Agriculture & Food Systems
SDC Thematic Network

How to:
Applying the food systems approach

What can you find in this document?

This document aims to provide SDC staff and its partners with a practical how-to tool for applying a food system approach in projects and programmes. The first part briefly explains SDC's food systems approach, as elaborated in more detail in the Agriculture and Food Systems network's (AFS) Knowledge Hub. The second part provides practical guidance on applying a food systems approach to planning or adapting development cooperation projects. The third part provides links to important possible partners and networks.

The guidance provided in this paper can be used to design new food system projects. It can also be used to embed ongoing projects that address specific aspects (e.g. agricultural production or healthy diets) in a wider food system context. This helps identify complementary interventions needed to achieve lasting systemic change and to avoid unintended side effects. Finally, the food system approach is useful for identifying gaps in a specific project or country strategy, which can then inform the development of new projects or partnerships.

Table of contents

	Pag		
01	03	**Food systems: definition and significance for SDC**	
	03	1.1.	Why a food system approach?
	03	1.2.	SDC's Food System approach
	04	1.3.	Food system lenses
02	05	**Applying food system approaches in project design**	
	05	2.1.	Context and problem analysis
	08	2.2.	Setting goals and objectives
	10	2.3.	Developing interventions
	13	2.4.	Stakeholder engagement
03	15	**Possible partners and relevant networks**	
	15	3.1.	Global level
	16	3.2.	Regional and national level

1. Food systems: definition and significance for SDC

1.1. Why a food system approach?

Food systems – from farm to fork and beyond – significantly impact human well-being (livelihoods, health) and the environment (natural resources, biodiversity, climate change). Therefore, **transforming food systems** offers an opportunity to simultaneously address several sustainable development goals, including improved food security, decreased malnutrition and non-communicable diseases, poverty reduction, reduced degradation of natural resources and biodiversity loss, and contributions to climate change mitigation and adaptation.

Many development projects relate directly or indirectly to food systems. Framing projects within a food systems perspective encourages systems-thinking, which involves understanding the relationships and dynamics between different components of the system. Systems thinking is essential to understanding the characteristics of **root causes** ("drivers") of the problems that projects seek to address. It also helps identify the most promising **leverage points** for interventions and think about how impulses can ripple through the entirety of the system, often leading to unintended or even unforeseen results. Therefore, system-thinking and analysis should be integral to project design.

Because of these features, systems thinking and systemic approaches are particularly useful for addressing 'wicked' and 'super wicked' problems[1] where direct causal links and ultimate solutions cannot be easily reached. Systems thinking also bridges traditional disciplinary and sectoral boundaries and incorporates multiple perspectives on situations and problems when developing interventions. It therefore facilitates working with multiple stakeholders across the food system and integrating their different interests when planning for longer-term and system-wide benefit.

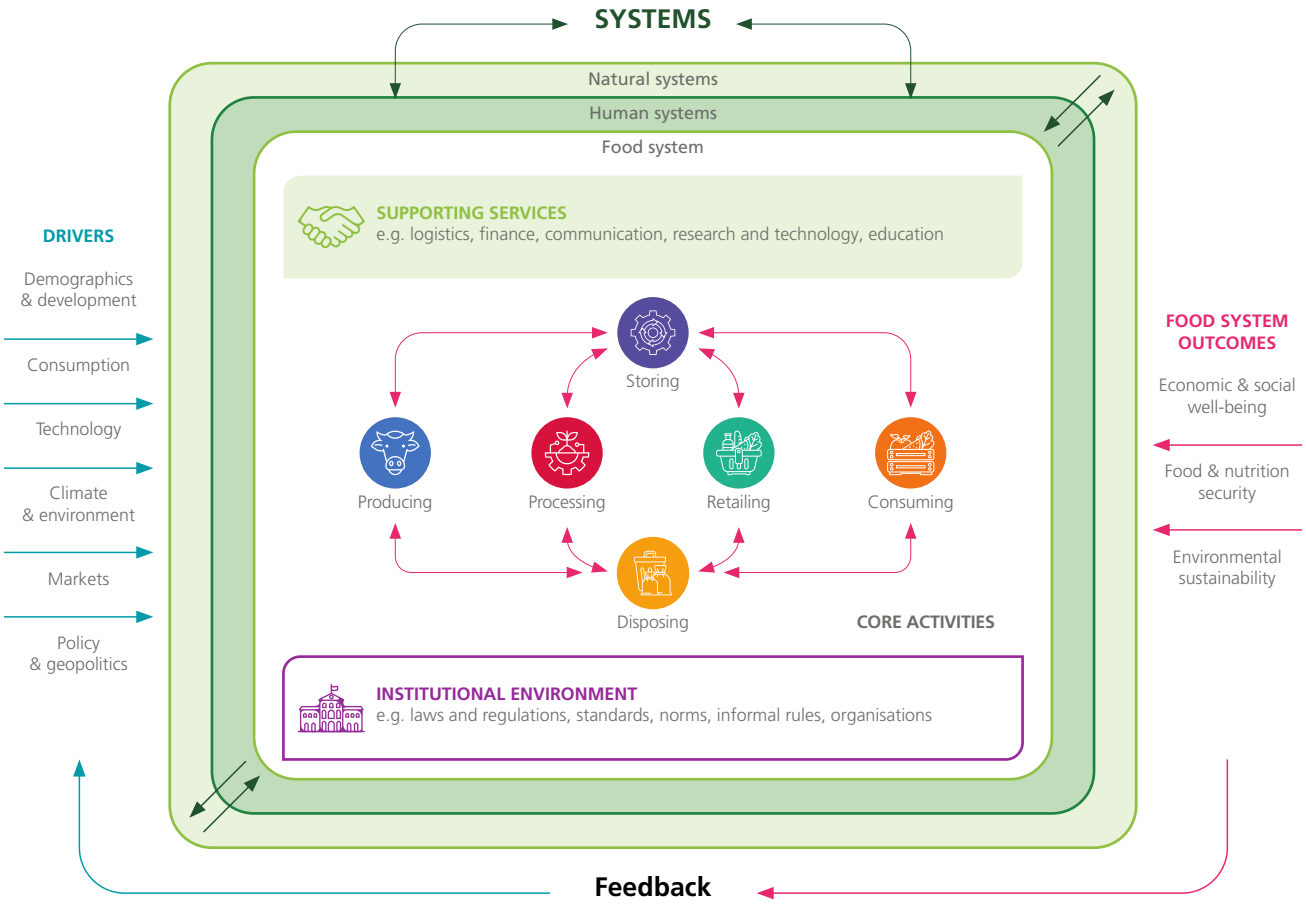
1.2. SDC's Food System approach

A **food system** refers to the interconnected set of activities, actors, and processes involved in supplying food, as well as the broader economic, social, and environmental drivers that shape these elements and determine food security, nutrition, and sustainability outcomes.

One of the most used representation for it is the Food System Model developed by Foresight4Food (Figure 1). This model is designed to describe the relationships between the key entities and processes within a food system and their connections with society and the environment. It includes activities carried out by different actors, such as food production, processing, distribution, consumption and disposal, all of which collectively influence the system's functioning and outcomes. The model also highlights the role of supporting services – like infrastructure, transportation, finance, information, input and financial services, and technology – in shaping these activities. Furthermore, the enabling environment, including relevant policies, regulations, and organisations, affects the behaviour of actors within the food system.

1 A 'wicked' problem is a problem that is difficult or impossible to solve because of incomplete, contradictory, and changing requirements that are often difficult to recognise. A 'super wicked' problem is where time is running out, there is no central authority, those seeking to solve the problem are also causing it, and policies discount the future irrationally.

Figure 1. The Food System Model



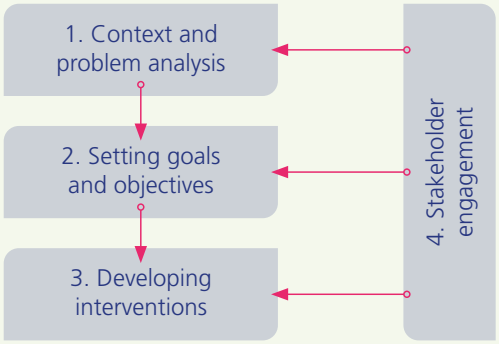
For more detailed explanations on SDC's Food System Approach, please refer to the Knowledge Hub (hyperlink).

Food systems are complex, multi-actor and multi-scale networks shaped by strong interdependencies, trade-offs, and feedback loops between economic, social, and environmental dimensions, making the approach very distinctive from traditional sector-based approaches (e.g. agriculture or nutrition alone).

1.3. Food system lenses

The scope that is chosen for a project largely depends on the framing of a given situation. In systems-thinking, frames are the lenses through which we perceive and make sense of complex issues. They shape our understanding by defining the perspectives, relationships and boundaries within a system. Choosing the right frame is crucial when dealing with complex problems because it influences the analysis, decisions, and potential solutions we consider for addressing systemic challenges. For example, do we see the situation primarily through an agricultural production or a nutrition lens, through an economic development or a climate resilience lens? Regardless of the lens used, ensure that key aspects of other lenses are not overlooked, as many are strongly interrelated.

2. Applying food system approaches in project design



The food system approach helps maintain a holistic view without getting lost in complexity, providing a good starting point for defining the scope of a project.

This part explains how to apply food system approaches in existing or new projects, providing practical guidance on integrating food system approaches into each planning step. Best practices, examples, key resources and tools are also offered. Generic aspects not specific to food systems (e.g. monitoring and evaluation, or risk management) are not covered.

2.1. Context and problem analysis

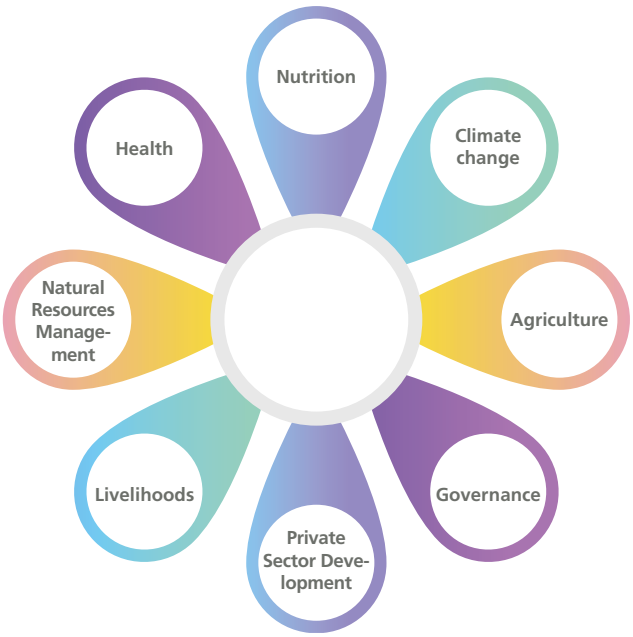
The first critical step in developing any project is identifying and analysing the current situation. This can be boiled down to a 5-step identification process:

- Define your entry point or **system lens** – usually building on the challenge you wish to address, which will determine which part of the food system you will be focusing on.

  This will influence the analysis, decisions, and potential solutions considered. For example, do we see the situation primarily through an agricultural production or a nutrition lens, through an economic development or a climate resilience lens? Regardless of the lens used, ensure that key aspects of the other lenses are not overlooked, as many are strongly interrelated and can provide opportunities to multiply benefits.

- Set your **system boundaries,** which will define and limit the scope of the analysis.

  Boundaries can refer to geography or jurisdictions (e.g. specified landscapes or districts), sectors (e.g. health system or livestock sector), focus areas (e.g. employment or nutrition), value chains (e.g. millet, livestock), population (e.g. pastoralists, households) or time-frames (short to long term) – related to your selected lens or entry point. It is not about analysing the "whole" system, but a relevant part of it, which can be addressed through a project. While it is advisable to draw boundaries that prevent the project from becoming overly complex, carefully consider unwanted effects and address critical risks of having too narrow boundaries.



- Map the **key elements** of your food system, looking at:
  - » **the actors:** farmers, herders, traders, au-thorities, suppliers, etc.
  - » **the activities:** production, processing, tra-de, consumption, etc.
  - » **the enabling environment,** exogenous and endogenous drivers and key trends that influence the food system: policies, markets, climate, etc.

The aim here is to get a broad visual picture of the different components of the food system, bringing to light also the various entry points.

- Identify the **key interactions and bottlenecks,** with the relevant feedback loops between food system components.

  Reflect on what (wanted and unwanted) outcomes the food system currently generates. Assess why the system functions (or malfunctions) – what motivates or demotivates actors to behave and interact in ways that produce desired food system outcomes? Where are the main constraints (e.g. access to land, market failures, conflict, poor diet)?

- Validate **with stakeholders:** Once a preliminary food system definition is established, it should be tested and refined through consultations with key stakeholders to ensure it reflects on-the-ground realities. This step helps verify assumptions, uncover blind spots (e.g. power dynamics, informal practices, seasonal variations), and build shared ownership of the analysis, ultimately strengthening both the relevance and legitimacy of the programme design.

Good practices

- Talk to key food system actors (e.g. through focus groups), including market actors, to understand how the system currently functions.
- Use foresight and scenario analyses to extrapolate current trends and envision the long-term situation.
- Avoid getting lost in complexity; apply a holistic view with a selective approach.
- Link the discussion of systems boundaries to an analysis of critical risks.
- Revisit the problem analysis from time to time and add new insights into your food system map.

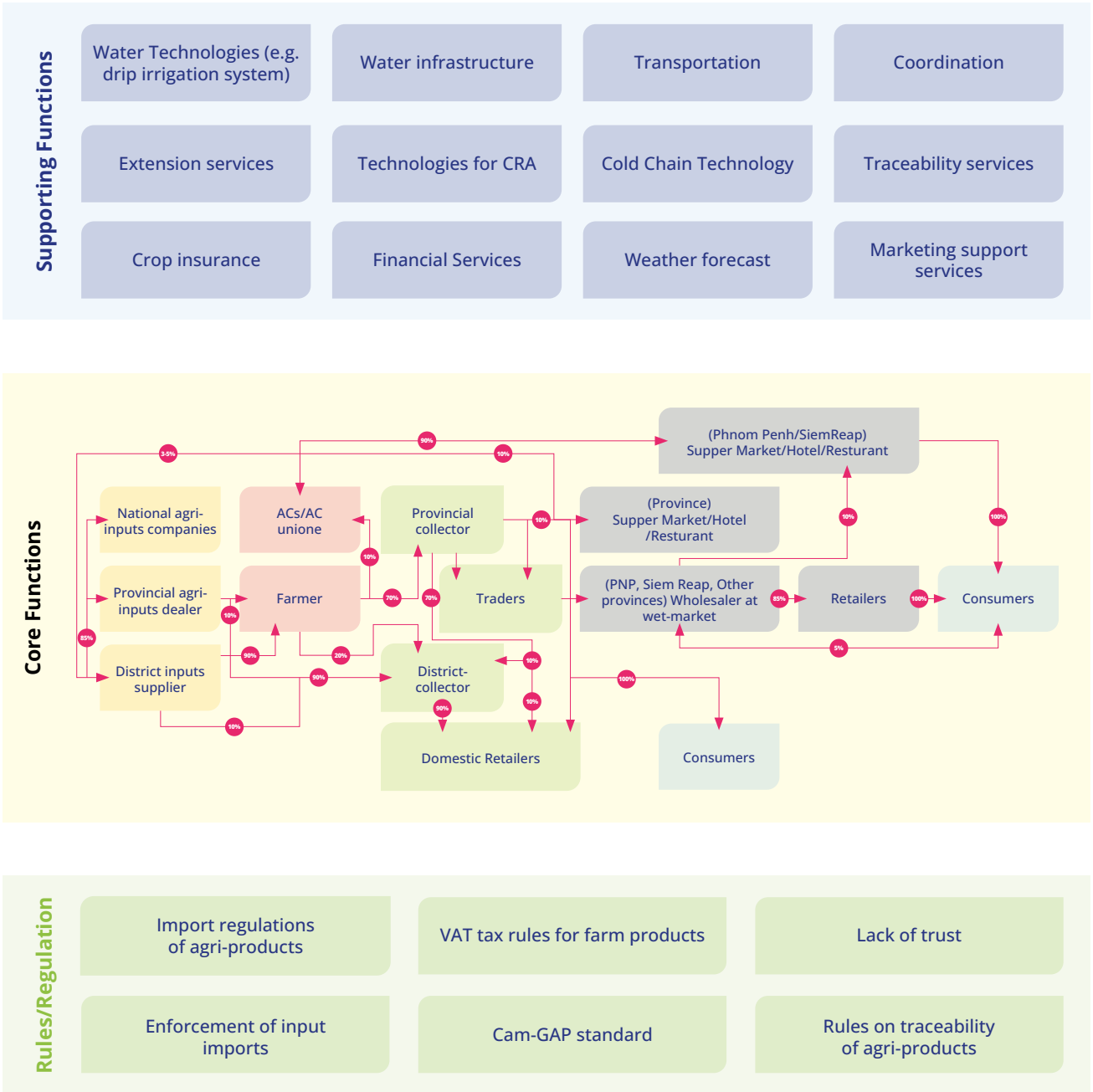
Further readings / tools

- "Food systems at risk", FAO, 2019 provides a comprehensive introduction to food systems with a focus on low- and lower middle-income countries.
- The Food Systems Dashboard compiles and visualises global and national food systems data from multiple sources.
- The City Region Food System Toolkit (FAO) and/or the Food System Decision Support Toolbox (WUR) offer guidance to conduct food system analyses.
- CEDRIG - for guidance on how to integrate Climate, Environment and Disaster Risk Reduction in project design.

Example

The Nurture project in Cambodia implemented by Caritas Switzerland and the Swiss Church Aid (HEKS/EPER) applies a systemic approach to enhance climate resilience by improving agricultural supporting systems and strengthening water governance for 15,000 households, focusing on women, youth, and marginalised groups.

Figure 2. Systems map of the vegetable sub-sector of the Nurture project in Cambodia (Source: Caritas and HEKS).



2.2. Setting goals and objectives

Now that your food system is mapped out, look at which food system outcome(s) need(s) to change from a sub-optimal to a more optimal state. The three primary outcomes of food systems are:

- economic & social well-being, resilience,
- food & nutrition security, and
- environmental sustainability.

Ideally, the project should design interventions that generate **positive results** in all three dimensions (win-win solutions). Sustainable production and marketing of nutritious foods, for example, can at the same time increase incomes of farmers, reduce malnutrition among children and reduce environmental impacts while enhancing resilience to climate change.

At a minimum, improving one outcome should not significantly disadvantage the other two. This may require specific measures to mitigate possible trade-offs and unwanted effects. Typical **trade-offs** in food systems include agricultural intensification versus environmental impact, the cultivation of cash crops versus improving nutrition, enhancing diversification versus increasing the workload for women, or enhancing market linkages versus power imbalances between market actors. These trade-offs can be reduced with targeted interventions, such as selecting more agroecological practices to protect environmental and human health, or diversifying food chains to reduce dependencies and improve inclusivity.

The next step is to define more specifically **with whom** and **for whom** food system outcomes need to change. Which stakeholders in the food system are expected to change their practices and behaviours? Examples include farmers adopting new techniques, Small and Medium Entreprises (SMEs) offering new services and investing in scaling up, local authorities implementing food system strategies, and/or schools offering healthier meals. And who are the people who should ultimately experience improvements? Smallholder women farmers or youth entrepreneurs, malnourished rural or urban consumers?

Aligning goals and objectives with the SDGs and with national strategies and priorities will enhance buy-in from responsible authorities and donors. It is also advisable to reflect early on the risks of not achieving the expected outcomes, and integrate mitigation measures in the project design right from the beginning.

Combining these reflections with the previous food system analysis will help develop an architecture of goals, outcomes and outputs that form the basis of the project's **results frame.** It will help you identify what is worth acting on, building your theory of change, identifying your system's relevant leverage points, and converting your objectives into outcomes, outputs, and ultimately indicators. In food systems work, defining objectives is not so much about listing activities as it is about choosing the system changes you want to influence and making the *causal pathway explicit.*

Good practices

- Defining the scope, goals and objectives of a food system project should be a co-creation process involving the concerned local stakeholders – and ideally is led by them.
- Begin with the perspectives of legitimate local actors (authorities, CSOs), on what changes in food system outcomes they want to see.
- Facilitate the development of a joint vision, goals and objectives to ensure strategic alignment between project partners.
- Ensure alignment with relevant local and national institutional priorities and strategies.
- Pay particular attention to the situation and role of women, youth and disadvantaged groups (e.g. internally displaced people and refugees).

Further readings / tools

- For alignment with official food system goals and objectives of partner countries, check national commitments and pathways to food system transformation compiled by the UN Food Systems Hub. Diagnosing Food Systems Policy Coherence can support the design of more coherent food policies (GAIN, 2025).
- For a deep-dive on win-wins and trade-offs between food system outcomes, consult the report Identifying synergies and trade-offs with food system interventions (Wageningen University & Research, 2021).

Example

The Nutrition in City Ecosystems Project (NICE) implemented by Swiss TPH, ETH Zurich, Sight and Life and Sustainable Agriculture Foundation facilitates locally-led action to improve nutrition and reduce poverty in low and middle income countries through agricultural, food and health sector collaborations, and public-private engagements, with strong emphasis on the role of women and youth entrepreneurs.

Figure 3. Results logic of the NICE project (Source: Swiss TPH).

Impact

2 ZERO HUNGER — By highlighting diet, and by increasing access to and encouraging use of nutritious local food.

11 SUSTAINABLE CITIES AND COMMUNITIES — By focusing on urban and peri-urban populations and by strengthening cities food systems.

3 GOOD HEALTH AND WELL-BEING — By improving the immune system and physical functions through diversified foods rich in micronutrients.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION — By promoting agro-ecological production and thoughtful consumption.

5 GENDER EQUALITY — By empowering women as producers, sellers, buyers, preparers, sharers and consumers of healthy food.

17 PARTNERSHIPS FOR THE GOALS — By building and running multi-stakeholder partnerships, locally and internationally.

Outcomes

1 Governance & Systems

Women and youth are involved in urban governance structures that incentivize food systems for improved nutrition

2 Availability, Production & Value Chains

City populations enjoy the enhanced availability of nutritious foods produced using agroecological practices

3 Knowledge & Demand

City populations' knowledge increases, and demand is created for the consumption of nutritious foods produced using agro-ecological practices

4 Policy, Learning & Scale-up

Knowledge hubs' ensure exchange within and between cities, healping shape urban-rural food environments and inform national and global policies

2.3. Developing interventions

Based on the food system analysis (chapter 2.1) and the defined outcomes (chapter 2.2), you can now identify key levers and interventions that can be used to catalyse the envisaged transformation. Choose levers that have a significant systemic effect, but that the project can also realistically influence (see Figure 4 below). Since you cannot simultaneously work on all possible levers and interventions, **prioritise** those most likely to have the biggest effect with your available resources.

Figure 4. Levers and possible interventions in food systems (Source: Helvetas).

Levers	Possible interventions	Examples
Paradigms	• Influencing public opinion • Influencing the narrative	• Media work to highlight issues and alternatives • National pathways for sustainable food systems
Consumer behaviour	• Awareness raising • Shaping food environments	• Campaign on healthy diets • Nudging healthy food choices in markets or canteens
Policies	• Evidence for policy-making • Policy coherence across sectors • Nutrition and sustainability into national strategies	• Policy-relevant research and evaluation • Inter-ministerial coordination mechanisms • Nutrition objectives into agricultural policies
Governance	• Inclusive governance and participation • Empowered rights-holders and citizen participation • Institutional capacity for food systems thinking	• National multi-stakeholder food policy platforms • Municipal food councils • Civil society participation in food policy processes
Market relationships	• Market system development • Inclusive and local markets systems • Market governance and regulation	• Production and purchase agreements • Participatory guarantee systems • Food safety standards, and competition policies
Business models	• Value addition and agribusiness development • Business capacity and skills • Digital transformation of agrifood SMEs	• Food trade and processing hubs • Social agribusiness enterprise acceleration • Entrepreneurship programmes for youth and women • Mobile payment systems, digital market platforms
Practices	• Knowledge sharing and training • Extension & advisory services • Access to quality inputs and seeds	• Farmer field school on agroecological practices • Local service provider models • Strengthening seed systems (local + certified, seed banks)
Technology	• Sustainability innovations • Digital solutions	• Promote black soldier fly to recycle organic waste • Develop an app providing digital advisory services
Finance	• Expand inclusive rural and agricultural finance • Scale climate and shock-responsive finance • Influence national budget prioritisation	• Support tailored financial products • Mobilise impact investment for sustainability & nutrition • Support index-based insurance • Align strategies and subsidies

The next logical step is to formulate your **theory of change,** by bringing the chosen interventions in relation with the desired outcomes. This can be formulated as a short narrative describing the underlying assumptions ("If…., then…, because…") or as a depiction of the logical framework (activities -> outputs -> outcomes -> impact). However, a graph showing the interrelations between interventions and outcomes is more suitable for a systems approach. Ideally, you can base such a graphical depiction on the food system map developed in the analysis step (chapter 2.1).

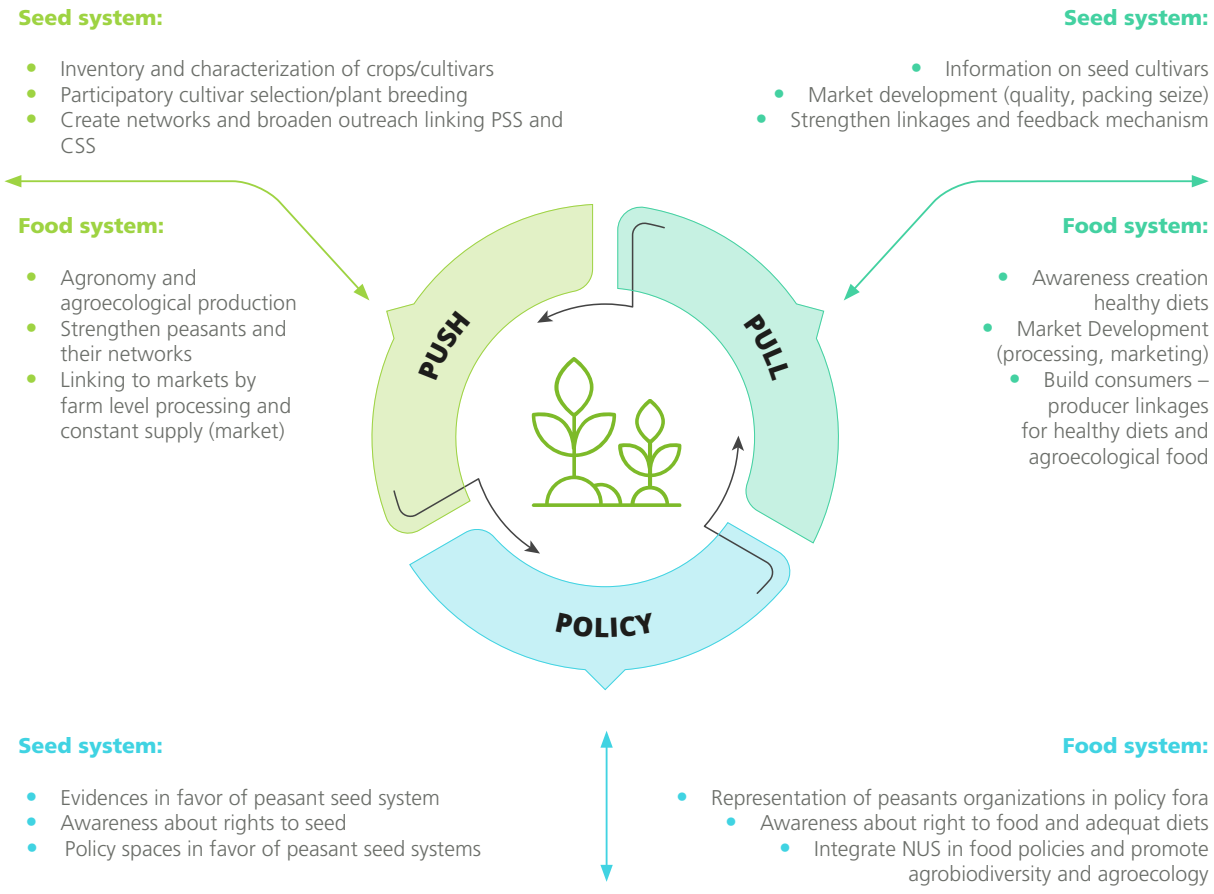
Good practices

- Consider the sustainability of interventions and potential for scaling up from the outset, notably through the involvement of the stakeholders.
- Re-visit formulated objectives and adjust them, if necessary.
- Also take into consideration non-linear causal relationships and feedback loops.
- Develop a sufficiently flexible logframe to allow for adjustments during project implementation.
- Systematically adopt a do-no-harm lens, while ensuring gender and climate considerations.

Example

The project CROPS4HD implemented by SWISSAID, FiBL, and AFSA works on demand (push), supply (pull) and policy aspects of neglected and underutilised crops. It implements interventions in the seed system as well as in the food system.

Figure 5. Interventions of the CROPS4HD project (Source: Swissaid).



Further readings / tools

- There is a wealth of tools and recommendations when looking at how to support food systems transformation. These need to be adapted to each project context and objective(s).

A broad set of resources would include:

- **Policy level:**
  - » Transforming Food and Agriculture Through a Systems Approach, FAO, 2025 - a practical framework for joined-up action.
  - » Policy Brief - Governance of Food Systems Transformation, UN Food Systems Coordina-tion Hub, 2021.
  - » Policy coherence for food systems transformation, UN Food Systems Coordi-nation Hub – with concrete examples and further resources.
  - » Rethinking Our Food Systems: A Guide for Multi-Stakeholder Collaboration, UNEP, FAO and UNDP, 2023 - consolidating learnings and tools to improve multi-stakeholder collaboration for sustainable food systems transformation.
- **Consumers Behavioural change:**
  - » Healthy Diets, WHO, 2026 – providing key facts and a set of interventions to improve healthy food and meals.
  - » EAT–Lancet Commission reports - widely used to justify dietary behaviour change policies.
  - » The RANAS approach (Risks, Attitudes, Norms, Abilities, and Self-regulation) de-veloped by EAWAG can be applied to under-standing and influencing dietary behaviour change.
  - » The Who-Does-Who-Pays Matrix helps identi-fy actors in the market system. It is a useful framework to help you decide whether your activities will lead to sustainable behaviour change.
- **Private sector engagement:**
  - » SDC's websites on Private Sector Engagement (PSD) and Market Systems Development (MSD) provide practical guidance, tools and news on these approaches.
  - » BEAM platform for knowledge exchange and learning about market systems develo-pment, with practical tools & guidances
  - » Participatory Guarantee Systems directly linking producers and consumers.

2.4. Stakeholder engagement

Involving relevant local food system stakeholders is absolutely essential in every step of project development. It is therefore important to design appropriate **participatory processes** to engage them effectively.

The stakeholders need to be involved throughout the key steps of a project development, and during the full implementation of the programme:

- during the context and problem analysis phase in order to get a comprehensive and realistic picture. Consultation will lead to a better understanding of who provides, who pays, who uses and who regulates services? Who does, or does not have access to resources, markets, financial services? Who makes decisions? A stakeholder map is a useful tool to identify the relevant stakeholders, their relationships with each other and existing power dynamics.

- when setting goals and objectives and when developing interventions. Following a food systems approach means recognizing that interventions are only sustainable if they are carried and carried out by existing food system actors, particularly by those who are in the driving seat to transform food systems. These are usually local or national authorities such as ministries, district departments or municipal governments. They can also be associations of stakeholder groups such as farmers, businesses or consumers, also drivers of food system transformation. It will be of great value if the project has a formalised partnership with such actors that ensures alignment on goals, objectives, interventions and processes.

An approach that has been proven useful in food system projects is to establish a **multi-stakeholder platform** involving representatives of relevant stakeholders. Depending on the specific context, these can include local authorities, producers, businesses involved in the food system (e.g. input and technical service providers, aggregators and traders, processors, retailers, canteens), consumer associations, academia and civil society organisations.

Most likely your project is not the only initiative to transform food system outcomes in your focus country or region. In recent years, a multitude of food system-related projects and initiatives have come up over the globe. It is therefore advisable to check who else is working on similar goals, coordinate interventions for best use of synergies and exchange information and learnings.

Good practices

- Provide sufficient time and resources for a co-creation phase to design the project together with legitimate local stakeholders.

- Analyse political economy and power relations and support alliances in favour of transformative change.

- Build a shared vision and formalise relationships with local key stakeholders by setting up partnership agreements or memorandums of understanding.

- Involve local key stakeholders in assessing progress and in project steering to ensure ownership and sustainability.

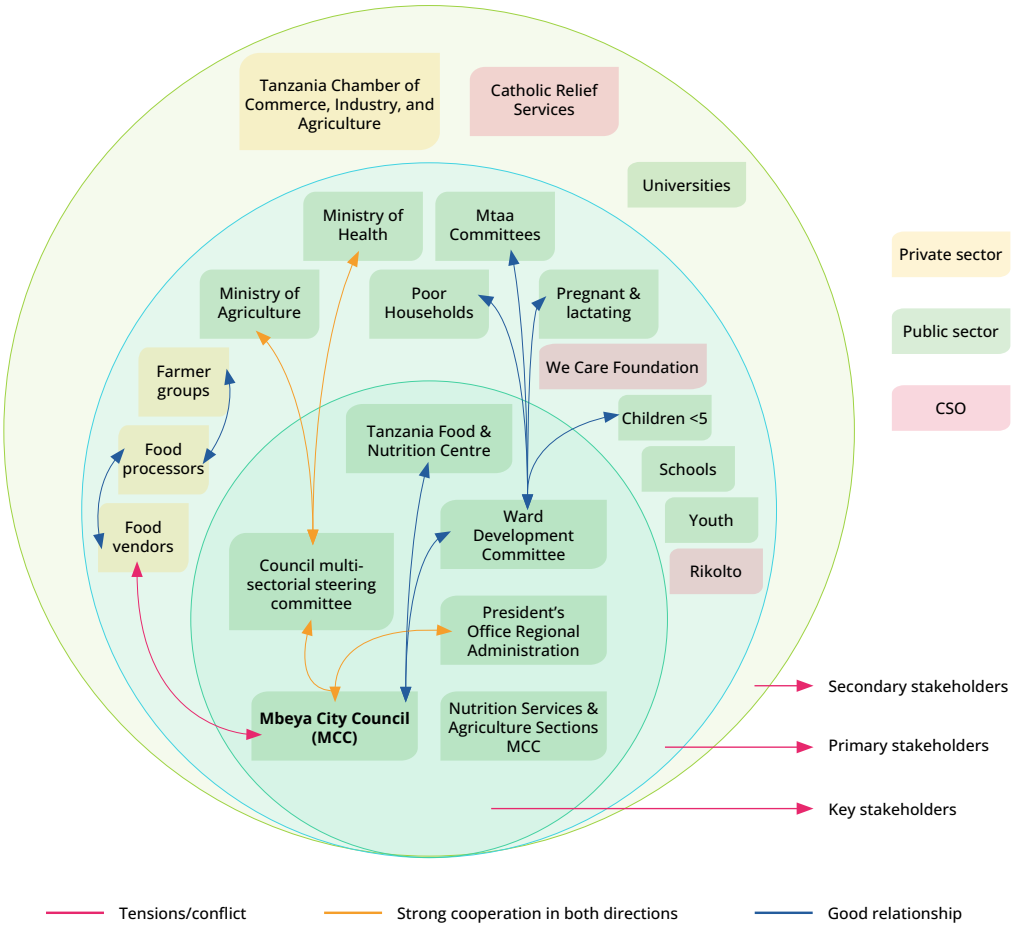
- Help local authorities overcome siloed institutions, e.g. by supporting multisectoral platforms (agriculture – health – environment…).

- Keep plans concise and open to ensure adaptability based on stakeholder guidance and lessons learned.

Example

The Inclusive Cities for Nutrition Project (IC4N) implemented by Helvetas in Tanzania and Bangladesh collaborates with municipalities of secondary cities in enhancing the production and consumption of healthy foods. Further stakeholders include farmer groups, food processors and vendors, universities and schools, as well as other INGOs active in this domain.

Figure 6. Stakeholder map of the IC4N project (Source: Helvetas).



Further readings / tools

- The Political Economy and Power Analysis Manual helps understand the interconnectedness bet-ween social, economic, environmental, and political actors and systems, and the changes required to address the root causes of power imbalances.
- OECD's Shifting Power with Partners Toolkit provides practical insights and tools for imple-menting the DAC Recommendation on Enabling Civil Society in Development Co-operation and Humanitarian Assistance.
- The discussion paper on Multi-Actor Partnerships (MAPs) by the German Development Institute provides guidance on how to form effective partnerships involving private sector actors.
- The Global Food Systems Network Map develo-ped by the Meridien Institute is an online tool designed to visually represent the relationships among stakeholders involved in food systems-related efforts worldwide.

3. Possible partners and relevant networks

3.1. Global level

- The Committee on World Food Security (CFS) is the foremost inclusive international and intergovernmental platform for all stakeholders to work together to ensure food security and improve nutrition for all. It produces valuable guidelines and policy recommendations on various food system aspects.
- The UN Food Systems Coordination Hub supports countries in transforming their food systems by providing systemic, country-driven, and customised assistance to achieve sustainable food systems.
- The Scaling Up Nutrition (SUN) Movement is a global initiative that unites governments, civil society, businesses, and other stakeholders to end all forms of malnutrition by 2030.
- The Global Alliance for the Future of Food is a strategic alliance of philanthropic foundations working together to transform food systems to be more sustainable, equitable, and resilient.
- The Global Alliance for Improved Nutrition (GAIN) is a Swiss-based foundation to tackle malnutrition by improving the consumption of nutritious and safe food for all people, especially the most vulnerable.

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3.2. Regional and national level

- La Via Campesina is an international movement that brings together millions of peasants, small and medium-scale farmers, agricultural workers, rural women, and indigenous communities to advocate for food sovereignty, agrarian reform, and sustainable agriculture.
- The Asia-Pacific Network on Food Sovereignty (APNFS) is a regional alliance that promotes and asserts people's basic right to adequate, nutritious, and safe food, as well as their right to sustainable livelihoods.
- The Alliance for Food Sovereignty in Africa (AFSA) is a Pan-African platform that unites small-scale food producers, farmers, pastoralists, fisherfolk, indigenous peoples, and civil society organisations to advocate for food sovereignty and agroecology across Africa.
- The AFS Forum - Africa Food Systems Forum is a forum for African agriculture and food systems, bringing together stakeholders to take practical action and share lessons to advance food systems across the continent.
- The Scaling Up Nutrition Movement operates SUN regional hubs in Africa, Asia, Latin America and the Caribbean as well as national focal points in its SUN member countries.

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