Strategic Partner Suggestions on Capacity Strengthening to Support Food Systems Transformation for Sustainable Healthy Diets

		Capability to commit and act	Capability to deliver	Capability to relate	Capability to adapt and self-renew	Capability to achieve coherence
Bangladesh	FPMU		▪Conduct research (capacity development)		▪Capacity development on monitoring and evaluation	▪Establish a food systems hub (governance)
	BNNC	▪Training on National Plan Of Action (NAP) for nutrition ▪Develop NAP on nutrition	▪Training on SHD Training in research and learning methods ▪Financial management and resource mobilization	▪Research and cross-sectoral learning for BNNC staff ▪Information, communication technologies ▪Exposure visits	▪SHD monitoring, evaluation and learning	▪Policy analysis and design ▪Information hub and data repository
Ethiopia	MoA Food & Nutrition Office	▪Improve or ensure food and nutrition structures at all levels ▪Implement recently launched national strategies on postharvest management, food safety and quality and nutrition sensitive agri-food system	▪Improve resource mobilization and utilization ▪Promote FBDG through knowledge and skills approach ▪Promote NSA SBCC towards production and consumption of healthy and nutritious foods	▪Enhance multisectoral coordination ▪Strengthen nutrition sensitive agri-food system stakeholder's forum ▪Promote food and nutrition through different media	▪Adopt new technologies to improve food and nutrition ▪Conduct research and advocacy on food and nutrition innovations	▪Coordinate the agri-food system within the Ministry
	MoH Multisectoral & Seqota Declaration Coordination Desk	▪Cascade the multisectoral FNS guidelines to regional levels	▪Organize trainings on FST and SHD for staff Arrange training on GIS- based evidence generation Identify applied FNS and SHD-focused research topics and solicit support	▪Organize local and global level experience sharing and exchange on FST and SHD	▪Document learnings about FNS and SHD in Ethiopia	
	EPHI Nutrition & Food Science Research Dept	▪Prioritize FST and SHD in designing research and conducting evaluation studies	▪Improve capacity of staff to conduct research on FST and SHD; new methodologies to assess food systems, environments, and diets ▪Budget and resource mobilization for research activities		▪Continue to integrate FST and SHD in internal monitoring and evaluation systems	
Vietnam	VAAS	▪Address climate change mitigation and adaptation as issues of interest	▪Build capacity on the technical, social, and organizational aspects of FST, climate change mitigation and adaption, SHD and environmentally friendly (agriculture) inputs. ▪Undertake food environment research to understand consumer behaviors, food markets, and logistics ▪Training of staff and relevant stakeholders to adapt and localize methodologies and technologies to understand and support FST for SHD	▪Share experiences at national and international level learning events	▪Build platforms and facilities for learning	
	IPSARD	▪Identify successful models/lessons about FST for SHD and conduct training to support integration in policy processes	▪Training on healthy/unhealthy food concepts and approaches to secure access to healthy foods ▪Analyze (FST, SHD) data and scenario planning			
	NIN	▪Develop food systems and SHD goals and plans	▪Training to increase knowledge about food systems ▪Develop training materials and documentation of training	▪Implement practical (FST, SHD) activities in the community		

3.2.3 Training of Trainers on Food Systems Transformation for Sustainable Healthy Diets

In 2022, as part of SHiFT, Wageningen Centre for Development Innovation (WCDI)[2] conducted an e-course on food system governance. Recognizing the need to further empower SPs, SHiFT's management proposed an initiative in early 2023 to build on this foundation. They requested the development of a Training of Trainers (ToT) program focused on FST, with a particular emphasis on fostering SHD.

Responding to this call, the WSER/WUR ToT team launched an internal design workshop to shape the vision for this ambitious initiative. The brainstorming session generated a wealth of ideas, encompassing diverse curriculum topics and delivery formats. These were systematically organized into a 'menu of options' that accounted for varied objectives, target audiences, and logistical considerations. From this menu, four distinct scenarios emerged, reflecting different delivery modalities: online, face-to-face, sequential, and hybrid, along with associated durations, time investments, and costs. The proposed options and scenarios were then shared with WSER/WUR ToT team, including CCs, for initial feedback and strategic guidance. Among the countries involved, Vietnam stood out as a pilot location, thanks to its government's proactive engagement in the UN Food System Summit—a global initiative driving national FST strategies. This alignment of priorities made Vietnam an ideal candidate for the first ToT pilot.

Above: Interactive discussions at the design workshop in Vietnam.

In Vietnam, a formal consultation meeting with Vietnam's SPs further refined the program's design, ensuring it addressed local needs and respected the nation's unique context. Guided by WSER's commitment to co-designing and demand-driven learning, the process culminated in an in-country design workshop in July 2023. Organized in close collaboration with Vietnam's CC, this workshop played a pivotal role in shaping the program's objectives and defining its learning outcomes.

Sets of skills identified during the design workshops emphasized the importance of effective communication, including active listening, non-verbal cues, and the ability to convey complex ideas in layman's terms (see Table 6). Equally vital was the capacity to engage audiences through empathy, cultural sensitivity, trust-building, and tailoring messages to their specific needs. In addition, strong facilitation abilities were seen as crucial, such as fostering teamwork, guiding co-creation processes, managing multi-stakeholder engagements, and utilizing participatory tools to ensure inclusive collaboration.

Above: ToT design workshop participants in Vietnam.

Table 6: Skills and Competences for Delivering FST for SHD Training Identified in ToT Design Workshops

Required skills and competences		Bangladesh	Ethiopia	Vietnam
Core communication skills	Good communication skills	x		x
	Active listening skills	x	x	x
	Non-verbal communication skills	x		x
	Communicating in laymen's terms	x	x	x
Interpersonal and emotional intelligence	Empathy and respect	x	x	
	Culture-sensitiveness			x
	Creating a trusting environment	x		x
	Understanding the audience to tailor to them	x	x	
Facilitation and collaborative processes	Facilitation skills		x	x
	Facilitating teambuilding			x
	Co-creation processes		x	
	Establishing and managing MSP processes		x	
	Interactive and participatory tools toolkit		x	x
	Creativity		x	
Knowledge and content management	Contextualizing knowledge	x	x	x
	Content mastery		x	
Leadership and conflict resolution	Leadership skills	x		
	Conflict management		x	
Presentation and delivery skills	Presentation skills		x	x
	Public speaking skills	x	x	
	Storytelling skills	x		
	Time management skills		x	

Source: Authors' own elaboration

Building on the design workshops, the ToT's program was shaped in close collaboration with CCs and SHiFT's SPs, all of whom worked to select the appropriate participants, send out communications, and prepare materials and training venues.

The results of this intensive co-creation process gave rise to a structured hybrid learning trajectory, the Training-of-Trainers (ToT) level 1 (see Figure 4), tailored to empower trainers with the tools and knowledge needed to catalyze FST and champion SHD. This approach allowed us to deliver the theory and concepts online, followed by applying what we learned on contextualized challenges and cases in groupwork during face-to-face trainings, with a strong focus on practicing inter- and intra-personal skills and competencies in the process.

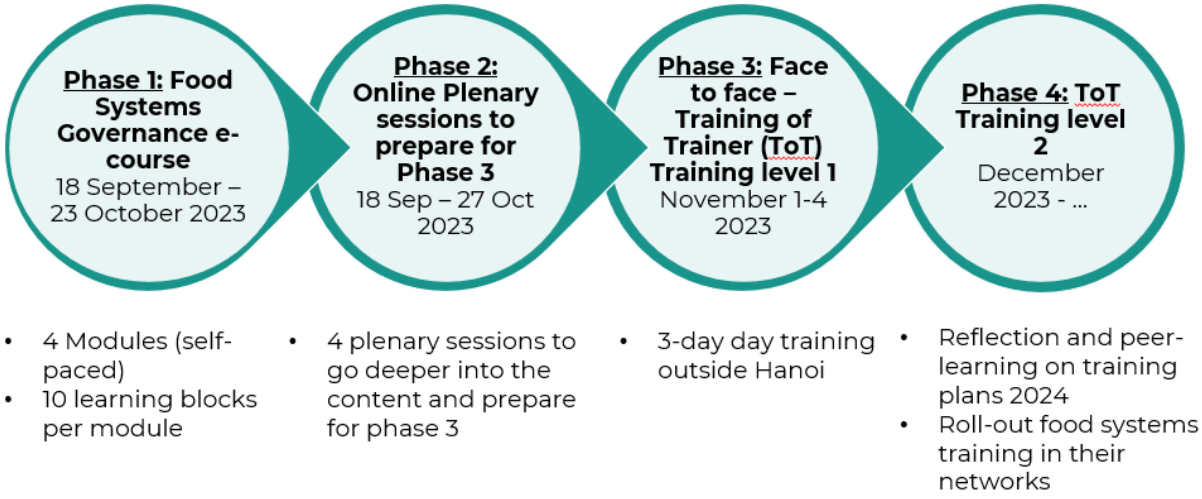
The full ToT approach consisted of an e-course, interactive online plenary sessions and a three-day workshop. It was specifically designed to connect different food system stakeholders in a learning journey, to stimulate horizontal knowledge exchange (between the participants) and vertical knowledge (deepening insights by considering diverse perspectives). The online theory and concepts in combination with what was learned in the three-day workshops served as a basis for the trainers to design their own training or adapt existing courses with additional learning materials related to amongst others: SHD, FST multi-stakeholder collaboration and governance. Due to the diversity of the level 1 trainers, the dissemination of these trainings reached a wide variety of target audiences, from university students to national, regional, and local policy makers, researchers, and private sector actors.

Above: Participants doing a local food system analysis at the ToT workshop in Vietnam.

This initiative not only reflects SHiFT's strategic priorities but also embodies WSER's mission to create impactful, participatory learning experiences.

Above (both photos): Participants in the ToT workshop in Vietnam.

Figure 4: Vietnam's ToT Learning Trajectory



Source: Authors' own elaborations of the ToT curriculum

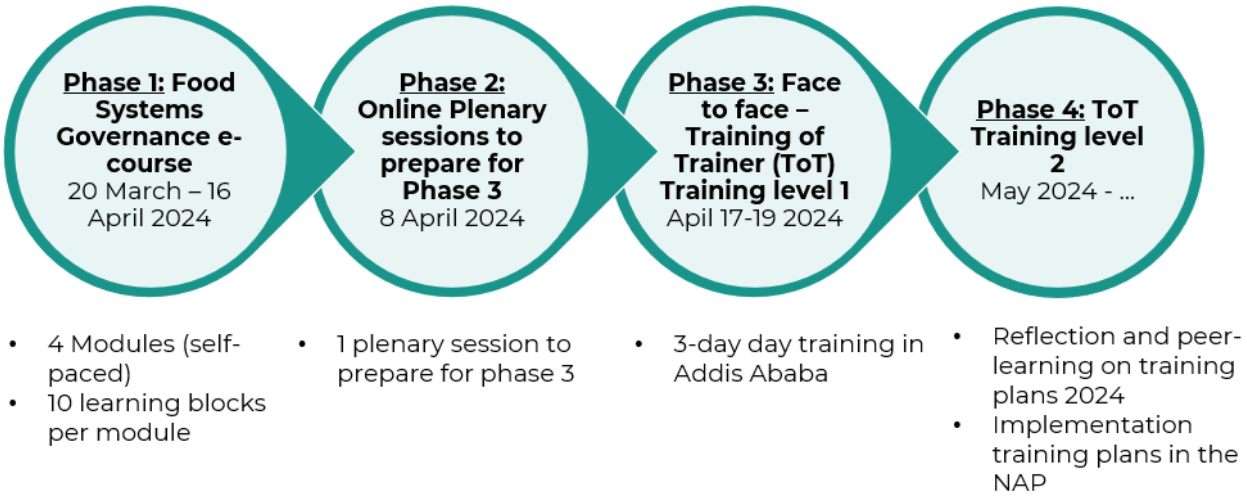
A similar approach was implemented in Ethiopia and Bangladesh, building on lessons learned from Vietnam. WSER's ToT team collaborated with SPs in Ethiopia and Bangladesh to address specific needs and adapt to contextual parameters.

In Ethiopia, the government was in the process of developing a Food System manual to be rolled out through a ToT approach. To support this effort, a consultation session and an in-country design workshop were conducted in 2023. Additionally, the ToT program lead visited Ethiopia in February 2024 to ensure alignment with and enhancement of ongoing Food System training initiatives. By linking SHiFT's ToT to the nationally endorsed Food System manual and its rollout, the program avoided duplication of efforts, maximizing both impact and reach.

While the Food System manual focused on defining 'what is a food system' within Ethiopia's context, SHiFT's ToT emphasized 'how to support FST.' This complementary approach strengthened Ethiopia's overall capacity for food system innovation. The ToT learning trajectory for Ethiopia is illustrated in Figure 5.

Below (both photos): Participants working at the ToT workshop in Ethiopia.

Figure 5: Ethiopia's ToT Learning Trajectory



Source: Authors' own elaborations of the ToT curriculum

In Bangladesh, the government was being challenged by its citizens during consultations with SPs. The design workshop (initially planned for July 2024) was postponed to October due to the political unrest and the ousting of the long-term government. The design workshop confirmed the demand by SPs and other food system stakeholders for a ToT on FST for SHD specific to Bangladesh's context. However, given the precarious nature of the (at the time) nascent government, the SHiFT ToT team decided to deliver the ToT in 2025, once new governance structures and the people responsible for them were in place.

Above (both photos): Participants at the design workshop in Bangladesh.

3.2.4 Key Differences in ToT Implementation: Vietnam vs. Ethiopia

The differing outcomes of Vietnam's and Ethiopia's Training of Trainers (ToT) implementations can be attributed to several distinctions in approach. One difference was participant preparation and knowledge baseline. In Vietnam, participant preparedness was quite high. All ToT participants were required to complete the e-course on food system governance and attend a most of the online plenary sessions. This process was closely monitored by Vietnam's CC, ensuring that only those who met the prerequisites

could advance to the final workshop. This approach resulted in a 15% drop-off rate; however it established a uniform baseline of food systems knowledge, which supported a productive workshop.

Conversely, Ethiopia's participants varied significantly in their readiness. While a few had completed the e-course, others felt they possessed the required prior knowledge. Unlike Vietnam, the completion of preparatory phases (1 and 2) was not closely tracked. This led to disparate levels of understanding among participants, which hindered the group's learning process at the three-day workshop. From this, we can conclude that the synchronous completion of all ToT phases is crucial to streamline group learning and avoid discussions about previously clarified concepts.

Another difference was the positioning of the ToT within the country's FST strategy. In Ethiopia, SHiFT's ToT was strategically aligned with the nationally endorsed Food System Manual and its associated ToT rollout plan. This alignment enabled SHiFT's ToT to gain national endorsement, ensuring broad, country-wide reach and significant potential for impact. However, as the Food System Manual and rollout process was led by the government, SHiFT's ToT and its actual roll depended on the status of the Food System Manual. Delays in completing the manual, its facilitation guide, funding, and government approval for a rollout therefore also affected SHiFT's ToT goals. Besides affecting the timing and impact of the ToT, being part of a national rollout also affected the visibility of SHiFT's ToT curriculum, which complicates efforts to measure SHIFT's contribution to the national roll out effort.

In Vietnam, the training is a stand-alone curriculum and a rollout to the provinces has been endorsed by the government. This is a step-by-step process as it is not part of any other national rollout. While the rollout may seem staggered, it fully aligns with the theory of change being developed under SHiFT for Vietnam for supporting FST at the subnational level: starting with sensitization at national level, then developing food system profiles at provincial level (filled with existing data from the CSO), and ultimately moving to the implementation of the ToT curriculum.

3.2.5 Rollout Approach of the ToT

After completing L1, the trained facilitators received coaching to conduct follow-up sessions and Level 2 and even 3 training, cascading knowledge and skills further. To reinforce cross-learning, SHiFT organized Share Fair events, fostering peer-to-peer exchanges among Vietnam, Ethiopia, and Bangladesh. This interactive platform not only strengthened connections but also encouraged innovative practices inspired by diverse experiences. SHiFT's capacity-strengthening approach exemplified a well thought out, scalable, and adaptive framework. By integrating mentorship, organizational reflection, collaborative design, and a multi-tiered training methodology, the framework not only equips stakeholders with critical skills but also drives meaningful, sustained transformation in food systems across diverse contexts. See table 7 for a full overview of the capacity strengthening actions at collective level.

Table 7: Capacity-Strengthening Actions Implemented by SHiFT

				2022			2023			2024		
	Action	**Target group**	**Reach**	**BGD**	**ETH**	**VTM**	**BGD**	**ETH**	**VTM**	**BGD**	**ETH**	**VTM**
Individual level	e-Course 'Food system governance'	Broad group of stakeholders in food system	252 participants	x	x	x						
	e-Course 'Food system governance for SHD' (tweaked for ToT trainees)	Selected ToT trainees	30 (VTM) 34 (ETH)						x		x	
Organization level	Implementation 5C self-assessment	SPs	3 to 6 participants per SP					x	x	x		
	Vision and action planning workshop	SPs	4 to 6 participants per SP							x	x	x
Group level Training of trainers	ToT design workshop	Representatives from SPs, government, training, and research organizations, (i)NGOs, academia	25 to 30 per workshop					x	x	x		
	ToT Level 1	Representatives from SPs, government, training, and research organizations, (i)NGOs, academia	26 to 30 per workshop						x		x	
	ToT Level 2	Staff SPs intra organizational learning	4 to 6 participants per SP									x
	ToT Level 2	Provincial government staff & other stakeholders in two provinces	75 participants									x
	ToT Level 2	Regional government staff in two regions	30 participants								x	
Reflexive learning	Share fair & cross-country learning	SHiFT staff and ToT trainees	10 to 20 per workshop								x	x

Source: Author's own elaboration

3.3 Supporting the Capacities at Institutional Level

The capacity of Training of Trainers (ToT) programs to drive transformative change within food systems is contingent on both political and organizational environments. At an individual level, participants require their supervisors' approval to dedicate time to the ToT program and actively contribute to its rollout. At the organizational level, institutions must align with national political commitments to FST and support their staff in acquiring the necessary skills and knowledge to succeed in this endeavor. Furthermore, institutionalized capacities, bolstered by robust capacity-strengthening programs, play a crucial role in anchoring transformative change within the food systems landscape.

Recognizing these dynamics, the ToT program emphasized not only the design and content of its curriculum—ensuring contextual relevance and robust supporting materials—but also its external environment. A key objective was to connect the program and its rollout process with existing national policies and strategies through close collaboration with national FST governance bodies. By doing so, the ToT program aimed to embed its transformative processes within the broader political landscape, facilitating long-term sustainability and impact.

Woodhill's institutional framework (2008), which identifies four types of institutions—association, meaning, action, and control—provided a theoretical lens to guide this integration. The ToT program specifically focused on institutions of association (organizations and formal/informal relationships) and control (policies, strategies, and formal/informal rules). These efforts varied across countries, reflecting their unique political and institutional landscapes.

In Vietnam, the ToT team supported the development of the Vietnam Food Systems Transformation Partnership, a multi-sectoral national body tasked with implementing the National Action Plan. This involved providing feedback on key policy documents and coaching the country coordinators (CCs) who collaborated directly with the National FST Partnership.

In Ethiopia, the team worked closely with an inter-ministerial governance body to integrate the ToT program into the national framework. This included contributing to the development of the national Food System Manual and coaching CCs who were embedded within the governance structure.

In Bangladesh, where the institutional and political landscape is still evolving, the ToT team provided strategic recommendations. Drawing on lessons from Vietnam and Ethiopia, they advocated for prioritizing support to the emerging multi-sectoral FST governance body and strengthening the organizational capabilities of SPs before implementing the ToT program.

By engaging with national governance mechanisms and tailoring approaches to specific contexts, the ToT program demonstrated its potential to anchor transformative change within institutional frameworks. This approach not only fosters alignment with national priorities but also positions participants and organizations to act as agents of change in the complex and dynamic landscape of food systems transformation.

4 Reflection and Discussion

Our reflections on our case-based experiences in the design and implementation of capacity-strengthening approaches supportive of driving food systems transformation for sustainable healthy diets (FST for SHD) address different aspects: the nature of capacities needed and the target group, the methodology of the ToT and what worked best in strengthening FST capacities, and the capacities needed to deliver capacity-strengthening strategies. While reflecting on our own practice, we noted that our working definitions of capabilities and capacities provided under section 2.2 required further explication and clarification in the realm of FST for SHD. We also noted that in the cited literature definitions on capacities are not uniform.

4.1 What Capacities are Needed for Food Systems Transformation for Sustainable Healthy Diets?

To support FST, a combination of (inter-) personal, functional and technical capacities is essential. Our case study reflections highlighted the importance of balancing inner, internal and external capacities. Inner capacities focus on self-awareness, connecting and relating to others, visioning, having a sense of purpose, and agency. Internal capacities focus on strengthening organizational structures and processes, while external capacities emphasize collaboration across sectors and stakeholders to drive systemic change. These capacities empower food system actors by fostering their agency and cultivating leadership from the bottom up. This ensures that change is driven by those directly involved, creating more sustainable and inclusive outcomes.

Developing inner, internal and external capacities implies learning at multiple levels: single loop learning (technical knowledge transfer, e.g. e-course); double loop learning (applying concepts to practice); and triple loop learning (what does this mean for my country, my organization, and for me as a food system actor?). Together, these levels of learning promote a comprehensive understanding and enable meaningful action.

The key features of food system transformative capacity emerging from our case study reflections align with our findings from literature (section 1.3) and resonate with principles such as fostering ownership and empowerment, experiential and practice-based learning, social and collaborative learning, and organizational learning. They align with practices that deliberately create learning spaces for societal learning, stimulating integrated co-learning processes that develop both individual and systemic agency, building on transformative consciousness practices. These approaches emphasize capacity strengthening for meaningful change, grounded in ownership, collaboration, and continuous learning.

4.2 Whose Capacity Should be Built?

There is merit in selecting participants based on their motivation (innate agency), supportive environment (e.g. organizational support to roll out the training), and their role and level of influence in the food system alongside a focused exploration of which actors matter in the system. Starting with building a good understanding of the actor landscape is a good start, but building relationships with actors, and an understanding of their connectivity and of who really feels involved in the matter of FST is helpful to determine in whom to invest.

In the literature, so far the focus is most on the value of building transformative capacities amongst researchers or M&E professionals. Other literature proposes a blanket approach (‘everyone’s capacity

should be built). Our experience tells us that it is not so much the profession, but the innate drive (leadership potential) and the influence individuals have on decisions in their organizational or societal roles that steer the food system at different levels.

4.3 What Capacity-Strengthening Practices are Essential to Support Food Systems Transformation?

Transforming a food system entails a combination of new agricultural techniques and solutions, new approaches to ensure availability of nutritious foods in different geographical areas which are accessible to all, new forms of governance and collaboration between food system actors, and people with transformative capacities to facilitate and lead the transformation.

Our ToT methodology employed a full-body learning methodology, engaging participants holistically through their heads (cognitive thinking), hearts (emotional connection), and hands (practical skills application). The participatory design workshop was tailored to generate the necessary insights for developing a contextualized ToT for the country. It also served as a live demonstration of participatory facilitation techniques, which were integral to both the online sessions and the face-to-face workshop.

The online plenary sessions stimulated collaboration and active participation through group discussions, breakout rooms, and a Padlet board where participants could upload their group work and receive feedback from their peers. The final three-day workshop was based on the principle of experiential learning: participants experienced the entire learning process firsthand, equipping them to facilitate similar, locally adapted workshops. This approach equipped participants to replicate the learning process in diverse settings effectively.

The group work in the ToT workshop stimulated collaborative and interactive learning which facilitated mutual knowledge exchange. Participants were encouraged to share their expertise, challenge each other and keep an open mind. Early in the workshop, the concept of group conformity was introduced, highlighting the power of groups and ‘groupthink’ and how pursuing conformity and consensus can diminish creativity and learning.

To practice facilitation skills, each group appointed a facilitator, note-taker, reporter, group dynamic observer, and timekeeper. By rotating roles, participants honed key skills such as precise communication, synthesis, observation, deep listening, and questioning. By switching roles with each new exercise, group members practiced facilitating a learning activity from different role perspectives which increased their awareness of the process of learning.

Besides paying close attention to the design process and content of the ToT program (contextualized curriculum and supporting materials), the ToT team also paid attention to the external environment of the ToT. The aim was to link the ToT program and its rollout process to existing national policies and strategies in close collaboration with national FST governance bodies. This would ensure a level of institutionalization of the ToT which would anchor the transformative process of change into the national political landscape.

Overall, we experienced that the ToT’s transformative capacity and impact depends on conducive political and organizational environments. At an individual level, participants need their supervisor’s approval to not only spend time on the ToT program but also participate in the rollout. At a collective level, organizations need the capability to relate and adapt to the political commitment of their government

to FST, and to find coherence by championing their staff to be at the forefront of building skills and knowledge to succeed. Lastly, at an institutional level, food system transformative capacities need to be embedded in national governance structures to anchor transformative change for food systems.

4.4 What Capacities are Needed to Design and Deliver Capacity-Strengthening Trajectories for Food Systems Transformation?

From our experience, designing and delivering capacity-strengthening trajectories for FST requires a diverse set of skills and qualities, including:

- Strong facilitation skills: Employing participatory approaches and managing group dynamics effectively.
- Co-creation skills: Deep listening and collaboration to foster shared ownership.
- Self-awareness: Understanding oneself as an individual and facilitator, drawing on empathy, compassion, and emotional intelligence.
- Bridge-building abilities: Connecting diverse viewpoints and supporting mutual understanding.
- Flexibility: Adapting to emerging challenges and opportunities.
- Engagement skills: Interacting effectively, both digitally and in person.
- Navigational skills: Addressing vested interests, balancing actors' needs, and managing power dynamics within the system.

The Training of Trainers (ToT) team included members with varied profiles, such as expertise in digital learning platforms, group facilitation, multi-stakeholder collaboration, program design, and deep academic reflection skills. The ToT team members' capacities were, at times, challenged by local dynamics and project pressures. Frequent project team meetings with country coordinators (CCs) proved instrumental in aligning perspectives, interpreting emerging issues, and finding solutions collaboratively.

Additionally, the ToT team from WSER/WUR engaged in periodic self-reflection to assess their capacities and skill sets, ensuring effective synergy with country-based expertise to enhance overall project outcomes.

5 Conclusion

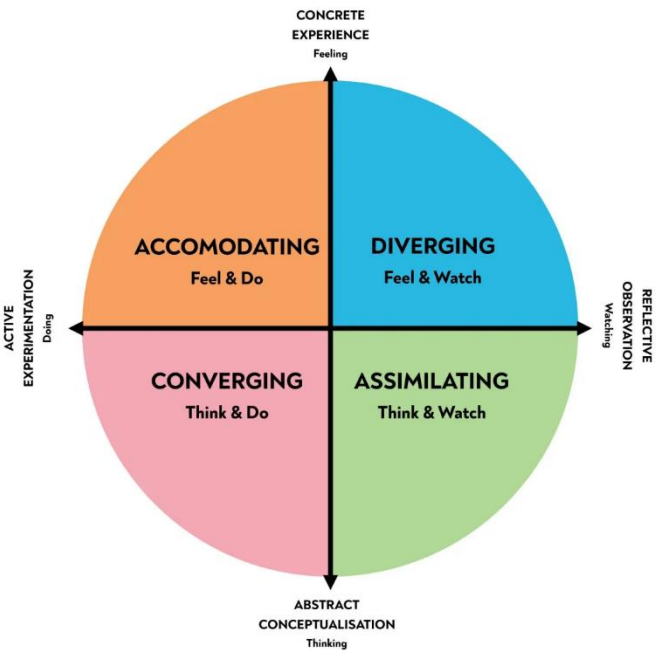
From our experience designing and delivering capacity-strengthening trajectories for food system actors in Bangladesh, Ethiopia, and Vietnam, the need emerged for tailored, inclusive, and adaptive approaches that resonate with the unique dynamics of food systems within the different countries, and even within the countries at subnational level. Being able to deliver such customized capacity-strengthening approaches requires tailored yet adaptive practices in the design and implementation of these capacity-strengthening trajectories. Seven principles emerged from our case-based practice, which were helpful for developing and delivering responsive capacity-strengthening trajectories. Our case-based identified principles align partially with those found in the literature, such as **context-specificity, respect and equity, addressing power dynamics, cultural relevance, utilizing evidence-based practices, and embracing the plurality of knowledge**.

5.1 Principles for Designing and Delivering Capacity-Strengthening Trajectories for Food System Actors

5.1.1 Principle 1: Contextualizing the Learning Journey in the Political Economy Landscape

Before even beginning to design the ToT at country level, the ToT team researched the country's food system context using national and international policy and strategy documents, discussions with CCs and meetings with local partners. This was to ensure that the capacities to be built could actually be applied. Every country had a different emphasis. For example, in Vietnam the focus was on implementing the National Action Plan, which was already fully endorsed with the national convener of the UNFSS as an active co-designer. Given Vietnam's economic profile, the issue of SHD was well received, while Ethiopian experts felt this was a 'nice to have' but that more emphasis should be given to availability and accessibility of food. Their focus was on finalizing and rolling out the Ethiopian Food System Manual, and hence attention was placed on aligning the different food system initiatives, linking up with the inter-ministerial governance body, and (given Ethiopia's internal conflicts) working with power dynamics. Staying true to the principle of contextualization, the WSER/WUR ToT team decided to postpone the ToT in Bangladesh due to the shifting political economy landscape which would inhibit proper contextualization.

Figure 6: Kolb's Experiential Learning Cycle



Source: McLeod 2017 (updated February 2024)

5.1.2 Principle 2: Adult-Based Full Body Learning

This principle can also be called ‘know your participants’. Strengthening capacities as a pathway for food systems transformation (FST) is most effective when targeting participants that can influence decision making and have an innate drive to use their personal leadership to support transformative processes. Most of the times, these are adult professionals with technical expertise related to the food system. Adult learning uses the learners’ reflection on concrete experiences to build and share knowledge. The knowledge should be applicable in the near to immediate future to make it relevant in their experience.

As such, the program promoted an exchange of expertise and collaborative knowledge building and followed Kolb’s experiential learning cycle (McLeod, 2017; Kolb, 1984), emphasizing:

1. **Concrete experience**: Encountering a new situation or reinterpreting an existing one.
2. **Reflective observation**: Analyzing the experience considering prior knowledge, identifying inconsistencies.
3. **Abstract conceptualization**: Formulating new ideas or modifying existing concepts.
4. **Active experimentation**: Applying these ideas in real-world scenarios.

By integrating theoretical knowledge with practical, participatory exercises, participants engaged in a full-body learning experience. Activities such as drawing visuals, moving around, participating in discussions, role-playing, deep listening, and focusing on process dynamics activated both hemispheres of the brain. This approach balanced rational, analytical thinking with creative visualization, while also engaging the heart through empathy and tailored communication. Additionally, hands-on exercises allowed participants to practice new skills and collaboratively draft actionable plans, fostering a comprehensive and dynamic learning process.

The ToT accommodated different learning preferences which are influenced by two key dimensions: the processing continuum (horizontal axis), which reflects how individuals approach tasks, and the perception continuum (vertical axis), which relates to emotional or intellectual responses to tasks. These dimensions combine to form four broad learning preferences: accommodating, diverging, converging, and assimilating. By accommodating these varied learning preferences, the ToT ensured high participant engagement and elicited valuable cross learning among the participants.

5.1.3 Principle 3: Timing of the Capacity-Strengthening Interventions

The timing of delivering the capacity-strengthening interventions (the timeline of the learning journey and the sequence of actions) is critical to its effectiveness as a pathway for FST. For example, delivering capacity-strengthening trajectories during political changes (Bangladesh) or amidst internal conflict (Ethiopia) will not result in an effective pathway for FST. Capacity strengthening can play a pivotal role when targeting the change makers, those responsible for making decisions and exerting influence. From our experience, if governance and human resources are not (semi) stable, any training investment will have a questionable impact at organizational and institutional level.

5.1.4 Principle 4: Working With Power Dynamics

Being sensitive to intra- and inter-organizational dynamics and competition is a critical part of capacity-strengthening preparations. For example, in many countries the Ministry of Health and Agriculture clash and compete in the area of nutrition, especially when investments are made. Power dynamics can also exist between directors and department heads, obscuring the real capacity needs of a team during

organizational self-assessment. These dynamics cannot and should not be circumvented. In fact, they could be used to create much needed transparency and clarity. This process of harnessing the energy of power and conflict to break through business as usual does require an experienced facilitator.

5.1.5 Principle 5: Working With Emergence

Every group of participants brings invaluable knowledge and experience to the learning journey; hence the learning process will be different with each group. Every country has its own culture and specific ways of collaborating and communicating, hence capacity strengthening will work out differently in its delivery phase. Responding to what emerges in the process and amongst the participants as they pass through the learning journey is an important principle to make the capacity strengthening truly transformational. It is in the interaction between participants and facilitators that learning emerges. Taking cues from participants' questions and observing group processes are entryways to define at a more granular level the learning needs of the participants at hand and finetune the program. For example, in Ethiopia the group displayed a strong internal power dynamic during the workshop that could in fact limit the learning benefits for all participants. The program was adapted to include more space for reflection and introspection, which offered opportunities to speak openly about power and polarization and how these could affect joint learning as well as FSTs.

Working with emergence also means that capacity-strengthening trajectories remain flexible and adaptable. For example, in Bangladesh the ToT team's efforts were postponed when the country went through political upheaval, after which they were resumed as soon as safety clearance was given. In spite of the strong demand from participants to deliver a full ToT before the end of the year, flexibility was requested as this would clash with principle 1 (contextualization).

5.1.6 Principle 6: Working With Diversity

To optimize the learning process, any capacity-strengthening initiative will want to engage a diverse group of participants to bring in a wide array of perspectives. Engaging the voices of the less powerful (e.g. minority groups) and the private sector (which in our experience is a hard-to-engage group) is important. More thought needs to be given to how to engage this wide array of participants, given their varied needs, interests and commitments. While it is important to move forward with those actors who are ready to learn, capitalizing on their innate drive, it is equally important to consider how to include food system actors who are less inclined or not able to join learning journeys, to ensure their perspectives are woven into the knowledge that is generated by the group.

5.1.7 Principle 7: Stimulating Agency and Personal Leadership

For capacity strengthening to be a pathway for FST, it requires stimulating and at times unlocking people's inherent capacity to take leadership of their own person and their own life. This means building self-awareness and visioning for themselves and others. Leadership, in our view, does not equate with high-level decision makers in high-ranking executive offices. Instead, it refers to a power that can be used to lead oneself and others at various levels in different circumstances. It comes into play when applying double loop and triple loop learning and is an important ingredient when going through transformative processes. Consciousness practices and approaches that stimulate connection, compassion, empathy, and deep listening skills (first with oneself and then with others) can be a start, as well as the ability to navigate complexity and a lack of clarity, while holding the vision of a sustainable food system. While many capacity-strengthening programs focus solely on building food system leadership, drawing on the plethora of leadership programs circulating our world, this principle highlights that personal leadership

development is an inextricable element in capacity strengthening for FST. It nurtures a group of change agents that can play an important and influential role in moving the food system towards more sustainable outcomes, at whatever level they work.

Finally, in addition to these principles, our experience underscores the importance of several critical elements. Flexibility is essential for adapting approaches to address emerging challenges and opportunities unique to each local context. Co-creation and collaboration play a vital role in actively involving participants in shaping learning processes, ensuring a sense of ownership and relevance. Furthermore, iterative reflection is key, embedding continuous feedback loops that allow for the refinement of strategies and responsiveness to evolving needs. Lastly, a strong focus on agency and leadership development is crucial, emphasizing the importance of innate motivation and leadership potential to drive meaningful and impactful capacity-strengthening efforts. These elements enhance the effectiveness and sustainability of our initiatives across diverse food systems.

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Appendix: Participation of Stakeholder Groups in Trainings

Stakeholder group / Training	E-course 2022	Vietnam ToT 2023	Ethiopia ToT 2023
Government	113 (45%)	11 (37%)	14 (41%)
Knowledge and education	55 (22%)	10 (33%)	11 (32%)
International organization	52 (21%)	6 (20%)	9 (27%)
Private sector	19 (8%)	1 (3)	0
Civil society	13 (5%)	2 (7%)	0
Total participants	252	30	34
Total completed	60	…	….

Source: Authors' own elaborations

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