Food and Agriculture Organization of the United Nations

BUILDING SUSTAINABLE AND RESILIENT CITY REGION FOOD SYSTEMS

ASSESSMENT AND PLANNING HANDBOOK

RUAF

BUILDING SUSTAINABLE AND RESILIENT CITY REGION FOOD SYSTEMS

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Abbreviations and acronyms

CBA	cost benefit analysis
CGIAR	Consultative Group for International Agricultural Research
CRFS	city region food systems
FAO	Food and Agriculture Organization of the United Nations
FAOSTAT	Food and Agriculture Organization Corporate Statistical Database
FIES	Food Insecurity Experience Scale
GIS	Geographical Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
ILO	International Labour Organization
IWMI	CGIAR International Water Management Institute
NGO	non-governmental organization
RUAF	RUAF Global Partnership on Sustainable Urban Agriculture and Food Systems
SAG	Stakeholder Advisory Group
UNDRR	United Nations Office for Disaster Risk Reduction
UNU-EHS	The United Nations University– Institute for Environment and Human Security
WLE	The CGIAR Research Program on Water, Land and Ecosystems

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INTRODUCTION

1.1 The need for resilient and sustainable city region food systems

Almost 70 percent of the world's population is predicted to live in urban areas by 2050, up from over 50 percent in 2018, with the most important growth occurring in Southeast Asia and Africa.[1] This rapid urbanization, along with overall global population increase, creates enormous challenges relating to all aspects of sustainability. Moreover, it is taking place at a time of climate emergency; weather patterns are increasingly unpredictable and climate-related shocks and stresses (such as droughts, floods, storms, etc.) are more commonplace.[2]

Cities are hotspots for the causes of climate change, accounting for 70 percent of global greenhouse gas emissions. A significant quantity of food destined to feed urban residents is produced and transformed by a globalized food industry, which is the third largest contributor to global emissions,[3] and is responsible for the massive depletion of natural resources and biodiversity loss.[4] On the other hand, cities can be hubs of technological and social innovation that devise solutions to reduce the carbon footprint and create environments for health and well-being.

Cities are also highly vulnerable to the impacts of the climate crisis. Events such as hurricanes, floods, prolonged dry spells, and temperature spikes can cause major disruption to the infrastructure and systems on which cities depend. This includes impacts on stakeholders, activities and assets throughout cities' food systems (food production, aggregation, processing, distribution and storage, markets, consumption, and waste management) in urban, peri-urban and rural hinterlands and further afield. The most vulnerable socioeconomic groups (including marginal food system stakeholders, people living in informal settlements without basic infrastructure and sanitation, women, young people, the disabled, and others) are hardest-hit and have the least capacity to recover, endangering not only their livelihoods but also their food security and nutrition.

In 2020, the vulnerability of food systems was laid bare as countries, subnational regions and cities around the world implemented preventive and control measures to address the COVID-19 pandemic. Many of these measures had immediate and considerable impacts on the capacity to conduct economic activities at all value chain nodes, resulting in supply chain disruptions, food shortages, increased food loss and waste, and lack of access to food. Again, vulnerable stakeholders were hardest hit, and in many places the impacts of COVID-19 control measures enhanced the effects of recent climate shocks and stresses. Responses to this situation have been swift and creative, involving repurposing of resources and infrastructures and deploying extraordinary efforts to ensure food supplies reach those in most need.[5] The emphasis has been placed mostly on emergency responses; yet experts predict that food systems will continue to be put to the test through the emergence of new viral diseases in the years to come as human activities cause biodiversity loss.[6] Therefore, we must prepare to absorb, prevent, anticipate and adapt to future shocks and stresses, as well as transform food systems.

In this challenging context of multiple risks and uncertainties, the city region food systems (CRFS) approach seeks to promote cities and their rural hinterlands (including clusters of smaller towns and cities), across which people, goods, money, natural resources and ecosystem services flow, as areas for food system governance and action. Through integrated, evidence-based planning, local governments and food system stakeholders from all sectors can make critical contributions to enhancing resilience capacities of CRFS in the long term. This would help improve economic, social and environmental conditions in both urban and nearby rural areas, and significantly reduce the risk of harmful impacts from all kinds of shocks and stresses.

This handbook, and the accompanying online toolkit, guides project teams, institutions and food system stakeholders through the CRFS assessment and action planning process.

1.2 About the City Region Food Systems Programme

The City Region Food Systems programme is an international initiative of the Food and Agriculture Organization of the United Nations (FAO) and the RUAF Global Partnership on Sustainable Urban Agriculture and Food Systems that aims to reinforce rural-urban linkages to enhance sustainable and resilient food systems.

The programme adopts a territorial perspective based on the intrinsic connections between urban, peri-urban and the surrounding rural areas, across which agricultural products, goods, money, people, natural resources, and ecosystem services flow.

The term "city region" refers not only to megacities and the immediate rural and agricultural areas surrounding them, but also to small and medium-sized towns that link remote small-scale producers, and other actors in agricultural and food value chains, to urban centres and markets. Although contexts differ between cities and regions, urban-rural partnerships and intermunicipal cooperation always extend beyond traditional administrative boundaries. The CRFS approach focuses on food systems as the functional tie that binds a territory together (for a detailed definition of the city region food system, see Section 1.4: How to use the handbook and online toolkit).

The scope of the CRFS assessment and planning approach focuses on regional food sources rather than globally sourced supplies that are transported from other countries, although these represent an important part of the food supply.

The characteristics of food systems differ dramatically from one city region to another, as do socioeconomic context, local and regional government structures, governance arrangements, prevailing climate change impacts and future scenarios, and other likely shocks and stresses. For this reason, there is no one-size-fits all approach to increasing the sustainability and resilience of a food system. Interventions must be context-specific and developed following an assessment.

The assessment enables stakeholders to build understanding of the current functioning and performance of their city region food systems, its sustainability and the risks faced because of bottlenecks, extrinsic hazards and intrinsic vulnerabilities, as well as lack of capacities.

The findings of the assessment allow project teams and other stakeholders to identify the main risks collectively, define priority areas for action and interventions, and draw up a set of indicators that serve to mobilize action and enable monitoring of progress.

In the context of the CRFS approach, action planning comprises developing (or revising existing) actions, such as policies, strategies, programmes, plans, regulations, projects, campaigns, interventions and governance mechanisms, and working out how they can be put in place and implemented. These actions are designed to address specific priorities, to valorize and support food systems' assets, infrastructure, activities, stakeholder livelihoods, and build resilience against multiple shocks and stresses. Moreover, not all actions are governmental; non-governmental stakeholders contribute to building CRFS resilience and sustainability through actions within their own areas of activity.

The first stage of the City Region Food Systems Programme ran from 2014 to 2018, during which the initial assessment and planning process was developed and piloted in six cities: Lusaka and Kitwe (Zambia); Medellin (Colombia); Quito (Ecuador), Toronto (Canada), and Utrecht Netherlands (Kingdom of the). The first phase was implemented in partnership with the Water Land and Ecosystems (WLE) programme managed by the CGIAR International Water Management Institute (IWMI) and Wilfried Laurier University. Funding support was provided by the German Federal Ministry of Food and Agriculture, and the Foundation Daniel et Nina Carasso.

The second phase began in 2019 and ran to 2023. This phase involved development of an adapted assessment and planning process focusing on building CRFS that are resilient to multiple hazards, focusing on climate shocks and stresses and pandemics as proxies.[i] This process was piloted in five cities: Antananarivo (Madagascar); Colombo (Sri Lanka); Kigali (Rwanda); Melbourne (Australia) and Tamale (Ghana). This programme stage was implemented in partnership with the WLE programme managed by IWMI, Wilfried Laurier University and Hivos. Funding support was provided by the German Federal Ministry of Food and Agriculture.

This handbook sets out the revised CRFS assessment and planning process that takes into account the learning experiences of all the pilot cities, in both phases. It is accompanied by an online toolkit containing technical examples showing how the cities implemented various activities, as well as tools, templates, workshop resources and training materials.

i The project conducted a global study to capture lessons learned from multiple shocks and stresses, looking at different types of hazards that may affect CRFS, e.g. conflicts, earthquakes, economic collapses, etc. Nevertheless the assessment and planning process has mainly focused on shocks and stresses derived from climate and pandemics as proxies.

1.3 Programme pillars and concepts

The CRFS approach is based on several pillars and key concepts. It is strongly recommended to ensure all stakeholders involved in a CRFS project fully understand these pillars and concepts from the beginning of the process. This may require the use of the training units and workshop materials provided in the online toolkit.

Pillar 1. Territoriality and city regions

The CRFS assessment and planning process is implemented within specific territorial contexts, i.e. "city regions".

In geographical terms, a city region is defined as "a larger urban centre – or conglomeration of smaller urban centres – and the surrounding and interspersed peri-urban and rural hinterland."[7]

Thus, the term "city region" not only refers to megacities and the immediate rural and agricultural areas surrounding them, but also to small and medium-sized towns that link remote small-scale producers and their agricultural value chains to urban centres and markets. City regions can also be defined as a network of towns that collaborate within a territory over economic, social or environmental assets, interests and issues.

In functional terms, a city region is an area in which flows of people, goods and ecosystem services operate across the rural-urban continuum (**see Figure 1**). City regions may extend across administrative boundaries, entailing urban-rural partnerships and inter-municipal cooperation.

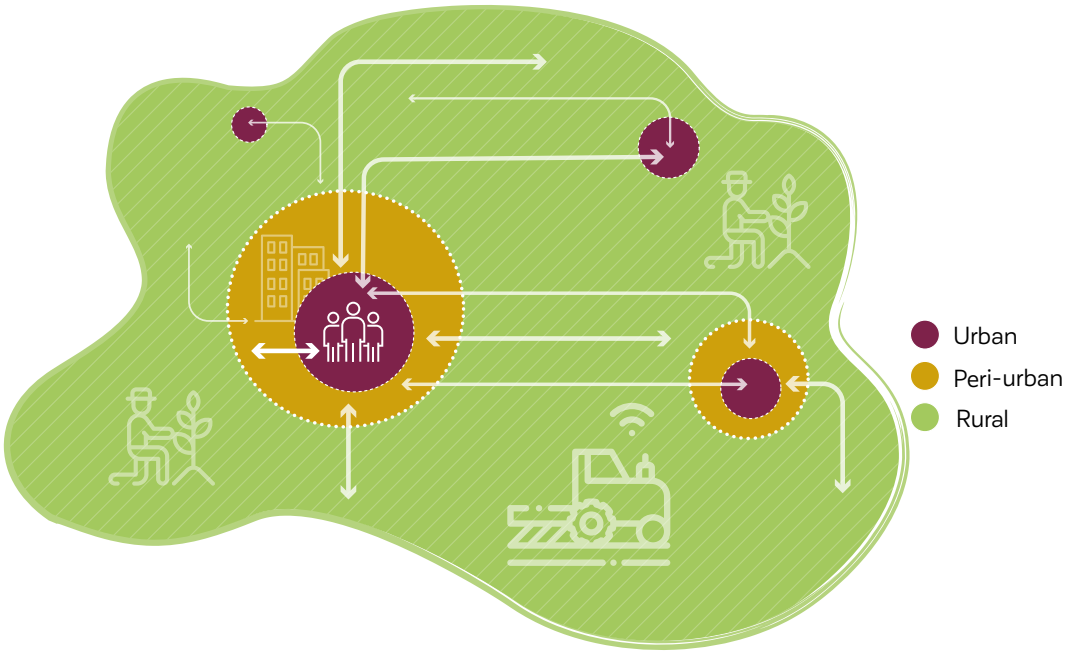


Figure 1. *Graphical representation of the city region concept adapted from an image produced by Han Wiskerke and Paul Hebinck, Wageningen University (unpublished)*

The dotted lines around the urban and peri-urban areas indicate that that the borders are not fixed within the urban-rural continuum, and are porous. The white arrows indicate functional relations or ties between the areas, such as food, goods, workforce, ecosystem services. The different weights of the arrows show different intensities or importance of these relations or ties.

The FAO-RUAF team will determine its own city region area when undertaking the Define the CRFS module. The team may base the initial boundary definition on one or more criteria, such as: administrative and jurisdictional areas (regions or several local areas); natural boundaries and physical features; population density and flows between urban, peri-urban and rural areas; projections for future urban growth and development; agricultural areas; presence of food industries. The initial boundaries may subsequently be revised as more data emerges.

For more information, see:

Training unit 1. Introduction to the City Region Food Systems approach and assessment and planning process. Access the online toolkit

Pillar 2. Food systems approach

The City Region Food Systems Programme is based on a food systems approach. FAO defines the food system as encompassing:

> *"The entire range of actors and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption and disposal of food products that originate from agriculture, forestry or fisheries, and parts of the broader economic, societal and natural environments in which they are embedded."*

The food system includes several subsystems, such as farming, waste management, input supply, etc.), and it is intrinsically connected with other systems including energy, public transportation, communications, road infrastructure, health.[8]

A **sustainable** and inclusive food system delivers food security and nutrition for all, in a way that does not compromise food security and nutrition for future generations; is profitable (economically sustainable), has benefits throughout society (socially sustainable), and improves or does not harm the natural environment (environmentally sustainable).

The food systems approach is helpful because it enables an understanding of the interactions and knock-on effects at any one stage or component of the food value chain, as well as how the food system as a whole is impacted by events within its component subsystems and connected systems.

A **city region food system** is the application of the food systems approach to a specific city region geographical setting.

The CRFS encompasses the complex network of actors, processes and relationships that are involved in food production, processing and manufacturing, distribution, markets, consumption, and food loss and waste,[ii] in a given city region. It includes the economic,

ii *These food supply and value chain nodes, used throughout the CRFS assessment and action planning process, are based on the FAO Framework for Sustainable Food Systems (https://www.fao.org/3/CA2079EN/ca2079en.pdf).*

societal, and environmental components that configure actors, processes and relationships.

Figure 2 is a graphical representation of the different elements of the CRFS.

Figure 2. *Elements of the city region food systems*

At the heart of the graphic in **Figure 2** are rural-urban linkages within a city region context. The CRFS approach advocates strengthened connectivity between urban centres and surrounding areas for fair rural development and well-managed urbanization that fosters the development of resilient and sustainable food systems. In this way, the approach stimulates smallholder agriculture, sustainable rural and urban production, employment, livelihood support, and ensures food and nutrition security for all.

The inner circle in the diagram shows the nodes of the value chain,[iii] for input supply and production; storage, processing and manufacturing, wholesale and distribution, marketing,

iii The handbook uses the term "food value chain" rather than "food supply chain", while acknowledging that they are not strictly the same. A food supply chain comprises the activities, stakeholders and transactions through which food passes from production to consumption and waste disposal; a food value chain consists of coordinated value-adding activities that take place during some nodes of the supply chain, resulting in food products.

catering and retail, consumption, food loss and waste.[9] The dotted line and arrow show the general direction of travel of foodstuffs through the value chain. Impacts on the actors and activities at each node have repercussions elsewhere in the value chain.

The smooth functioning of inter-related urban systems (e.g. public transportation, road network, electrical power system, telecommunications, fuel supply, transportation, storage and distribution) supports activities across all food value chain nodes, while any problems in these systems will impair the functioning of the CRFS.[10]

The outer circle of the CRFS diagram shows the components relating to livelihoods and economic development, food security and nutrition, social inclusion and equity, and environmental and ecosystem services. These components both condition the actors, processes and relationships at each of the food value chain nodes and are affected by them.

The outer circle components can also affect each other. For example: livelihoods and economic development affect food security and nutrition; social inclusion and equity affect livelihoods and economic development.

For more information, see:

Detailed explanation: the food systems approach. Access the online toolkit.

Workshop activities: stakeholder understanding of food systems. Access the online toolkit

Training unit 1. Introduction to the City Region Food Systems approach and assessment and planning process. Access the online toolkit

Pillar 3: Multistakeholder engagement and participatory governance

The CRFS process is highly participatory, engaging and involving all relevant stakeholders. It is based on qualitative participatory methods, balanced with quantitative information and data collection and the use of assessment tools. These methods are circular. Rather than holding consultations, **all relevant stakeholders** are involved in **all project modules**.

A summary of multistakeholder participation is included at the start of each module, and key multistakeholder activities are indicated using ➜

The number and types of stakeholders differ from city region to city region, but may include:

- various types of rural, peri-urban and urban farmers or farmers' organizations, as well as those providing technical services and inputs to farmers;
- stakeholders involved in different parts of the food chain, including the processing industry, wholesale and retailers, input supply, restaurants, markets and waste management;
- governmental (all level) and non-governmental stakeholders whose main work concerns other food systems components, i.e. social inclusion and equity, environment and ecoservices, livelihoods and economic development, food security and nutrition;
- organizations that provide awareness and communication on food systems (and resilience) issues (farmer organizations and other civil society and community organizations and consumer groups, including representatives of low-income, vulnerable and marginalized groups);
- institutions and organizations that formulate, influence and implement policies and legislation in areas related to the food system (and resilience), and related areas (transport, health, agriculture, economic development, land-use planning, parks and green spaces, social and educational programmes, etc.);
- institutions and organizations that have advisory roles in areas related to the food system and resilience, and related areas as above (including universities and other research institutes);
- elected officials (the elected officials within the CRFS are several and from different political persuasions).

Projects following the multirisk track may also include stakeholders involved in climate and pandemic risk assessment and resilience capacity-building work, such as:

- representatives of health or environment ministries;
- national and subnational disaster management agencies;
- planning professionals and urban developers;
- natural resource managers;
- meteorologists;
- civil protection officials;
- key private sector entities that maintain functioning food supply chains when shocks and stresses hit;
- NGOs working in emergency response and longer-term resilience projects addressing climate and pandemic risks;
- community leaders, and representatives of low-income, vulnerable and marginalized social groups;
- researchers.

This participatory way of working enables: the collective development of shared vision and focus areas; securing local knowledge and understanding of people's needs and preferences; co-development of research questions and validation of findings; identification of critical issues and determination of priority areas; adjustment of the vision to take into account new information; and finding of creative ways to address the issues through existing and new policies and programmes.

The benefits of the multistakeholder approach are:

- greater awareness and understanding of the characteristics and functioning of the CRFS;
- greater awareness and understanding of key risks and vulnerabilities and capacities needed to manage/ address for resilience building of the CRFS;
- access to local knowledge and insights;
- broad ownership of the project and empowerment, leading to uptake of evidence in policy and programme planning;
- ability to plan interventions that are relevant to local needs, including anticipating challenges and unintended effects;
- stimulus for more joint efforts, capacity and resources to implement policies, strategies and actions, to foster linkages and coherence between initiatives and to avoid duplication;
- basis for establishing a long-term governance structure for the CRFS, beyond the end of the project.

Usually, initial **stakeholder mapping** is conducted early on. It is recommended as part of the Inception module, which enables the project team to establish an initial stakeholder advisory group (SAG). More stakeholders are added to the SAG throughout the process, as the project team builds contacts according to the needs of different activities.

Each of the other modules involves activities requiring **stakeholder dialogue**, either through a workshop involving all stakeholders or in smaller groups of stakeholders with knowledge and experience relevant to specific tasks.

A common, recurring activity through all modules is **visioning**. Visioning helps build consensus within the core team and the SAG regarding the overall project goal, i.e. reduced vulnerability of CRFS to climate shocks and stresses and increased resilience. The intention is to develop a shared vision that all or most of the stakeholders participating in the process agree with. Depending on the node or component at which they operate, different stakeholders will be able to offer insights on different parts of the food system. The perspectives of different kinds of stakeholders may be different and, in some cases, conflicting (e.g. between producers, and other private sector stakeholders, government officials from local or national levels, civil society representatives and academics).

The initial project vision can be developed at the start of the project (see Inception module). At this stage it may be quite broad, however visioning is an iterative process and the focus will narrow over the course of subsequent modules. It is recommended that stakeholders "check in" on the vision at regular intervals, to ensure it is still valid in the light of new information and to make adjustments that will direct subsequent activities.

How to conduct stakeholder mapping and analysis. Access the online toolkit

How to develop a vision and summary vision statement. Access online toolkit

Training unit 3. Participatory multistakeholder processes. Access the online toolkit

Key concepts: Risk and risk determinants

A project team may wish to look in more detail at the risks to the CRFS from specific likely hazards, such as climate shocks and stresses, pandemics and their impacts, with a view to reducing risks and vulnerabilities and increasing resilience capacities.

It is important that the project team have have to has a common understanding of the concept of risk and the key associated terms: hazard, exposure, vulnerability and resilience capacities. This will avoid confusion and cross-purposes, and will provide the basis for assessing risk in the In-depth Assessment module.

Resilience terminology in local context

The definitions set out below are based on those developed by United Nations agencies working on climate risk management and disaster risk reduction. It is acknowledged that the terms may be used differently in national and local policies and plans.

Moreover, terms may be translated into local languages with slightly different nuances. The intention is not to impose that cities adopt the global definitions, but rather to ensure local project teams understand the concepts used throughout CRFS materials and, where necessary, ensure equivalent locally preferred terminology is used consistently.

Defining and determining risk

A formal definition of risk is the potential for specific consequences (impacts) that may affect assets, people, ecosystems, culture related to the city-region context.[iv]
Put another way, risk is the likelihood of damage or negative impacts or consequences within the CRFS.
Risk is determined by the interaction between the **hazard** in question, and the **exposure, vulnerabilities and resilience capacities** of people, assets, infrastructures, and ecosystems within the CRFS.

The terms underlined are known as the risk determinants and the interaction between them is illustrated in **Figure 3**.

iv Adapted from Climate Risk Assessment for Ecosystem-based Adaptation – A guidebook for planners and practitioners.[11]

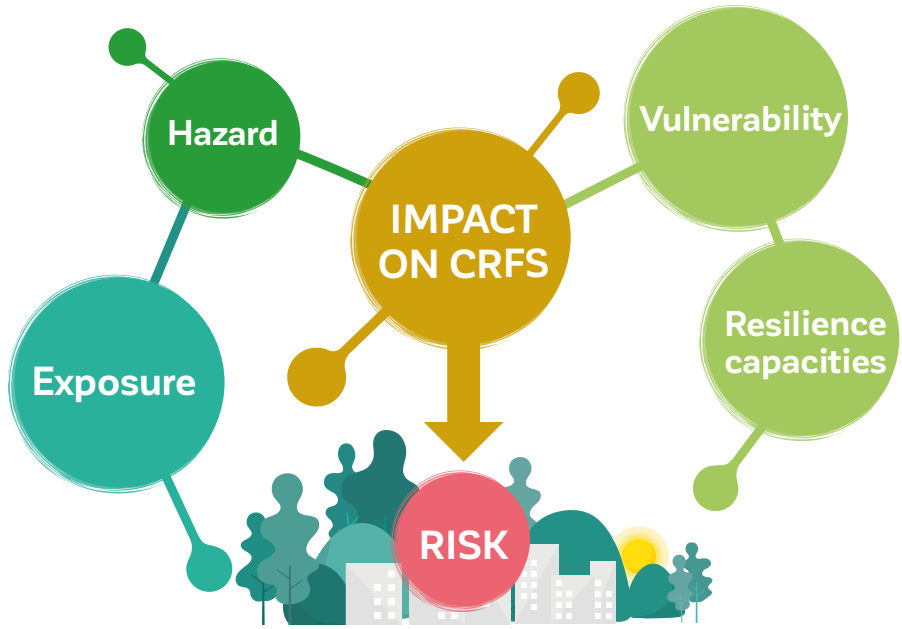


Figure 3.
The risk equation

Defining the risk determinants

Tables 1 to **6** provide definitions of risk itself and of each of the risk determinants. For each, three definitions are shown of varying degrees of accessibility and complexity: short, accessible and formal.

Table 1. Risk definitions

Short explanation	**Risk is determined by hazard, exposure, vulnerability and capacity**
Accessible definition	Risk is determined by hazard, exposure, vulnerability and capacity
Formal definition	The potential of shocks and stresses to negatively affect systems, communities, households, or individuals. Risk is a function of hazard, exposure, vulnerability, and capacity and accounts for the probability of direct and indirect social, economic, and environmental costs of shocks and stresses.[12]

Table 2. Hazard definitions

Short explanation	A shock or stress that may impact the city region food systems
Accessible definition	A shock or stress that could cause injury or death, damage to property, social and economic or environmental disruption, damage or degradation. A hazard can be either a sudden shock (an extreme weather event) or a chronic stress over a period of time (such as persistently rising temperatures or below average rainfall over a number of years).
Formal definition	A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation.[13]

Table 3. Impact definitions

Short explanation	What happens; changes that occur
Accessible definition	How a hazard actually affects people, livelihoods, assets, infrastructure, and ecosystems, in light of the vulnerabilities, exposure and differing resilience capacities.
Formal definition	The consequences of realized risks to natural and human systems, where risks result from the interactions of climate-related hazards (including extreme weather and climate events), exposure, vulnerability and resilience capacities. Impacts generally refer to effects on lives, livelihoods, health and well-being, ecosystems and species, economic, social and cultural assets, services (including ecosystem services) and infrastructure. Impacts may be referred to as consequences or outcomes and can be adverse or beneficial.[14]

Table 4. Vulnerabilities definitions

Short explanation	What makes people or things more prone to harm from a hazard.
Accessible definition	Conditions or factors (social, economic, environmental) that make people or things more susceptible to harm. (N.B. social factors may include age, gender, socioeconomic status, household structure).
Formal definition	The conditions determined by physical, social, economic and environmental factors or processes that increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.[15]

Table 5. Resilience capacities definitions

Short explanation	Helpful skills or resources
Accessible definition	Risk management capacities, skills or resources that enable some people to prevent, anticipate, absorb, adapt and transform their activities and perspective in the light of risk of impacts from different hazards. The following are subdefinitions of the key verbs, adapted from the formal definition source to be applicable to the CRFS approach: • Prevent: to take measures to reduce existing known and future disaster risks and vulnerabilities, e.g. adopting good practices to reduce current and future risks. • Anticipate: to be warned and acting early, e.g. the existence of and access to effective early warning systems, and being able to act upon them. • Absorb: to be able to cope during and after an event, e.g. having risk insurance and social protection; having mutually supportive community/business networks. • Adapt: to make initial changes to be able to continue functioning in view of the known/identified risks (these changes may inform longer-term transformation). • Transform: to do things differently and change the system in view of the known/identified risks, e.g. finding alternative activities or perspectives, diversifying livelihoods. Measures to enhance all of these resilience capacities are determined by implementation of policies, strategies, practices and funding mechanisms. Some example areas where actions can be taken to increase resilience capacities are: • agroclimatic and disaster/crisis risk information systems, including food security information systems; • multirisk early warning systems with actionable alerts; • anticipatory action (linking to emergency preparedness and response); • risk and crisis governance and finance (including investments); • vulnerability, risk reduction and diversification measures at field levels (including livelihoods diversification); • risk proofing of infrastructures along the food value chain; • risk transfer and social protection mechanisms, specifically cash transfers, risk-informed and shock-responsive social protection, and insurance; • nature-based solutions, including territorial and ecosystems and natural resource management; • reducing food loss and waste; • inclusive, resilient and sustainable diets.
Formal definition	Resilience is the ability of individuals, households, communities, cities, institutions, systems and societies to prevent, anticipate, absorb, adapt and transform positively, efficiently and effectively when faced with a wide-range of risks, while maintaining an acceptable level of functioning without comprising long-term prospects for sustainable development, peace and security, human rights and well-being for all.[16]

Table 6. Exposure definitions

Short explanation	Who and what are located in the areas prone to be affected by a hazard.
Accessible definition	Who (which people) and what (which assets, infrastructure, etc.) are located in the geographical area likely to be affected by the hazard.
Formal definition	The presence of people, infrastructure, housing, production capacities and other tangible human assets in hazard-prone areas. Measures of exposure can include the number of people or types of assets in an area.[17]

Detailed examples of risk scenarios from the pilot cities. Access the online toolkit

Training unit 2. Building resilience against multiple shocks and stresses. Access the online toolkit

1.4 How to use the handbook and online toolkit

This handbook is designed for project coordinators and project teams in city regions that are implementing the city region food systems assessment and planning process. Its purpose is to set out the concepts of the CRFS approach and key terminology, and to detail activities and outputs under five project modules: Inception, Defining the CRFS, Rapid Scan, In-depth Assessment and Action Planning.

The handbook is to be used in conjunction with the online toolkit, which contains the training units, supplementary explanations, how-to tools, technical examples, and workshop resources related to activities within each project module. The toolkit can be accessed here.

A series of training units is available to help city region stakeholders as they embark and implement the CRFS approach.

The handbook and toolkit follow the same structure, and links to the corresponding toolkit pages are given at relevant points throughout the handbook. Links to the toolkit are signalled using the Toolkit symbol.

A modular process

The CRFS assessment and planning process is modular. In this handbook the modules are presented in a logical, linear order, but the project team may implement them in a different order, or in an iterative fashion, if that makes more sense in light of local context or previous food systems work in the city and surrounding area. Some modules may not be needed, for example, if it is possible to draw on the results of previous projects, or if there are resource or capacity constraints. To ensure flexibility, the introduction to each module includes **Options** for implementation, and ends with several suggestions for **Where next**.

In addition, it is not always necessary to complete all the activities in a module before beginning another; activities from different modules can be conducted concurrently (especially at the start of the process). **Figure 4** is a linear representation of the assessment and process, with potential for overlaps between modules.

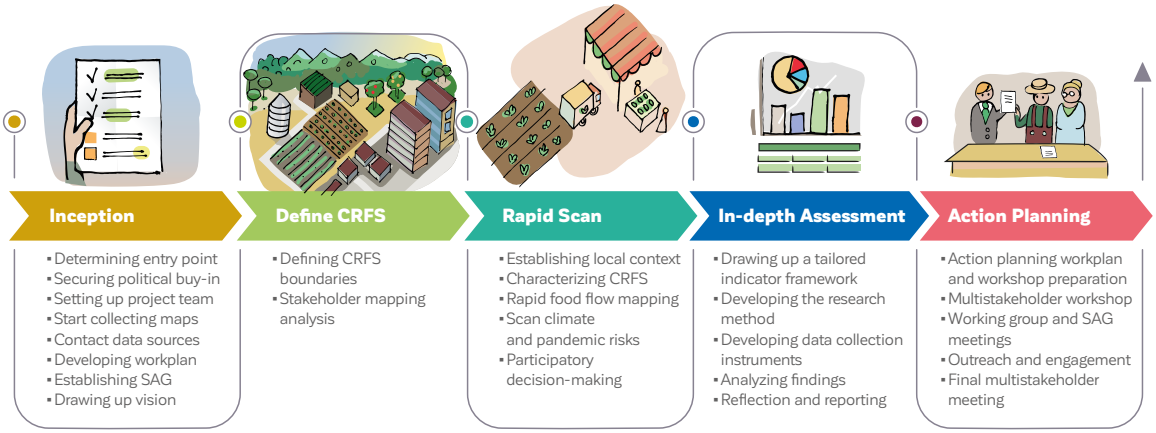


Figure 4. *Linear representation of the assessment and planning process*

An indicator-driven process

The CRFS indicator framework is a crucial element of the CRFS process. It is used and referred to throughout the **entire assessment and planning process**.

This is an unusual way of using indicators. In addition to the usual practice of defining (or re-defining) indicators as part of action planning in order to monitor progress and assess impacts of interventions, in the CRFS process indicators are used to clarify where attention should be focused **from the start**.

What is an indicator framework?

An early-stage indicator framework is developed before the In-depth Assessment, and is usually presented as a table that identifies, for each selected priority area:

- The **outcomes**, i.e. types of changes that stakeholders in the CRFS project want to achieve in the future in relation to each priority area (and, in some cases, key commodity value chains).
  *For example: 80 **percent** of CRFS food producers will have adopted climate resilient practices by 2030.*
- **Issues to be measured** (in relation to each outcome)
  For example: Extent of adoption of climate resilient practices by CRFS food producers.
- Possible **indicators**, i.e. specific, measurable characteristics relating to each issue to be measured, that can be used to show change or progress towards the outcome.
  For example: numbers of producers adopting climate resilient practices; by type of practice; by geographical location.

An early-stage indicator framework will not include activities, outputs and impacts. These can only be developed later, during the action-planning phase. At this point the focus is on agreed priority outcomes.

Two reference indicator frameworks are provided in the CRFS Toolkit. One is the CRFS sustainability indicator framework; the other is the CRFS resilience indicator framework.

These reference indicator frameworks can provide a menu of options that can be used to clarify where attention should be focused from the start.

The project team must develop its own early stage indicator framework that is customized to fit the context. This may draw inspiration from the reference indicator frameworks, but it is developed from the 3–5 priority areas that are selected following the Rapid Scan, taking into account the shared vision developed by the project team and the SAG.

The indicator framework will evolve in light of results of the in-depth assessment findings and in relation to refined priorities and planned actions.

Why develop an indicator framework?

By prioritizing desired outcomes and considering possible indicators **before** doing further in-depth assessment to inform the action planning, the process of developing an indicator framework guides the focus of the project team. It allows them to:

- Develop research questions and appropriate data collection methods to assess the current performance of the CRFS, following a whole-systems approach.
- Further refine priority areas for action with clearly defined outcomes, issues to be measured, and ways of monitoring change.
- Enable establishment of baselines in relation to each priority area.
- Provide an evidence base to support engagement and outreach, mobilization of resources, and communication of experiences and lessons learned.
- Help with planning strategy and actions to achieve the desired outcomes.
- Allow for monitoring of changes (progress or regression) resulting from (future) policy and programme implementation (although such monitoring itself falls outside the timeline of the CRFS project).

In addition, the process of identifying, developing or fine-tuning indicators helps to focus stakeholders' minds on working towards realizing the shared vision.

It is strongly recommended that the project team review the tool on developing the indicator framework early in the project, which should be prepared in advance of the In-depth Assessment module. It is also helpful to review the reference indicator frameworks, which are useful starting points and can provide inspiration.

Tool: Detailed guidance on drawing up indicators. Access the online Toolkit

Tool: CRFS Sustainability indicator framework. Access the online Toolkit

Tool: CRFS Resilience indicator framework. Access the online Toolkit

Multiple thematic tracks

The general process described in this handbook relates to the overall functioning and performance of the CRFS, its resilience and sustainability. This is referred to as the "main track".

A project team may wish to look at the risks to the CRFS in more detail in relation to specific potential hazards, such as climate shocks and stresses, pandemics and their impacts, with a view to reducing risks and vulnerabilities and increasing resilience capacities. This option, referred to as the "multirisk track", may be implemented either in conjunction with the main track or, in city regions where food systems assessments have been carried out in the past (using the CRFS approach or other methodologies), as a bolt-on project.

Additional or alternative activities and outputs for the multirisk track are indicated using the symbols for "climate" and "pandemic":

Climate →  **Pandemic →** 

For more details on defining and determining risks, see Key concepts: Risk and its components in Section 1.4.

Mapping and spatial analysis

Because the CRFS assessment and planning process is implemented within specific territorial contexts (city regions), all modules include activities that require some mapping and spatial analysis. These activities allow for visual representation of the CRFS, including key stakeholders, assets and infrastructures, as well as blockages, problems and vulnerabilities.
Mapping and spatial analysis activities are indicated using the mapping symbol →

Mapping involves the collection of data and information related to specific locations. The output of mapping is usually a simple map, displaying, for example, food markets; storage facilities; road distribution network, etc.

Spatial analysis involves combining several layers of maps and spatial information to observe patterns in how different elements are related to each other, and to identify trends or problems. The output of this process is usually more complex maps that contain several layers of information, see **Figure 5**.

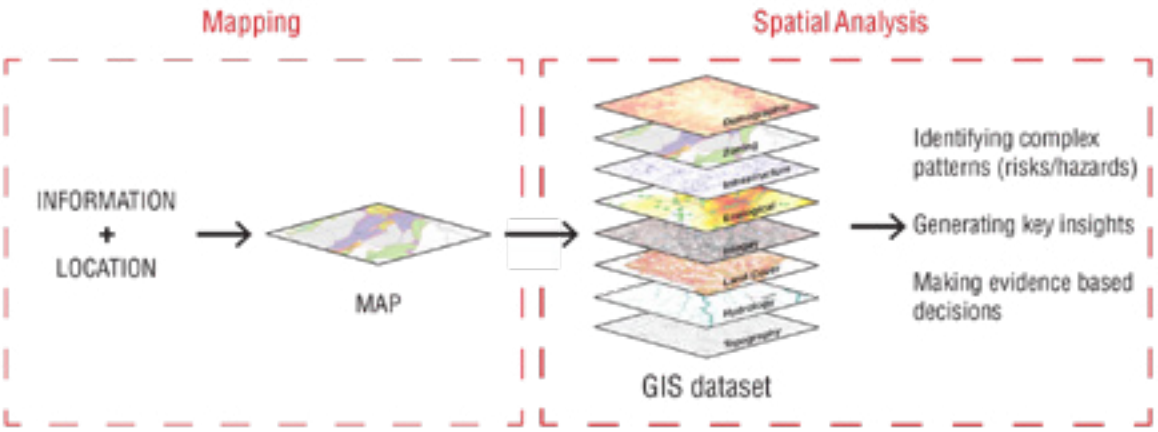


Figure 5. *Mapping and spatial analysis*
© FAO/Matt Poot

The recommended technology for mapping and spatial analysis is Geographical Information System (GIS), due to its advanced functionality. There are various GIS software, such as ArcGIS, QGIS and others. However, GIS requires specific skills, and it is likely that a GIS expert will need to be recruited to join the project team. If this is not possible (for example, lack of available expertise or budgetary constraints), non-experts can still conduct simple spatial analysis, using existing maps, complemented by maps on specific CRFS components produced through participatory mapping.

For more details and example, see:

Tool: Mapping and spatial analysis in the CRFS process. Access the online toolkit

2

ASSESSMENT AND PLANNING PROJECT MODULES

This section provides detailed guidance on each of the CRFS project modules.

Although there is logic in the order the modules are presented, the modules have not been numbered. This is because they may be conducted in the order that makes most sense in a given context, and depending on information available from any previous assessments. If previous work on food systems has been conducted (recently), some modules may require only a slight review and update of the earlier work, or may not be needed at all.

Stakeholder dialogue and governance operationalizes Programme Pillar 3: Multistakeholder engagement and participation and is a component of all modules.

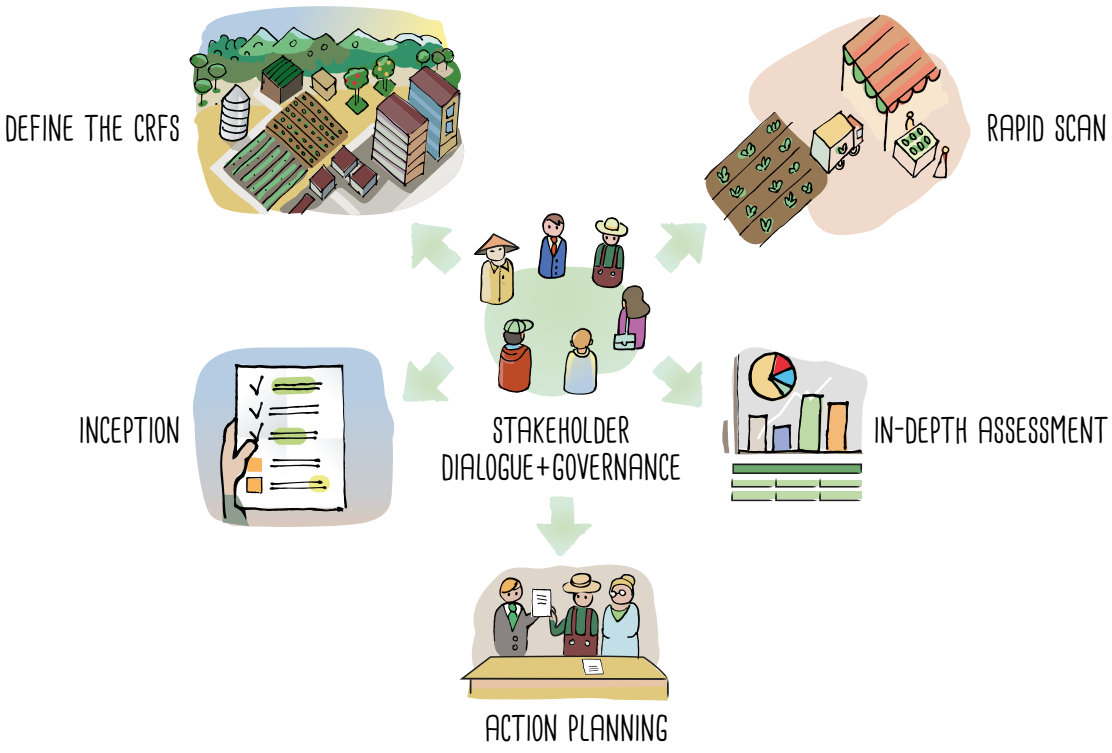


Figure 6. *City region food systems programme modules*

In the following guidance, each module starts with a **Before you begin** box detailing key activities that the project team will find useful to have completed. A general introduction is provided for the module, including boxes on **Outputs, Options**, **Timings**, and **Summary of multistakeholder participation**.

Subsections follow that describe each activity, why and by whom it will be conducted, brief guidance on how to do it, and narrative examples from pilot cities. Key relevant resources (tools, guidance, templates, technical examples, training materials, workshop exercises, etc.) relating to the activity are indicated in the text, together with a link on where to find them in the online toolkit.

A **complete list of resources** is provided at the end of each activity.

Each module concludes with **Where next** bullet points suggesting which module or activities the project team may undertake next, depending on circumstances.

2.1 Inception

The Inception module is a logical starting point in the CRFS assessment and action planning process.

The purpose is to conduct preparatory administrative tasks and to lay the foundations for multistakeholder engagement and participation throughout the rest of the project. Additional stakeholders mapping and checking-in, on (and possibly revising) the vision will take place in subsequent modules.

The Inception module contains five activities:

- determining the entry point(s) and securing political buy-in;
- setting up the project team, including skills audit;
- starting to collect maps and contacting data sources;
- developing the workplan;
- establishing a Stakeholder Advisory Group (SAG);
- drawing up an initial vision.

Outputs of the Inception module

By the end of the Inception module, project initiators will have:

- political buy-in or approval for the project;
- a project team in place, including appointment of a project coordinator, institutional focal point(s), and other experts;
- a workplan detailing tasks, responsibilities, resources, products or outputs, and timeline/deadline;
- established contact with a few sources of spatial data;
- an initial collection of up-to-date maps.

Project initiators or the project team may also have:

- identified the entry point(s);
- established an initial stakeholder advisory group;
- an initial vision and vision statement.

In addition, the project team will have identified, and have knowledge of, recent past and ongoing projects that are relevant to the city region food systems.

Options

The activities included in the Inception module can be carried out at the start of the CRFS project. Depending on local context it may be necessary to postpone some activities or return to them later on. The modular process means there is the flexibility to do this, if it makes more sense. For example:

- It may not be possible to determine the entry point(s) at the beginning. If necessary, the project team can return to this activity in the Define the CRFS module or following the Rapid Scan module.
- If it is not possible to establish the stakeholder advisory group (SAG) because of an initial lack of institutional participation, the project team can solicit initial multistakeholder engagement through informal and bilateral discussion. The SAG may then be formed later, for example, after the stakeholder mapping analysis in the Define the CRFS module
- If participatory visioning is not carried out at the outset (if, for example, the SAG is not yet formed), it can be done during a future multistakeholder workshop, such as during stakeholder mapping analysis in the Define the CRFS module or at the end of the Rapid Scan.

As explained in the introduction, the CRFS process is designed to be modular. As the project team develops their workplan they may decide to complete the modules in the order that makes most sense in the context of the particular city region. The project team may even choose to omit some modules or activities if similar work has been carried out already.

Activity 1. Determining the entry point(s) and securing political buy-in

Summary of multistakeholder participation

Multistakeholder participation in the project should start as soon as possible. The agenda of the initial meeting of the stakeholder advisory group includes:

- discussion (and validation) of the entry point;
- input into the workplan;
- workshop activity on the food systems approach;
- participatory visioning.

A CRFS assessment and planning project may be initiated at the request of a (local or regional) government that is interested in having more information on the character and functioning of the food systems and existing risks, and that is looking to improve its resilience and sustainability. Alternatively, it may be driven externally, e.g. by local non-governmental organization (NGO) actors or consultants, or come about as a result of an existing collaboration between governmental and non-governmental stakeholders.

Regardless of how and by whom the project is initiated, it will be necessary to ascertain one or more entry point(s) and to ensure there is a clear and concise case for support that secures strong political buy-in.

An **entry point** is an issue or policy area of shared interest or concern. It may be used to engage governmental and institutional stakeholders in the process, helping to secure political buy-in and ownership, and ultimately mainstreaming food systems considerations into policies, programmes and action plans.

There are many potential entry points for a CRFS project. Some examples are:

- improving economic opportunities of small scale-producers connected to urban and peri-urban markets;
- improving food security and nutrition of vulnerable dwellers;
- improving environmental sustainability;
- strengthening the resilience of food supply chains against specific or multiple shocks and/ or stresses, with a focus on key commodities that are produced and consumed within the city region.

Table 7 contains some ideas of how to ascertain the entry point(s), one of the most important of which is examination of previous food work. Not only will this provide inspiration, but it will also help the project team to determine which module to start with (to capitalise on, and not unnecessarily repeat, previous work), as well as the order for subsequent modules. For more detailed guidance on entry point selection, see:

Tool: Detailed guidance on identifying entry points and securing political buy-in. Access the online Toolkit

The selection of one or more entry point(s) does not exclude other issues from being taken up. On the contrary, the intention is for representatives of multiple relevant policy areas, departments, and agencies to be involved in the multistakeholder process. The entry point provides the impetus and can frame the arguments for securing political buy-in.

The government department or agency responsible for the issue or policy area may lend its support towards securing buy-in from elected officials and/or host the project, as it recognizes alignment between the overall objectives of the CRFS approach and its own policy agenda. The relevant department or agency may also provide the institutional focal point for the project (see **Activity 2**).

It is important to discuss the entry point with the stakeholder advisory group (SAG, see **Activity 4**) once it is established, so that everyone is clear on how the CRFS work is being framed and communicated at the political level. Making the entry point part of SAG discussions will help reinforce other aspects of the CRFS process, such as the vision, selection of priority areas and indicators, fine-tuning research questions and communication of findings.

Timing

This module may take up to four months in total, but there is no need to complete all activities before moving on to the next module. It is likely that some of the activities will be done concurrently with the Define the CRFS module.

Table 7. Suggested ways to identify entry points

At the start of the project:	
Examine previous food work	Where a city or city region has previously conducted work on food systems, consider: What was the aim? What did it seek to address? Which departments and stakeholders were involved? What recommendations and interventions came out of it? Why did the project come to an end?
"Selling-in" to top-line agenda	Consider how food systems work can contribute to one or more pressing issues in the city and region, e.g. creating job opportunities; reducing obesity or malnutrition; improving the urban environment; building resilience, etc.
If there are no obvious entry points at the start:	
Stakeholder and institutional mapping (see Define the CRFS module)	It is likely that one or more entry points will emerge from identification of: general objectives of local government departments, and how a resilient and sustainable CRFS can contribute; existing food-related roles and responsibilities; interested individuals.
Rapid Scan **findings**	Clear communication of the problems and priority areas identified in the rapid scan can point to a logical entry point.

Delayed selection of entry points

Although the phrase "entry point" implies it is determined at the start of the CRFS process, the modular nature of the process means it may be determined under a subsequent module if it makes more sense to do so.

Delaying the final selection of entry point should not be a reason to neglect securing tacit political buy-in to the project at the outset, but it may be necessary to couch the benefits of the CFRS approach in general terms – or to point out the multiple possible (and interchangeable) entry points.

Entry points in time of electoral change

Electoral change and changes in the political agenda can mean an entry point suddenly becomes invalid, if it is tied to the top-line agenda (see Table 7). This means all key players should be aware of, and in agreement with, how to use different entry points if necessary.

The project team should be prepared to re-enter dialogue and secure political buy-in again, if necessary using a different entry point that connects better with the new political agenda.

Political buy-in is the formal agreement of elected officials to support the project (whether through resources or through in-kind actions), to participate in multistakeholder activities, and to give due and proper consideration to recommendations. Securing political buy-in can be extremely difficult and require concentrated effort. Table 8 contains ideas on tactics to engage influential contacts and decision-makers (often a combination of tactics is required), and support materials. For more detailed guidance, see:

Tool: Detailed guidance on identifying entry points and securing political buy-in. Access the online Toolkit

Further targeted engagement of government officials is required throughout the process to maintain a sense of ownership and commitment, so that the policy or action plan will be shaped according to the needs, demands and contributions of all stakeholders involved.

Table 8. Tactics and support materials to secure political buy-in

Tactics:	
Working through network connections	Project team members can explore their wider networks to identify people who have direct links and influence with decision-makers.
Finding a champion	"Champions" are people who are, or have connections with, city leaders and elected representatives, who understand the importance, and are prepared to advocate for the building of a resilient and sustainable CRFS. For example: a politician, a high-ranking civil servant, a celebrity who understands the food agenda.
Getting powerful businesses on board	Engaging economic actors who pay local taxes and invest in the area can be an effective way to attract the attention of political leaders. They may already be investing in innovative approaches related to increased sustainability and resilience.
Multistakeholder workshops and meetings	Personal invitations are sent to key political actors that clearly explain why the project is important. Attention should be paid to logistical arrangements to maximize the likelihood of attendance. It can also be helpful to arrange one-on-one meetings with key stakeholders, either if they cannot or are unwilling to attend the multistakeholder workshop or as a follow-up.
Media coverage	Local media organizations (e.g. newspapers, radio, television and online platforms) can help spread the word about the CRFS project and the issues it seeks to address, to mobilize public support for action by the municipality and others.

Support materials:	
Briefing paper	A one or two-page, clear, to-the-point briefing document explaining the importance of the project can be circulated with an invitation to a multistakeholder workshop or a meeting request.
Fact sheet	A short, accessible and visual fact sheet of the findings of the Rapid Scan can make the case for supporting the project.
Scenarios and modelling	Data-based modelling can be used to show potential future scenarios for the city region and its food system, in relation to the entry point, e.g. future food insecurity scenarios, impact of shocks and stress scenarios. Projected economic costs of non-action (compared with investments in resilience-building) are particularly powerful.
Case studies from elsewhere	Case studies from other city regions can help people see how the project can increase CRFS resilience and sustainability.

Examples. Cities' entry points and how they were determined. Access the online Toolkit

Complete list of tools and resources for this activity

Tool: Detailed guidance on identifying entry points and securing political buy-in. Access the online Toolkit

Examples. Cities', entry points and how they were determined. Access the online Toolkit

Activity 2. Setting up the project team, including skills audit

It is recommended that each city region form a project team to coordinate the process and to raise awareness of activities, to ensure initial and ongoing engagement, to be the visible "faces" of the project for other stakeholders, and to advocate mainstreaming of resilient and sustainable food system considerations in relevant policies, programmes and plans across the city region.

The size and composition of the project team will vary from one city region to another, but it is recommended that the team does not exceed 10 individuals. The following are key roles:

- **Project coordinator** leads the project team. This person has an appropriate technical profile, combined with the capacity to effectively manage projects, interact with different institutions/groups of stakeholders and orient research towards policy outcomes. Terms of reference are drawn up for this role and agreed at an initial team meeting. See the following for an example:

Sample terms of Reference: Project Coordinator. Access the online Toolkit

- **An institutional focal point** is an individual within the local or subnational government who acts as a reference point for the project across all departments/sectors. Depending on the number of governmental institutions or agencies involved in the CRFS project, it may be necessary to have multiple institutional focal points. Preferably, a suitable candidate has a technical profile and, at the same time, the capacity and position to influence the decision-making process. Again, terms of reference are drawn up for this role and agreed at an initial team meeting. See the following for an example:

Sample terms of Reference: Institutional focal point. Access the online Toolkit

- **Specialists** in **agronomy**, **value chain analysis** and **GIS mapping.** If budget allows, these specialists may be hired as consultants. The expertise of these specialists will be very helpful in Defining the CRFS, Rapid Scan and In-depth Assessment modules (although, as noted in the introduction some mapping and spatial analysis activities can still be carried out if it is not possible to hire a GIS expert). Again, terms of reference are drawn up and agreed at an initial team meeting. See the following for an example:

Sample terms of Reference: GIS, agronomy, and value chain experts. Access the online Toolkit

In light of the multi-disciplinary nature of the CRFS process, it may be helpful to include other champions, according to local context. Champions may include:

- Representatives of relevant local, regional or national government departments, such as agriculture, local economic development, environment, planning, and disaster risk reduction. Representatives of locally-based consultants and NGOs that focus on agriculture and food systems issues and/or existing programmes to increase resilience and sustainability within the city region food systems.

It is recommended that an audit be conducted of skills and expertise among the project team members, to identify the additional expertise that needs to be brought in to complete all the tasks in subsequent modules (by adding more people to the project team or to the SAG). The audit covers:

- which members are best equipped to handle required tasks;
- which areas training is required to bridge any knowledge gaps.

For example:

- Facilitation skills are required for multistakeholder workshops throughout the project; multiple facilitators might be needed for the working groups during the Action Planning module.
- Writing, layout and presentation skills are needed to produce reports and visual support materials based on the assessment findings.
- An economic analyst or researcher may be needed to carry out a cost-benefit analysis during the Action Planning module.
- Expertise in media relations is required to ensure media engagement at key stages of the project, especially during action planning when media coverage can help secure the engagement of other stakeholders required to put actions in place.

See the following checklist of required skills and expertise:

Tool: Checklist of required skills, expertise and experience. Access the online Toolkit

Once the project team is formed, an initial meeting is held to introduce the project, the programme pillars and key concepts. If necessary, more detailed training is arranged to ensure all stakeholders fully understand the programme pillars and concepts – in particular the importance of taking a food systems approach and multi-stakeholder engagement.

For examples of how the project teams were established and trained in pilot cities, see:

Example: Setting up and training project teams. Access the online Toolkit

Complete list of tools and resources for this activity

Sample terms of Reference: Project Coordinator. Access the online Toolkit

Sample terms of Reference: Institutional focal point. Access the online Toolkit

Sample terms of Reference: GIS, agronomy, and value chain experts. Access the online Toolkit

Tool: Checklist of required skills, expertise and experience. Access the online Toolkit

Example: Setting up and training project teams. Access the online Toolkit

Training unit 1. Introduction to the City Region Food Systems approach and assessment and planning process. Access the online Toolkit

Training unit 2. Building resilience against multiple shocks and stresses Access the online Toolkit

Training unit 3: Participatory multistakeholder processes. Access the online Toolkit

Activity 3. Start collecting maps and contacting data sources

It is recommended that the project team (or the GIS expert, if contracted) establish contact with sources of up-to-date maps and spatial data, and start collecting maps as soon as possible. These materials will be needed to determine the initial CRFS boundaries in the Define the CRFS module, but it can take some time to find the right source. If the right source is not available when needed, the project may face costly delays.

Useful documentation, maps and spatial data may include:

- Maps that show administrative, local government, and metropolitan areas and jurisdictions; cadastral maps showing land plots and property boundaries (where they exist).
- Land use, land cover maps, topographic maps.
- Infrastructure and utilities, roads maps, ports.

- Most recent population census data.
- Urban planning and development policy frameworks, defining areas that are earmarked for development or conservation (such as greenbelts).
- Topographic maps and biophysical data sets, e.g. physical data (soil conditions, geology); climate, hydrology, water resources; land use and capability showing biological data; erosion and sediment.
- Environmental impact reports, i.e. areas that have been affected by environmental events, when, how, in what ways.
- Household consumption surveys showing dietary habits of particular social and economic groups in different locations.
- Food flow analyses (if completed previously).
- Employment data and economic reports.
- Agricultural census data and commodity marketing data.

Potential sources of these data include:

- Local urban planning department (master plans, land-use maps, etc.).
- Local institutions and entities that hold up-to-date census data, e.g. Ministry of Internal Affairs
- Ministries of Agriculture, Environment, Local Economy
- Geography and planning faculties at local universities/colleges
- NGOs working on issues including agriculture, food security, etc.

For more information, see:

Step-by-step mapping and spatial analysis guide for the CRFS assessment and planning process. Access the online Toolkit

Complete list of tools and resources for this activity

Step-by-step mapping and spatial analysis guide for the CRFS assessment and planning process. Access the online Toolkit

Activity 4. Developing the workplan

The purpose of the workplan is to outline the steps to be carried out in the assessment and planning process, to assign responsible stakeholders, and to set out expected products or outputs and timescales so as to ensure accountability.

The workplan can be developed either during a first project team meeting or during an initial SAG meeting (following Activities 5 and 6, taking into account the overall project purpose established after the Visioning). Alternatively, the project team can develop an initial workplan, which subsequently can be amended or extended to include actions by members of the SAG. If necessary, drafting of the workplan can be completed after the meeting, for discussion and approval at the next meeting.

The workplan should identify a concrete set of activities that can be realistic accomplished, considering the available time period, resources and skills available in the core team and/or wider SAG. The workplan also contains a strategy for multistakeholder engagement and participation in each module, as noted above, and tasks on mapping and spatial analysis.

It may be helpful to create and complete an action grid with columns for the action or task, stakeholder responsible, resources, products or outputs, and timeline/deadline. A template workplan action grid is available:

Template: Workplan action grid. Access the online Toolkit

As explained in the introduction, the CRFS process is designed to be modular. Project teams may complete the modules in the order that makes most sense to them, and if previous food systems work has been conducted, some modules may require only a slight review and update of the earlier work, or may not be needed at all.

Complete list of tools and resources for this activity

Template: Workplan action grid. Access the online Toolkit

Activity 5. Establishing a stakeholder advisory group

The project team (including the institutional focal point) works in close collaboration with a wider group of stakeholders to trigger a multistakeholder dialogue and to secure wider local ownership of, and engagement in the project. This dialogue may be initiated by establishing a **stakeholder advisory group, or SAG,** involving representatives from various government sectors and levels of government, food value chain nodes (may be unions or professional associations), civil society (producer and consumer organizations, NGOs), academia (including local universities, private and financing sector, media, etc.

The role of the SAG is to:

- provide info/data on CRFS;
- give input and feedback to help identify priority areas;
- participate in strategy development;
- help build a permanent network;
- bridge communications gap between stakeholders;
- collaborate with other initiatives and groups;
- facilitate uptake of research results into policy and programmes;
- advise the project team.

Prospective members of the SAG can be identified and engaged in several ways:

- In city regions, where there are existing networks related to the food system, or where related projects have been carried out recently, project team members will be able to identify suitable stakeholders relatively easily at the initial project team meeting. Each project team member can engage stakeholders they already know.

- Internet searches can identify potential interested/knowledgeable partner organizations and the right people to speak within these organizations. These people could be engaged through an introductory phone call or face-to-face meeting.
- A preliminary stakeholder mapping analysis could be initiated at this stage (detailed stakeholder mapping analysis is envisaged in the Define the CRFS module). This ensures that the most relevant actors are engaged from the beginning to secure continuity of project activities. The coordinator, together with the institutional focal point, makes sure the relevant food systems and climate actors are part of the SAG. For more information, see:

How to conduct stakeholder mapping and analysis. Access the online Toolkit

For examples of how the project teams established a SAG see:

Example: Establishing a Stakeholder Advistory Group. Access the online Toolkit

It is recommended that the average SAG include around 50 people, as more individuals may create challenges in operationalizing activities. Stakeholders from broader disciplines can be identified later through a more comprehensive stakeholder mapping and analysis (see Define the CRFS module) and be brought in later, as and when they are required at specific moments in the process.

Figure 7 shows the relative size and relationship between the SAG, the project team, and the wider pool of stakeholders, including subgroups that can be brought into the SAG when required.

It will be necessary to draw up terms of reference for the SAG. For an example, see:

Sample terms of Reference: Stakeholder Advisory Group. Access the online Toolkit

Figure 7. *Relationship between project team, stakeholder advisory group, and wider stakeholder group*

Once the SAG has been established, it will be necessary to hold an initial SAG meeting to introduce the project and (in particular) the food systems approach, to validate the entry point (see **Activity 1**), and to conduct initial visioning (see **Activity 5**). For a sample agenda for the first SAG meeting and workshop activities on the food systems approach, see:

Sample agenda for the initial SAG meeting. Access the online Toolkit

Workshop activities to build stakeholder understanding of food systems Access the online Toolkit

In city regions, where broader institutional participation and interest in CRFS is still lacking, the project team can initiate work with multistakeholder engagement initially occurring through informal and bilateral discussions. In such cases, the broader SAG will be established later (for example, following the stakeholder mapping analysis in the Define the CRFS module).

Complete list of tools and resources for this activity

How to conduct stakeholder mapping and analysis. Access the online Toolkit

Example: Establishing a Stakeholder Advistory Group. Access the online Toolkit

Workshop activities to build stakeholder understanding of food systems. Access the online Toolkit

Sample terms of Reference: Stakeholder Advisory Group. Access the online Toolkit

Sample agenda for initial SAG meeting. Access the online Toolkit

Training unit 3: Participatory multistakeholder processes. Access the online Toolkit

Activity 6. Drawing up an initial vision

It is recommended that an initial CRFS vision be drawn up towards the start of the CRFS project through a participatory process.

Participatory visioning is the process of developing and articulating:

- The shared **CRFS vision**, which captures the types of changes or new elements in the CRFS that the participants want to see in place in the future. The shared vision expresses: the direction in which the stakeholders want to take the food system, and why; and what success will look like in the future (5+ years).
- A brief and inspiring summary **vision statement** that summarizes the vision, agreed on by all stakeholders.

By establishing the direction of travel, the fully articulated CRFS vision becomes the starting point for developing priority areas.

The summary vision statement can be used to explain the CRSF vision easily to other stakeholders or it may be adapted to increase public engagement.

Participatory visioning may take place during the initial SAG meeting (see Activity 4). If this is not possible (e.g. because key stakeholders have not been engaged) it may be completed during a subsequent workshop.

Working with the CRFS vision is an iterative process. The CRFS vision will be revisited in subsequent modules, as more information is obtained, to check if it is still relevant and useful.

Why conduct visioning?

The visioning process helps build consensus within the core team and multistakeholder SAG regarding the overall project goal (i.e. reduced vulnerability of the CRFS to climate shocks and stresses and increased resilience). It brings together a range of different perspectives and provides a more holistic or rounded picture of how a better future might look. It also begins to capture ideas for action and a sense of prospective priority areas.

Its purpose is to begin to establish and guide the direction of travel for the project.

Having a summary vision statement helps to:

- Anchor the project, providing a shared reference point that can help guide discussion (for example, it can be used as a reminder of focus in reports or presentations).
- Orientate any new stakeholders who join later in the process (for example, stakeholder invitations or briefings).

In the In-depth Assessment module, the (evolved) vision serves as a basis for identifying more refined issues to be measured, priority areas and indicators.

How to carry out visioning; who should participate?

Ideally, visioning takes place during a workshop. For detailed guidance on the visioning process, including alternative methods for when it is impossible for groups to meet in person and guidance on revisiting the vision, see:

How to develop a vision and summary vision statement. Access the online Toolkit

The intention is to develop a fully articulated CRFS vision and a summary vision statement that is agreed on by all or most of the stakeholders participating in the process. Depending on the food system node or component they operate, different stakeholders will be able to offer different insights. The perspectives of different kinds of stakeholders will be quite different (e.g. producer, a government official, an NGO employee), and among those at different government levels.

For this reason, participating stakeholders should be broadly representative of stakeholders in the CRFS (e.g. members of the SAG, or the wider stakeholder group once it has been formed (see Define the CRFS module).

What should a CRFS vision and summary vision statement look like?

A shared CRFS vision can be articulated as a set of sentences that capture what a better future will look like from various perspectives, a bit like a collection of photographs. It has an active and inspiring tone and a clear focus, and a structured direction of travel starts to emerge. The vision may already include a few ideas of priority areas; for details of how priority areas are narrowed throughout the process, see **Box 1**: Rapid Scan module.

The vision may contain initial ideas for actions, which may be taken up in the Action Planning phase. The content is co-created with a group of stakeholders, so that it does not only contain the ideas of one person or organization.

A summary vision statement is a summary of the headline key points contained within a vision. It is not the vision itself. It should be short (one or two sentences) and quite simple and should be something that everyone can agree with.

The vision and the vision statement are the outputs of the visioning process, and provide a solid and invaluable reference framework for the project.

For example visions and vision statements see:

How to develop a vision and summary vision statement. Access the online Toolkit

Complete list of tools and resources for this activity

How to develop a vision and summary vision statement. Access the online Toolkit

Training unit 3. Participatory multistakeholder processes. Access the online Toolkit

Where next?

- It is likely that the project team will have already begun activities in the Define the CRFS module, concurrently with project inception. If not, they are likely to turn their attention to this module next.
- If some previous work has been conducted to characterize and assess the functioning of the CRFS, it is recommended that project teams review the Define the CRFS module to verify that the boundaries used are appropriate, and that the full complement of stakeholders are engaged (including current post-holders, in case key stakeholders have changed jobs). They make adjustments if necessary.

This is particularly important if the CRFS project is to build on previous work by adding a lens for climate and pandemic resilience, for which different criteria are used to determine boundaries and identify helpful stakeholders.

- If the project team is confident that pre-determined CRFS boundaries are appropriate, it is recommended they check the existence of GIS maps, which will be used as base maps in subsequent modules.

2.2. Define the city region food systems

Before you begin

Some of the activities in the Inception module will probably have been completed before embarking on the Define the CRFS module, but it is not necessary to have completed all the Inception activities.

In particular, it will be helpful for the project team to have been established (Inception Activity 2), and to have started collecting maps of the city and surrounding region and making contact with spatial data sources (Inception Activity 3). If this is not underway, it should be prioritized to avoid delays later in the process.

The purpose of the Define the CRFS module is for the project team to determine exactly what constitutes the CRFS in the particular city region context.

As a reminder, the CRFS encompasses the complex network of actors, processes and relationships involved in input supply and production, storage, aggregation, processing and manufacturing, wholesale and distribution, marketing, catering and retail, consumption, food loss and waste in a given city region. It includes the economic, societal, and environmental components that configure these actors, processes and relationships.

This means the project team must determine both the geographical area that is relevant to the CRFS (which will cut across administrative boundaries and include urban, peri-urban and rural areas), *and* the stakeholders in the food system within that area.

To help them do this, the Define the CRFS module is comprised of two activities:

- determining initial CRFS boundaries;
- stakeholder mapping analysis.

Both these activities are ideally conducted using multistakeholder participatory methods involving members of the project team and the SAG.

It is strongly recommended that the project team undertake both these activities. In city regions, where food systems work has been conducted in the past, the spatial/territorial boundaries used in the earlier work (and geographical area within the boundaries) may not be optimal for this project. Likewise, previous stakeholder mapping analysis (or existing multistakeholder platforms) may not include all the food system nodes (including the outer, contextual nodes that are not directly concerned with food value chain activities); some stakeholders will have changed jobs.

For this reason, any previous food systems work in and around the city may serve as a **basis** for the activities in this module, but existing understandings of *what area* and *which stakeholders* comprise the CRFS are reviewed and, if necessary, amended in line with the conceptualizations in this CRFS assessment and planning process. For those following the multirisk track, this will include the addition of criteria relating to likely shocks and stresses.

Outputs of the Define the CRFS module

By the end of the Define the CRFS module the project team will have:

- determined the boundaries of the CRFS, based on a set of agreed criteria;
- base GIS maps showing the initial boundaries of the CRFS;
- a database or table of information on stakeholders;
- written a report on the findings of the stakeholder mapping analysis;
- detailed stakeholder maps, showing influence, links, goals/objectives of stakeholders, and strength of influence over certain issues.

Options

During the Define the CRFS module, the project team and initial SAG (if it has been established, select the criteria to use in drawing up the initial CRFS boundaries.

The boundaries, and the criteria, which can be revised later in the assessment and planning process, as more information becomes available.

Timing

It is recommended that around two months is spent on the Define the CRFS module. This module can be conducted concurrently with some of the activities in the Inception module.

The Rapid scan module may also be conducted concurrently with the Define the CRFS module, especially once the initial CRFS boundaries have been set so that the project team knows the relevant geographical study area for data collection.

Summary of multistakeholder participation

Multistakeholder participation is integral to both activities in the Define the CRFS module.

Key moments for multistakeholder dialogue and engagement are:

- participatory mapping as part of determining the initial CRFS boundaries, to obtain local knowledge and qualitative data that is otherwise hard to collect;
- collective decision-making on the CRFS boundaries, including which criteria to retain;
- consultative workshop activities to identify and characterize stakeholders;
- participatory analysis of collected stakeholder information, including creation of detailed stakeholder maps;
- validation of the stakeholder mapping analysis narrative report and stakeholder maps.

Activity 1. Determining initial city region food systems boundaries

The spatial/territorial boundaries of the city region must be determined so that the project team can establish:

- the relevant geographical area for collation or collection of territorial data and indicators; and
- the area for which any interventions will be designed, and in which they will be implemented.

This activity enables the production of base maps onto which new data relating to the character and functioning of the CRFS can be added, as well as (for projects following the multirisk track) data on risk components (hazards, impacts, exposure, vulnerability, resilience capacities).

Revision of city region food systems boundaries

Initial boundaries will be determined early in the CRFS assessment and planning process, based on the selected criteria and existing data. However, these boundaries should not be considered as set in stone. They may be revised during subsequent modules to take account of emerging data.

Project team members may bear in mind the following principles as they begin considering the CRFS boundaries:

- The area within boundaries should include a specific city or cluster of cities whose reach (both for supplying inputs and for marketing its own output) encompasses an area larger than the city itself.
- The geographical area should be significant for the reference city, either because that region supplies or should supply a large share of food demanded by the city, or because the reference city purchases or could purchase a large share of food processed in that city region.
- The city region will cover areas falling outside the jurisdictional mandate of the city itself - and probably outside of its administrative region or province as well.
- The city region may include the hinterland, which includes the surrounding countryside, hamlets, villages and small towns.
- City region food systems of two or more different cities can overlap.
- The size and scale of the CRFS can vary widely from place to place, varying from a few regional districts or provinces to the national scale in certain cases. For more information on scale preferences, see:

Step-by-step mapping and spatial analysis guide for the CRFS assessment and planning process. Access the online Toolkit

There are four steps to determining CRFS boundaries:

1. Considering possible criteria for determining boundaries.
2. Data collection from a) review of literature and existing data, b) inputs from SAG.
3. Visualization and simple spatial analysis.
4. Collective decision-making.

Step 1. Considering criteria

Table 9 sets out five possible criteria that can be used to define the geographical boundaries of the CRFS (either individually or several together), as well as the "pros" and "cons" of each, and examples or comments. These criteria are based on the experiences of cities that have piloted the CRFS assessment and planning process, but additional criteria may be relevant in a specific context.

The decision on the criteria to retain or discard will be made later, after data collection and visualization.

Table 9. Criteria to define geographical boundaries

Criteria	Pros	Cons	Examples and comments
Jurisdictional and administrative	Data are often available at the jurisdictional and administrative level. There are clear roles and responsibilities at different governmental levels	The area is not always representative of main food systems activities, and inter-related systems such as electricity supply, transportation network, ecosystems services	Examples include metropolitan areas, provinces or regions
Natural boundaries and physical features: rivers, sea, mountain ridges, watersheds	Biophysical datasets are often available	Data may not be available at the appropriate level. Mostly, the assessment will be driven by qualitative analysis, unless data is disaggregated at the lowest administrative level (e.g. districts/wards)	Examples include watersheds, forests, and other important landscape features that play a critical role for food security and nutrition of a territory
Existing built environment, and future urban growth, development, land use and new policy processes	The prevailing built environment can be discerned from existing local maps. Information on future growth can feed ongoing and future policy process	Data on future growth and land use may not be available at this level; the assessment will be mostly driven by qualitative analysis unless data is disaggregated at the lowest administrative level (e.g. districts/wards)	Examples include existing urban/built areas and infrastructure (road, rail, ports, etc.), and planning of new administrative regions like Metropolis or Provinces
Presence of food industries (processing, distribution, waste management, food hubs)	This is a key criterion to be selected if the project entry point is to increase the resilience capacities of local food industries.	This perspective may result in a multilayer boundary definition, as key commodities consumed can come from far away	If food industries are included within jurisdictional and administrative boundaries, the data collection process can have a strong quantitative component
Production areas (of key commodities or food groups) around the city and production potential/capacity in relation to the city region's food demand	This is a key criterion to be selected if the entry point of the project is to increase the resilience capacities of local producers	This is a production-driven perspective that may not be appropriate if the food produced is mainly for export	If production areas are included within jurisdictional and administrative boundaries, the data collection process can have a strong quantitative component

Step 2. Data collection

The project team will assemble any available data and resources relating to the above criteria, drawing on contacts established in the Inception module (Inception **Activity 3**).

An important caveat is that, very often, data is not actually available for city regions. National data may be available that are divided into subnational areas, or data for urban versus rural areas. This means it might be necessary to look at the data sets in detail and – if at all possible, depending on how it was collected – disaggregate the data for the city region.

Potential documentary sources are:

- Maps that show administrative, local government, and metropolitan areas and jurisdictions; cadastral maps showing land plots and property boundaries (where they exist) may also be helpful.
- Land use and land cover maps, topographic maps.
- Infrastructure and utilities, roads maps, ports.
- Most recent population census data, collected every 10 years or more frequently.
- Urban planning and development policy frameworks, defining areas that are earmarked for development or conservation (such as greenbelts).
- Topographic maps and biophysical data sets, e.g. physical data (soil conditions, geology); climate, hydrology, water resources; land use and capability, and biological data; erosion and sediment.
- Environmental impact reports, i.e. areas that have been affected by environmental events, when, how, in what ways.
- Household consumption surveys showing dietary habits of particular social and economic groups, at various points in time.
- Food flow analyses, if they have been previously done (if not, they will be done in subsequent modules). A food flow analysis involves tracing the flows and sources of food, to identify the functioning of the food system and to give a first idea of the vulnerabilities, strengths, and weaknesses within it.
- Employment data and economic reports held by economic development units.
- Agricultural census data and commodity marketing data, held by agricultural departments or economic development units.
- Business reports produced by food processors, especially in the case of publicly held companies.

In addition to the collection of data from documentary sources and existing data sets, the project team may obtain inputs from the SAG.

This may involve participatory mapping among a small group of stakeholders to obtain qualitative data based on local knowledge of certain areas that is otherwise hard to collect. The stakeholders use a simple base map, or several maps on specific themes (e.g. land use, transportation, etc.) to draw boundaries for various elements of the food system. This can be done digitally using an existing GIS map showing, for example, jurisdictional or

administrative borders, or another non-expert mapping application (e.g. Google Maps, OpenStreetMap, QGis, etc.). Existing printed maps can also be used for participatory mapping.

Another approach is to identify key informants from within the SAG who are experts in the kind of data the project team is trying to obtain and hold one-to-one interviews with them. The experts may be able to provide references for useful documentary sources.

Step 3: Visualization and simple spatial analysis

The collected data from documentary sources is presented visually on maps; may be added to the maps produced during participatory mapping.

If the project team is using GIS mapping, data layering can be used to conduct a preliminary simple data analysis, where patterns in multiple data sets are identified, as shown in **Figure 8**.

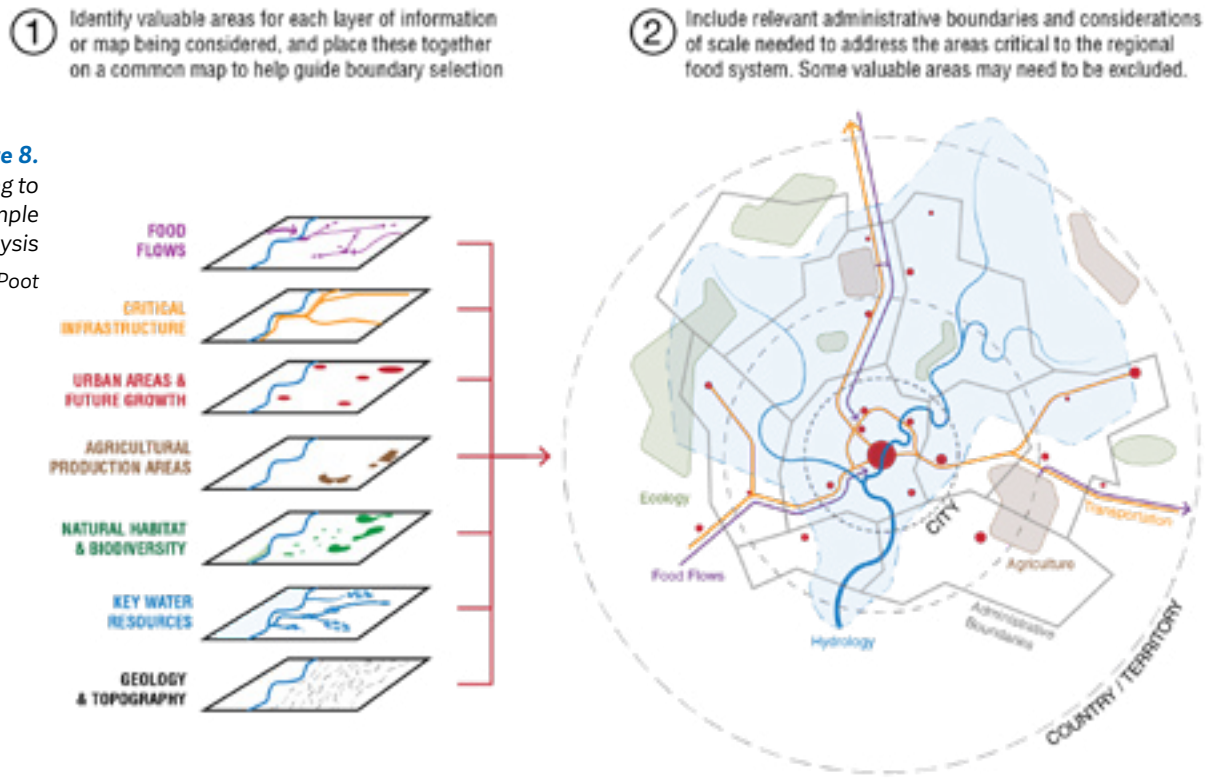


Figure 8.
Data layering to conduct simple spatial analysis
© FAO/Matt Poot

For examples of how boundaries were determined in pilot city regions, see:

Examples. Pilot cities' CRFS boundaries and how they were determined. Access the online Toolkit

The visualization of data related to CRFS boundaries is the first, foundational mapping activity in a CRFS project. As well as being used to make a collective decision on the boundaries, the maps produced in this module will serve as base maps to which additional data on populations, infrastructure, food flows, exposure, vulnerabilities, etc. will be added during the Rapid Scan and In-depth Assessment modules.

For more information on mapping and spatial analysis, see:

Step-by-step mapping and spatial analysis guide for the CRFS assessment and planning process. Access the online Toolkit

Step 4. Collective decision-making

The maps are viewed in a workshop setting involving the project team and/or the SAG, including experts who contributed data. During the workshop, the project coordinator presents the preliminary maps showing the collected data, as well as the preliminary analysis and boundary options. The SAG can explain the pros and cons of each option and decide which criteria to retain and which to discard.

Stakeholders should have the opportunity to ask questions and make suggestions, before a consensus is reached on where the boundaries are to be located. If necessary, the decision can be put to a vote, however, it is important that all participants accept the decision.

Boundaries can be adjusted further in subsequent modules, as new information is obtained through the rapid scan and In-depth Assessment.

Once agreement is reached, the maps are updated to reflect the decision. The updated maps must be at large scale and with good resolution, as they will serve as a reference for further data collection and stakeholder discussions.

Complete list of tools and resources for this activity

Step-by-step GIS guide for the CRFS assessment and planning process. Access the online Toolkit

Examples. Pilot cities' CRFS boundaries and how they were determined. Access the online Toolkit

Training unit 4. Defining CRFS boundaries. Access the online Toolkit

Activity 2. Stakeholder mapping analysis

Stakeholder mapping analysis involves carrying out an inventory of relevant stakeholders (individuals and organizations) in the CRFS, at all food system nodes. This includes:

- Direct stakeholders in the value chains of key commodities, including producers, processors, wholesalers and retailers, input suppliers, restaurants, market traders, consumer groups or representatives, waste management operatives, etc.).
- Indirect stakeholders such as different municipal, metropolitan and provincial departments, NGOs, universities/research institutes, community-based organizations and support organizations dealing with food and related areas (transport, health, agriculture, economic development, land use planning, parks and green spaces, social and educational programmes, etc.).

  For projects following the multirisk track, indirect stakeholders also include government departments, NGOs and others involved in disaster risk management and resilience building.

Indirect stakeholders can have a bearing on activities and interactions at and between food value chain node, as well as the contextual nodes that both affect and are affected by outcomes of food value chains – that is, food security and nutrition, livelihoods and economic development, social inclusion and equity, and environment and ecosystem services (see **Figure 2**: Elements of the city region food systems).

An initial stakeholder mapping exercise may have been carried out in the Inception module to establish the initial SAG. The detailed stakeholder mapping analysis described here builds on that exercise, and can enable expansion of the SAG and establishment of a broader stakeholder group, including sub-groups that can be brought into the SAG when required (see **Figure 5**).

Later addition of stakeholders

While the stakeholder mapping analysis aims to be as detailed as possible, it is not always possible to identify all stakeholders in one go – especially those from smaller, less visible organizations, or whose indirect relevance to the CRFS is not immediately evident. For this reason, new stakeholders, who are identified in subsequent modules, are added to the database. In particular, an additional round of institutional stakeholder mapping analysis takes place in the Rapid Scan module.

In addition to identifying more stakeholders, stakeholder mapping analysis aims to answer the following questions:

- What is the mandate/mission of each stakeholder and/or their organization (in relation to a key commodity, where relevant)? What is their main area of operation?
- What is their actual involvement in the food system or in relation to it (including building resilience to climate and pandemic hazards)? What are their relevant past, ongoing and planned activities?
- What are their views and understanding of the functioning of the food system (or of specific components of the food system), problems or bottlenecks and vulnerabilities?
- What are their views and understanding of current trends and the desired development to enhance resilience and sustainability of the food system: constraints to overcome, needs, main strategies to apply and their own role in and contributions to that process?
- What human, financial or other resources do they have that could be of interest when developing more resilient and sustainable food systems?
- What are the existing formal and informal relations and networks between the different stakeholders?

The project team can analyse this information to:

- Identify relevant stakeholders to engage in the CRFS assessment and planning process.
- Start engaging these stakeholders in the process.
- Understand relations between stakeholders, including cooperation and conflicts, as a basis for improving cooperation.
- Gain understanding of the institutional and policy context of the city region.
- Determine the entry point(s), if it was not possible to do so during the Inception module.

There are six steps to stakeholder mapping analysis:

1. Review available information.
2. Convene participatory workshop with the SAG.
3. Conduct one-on-one interviews with key informants.
4. Conduct interviews with some stakeholders.
5. Analyse the collected data.
6. Report and display the findings.

Step 1. Review available information

The project team reviews available information from reliable sources on food systems within the CRFS and related work areas (including, for projects following the multirisk track, information on disaster risk management and resilience building) to draw up a preliminary list of stakeholders. Where known, the project coordinator writes down the location and role of each stakeholder, their responsibilities, obligations and their collaborators.

Possible sources of stakeholder information include:

- Local government websites and public policy documents.
- Websites of NGOs working on issues related to the food sector (local and international NGOs that have some local representation).
- Membership lists of cooperatives, trade associations, and unions.
- Previous reports on aspects of the food system, conducted by government departments, NGOs, universities, or other organizations.
- Agricultural census data and commodity marketing data, held by agricultural departments or economic development units.
- Business reports produced by food processors, especially in the case of publicly held companies
- Media reports.

The project coordinator can start to set out the findings in a table that provides the name of the stakeholder organization, its role, responsibilities and obligations, collaborators, and contact details. More detail will be added to this table in steps 2 and 3. For an example table, see:

Table for collating stakeholder data. Access the online Toolkit

Step 2. Convene consultative workshop with the SAG

Members of the initial SAG come together in a consultative workshop to identify and characterize more, and different, stakeholders to add to the preliminary list. If the initial SAG has not yet been formed the consultative workshop involves members of the project team.

At the start of the workshop, it is a good idea to check that all participants have a thorough understanding of the CRFS conceptualization and the food systems approach. See:

Detailed explanation of the food systems approach. Access the online Toolkit

A first activity during the workshop involves participants conducting a stakeholder mapping analysis of *themselves*. The benefit of this is two-fold. First, it ensures the project team has accurate, up-to-date information on the stakeholders who are already involved, as well as their collaborators and network connections. Second, it ensures participants have a good understanding of the CRFS conceptualization that they can apply to mapping other stakeholders.

Next, participants are asked to write down the names of other important stakeholders they are aware of, together with the location and roles of each stakeholder, their responsibilities and obligations, and their collaborators, where known. They may identify a few stakeholders they consider to be potential interviewees (see Step 4). The gathered stakeholder information can be added to the table started in Step 1.

The participants may also discuss the collated stakeholder information, and collectively produce some simple stakeholder maps showing (for example), which stakeholders affect or are affected by which CRFS node, network connections and collaborations, and influences. This mapping can be done in plenary or in small groups as a pen-and-paper exercise (more complex stakeholder maps using software can be produced in Step 5).

For more information, see:

Workshop activities to build stakeholder understanding of food systems. Access the online Toolkit

Step 3. Request contacts from key informants

The stakeholder table developed in Steps 1 and 2 can be further expanded by requesting contacts from key informants who are not members of the project team or SAG (and therefore did not participate in the workshop), but who play a role in relation to the entry point(s), if already elected. The informants are asked to provide the names of stakeholders (individuals and organizations, departments, agencies and other entities) by category, as in Step 2. Again, they may identify some stakeholders they consider to be potential interviewees (see Step 4). Input from the informants can be added to the existing table started in Steps 1 and 2.

The rationale for this additional step is that different answers will be given by people who regard the CRFS from a different perspective, and who themselves have different networks. By casting the net as widely as possible, it will be possible to obtain a more rounded picture.

Step 4. Conduct interviews with stakeholders

The fourth step is to conduct interviews with a few of the stakeholders identified, to gather more information on their opinions, interests, mandates, capacity and resources.

To decide who to interview, it is recommended that the project team first carry out a stocktaking exercise of all the stakeholders proposed for interviews in Steps 2 and 3, cross-checking the food chain nodes/components against the type of stakeholder organization (e.g. government departments, etc.). This exercise will enable the project team to see any areas of over and under-representation or gaps. Invitations can then be extended to interviewees strategically, in order to have a balanced representation.

For more information, see:

Table for ensuring representation in stakeholder interviews. Access the online Toolkit

An interview is held with one or more representatives of each selected organization. The person(s) interviewed should be of senior rank in that organization and their views should represent the institutional viewpoints. Responses are logged in a stakeholder profile sheet, which includes space for the interviewer's observations.

For more details of points to cover in the interview and a template profile sheet, see:

Sample stakeholder interview guide and profile sheet. Access the online Toolkit

Step 5. Analyse the collected data

The next step is to analyse the collected data, both from the table prepared in Steps 1 to 3 and the more detailed data from the stakeholder interviews.

The analysis allows the project team, or SAG, to assess each stakeholders' potential role or contribution to building a sustainable and resilient CRFS, considering their expertise, resources, power, legitimacy, representation, etc. – and therefore their potential involvement in the SAG or wider stakeholder groups. Participants will also start to develop a picture of the character and functioning of the CRFS, including relevant past and ongoing projects. This information will be helpful in the CRFS Rapid Scan module.

The analysis is conducted by the project team or the initial SAG in a participatory way. Participants ask what can be learned from the data regarding:

- Existing relations and networks between various stakeholders, including which stakeholders interact and **how**.
- Congruency or discrepancy in the views that stakeholders (individuals or organizations) have on the functioning and vulnerabilities of the current CRFS.
- Congruency or discrepancy in the views of stakeholders on the future trends, development potential, needs and strategies to build a more sustainable and resilient CRFS.
- Views of stakeholders on their own current role in the sustainability and resilience of the CRFS, and the contributions they might in the future.

During the analysis, the project team or SAG can create detailed stakeholder maps. These maps will be more complex than those produced during the consultative workshop (Step 3), although the latter may provide a useful basis. They can include fine-grained information on particular aspects or issues concerning the CRFS or the status of the contextual nodes (food security and nutrition, livelihoods and economic development, social inclusion and equity, and environment and ecosystem services, see Figure 2: Elements of the city region food systems. The maps can show:

- who influences the aspect or issue;
- how the various stakeholders are linked with regard to the aspect or issue;
- the goals of stakeholders with regards to the aspect or issue;
- how strongly they can influence the aspect or issue.

These detailed maps can be made using pen and paper, or a software programme such as NetMap or SocNetV. Alternatively, the project team or SAG may prefer to display the information in a matrix.

For more information on software for creating stakeholder maps, see:

Software tools for producing stakeholder maps. Access the online Toolkit

Step 6. Report and display the findings

Results of the stakeholder mapping analysis are presented in a written document that includes the final stakeholder relation/network maps. The project team retains the tables containing collated data on stakeholders for future reference, in case it is necessary to call upon specific stakeholders later on in the process (e.g. to access data; for involvement in action planning working groups; for engagement and outreach towards putting actions in place).

The draft document and maps are shared with all involved stakeholders, who validate them. This may take place as part of the next SAG meeting.

Complete list of tools and resources for this activity

Table for collating stakeholder data. Access the online Toolkit

Detailed explanation of the food systems approach. Access the online Toolkit

Workshop activities to build stakeholder understanding of food systems. Access the online Toolkit

Table for ensuring representation in stakeholder interviews. Access the online Toolkit

Sample stakeholder interview guide. Access the online Toolkit

Software tools for producing stakeholder maps. Access the online Toolkit

Examples. Pilot cities' stakeholder maps. Access the online Toolkit

Template: written report on stakeholder mapping analysis. Access the online Toolkit

Training unit 3: Participatory multistakeholder processes. Access the online Toolkit

Where next?

- It is likely that the project team will have already begun activities in the Rapid Scan module and, concurrently, the Define the CRFS module. If not, they are likely to turn their attention to this module next.
- Even if some work has been carried out previously to characterize and assess the functioning of the CRFS, it is highly recommended to carry out at least Activities 1 and 2 of the Rapid Scan module next, which will allow for stock-taking of existing information and any recent research findings in respect of the CRFS as a whole, and participatory decision-making.

Additional optional activities are available if the project team wishes to carry out rapid food flow mapping of selected commodities or value chains or add a multirisk lens to the project.

Preliminary note about the city region food systems assessment

The following two modules set out a process for conducting the CRFS assessment in two parts: the Rapid Scan followed by the In-depth Assessment.

While this process is recommended, it may be necessary for the project team to customize it to their particular situation and context.

If customization is required, adhering to the following general principles will help ensure that the assessment is useful and coherent.

1. The Rapid Scan should give a broad overview of the character and functioning of the CRFS, and (for projects following the multirisk track) likely hazards, vulnerabilities, exposure and resilience capacities. The In-depth Assessment, on the other hand, is focused on particular areas of interest and concern.

It is not recommended to attempt an In-depth Assessment of an entire CRFS, which would be extremely complex, time-consuming and expensive.

2) The In-depth Assessment should be led by the priority areas and related indicators. These inform the assessment methodology, which is designed to help the project team remain focused and cost-effective.

3) The project team should use and build upon results of recent assessments, resisting the temptation to repeat previous studies that will not bring substantially new information. Thus, the In-depth Assessment methodology brings NEW information in areas not previously studied.

2.3 Rapid Scan

Before you begin

Before embarking on the Rapid Scan module, the project team will probably have established the initial spatial or territorial boundaries of the CRFS, which determine the geographical area for which they will collate or collect data (see Define the CRFS module).

It is not necessary to have completed all the activities in the Define the CRFS module before beginning the Rapid Scan. As the Rapid Scan module progresses, however, it will be increasingly useful to have carried out stakeholder mapping and established the SAG (and possibly a wider stakeholder group also), members of which may contribute specialist knowledge.

The Rapid Scan module is the first phase of the assessment and is based entirely on existing (secondary) data and stakeholder knowledge, including the results of existing or recent assessments and existing policies and programmes relating to the CRFS.

The purpose of this module is to start building a broad, general picture of the CRFS, and to enable identification of some priority areas where more in-depth information is needed to inform action planning.

The Rapid Scan is made up of five activities, two of which (3 and 4) are optional.

1. Establishing the **local context of the city region** (geographical, demographic, socioeconomic and jurisdictional).
2. Identifying the **character and assessing the functioning of the CRFS**.
3. Rapid **food flow mapping** of one or more commodity value chain or food group.
4. Assessing **climate and pandemic-related risks** (determined through the most relevant hazards, potential impacts on the CRFS, exposure, vulnerabilities and resilience capacities.
5. Participatory decision-making.

Outputs of the Rapid Scan module

By the end of the Rapid Scan the project team will have:

- A written report of the Rapid Scan with sections on local context of the city region and broad characterization of the CRFS.
  Depending on whether Activities 3 and 4 are carried out, the report may also contain sections on food flows of key commodities and food groups; and on hazards and possible impacts on CRFS components, as well as what is already known about vulnerabilities, exposure, and resilience capacities within the CRFS

- Updated maps showing spatial data relating to CRFS characteristics and general food flows. Depending on whether Activities 3 and 4 are carried out, they may also have maps or GIS data sets for food flows of specific commodities or food groups; and key spatial data on risk exposure.
- A short (4-page), accessible, visual fact sheet of the Rapid Scan findings.
- A list of 3 to 5 priority areas for in-depth assessment.
- A list of data gaps, some of which will have an explanation; and a sublist of data gaps (outside the priority areas) to be addressed as part of the In-depth assessment.
- Updated stakeholder maps, including more institutional actors from government departments and agencies; and, if Activity 4 is carried out disaster risk management and urban resilience stakeholders.

The project team may also have:

- An updated visioning statement that takes into account the Rapid Scan findings.
- Re-defined boundaries of the CRFS, taking into account the characterization of the CRFS and food flow mapping.

Options

It is highly recommended that the project team complete activities 1 and 2 of the Rapid Scan as a minimum, which will allow them to take stock of existing information and any recent research findings in respect of the CRFS as a whole.

- Activity 3 is optional, depending on whether the project team wishes to trace the flow of one or more specific commodities or food groups along their value chains.

  This activity may be performed partly in tandem with Activity 2, as some of the research questions are the same.
- Activity 4 is also optional, depending on whether the project will focus on climate and pandemic resilience as well as sustainability.

  This activity can either be carried out in tandem with Activity 2 or – if the project team is considering climate and pandemic resilience after having completed the main track – as a subsequent stand-alone exercise.

The findings of Activities 1, 2, 3 and 4 will all be taken into account in Activity 5: Participatory decision-making.

Timing

It is recommended that around three months be spent on this module, which can begin before the end of the Define the CRFS module. Remember that it should be **rapid** and aimed at gathering **enough existing information** to enable priority areas to be drawn up. It is important to set a timeline at the outset, to draw up explicitly defined tasks, and to identify individuals responsible for getting the work done.

Summary of multistakeholder participation in the Rapid Scan module

- Additional institutional stakeholder mapping analysis, leading to engagement.
- Discussion and input into draft Rapid Scan findings.
- Revision of shared vision to take into account Rapid Scan findings (if necessary).
- Participatory decision-making over priority areas and value chains.

Activity 1. Establishing the local context

The purpose of this activity is to establish various demographic, socioeconomic, jurisdictional/institutional, geographical, environmental, and natural factors that shape the context of the city region. These factors are set out in **Table 10**.

Data relating to these factors indicate the status of the contextual components of the CRFS (the nodes in the outer circle of the CRFS diagram in Figure 2). These contextual components both affect food value chain activities and are affected by them. For more information, see:

Tool: Detailed explanation of the food systems approach. Access the online Toolkit

The contextual information will be particularly helpful when setting priority areas for the CRFS project, as it shows the extent of problems to be addressed, where the most exposed areas are, and the locations of certain vulnerable groups. The jurisdictional, institutional and political information is very helpful for action planning, as it tells us which government entities have a mandate over which policy areas, in which places.

Data collection

Data on the contextual factors is collected using two methods – document analysis and expert interviews

Document analysis

As much data as possible is collected by reviewing existing, secondary documentary sources, surveys and studies. **Table 10** includes some ideas of data sources, but these are by no means exhaustive; in each city region, a range of different sources will be available.

Table 10. Local context information and possible sources

Jurisdictional information	Data sources may include
Jurisdictional boundaries of/within the city region (see Defining CRFS boundaries, module IV)	• Local government documentation and website • Existing jurisdictional maps • Urban planning documents / strategy
Surface areas (municipal area and city region; urban and rural area; urban growths patterns)	
Government entities and jurisdictional structures in the city region	
Demographic information	
Number of inhabitants in urban/rural/municipal area and city region	• Census data • Household survey data
Gender, age, race/ethnicity, geographical distribution of population groups, etc.	
Socioeconomic information – for different groups and in different areas (urban/rural; municipal and city region)	
Average household income, poverty level, employment statistics, spatial distribution of socioeconomic characteristic.	• Census data • Local economic reports • Household survey data
Gender, age, race/ethnicity, geographical distribution of population groups, etc.	
Food security and nutrition outlook • per population and income group; • per area	• Household survey data • National food experience scales/ FAO Food Insecurity Experience Scale (disaggregated to city or regional level) • Domestic food price indices • Public health reports (government or NGO)
Prevalence of diet-related diseases, including obesity and malnutrition-related conditions • per population and income group; • per area	
Environmental and ecosystem services, natural resources	
Natural resources and climate data per area, including: existence, quality and use watersheds (rivers and aquifers); **interannual** variability of rainfall, rivers, streams; biodiversity; soil type and quality	• National meteorological and hydrological services (on natural resources and climate, disaggregated) • Environmental organizations
General management of natural resources	

Data (dis)aggregation

Data that has been collected at the level of individual municipalities must be aggregated at city region level. If such aggregation is not possible (e.g. if datasets cover areas that are only partly within the city region boundaries), data boundaries should be clearly identified.

Likewise, data that has been collected only at the national level must be disaggregated to the city region level (as far as possible); or to the level of the administrative region or several municipalities that are included in the city region.

To enable a potential repeat exercise or monitoring of certain issues, it will be helpful for the core team to create an updated list of locally available literature and data sources, with retrieval locations of data sources. Hard and soft copies should be collected for further use. For an example log of data sources, see:

Example: Data sources for literature review in Toronto, Canada. Access the online Toolkit

Expert interviews

It is highly unlikely that the project team will be able to find comprehensive, written information and data on all the above-mentioned points in the public domain, especially at the level of the city region and in cities.

It may be possible to fill some of the data gaps in documentary sources through expert interviews with, for example, local government officials, NGOs, and local experts, and researchers. Potential interviewees may be identified from the stakeholder mapping analysis carried out under the Define the CRFS module.

The experts may also provide supporting documentation that has not been published (if they have the authority or authorization to do so).

Data gaps that persist after conducting both document analysis and expert interviews are noted, as well as their causes. They may exist for several reasons, such as:

- Data exists but the stakeholders with access are not at the table.
- Data exists but access is restricted for political or security reasons.
- Data exists but is controlled by gangs or other powerful stakeholders for competitive reasons.
- Data exists at the national level but cannot be disaggregated to the level of the city region (or regional or local administrative areas).
- Data does not exist; it has not been collected.

While the first reason may prompt a review of stakeholder mapping and subsequent engagement of the required stakeholders, the other reasons point to problems or bottlenecks within the governance and functioning of the CRFS.

If the data gaps are seen as crucial, and if it is possible to collect the necessary data, this can be done during the In-depth Assessment module.

Mapping and spatial analysis

New information data gathered concerning the local context should be added to the maps developed under Define the CRFS.

Where GIS is used, the data may be added as new layers that can help the project team identify spatial patterns, such as, for example, population distribution (including by income level, food security status, and other socioeconomic characteristics) in relation to jurisdictional boundaries, areas of different population density and environmental features.

Presentation of findings

The findings from the document analysis and expert interviews are described in a written document, which will be included in the consolidated CRFS Rapid Scan report (see Activity 5). The template for the report is available here:

Template: Rapid Scan report. Access the online Toolkit

It is also helpful to include a one-page visual summary of the local context, which may include GIS maps that show the contextual information as new layers, as well as a short factsheet of findings. For example:

Examples. Climate and pandemic risk assessment fact sheets (Antananarivo, Colombo, Kigali, Tamale). Access the online Toolkit

Complete list of tools and resources for this activity

Tool: Detailed explanation of the food systems approach. Access the online Toolkit

Example: Data sources for literature review in Toronto, Canada. Access the online Toolkit

Step-by-step GIS guide for the CRFS assessment and planning process. Access the online Toolkit

Examples. Climate and pandemic risk assessment fact sheets (Antananarivo, Colombo, Kigali, Tamale). Access the online Toolkit

Template: Rapid Scan report. Access the online Toolkit

Training unit 5. CRFS context and characterization (Rapid Scan). Access the online Toolkit

Activity 2. Characterizing the city region food systems

Characterization of the CRFS means gaining an understanding of the general functioning and performance of the food system, as well as its resilience and longer-term sustainability.

This information is drawn from existing, secondary documentary sources (collected through document analysis) and stakeholder knowledge (collected through expert interviews). It allows the project team to start identifying the strengths, weaknesses, problems and bottlenecks within the CRFS, which can inform priority areas for action – such as specific value chains, system-wide issues, specific food system nodes, or localized areas (see Activity 5).

Since it is highly unlikely that all the information needed will be available from secondary sources, this activity also allows the project team to identify data gaps that need to be filled through collection of primary data during the in-depth assessment (see In-depth Assessment module).

Data (dis)aggregation

As with Activity 1, data that has been collected at the level of individual municipalities must be aggregated at city region level. If such aggregation is not possible (e.g. if datasets cover areas that are only partly within the city region boundaries), data boundaries should be clearly identified.

Likewise, data that has been collected only at the national level must be disaggregated to the city region level (as far as possible); or to the level of the administrative region or several municipalities that are included in the city region.

Table 11 sets out some initial research questions relating to each of the food value chain nodes, plus additional questions on natural resource management and governance and policy frameworks.

Table 11. Research questions for characterization of city regional food system

Input supply and food production
• Where are the inputs and resources (that are needed for city region food production) sourced (e.g. seeds, fertilizers, equipment, etc.)? (*)
• What are the main food commodities produced within the city region? What quantities?*
• Where are the main production areas? (*)
• What is the proportion/distribution of farms of different sizes, production systems, and market focus (including existence of cooperatives)? (*)
• What are the food prices for different food crops (past, current, expected trends)?
• To what extent does the food produced in the city region contribute to the city region's overall food consumption? (*)
Food storage, processing and manufacture
• How many food storage/processing/manufacturing businesses in the city region? What types (small, medium, large; cooperatives, public, private-owned, etc.)? What are their locations? (*)
• Are the food processors and manufacturers providing affordable, sufficient, nutritious, safe and sustainable food?
• What added value product categories are manufactured in the city region?

Food wholesale and distribution

- Are the wholesalers and distributors providing affordable, sufficient, nutritious, safe and sustainable food?
- Who are the suppliers of food to outlets that sell food to the consumers (e.g. wholesale markets, distribution hubs)? What type and size? Where are they located? (*)
- What are the principal distribution channels for the main commodities commercialized in the city region? (*)
- What are the infrastructures relevant to food distribution (road network, public transport, markets, production, processing, storage and retail areas)? (*)

Food marketing, catering and retail

- What are the main outlet-types where consumers buy their food (per population and income group, per area)? (e.g. supermarkets, small shops, markets and street traders, caterers, online food delivery platforms, and including the informal sector where information is available). (*)
- Does all the population have physical access to outlets selling affordable, nutritious and safe food? (per population and income group, per urban/rural area)
- Does all the population have access to outlets selling food produced in the city region? In what outlets? What locations? (*)
- What public food facilities and mechanisms are in place? (e.g. school meals, public canteens, voucher schemes, etc.)? Which groups are they intended for?

Food consumption

- What are the main food commodities consumed within the city region? What quantities? (*)
- What proportion of food consumed is produced in the city region? What types/foodstuffs? (*)
- Where does other food that is consumed in the city region come from? (by food item, origin of import (national, regional, global) (*)
- What is the typical diet of residents in the city region? Main staple foodstuffs? (per population and income group, per urban/rural area)
- What is the composition of a typical food basket? (per population and income group, per urban/rural area);
- What is the price or proportion of household income spent on the above typical food basket?
- What proportion of eligible groups use the public food facility or mechanisms to which they are entitled (e.g. school meals, public canteens, voucher schemes, etc.)?

Food loss and waste

- Where and how much food loss and waste is generated along the food chain? (*)
- What is the impact of food loss and waste throughout the entire CRFS food supply and value chain (e.g. lost revenue, etc.)?
- Where can food loss and waste along the food supply chain be reduced (production to consumption)?
- How is organic food waste managed?
- How could organic waste be better managed? (e.g. through closed loop systems, mechanisms (platforms, apps, etc.; organizations for distribution of surplus perishable foods at lower cost/ for free to vulnerable people; collaborations between producers and processors; repackaging of food intended for hospitality industry for sale in retail; measures to encourage citizens to waste as little food as possible, etc.)
- Are there active efforts underway to do any of these?
- Are plastic packaging and other non-compostable food-related waste being reduced/ minimized/re-used/recycled?

Supporting infrastructure and services

- What is the main source of electrical power (on which food processors and other CRFS activities depend)? (*)
- Where is key electrical power system infrastructure located (transmission terminal stations, substations, switches, transformers, and wires)? What is the state of the electrical power system infrastructure? (*)
- What is the main water source within the city region (on which CRFS activities rely)? (*)
- Where is key water and sanitation infrastructure located (e.g. reservoirs, water treatment centres, pipelines, drainage systems, sewers, etc.)? (*)
- What is the state of water distribution infrastructure?
- What is the extent and state of the transportation network that is used to transport food within the city region (e.g. highways, local roads, bridges, railways, etc.)? (*)
- What is the main type and source of liquid fuel used in CRFS activities (e.g. petroleum, diesel, propane, natural gas)? Where is the infrastructure for processing, transporting, storing and distributing liquid fuel located? (*)
- What is the state of the liquid fuel processing, transportation, storage and distribution infrastructure?
- What is the main telecommunications technology within the city region (e.g. land, mobile and satellite, telephones; internet; radio)? How extensive is coverage? (*)
- Where is the key telecommunications infrastructure (e.g. exchanges, mobile masts, internet cabling)? (*)
- What is the state of the telecommunications infrastructure?
- What public transportation services, within the city region, are used by workers to commute and by residents to reach food outlets (e.g. buses, trains, trams, etc.)? (*)
- How extensive is the public transportation network? Which areas does it cover/not cover? How often? (*)
- What is the state of the public transportation infrastructure?

Natural resource outlook

- What are the main issues concerning natural resources required by the food system in the city region?
- What factors affect water quality? How severe are they? Is the situation worsening/improving?
- What factors affect soil quality? How severe are they? Is the situation worsening/improving?
- What factors affect the state of biodiversity and existing ecosystems in the city region? How severe are they? Is the situation worsening/improving?
- How are natural resources impacted by climate-related events? How might they be impacted in the future?
- How can natural resource management be enhanced to contribute to improving the resilience of the CRFS?

Governance and policy framework of the food system

- What are the main food-related roles, powers and responsibilities at the local/regional government(s) level? How do higher levels shape these?
- Which government departments have a role related to food? What is their role?
- What policies, programmes and initiatives exist and are actively implemented to influence the character and functioning of the CRFS, to increase sustainability, resilience, food safety, and equity? Consider policies, programmes and initiatives at city, regional, national levels.
- Is there a local legal and institutional framework to enhance food and nutritional security?
- Are there existing local/regional/national government programmes or initiatives that offer opportunities and incentives for livelihood diversification at any CRFS nodes? (e.g. access to land for food growing; training/extension services; value-addition).
- Is there an institutionalized fund or budget allocation for interventions focusing on building sustainable and resilient agriculture and food systems?
- Is there a food council or other governance mechanism within the city region that has a role in promoting/implementing food system change (and that could have a role in responding to the impact of hazards on the food system)?
- Are there existing neighbourhood and/or community networks that work on sustainable food and/or community resilience issues?

The questions marked (*) relate to spatial information on food system assets, infrastructure and activities that may be plotted on a map (see Box 2: Mapping and spatial analysis).

Data collection

Secondary or existing data to answer the questions in **Table 11** can be drawn from a variety of sources, using several collection methods.

Document analysis (data sources, surveys, studies)

In the first instance, desk research is carried out to draw relevant information from existing data sources, surveys and studies. The project team may not be able to find exactly the right data to answer the questions, but it is acceptable to make a few estimations based on the data that *are* available.

Possible data sources include (but are not limited to):

- National and international databases (e.g. FAOSTAT on food production, trade, values; Food Insecurity Experience Scale (FIES) on food insecurity; International Labour Organization (ILO) stats on labour markets).
- Local government departments, agencies, and contractors (e.g. farm census data, retail centre studies, food waste data).
- Chambers of commerce and unions (e.g. food business register).
- NGOs and aid agencies (e.g. household consumption and nutrition reports).
- Specialist organizations and networks (e.g. urban and peri-urban agriculture).
- Universities (e.g. land maps and data, consumption and retail outlet studies, policy analyses).

To answer questions on governance and policy frameworks, desk research also includes existing policies, strategies and plans at national, regional, local, municipal levels for relevant clauses on or related to food and nutrition that (could) impact the CRFS. For example:

- Agriculture policies.
- Planning, development land use strategies.
- Public health policies.
- Economic development strategies.
- Food security action plans.
- Public procurement policies.
- Risk management plans and strategies.

Participatory mapping

It is highly unlikely that the project team will be able to find comprehensive, written information and data on all the questions in Table 11 in the public domain, especially at the level of the city region and in cities.

To help fill some of the gaps, members of the project team and the SAG can conduct participatory mapping to collectively answer (some of) the spatial characterization questions (marked (*) in **Table 11**) related to assets and infrastructure. This involves marking up either paper or digital maps in a meeting or workshop setting. The results of participatory mapping are particularly helpful for spatial analysis (see **Box 2**: Mapping and spatial analysis).

Expert interviews

The project team may also be able to fill some data gaps through expert interviews with, for example, academics, agricultural experts and value chain experts, local government officials, and NGOs. At this stage the team does **not** interview individual farmers or processors because they would be able to speak only from their own experience and would not be able to give an overview of the whole supply chain. Potential interviewees may be identified from the stakeholder mapping analysis carried out under the Define the CRFS module, and the *additional institutional stakeholder mapping analysis (see below).*

Interviews must be semi-structured so that more details can be sought on interesting emerging information, with open-ended questions grouped according to themes.

The experts may also provide supporting documentation that has not been published (if they have the authority or authorization to do so).

As for Activity 1, data gaps that persist after conducting both document analysis and expert interviews are noted, and their causes determined if possible.

Institutional stakeholder mapping analysis

Although a stakeholder mapping analysis was carried out in the Define the CRFS module, an additional round may be helpful as part of the Rapid Scan, focusing specifically on institutional actors from government departments and agencies. This can contribute to answering the questions on governance and policy frameworks.

It is recommended that the same process be followed broadly as set out in the Define the CRFS module, that is:

- Listing government departments and agencies, and identifying relevant individuals with a role related to the food system.
- Carrying out an initial characterization using a table with columns for the department or agency, location, role, responsibilities, collaborators, and contact details. For a helpful template, see:

Table for collating stakeholder data. Access the online Toolkit

Selecting some stakeholders for one-to-one interviews to find out about their mandates, needs and concerns, existing policies, opinions, connections and co-operations, capacity and resources, *and* to obtain more information to answer the research questions in **Table 11**.

In addition, these interviewees may also be engaged in the multistakeholder process. For more information, see:

Sample stakeholder interview guide. Access the online Toolkit

BOX 1

MAPPING AND SPATIAL ANALYSIS

New spatial information and data gathered from characterizing the CRFS should be added to the maps developed under Define the CRFS.

Where GIS is used, the addition of data sets as new layers can help the project team identify spatial patterns, such as, for example, the location of food production areas in relation to environmental features; the location of markets in relation to jurisdictional boundaries and to areas of high population (including areas with a high population of low-income or marginalized people), etc.

Some general food flow mapping (for *all* commodities and food groups) may be carried out by plotting on a map spatial information on food system assets, infrastructure and activities (from questions marked *) in **Table 11**.

Food flow mapping involves identifying the main areas where assets and infrastructure are located, and where activities take place as food travels across the city region, and through the value chain from farm to fork. This includes the main production areas, storage facilities, whole markets, main modes and routes for distribution and transportation, and retail outlets, markets or other consumer-oriented provisioning. Based on this information the project team may decide it is necessary to re-define the boundaries of the CRFS, which were initially set in the Define the CRFS module.

Example: The map in **Figure 9** from Kigali city region food system shows markets within the Kigali city region, with red lines indicating food flows to local markets and green lines showing flows from local markets to Kigali City.

For more detailed guidance on mapping and spatial analysis, see:

Step-by-step GIS guide for the CRFS assessment and planning process. Access the online Toolkit

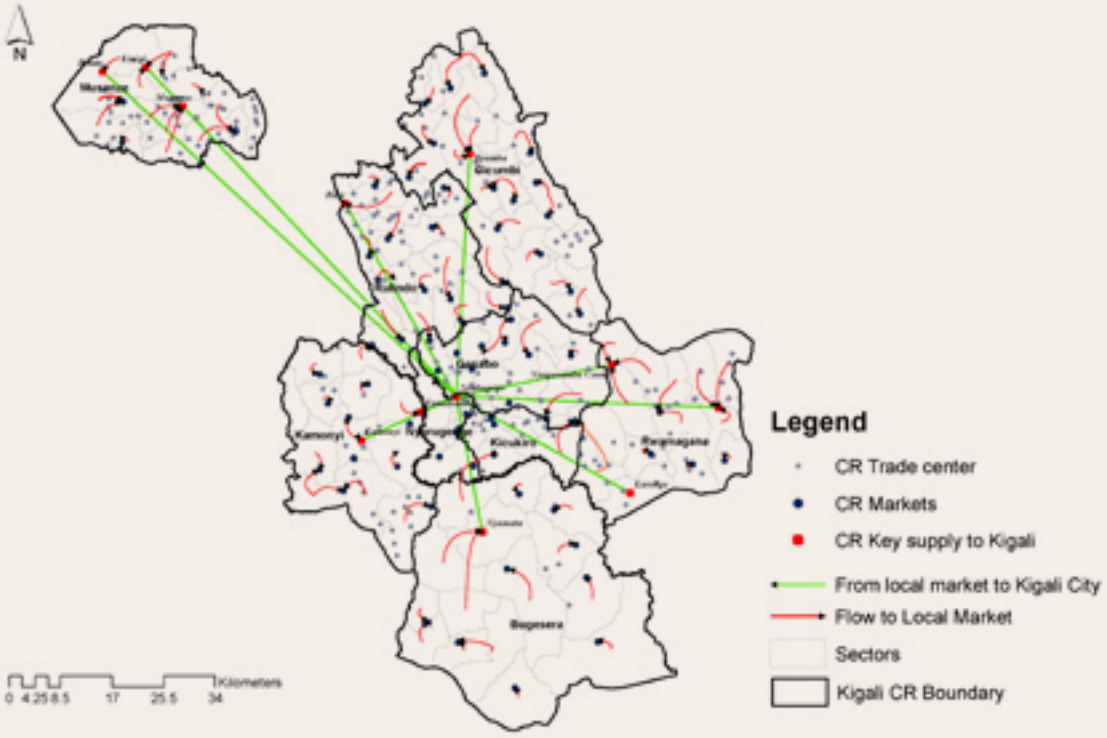


Figure 9. *Kigali city region food flow*

© FAO/Matt Poot

Presentation of findings

A narrative report of the findings of the CRFS characterization will be prepared for inclusion in the draft Rapid Scan report, supported by updated maps and general food flow maps. See:

Template: Rapid scan report. Access the online Toolkit

The findings will be presented at the stakeholder workshop and will inform participatory decision-making (see Activity 5).

Complete list of tools and resources for this activity

Table for collating stakeholder data. Access the online Toolkit

Sample stakeholder interview guide. Access the online Toolkit

Step-by-step GIS guide for the CRFS assessment and planning process. Access the online Toolkit

Food flow mapping. Access the online Toolkit

Examples. Flow charts showing findings of food flow mapping. Access the online Toolkit

Template: Rapid scan report. Access the online Toolkit

Training unit 5. CRFS context and characterization (Rapid Scan). Access the online Toolkit

Activity 3. Rapid food flow mapping of selected commodities or food groups (optional)

In addition to data collection on general food flows, as part of characterization of the CRFS, the project team may choose to conduct rapid food flow mapping of a small number of important commodities produced locally that form a staple part of the local diet, or main food groups (e.g. staples such as grains or potatoes; fruits and vegetables; meat and dairy; fish, etc.).

The rapid food flow mapping proposed as part of the Rapid Scan is based on available data and qualitative information, collected through document analysis, participatory mapping and expert interviews. It enables the project team to obtain a first sense of the strengths, weaknesses, and potential problems or bottlenecks within key value chains. There will be an opportunity to collect primary data, focused on specific aspects of the value chains, as part of the in-depth assessment.

Some questions to guide rapid food flow mapping of each commodity or food group are provided in **Table 12**. There is some crossover between the questions in Table 12 and those in Table 11, and many of the data sources (for document analysis and expert interviews) are the same. For this reason, it may be more efficient to combine data collection for Activities 2 and 3.

Table 12. Guiding questions for rapid food flow mapping of each commodity or food group

Input supply and food production
• Where are the inputs and resources that are needed for city region food production sourced from (e.g. seeds, fertilizers, equipment, etc.)?
• Where are the main production areas for the commodity or food group within the city region?
• What is the production volume of the commodity or food group inside the city region (compared with product volumes and diversity of sources coming from outside the city region)?
• What surface area or percentage of farmland in the city region is used to produce the commodity?
• How many producers of the commodity or food group are there in the city region?
• What is the proportion/distribution of farms of different sizes, production systems, and market focus (including existence of cooperatives)?
• What are the main market opportunities for farmers (e.g. sales to intermediaries, direct market sales, public food procurement, etc.)?
• What are the prices for the crop or commodity at the farm gate (past, current, expected trends)? How does this compare to prices of the commodity sources from outside the city region?
• What is the total financial value of the commodity or food group produced in the city region, based on farm price data?
Food storage, processing and manufacturing
• How many food storage/processing/manufacturing businesses in the city region?
• What types of storage/processing/manufacturing businesses are there (small, medium, large; cooperatives, public, privately-owned, etc.)?
• Where are they located?
Food wholesale and distribution
• What are the principal distribution channels/means of transportation for the commodity or food group from farm to place of processing/storage/manufacture, and onward distribution? Via what routes?
• What are the infrastructures relevant to food distribution (road network, public transport, markets, production, processing, storage and retail areas)?
• How many wholesale markets or distribution hubs (that deal with the commodity or food group) are there? What type? Where are they located?
• What proportion of the commodity or food group produced in the city region is destined for city region markets? What proportion is distributed outside the city region (to neighbouring areas, national, international)?

Marketing, catering and retail

- Where are the main outlets consumers go to? What types of outlets are they (e.g. supermarkets, small shops, markets and street traders, caterers, online food delivery platforms. Include the informal sector where information is available)? Are they (physically/economically) accessible to everyone?
- What are the total annual sales volumes of the commodity or food group in the city region for different outlet types (e.g. farmers markets, public sector food procurement, direct to consumers)?
- What are the prices per market type? How do they compare to farm gate prices?
- What is the total financial value of the commodity or food group sold in the city region, based on price data?

Consumption

- What quantity of the commodity or food group is consumed within the city region each year?
- What proportion of the commodity or food group consumed is from the city region value chain (compared with external sources)?
- Who are the main consumers? In what context do they consume the product? In what location?

Food loss and waste

- What quantities of food loss and waste occur at each value chain node? At what points (including on farm and post-harvest losses)? What is the cause?

For more detailed guidance on conducting rapid food flow mapping, see:

Food flow mapping. Access the online Toolkit

BOX 2

USING GLOBAL INFORMATION SYSTEMS

The physical locations of key infrastructure, businesses, and stakeholders, and the movement of foodstuffs between them, are plotted on maps and are subject to spatial analysis.

Where GIS is used, information on relating to each commodity or food group is added as a separate data set, to enable spatial analysis between layers. As for Activity 2, the project team may decide it is necessary to re-define the boundaries of the CRFS, which were initially set in the Define the CRFS module, to take account of important food flows.

For more detailed guidance on mapping and spatial analysis, see:

Step-by-step GIS guide for the CRFS assessment and planning process. Access the online Toolkit

For an extended example of commodity food flow mapping, see:

Example: Commodity food flow mapping in the Colombo CRFS. Access the online Toolkit

Presentation of findings

A narrative report of the findings of the rapid food flow mapping for specific commodities or food flows can be prepared for inclusion in the draft Rapid Scan report, supported by food flow maps and other diagrams or charts. See:

Examples. Flow charts showing findings of food flow mapping. Access the online Toolkit

Example: Commodity food flow mapping in the Colombo CRFS. Access the online Toolkit

Template: Rapid scan report. Access the online Toolkit

The findings will be presented at the stakeholder workshop and will inform participatory decision-making (see Activity 5).

Complete list of tools and resources for this activity

Food flow mapping. Access the online Toolkit

Step-by-step GIS guide for the CRFS assessment and planning process. Access the online Toolkit

Examples. Flow charts showing findings of food flow mapping. Access the online Toolkit

Template: Rapid scan report. Access the online Toolkit

Activity 4. Scan of climate and pandemic risks (optional)

This optional activity forms part of the assessment in city regions that are following the multirisk track, either as a stand-alone project or in conjunction with the main track.

The purpose of the scan of climate and pandemic risks is to start identifying the hazards that are most likely to affect the city region, the potential impacts on the CRFS, and the exposure, vulnerability, and resilience capacities of food systems assets, infrastructure, stakeholders and ecosystems – that is, the risk components. Once the project team has an idea of these risk components, team members will be able to identify some priority areas for in-depth research and action (see Activity 5 below).

Reminder

Risk is the likelihood of damage or negative impacts or consequences within the CRFS.

Risk is determined by the interaction between the **hazard** in question, and the **exposure**, **vulnerabilities and resilience capacities** of people, assets, infrastructures, and ecosystems within the CRFS (see **Figure 3**, the risk equation).

It is strongly recommended that project coordinators / project full understanding of the above terms associated with risk before they embark on this activity. See:

Definition of risk elements. Access the online Toolkit

Options

Activity 4 is not intended as an alternative to Activities 1 and 2. The local context should be established, and the CRFS characterized, before carrying out a scan of climate and pandemic risks. Rather, Activity 4 can be:

- A stand-alone activity in city regions that have already completed the main track of the CRFS assessment and planning process, and now wish to apply a climate and pandemic risk lens; or
- Conducted in conjunction with Activity 2 in city regions that are undertaking CRFS assessment and planning for the first time and wish to include the climate and pandemic lens from the outset.

The project team may choose to conduct a general scan of climate and pandemic risks across the value chain nodes of all commodities. This will help determine which commodities experience the most vulnerabilities and have the least resilience capacities within their value chains, which may inform decisions over priority areas (Activity 5).

Alternatively, if the project team has opted to carry out rapid food flow mapping for a small number of important commodities and food groups (Activity 3), the scan of climate and pandemic risks may focus on those commodities or food groups. It may be conducted in conjunction with Activity 3.

As with Activities 1, 2, and 3, information for the scan of climate and pandemic risks is drawn from existing, secondary documentary sources (through document analysis) and stakeholder knowledge (through expert interviews). It is highly unlikely that all the information needed will be available from secondary sources. This activity also allows the project team to identify data gaps that may need to be filled during the In-depth Assessment, through collection of primary data (see In-depth Assessment module).

Data (dis)aggregation

Where national data is available relating to any aspects of climate and pandemic shocks and stresses, it is very important that this be disaggregated to the city region level as far as possible.

If national data are not disaggregated, the project team will not be able to adequately see the risks faced within the specific context of the CRFS, which can differ considerably from the wider-scale national situation. This means they will not be able to identify locally relevant priority areas, or to pinpoint data gaps to be filled in the In-depth Assessment.

Given that the city region boundaries are not required to adhere to administrative or jurisdictional boundaries, it is quite likely that data sets will apply to the level of the administrative region or to the several municipalities that are included in the city region. In this case, the data boundaries should be clearly identified.

Rapid risk assessment questions

Hazards

Table 13 sets out initial questions relating to potential hazards faced by the CRFS.

These icons are used to denote which questions are relevant to climate risk, whichfor pandemic risk, and which for both.

Table 13. Rapid scan questions and data sources relating to hazards

	What are the main climate shocks and stresses that have affected the city region in the past (e.g. in the last 5, 10, 20 years)?
	What were the immediate physical impacts of each climate shock and stress?
	Are there any defined thresholds of intensity that initiate disaster risk management protocols or actions?
	How frequently have these climate shocks and stresses occurred (at levels that breach the thresholds for disaster risk management protocols or actions)?
	What disease epidemics/pandemics have affected the city region in the past?
	What specific restrictions or measures have been taken in the past to limit infection rates?

Value chain nodes – impacts, exposure, vulnerabilities, resilience capacities

Tables 14 to **17** set out initial questions relating to the other risk components, which are addressed in relation to each of the food value chain nodes: input supply and production; storage, processing, and manufacturing; wholesale and distribution; marketing, catering and retail; consumption; food loss and waste.

Table 14. Rapid scan questions and data sources relating to impacts at value chain nodes of the city region food systems

	What main climate shocks and stresses have affected people, livelihoods, assets, infrastructure and ecosystems at the node?
	For each hazard, what have been the main impacts on the CRFS node in the last decade?
	What other impacts could there be for the node in the future?
	How have each of the pandemic restrictions impacted people, livelihoods, assets, infrastructure and ecosystems at the node?
	How have the impacts of restrictions/measures compounded impacts of previous hazards or existing, chronic problems with on the nodes? Why?
	What agricultural products/staple foods are mostly impacted by each identified impact?

Table 15. Rapid scan questions and data sources relating to exposure at value chain nodes of the city region food systems

	Which stakeholders / assets / activities / infrastructures are located within geographical range of main climate-related hazards and are thus most exposed?
	Which stakeholders and infrastructures are most exposed to the impacts of pandemic measures / restrictions as a result of their geographical location (e.g. densely populated; remote areas)
	What proportion or quantity of stakeholders / assets / activities / infrastructures are exposed?

Table 16. Rapid scan questions and data sources relating to vulnerabilities at value chain nodes of the city region food systems

	Which stakeholders, activities, infrastructures at the node are most vulnerable in the face of identified hazards (climate and pandemic measures)?
	In what ways are these stakeholders, activities, and infrastructures vulnerable?
	What are the reasons for these vulnerabilities (gender-related, socioeconomic, ecological, lack of institutional capacities)?

Table 17. Rapid scan questions and data sources relating to resilience capacities at value chain nodes of the city region food systems

	Which stakeholders, activities, infrastructures have resilience capacities in face of each hazard?
	What are these resilience capacities? (Preventative, anticipatory, absorptive, adaptive and transformative capacities; these capacities are explored more in detail in **Table 19**)
	Why do they have these resilience capacities?

Knock-on impacts

The food systems perspective enables us to acknowledge that, following the initial impact of a hazard on the people, assets, infrastructure, assets and livelihoods at one node in the food supply chain, there may be knock-on impacts at other nodes.

In addition, it is important to remember that the CRFS is intrinsically connected to other urban and regional systems – both nature-based (e.g. as air, soils, ecosystems, water, and climate) and human based systems (e.g. public transportation, roads, fuel supply, electricity grid, communications).

If any of these nature-based or human-based systems are impacted by a hazard, there can be knock-on impacts at food value chain nodes that rely on them. For example:

- Flooded roads can have knock-on impacts for food distribution.
- Lack of electricity can have knock-on impacts for food processing and manufacturing that relies on power.
- Public transportation disruption has knock-on impacts at multiple nodes because people cannot reach their places of work or food outlets; etc.

While knock-on impacts will be explored in more detail in analysis of the In-depth assessment findings. For more information see:

Analysis guide. Access the online Toolkit

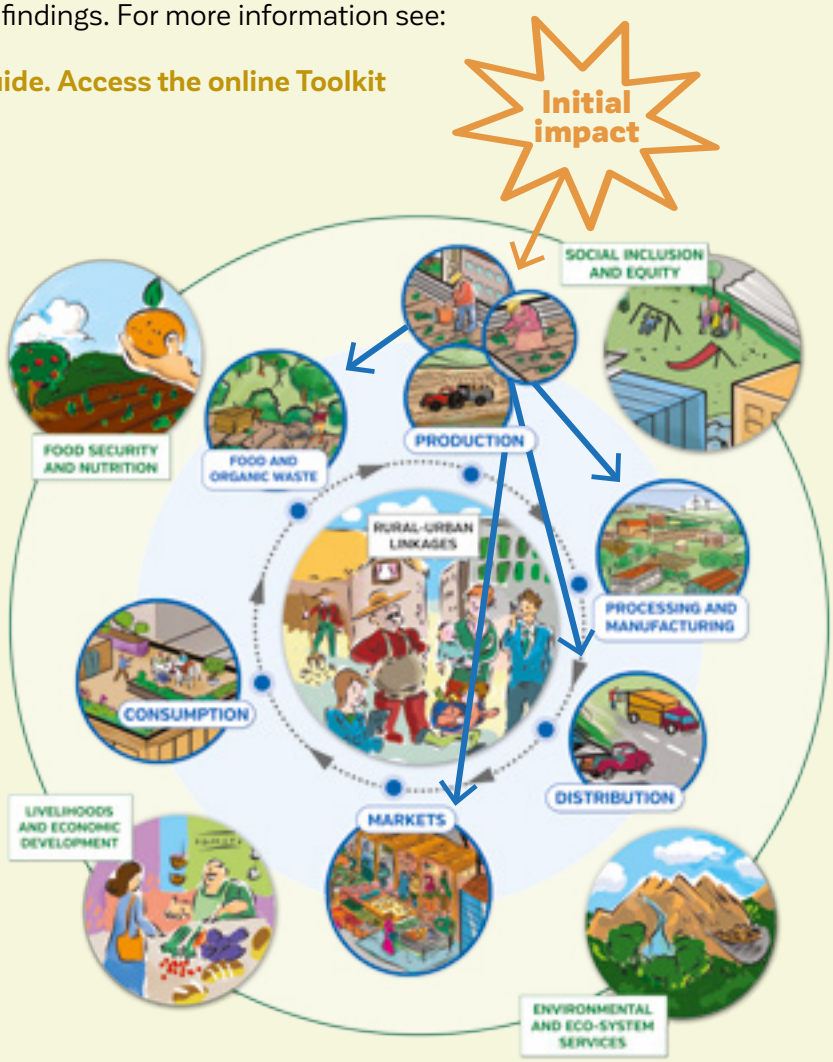


Figure 10. *Knock-on impacts through the city region food systems*

Natural resources: impacts, exposure, vulnerabilities, resilience capacities

Table 18 sets out initial questions relating to each of the city regions' key natural resources, such as rivers, forests, etc. and ecosystem services.

Table 18. Rapid scan questions and data sources relating to resilience capacities at value chain nodes of the city region food systems

	What are the likely impacts of the most likely climate-related hazards on natural resources
	What are the main climate-related vulnerabilities of natural resources and the related ecosystem services?
	In what geographical locations are natural resources most exposed to impacts of climate-related hazards?
	Are nature-positive solutions or nature-based solutions being implemented as part of risk management actions to strengthen the resilience of the city region food systems?

Governance, institutional arrangements and policy frameworks

Table 19 sets out initial questions relating to governance, institutional arrangements and policy frameworks. There is some crossover between the questions in **Table 19** and those in **Table 17** because policy provisions are often the source of resilience capacities.

One data collection method to answer these questions is document analysis of policy papers. The information contained in policy papers will probably need to be supplemented through institutional stakeholder mapping, including one-to-one interviews. For instructions on how to do this see Activity 2, and:

Table for collating stakeholder data. Access the online Toolkit

Sample stakeholder interview guide. Access the online Toolkit

Table 19. Initial questions relating to governance, institutional arrangements and policy frameworks

	What roles, powers, responsibilities do local/regional decision-makers and stakeholders have to manage multiple risks and increase resilience of the CRFS to climate-related hazards?
	What roles, powers, responsibilities do local/regional decision-makers and stakeholders have that can be deployed to mitigate the impacts of pandemic measures/restrictions?
	Do(es) local/regional government(s) have multirisk emergency preparedness and contingency plans and disaster risk reduction strategies in place that include the food system?
	Are there institutionalized and functioning multirisk monitoring and early warning systems in place that are helping to absorb impacts on the CRFS?
	Do(es) local/regional government(s) have a functional emergency response system? Is decision-making informed by a post-disaster needs assessment mechanisms?
	Is the city/regional government implementing measures or investment to reduce climate-related vulnerabilities of food system stakeholders, or to risk-proof grey infrastructures and/or Nature-based Solutions (NbS) or hybrid solutions?
	Do policies/programmes exist that promote good practices for vulnerability and risk reduction and climate adaptation in the food system? Are they being implemented?
	Have existing food-related policies and regulations been amended (or in the process) to take account of the climate and pandemic context?
	What measures have been taken by the (local or national) government to mitigate impacts of pandemic restrictions/measures on the CRFS?
	Is there any institutionalized fund or budget allocation for building resilience to multirisks that includes food system stakeholders, infrastructures and activities?
	Are insurance mechanisms in place to cover damages/losses caused by impacts of hazards?
	Do(es) local/regional government(s) have social protection mechanisms that could reduce vulnerability of the most vulnerable and/or improve emergency response and recovery?

Multilevel policies

When conducting this institutional analysis, it is necessary to look at arrangements and policies at multiple levels – from the local up to the national. This is because local policies are often framed and constrained by higher levels.

For instance, a national policy may dictate social protection measures, or certain aspects of environmental management.

Data collection

Document analysis

As for Activity 2, desk research is carried out to draw relevant information from existing data documentary sources, surveys and studies. The project team may not be able to find exactly the right data to answer the questions, but it is acceptable to make a few estimations based on available data.

Possible data sources include (but are not limited to):

- Media reports.
- Previous studies on urban resilience (e.g. 100 Resilient Cities).
- Documents on other projects and studies on climate and resilience.
- Reports on COVID-19 impacts and experiences.
- Economic reports.
- Agricultural reports .
- Policies/plans on disaster risk reduction, climate mitigation, natural resource management.
- National meteorological and hydrological services (natural resources and climate, disaggregated).
- Data from environmental organizations and health institutions (on water quality, pollution).
- Local government website, policy documents, plans and budgets .

Expert interviews

As for Activity 2, it is unlikely that the project team will be able to find comprehensive, written information and data on all the questions in the public domain, especially at the level of the city region and in cities.

Again, it may be possible to fill some of the data gaps in documentary sources through semi-structured expert interviews with, for example, academics, risk management professionals, value chain experts, local government officials and NGOs.

Potential interviewees may be identified from the stakeholder mapping analysis carried out under the Define the CRFS module, and the *additional institutional stakeholder mapping analysis (see below)*.

The experts may also provide supporting documentation that has not been published (if they have the authority or authorization to do so).

Data gaps that persist after conducting both document analysis and expert interviews are noted so they can be addressed as part of the In-depth Assessment module.

Participatory mapping

It is unlikely that the project team will be able to find comprehensive, written information and data on all the questions in the public domain, especially at the level of the city region and in cities.

To help fill some of the gaps, members of the project team and the SAG can conduct participatory mapping to collectively answer (some of) the questions related to exposure. This involves marking up either paper or digital maps in a meeting or workshop setting. The results of participatory mapping are particularly helpful for spatial analysis (see Box 2: Mapping and spatial analysis).

Institutional stakeholder mapping analysis

If Activity 3 is being carried out in conjunction with Activity 2, the institutional stakeholder mapping analysis includes disaster risk management and urban resilience stakeholders.

If Activity 3 is a separate, subsequent activity, a new round of institutional stakeholder mapping will need to be conducted to identify these stakeholders and understand their mandates, needs and concerns, existing policies, opinions, connections and co-operations, capacity and resources, *and* to obtain more information to answer the research questions in the tables (especially **Table 18**).

As before, these interviewees may also be engaged in the multistakeholder process.

Making sense of the findings

The findings relating to risk components for each hazard may be tabulated for ease of reference, as per **Table 20**.

Table 20. Table to summarize risk components for each hazard

Node	Potential direct impact	Knock-on impacts from related systems or nodes	Food commodities affected	Exposure	Vulnerable stakeholders, assets, infrastructures	Resilience capacities
Input supply and production						
Storage, processing and manufacturing Wholesale and distribution						
Marketing, catering and retail						
Consumption						
Food loss and waste						
Natural resources						

Table 20 is available as a Word document:

Table to summarize risk components for each hazard. Access the online Toolkit

Once each table is completed, it may be possible to identify nodes, stakeholders, assets and infrastructures, areas, and commodities that are particularly at risk of impact from the hazard in question.

By comparing tables, the project team may find that some nodes, stakeholders, assets and infrastructures, areas, and commodities are at risk from multiple hazards. From this, it may be possible to start identifying potential priority areas and data gaps.

Governance for resilience

The answers to the questions on governance, institutional arrangements and policy frameworks may enable the project team to start identifying some resilience capacities to potential impacts of hazards on the CRFS, but they will probably be general to be included in the above table.

Rather, the answers will provide an initial indication of the extent to which climate and pandemic risks have been considered in the city region to date, and specifically in relation to the food system. It is highly likely that some gaps in existing arrangements and frameworks will be identified, which might be addressed through action planning.

BOX 3

ADDING INFORMATION TO MAPS

Information from the scan of climate and pandemic risks should be added to the existing GIS maps (that will already show the boundaries of the CRFS, contextual data, and (if done) rapid food flows.

Simple spatial analysis of the new GIS may yield patterns and relationships between the data layers added so far. For example, climate data (e.g. precipitation, temperature, drought, and floods) can be cross-checked with data on population density and food flow maps to identify exposure to hazards. Any potential insights from emerging patters may be the subject of discussion and confirmation in the participatory workshop (Activity 5).

See:
Step-by-step GIS guide for the CRFS assessment and planning process. Access the online Toolkit

Presentation of findings

In addition to the above-mentioned GIS maps, a narrative report of the findings is also prepared for inclusion in the draft Rapid Scan report (and for presentation at the stakeholder workshop (see Activity 5). See:

Template: Rapid Scan report. Access the online Toolkit

Complete list of tools and resources for this activity

Definition of risk elements. Access the online Toolkit

Table to summarize risk components for each hazard. Access the online Toolkit

Table for collating stakeholder data. Access the online Toolkit

Sample stakeholder interview guide. Access the online Toolkit

Analysis guide. Access the online Toolkit

Step-by-step GIS guide for the CRFS assessment and planning process. Access the online Toolkit

Template: Rapid Scan report. Access the online Toolkit

Examples. Climate and pandemic risk assessment fact sheets (Antananarivo, Colombo, Kigali, Tamale). Access the online Toolkit

Training unit 6. Climate and pandemic risk Rapid Scan. Access the online Toolkit

Activity 5. Participatory decision-making on priority areas

Participatory decision-making takes place in a workshop setting and involves taking stock of the findings of the Rapid Scan, including the preliminary analysis identifying problem areas, issues, gaps, bottlenecks, and risks by the project coordinator and/or project team. The findings are considered in conjunction with the ideas of priority areas that may have emerged from the visioning exercises and are used as the basis for collective decisions over priority areas to be investigated further in the In-depth Assessment, with a view to being addressed through action planning.

The workshop is attended by all relevant CRFS stakeholders – e.g. public authorities, private sector and civil society, from agricultural production to consumption and food waste management – and anyone else who contributed information and data.

Presentation

The workshop will start with a presentation, which will probably be made orally (with slides). The project team may also wish to circulate a draft narrative report or a summary in advance for comment.

Following the presentation, stakeholders may:

- Ask questions and comment to ensure information is accurate and as complete as possible.
- Comment upon the initial analysis, propose different interpretations where relevant.

Guided discussion

After the presentation and comments, the facilitator guides the participants in:

- Revisiting the vision statement (see Initiation module) and considering whether the findings give cause to amend the vision. For guidance, see:

How to develop a vision and summary vision statement. Access the online Toolkit

- Considering both the ideas of priority areas that emerged from the (amended) vision *and* the Rapid Scan findings to identify priority areas for further investigation in the In-depth Assessment.

Where the Rapid Scan has included climate and pandemic risks, stakeholders will identify priority areas to build resilience capacities to the most likely context-specific climate hazards and pandemic-related hazards.

The priority areas are verified and confirmed collectively by the SAG rather than unilaterally by the project coordinator, project team, or local government officials.

Narrowing the focus on priorities

Figure 11 shows how the priority areas determined at the end of the Rapid Scan are key to the direction of the rest of the CRFS project. They are gradually refined, becoming more focused as the project progresses.

It may be necessary to start with a long list of proposed priority areas then work towards consensus over (recommended) 3 to 5 to take forward to the In-depth Assessment. It is important to allow enough time for the stakeholders to determine their own selection criteria, to clearly articulate what each priority area is. The selected 3 to 5 priority areas will be used as the starting point for drawing up the indicator framework, which informs the methodology for the In-depth assessment.

The findings of the In-depth Assessment allow for specific priorities under each priority area to be identified; these specific priorities will be taken up in the Action Planning module). However, if any specific ideas for actions emerge earlier they should be recorded and considered during the Action Planning module.

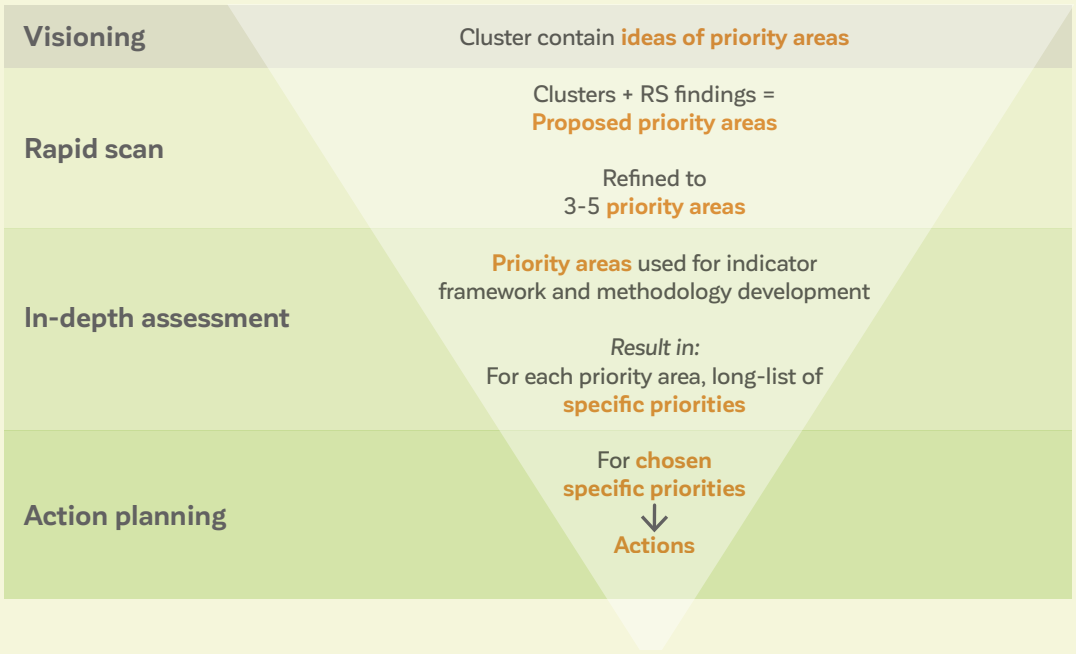


Figure 11. *Narrowing the focus on priorities*

As part of identifying the priority areas, it may be helpful for the SAG to have a look at the reference indicator frameworks, which set out a range of possible priority areas and desired outcomes. These materials can help ensure that the stakeholders select priorities, while keeping the food systems perspective in mind, and may allow them to start thinking about developing the customized indicator framework (completed during the In-depth Assessment module). See:

Tool. Reference CRFS Indicator Framework. Access the online Toolkit

Tool. Supplementary reference CRFS indicator framework on climate and pandemic risk. Access the online Toolkit

- Identifying key commodity or food group value chain(s) for the In-depth Assessment to focus on (if considered beneficial and if not already done).
- Identifying additional major data gaps from the Rapid Scan (aside from those in the priority areas) that need to be filled to provide a more complete broad characterization of the CRFS.

  It is recommended not to attempt to fill all the data gaps but to select the 5 to 10 that are most pressing, that are most likely to inform future work, and for which data can be collected easily and cheaply, and without requiring additional resources (such as by adding questions to surveys and interviews).

The objective is to reach consensus over each of these points, as the decisions will form the basis of the In-depth Assessment.

What if too much data is missing making priority areas difficult to identify?

The Rapid Scan is intended to provide just enough information and secondary data from existing documents and stakeholder knowledge to enable a collective decision over priority areas for the In-depth Assessment.

However, the availability of secondary data depends on the quantity and scope of food systems in the city region has been done in the recent past and its scope; what data is collected systematically by (local, regional or national) government departments or NGOs; and whether data is in the public domain or access is restricted.

In some cases, the project team and SAG find that the data gaps are too many/too large to enable priority areas to be identified. Ideally the project team would acknowledge this before the workshop. If this happens, the project team may need to:

- Re-visit stakeholder maps to assess whether any stakeholders or organizations with access to information have been overlooked.
- Draw up a long-list of priority areas in the first instance, then conduct a short and limited round of primary data collection to enable this list to be reduced. A value chain expert may conduct this interim data collection. It is very important not to get carried away and try to fill all the gaps; the intention is to collect essential information, rather than the “nice to have”.

After the workshop, the project coordinator finalizes the narrative report to take account of discussions, including decisions made over the priority areas and data gaps.

The coordinator may also produce short fact sheets and other accessible materials containing key findings, for communication and advocacy purposes. For example fact sheets, see:

Examples. Assessing and planning City Region Food Systems fact sheets (Colombo, Lusaka, Kitwe, Medellin, Utrecht, Quito, Toronto) Access the online Toolkit

Examples. Climate and pandemic risk assessment fact sheets (Antananarivo, Colombo, Kigali, Tamale). Access the online Toolkit

Complete list of tools and resources for this activity

How to develop a vision and summary vision statement. Access the online Toolkit

Identifying priority areas for in-depth assessment and action planning. Access the online Toolkit

Training unit 3. Participatory multistakeholder processes. Access the online Toolkit

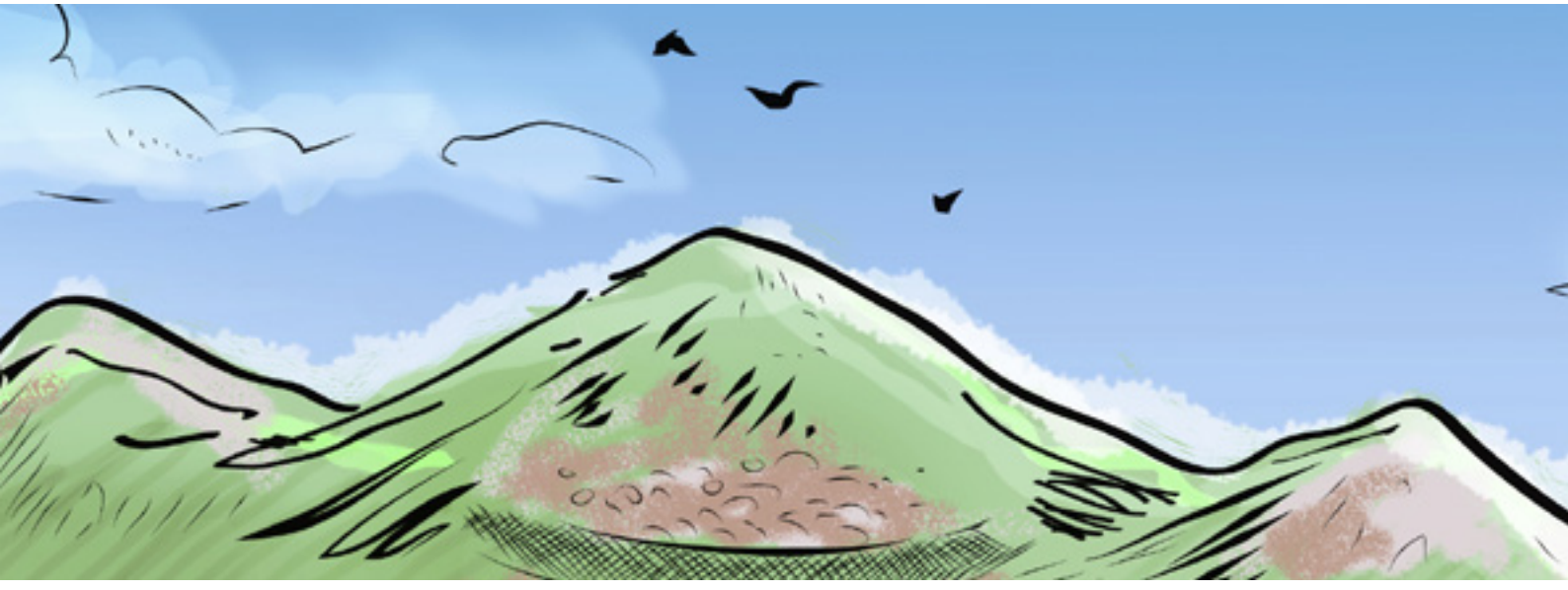
Template: Rapid scan report. Access the online Toolkit

Examples. Assessing and planning City Region Food Systems fact sheets (Colombo, Lusaka, Kitwe, Medellin, Utrecht, Quito, Toronto) Access the online Toolkit

Examples. Climate and pandemic risk assessment fact sheets (Antananarivo, Colombo, Kigali, Tamale). Access the online Toolkit

Where next?

After completion of the Rapid Scan, the logical next step is to embark on the first activities in the In-depth Assessment module.



2.4 In-depth Assessment

Before you begin

Before embarking on the In-depth Assessment module, the project team will have completed the Rapid Scan – Activity 1 (Establishing local contexts), Activity 2 (Characterizing the CRFS), and Activity 5 (Participatory decision-making).

The project team may also have opted to complete Activity 4 (Rapid food flow mapping), and if they are following the multirisk track they will have completed Activity 3 (Scan of climate and pandemic risks). These activities will have enabled them to identify:

- 3 to 5 priority areas for further investigation in the In-depth Assessment, with a view to enhance resilience and sustainability.
- Key commodity or food group value chain(s) to be focused on for the In-depth Assessment.
- Major data gaps from the Rapid Scan to be filled through primary data collection.

The In-depth Assessment module is the second part of the CRFS assessment, and involves targeted primary data collection, through methods such as focus groups, field surveys, and interviews with individual food system stakeholders.

The main purpose of the In-depth Assessment is to collect and analyse both quantitative and qualitative data related to problems, bottlenecks, vulnerabilities, and lack of capacities within the priority areas of the CRFS (as identified in the Rapid Scan), and in some cases in relation to a small number of important commodity value chains. This detailed information allows the project team to confirm the findings of the Rapid Scan and to identify the underlying causes of the problems. The findings serve as an evidence base for action planning to address the causes (see Action Planning module).

In addition, the In-depth Assessment provides an opportunity to fill data gaps from the Rapid Scan, where no secondary data were available. This ensures the existence of a more complete picture of the local context and character and functioning of the CRFS, which can inform future work to build resilience and sustainability beyond the end of the CRFS project.

The In-depth Assessment module contains five activities:

1. Drawing up the indicator framework.
2. Developing research questions and methods.
3. Developing data collection instruments.
4. Analysing findings.
5. Reporting on the in-depth assessment.

Outputs of the In-depth Assessment module

By the end of the In-depth Assessment module the project team will have:

- A customized indicator framework.
- A detailed written report of the findings of the In-depth Assessment, including identification of causes of key strengths, problems, bottlenecks, vulnerabilities, and (lack of) capacities within the CRFS, and recommendations of those to be addressed in the Action Planning module.
- A set of maps showing the spatial data and relationships between data sets.
- Short, accessible, visual presentations of key findings, such as infographics, dashboards, videos and factsheets.

Through the activities in the In-depth Assessment module, the CRFS project will have generated stakeholder awareness of CRFS value chain performance.

Options

The design of the In-depth Assessment is informed by local needs and the priority areas identified at the end of the Rapid Scan module. These decisions inform the indicator framework and subsequent development of the research methodology.

The choice over whether to follow the main track of the CRFS process or the multi-risk track, or a combination of the two, will already have been made during the Rapid Scan module. This choice determines whether the in-depth assessment is oriented towards:

- Gaining more, detailed understanding of the character and functioning of certain aspects of the CRFS, including, in some cases, key commodities.
- Assessing the hazards that are most likely to impact the CRFS, including climate shocks and stresses and pandemics and the risk components.

It is highly recommended that the project team incorporate mapping and spatial analysis into the In-depth Assessment. The scope of these activities will depend on expertise within the project team, and resources.

Summary of multistakeholder participation

It is important to maintain multistakeholder dialogue during the In-depth assessment, to promote broader awareness of CRFS performance and pave the way for action planning by fostering shared agreement on the need for interventions. Without efforts to keep stakeholders actively engaged there is a danger that some will lose interest or deprioritize their participation.

Key moments for multistakeholder dialogue and engagement are:

- Consultation of the SAG regarding indicator framework development.
- Outreach to other research teams and organizations to promote data collection under existing programmes and surveys.
- Possible involvement of the SAG in identifying interviewees.
- Consultation with the SAG over existing plans, strategies, policies or programmes related problems, bottlenecks, vulnerabilities, and lack of capacities in the CRFS.
- Consultation of the SAG over initial findings, including review of draft report (findings will be validated in the workshop at the start of the Action Planning module).

Timing

It is recommended that between three and nine months are spent on the In-depth Assessment, depending on scope (e.g. number of priority areas and research questions, number of key commodities).

Activity 1. Drawing up a tailored indicator framework

Before developing a methodology for collection of primary data, the project team first draws up a customized indicator framework in relation to the chosen priority areas. From this point onwards, indicators are an important component in the CRFS process as they inform subsequent activities.

The indicator framework is developed by the project team (including the value chain and GIS experts, where contracted), in consultation with the SAG. The SAG validates the working indicator framework.

What is an indicator framework?

An *indicator framework* is a table that identifies:

- The **outcomes**, i.e. types of changes that stakeholders in the CRFS project want to see in the future in relation to each priority area (and, in some cases, key commodity value chains).
- **Issue to be measured** (in relation to each outcome)
- Possible **indicators**, i.e. specific, measurable characteristics relating to each issue to be measured, that can be used to show change or progress towards the outcome.

Each outcome must have at least one issue to be measured, but it may have several; each issue to be measured may have one or several indicators (but ideally no more than three to avoid data collection being too challenging) See **Table 21**.

Table 21. Indicator framework development

Outcoming (type of change)	Issue to be measured	Indicators

Indicators should be expressed in clear, unambiguous, and (usually) quantifiable terms, e.g. the number or percentage of affected people, assets or resources; the existence/absence of an asset or feature.

Depending on how precise the priority area is, indicators include information about the relevant population and/or geographical area they concern.

Indicators should be practical – that is, data should be available and there must be an affordable, feasible means to collect data on a regular basis. They should also be reliable, meaning that change can be measured objectively over a period of time by different observers.

Why are indicators needed?

Indicators play a multifunctional role in the CRFS process. They allow the project team to:

- Develop research questions and appropriate data collection methods to assess the current performance of the CRFS, following a whole-systems approach.
- Further refine priority areas for action with clearly defined outcomes, issues to be measured, and ways of measuring change.
- Help with planning strategy and actions to achieving the desired outcomes.
- Enable establishment of baselines in relation to each priority area.
- Provide an evidence base to support engagement and outreach, mobilization of resources, and communication of experiences and lessons learned.

Allow for monitoring of changes (progress or regression) resulting from (future) policy and programme implementation (although such monitoring itself falls outside the timeline of this project).

In addition, the process of identifying, developing or fine-tuning indicators helps to focus stakeholders' minds on working towards realizing the shared vision.

Developing the indicator framework

The indicator framework will differ considerably for each city region, since it is based on the priority areas that are specific to the local context and the characteristics of the CRFS. However, the project team may start by referring to the full reference CRFS indicator framework, which includes 210 indicators relating to social sustainability and equity, economic sustainability, urban–rural integration, environmental sustainability, food governance, vulnerability and resilience.

A supplementary reference indicator framework focused on resilience contains additional indicators of vulnerability and resilience capacities to climate shocks and stresses, and some related to pandemics.

Tool: Reference CRFS Indicator Framework Access the online Toolkit

Tool: Supplementary reference CRFS indicator framework on climate and pandemic risk. Access the online Toolkit

While the reference indicator frameworks are useful starting points and can provide inspiration, the desired outcomes, issues to be measured, and related indicators provided will almost always need to be adapted for the local context and specific priorities. To do this, the project team reviews the reference priority areas to see whether any resemble those that were drawn up at the end of the Rapid Scan module.

If the priority areas are substantially similar, the team works from left to right, adjusting first the outcomes to fit the precise priority areas, then considering the issues to be measured within the local context, and lastly the possible indicators for measuring each issue (see Table 21: Indicator framework development). With each column, the focus becomes narrower, more specific, and more tailored to the local context. This means that even if the local priority areas are similar to the reference priority areas, there is no need to adhere to the reference indicators if they are not appropriate.

Where a priority area is not represented in the reference indicator framework, it will be necessary to determine the outcomes, issues to be measured, and indicators from scratch. To do this, the same process of moving from left-to-right process is followed.

For detailed guidance on indicator development, see:

Tool: Detailed guidance on drawing up indicators. Access the online Toolkit

Training unit 7. Working with indicators. Access the online Toolkit

Development of indicators is not necessarily a straightforward, one-time process. It is possible that the project team will re-visit the selected indicators and, if necessary, adapt them.

Wherever possible, the required information or data should have been collected

periodically by a stakeholder or organization engaged in the SAG. If not, members should investigate whether regular data collection is being carried out among target beneficiaries of the action (by any government department, organization, or stakeholder group); if so, the SAG could request the addition of one or two questions to survey questionaires.

If the above strategies are not feasible and it would require a lot of work and resources to obtain the information on a regular basis (e.g. through dedicated household surveys), working group members may prefer to adjust the indicator.

Complete list of tools and resources for this activity

Tool: Sample CRFS Indicator Framework Access the online Toolkit

Tool: Supplementary sample CRFS indicator framework on climate and pandemic risk. Access the online Toolkit

Tool: Detailed guidance on developing indicator framework. Access the online Toolkit

Training unit 7. Working with indicators. Access the online Toolkit

Activity 2: Developing the research method

This activity is conducted by the project coordinator and project team, including the value chain expert and GIS expert (where contracted). The research method for the In-depth Assessment is specific to each city region, depending on the priority areas and data gaps identified at the end of the Rapid Scan module, and the indicators drawn up in Activity 1.

The same process is followed to develop the research method for projects following the main track and the multirisk track, as well as for those investigating specific commodity or food group value chains.

The process of developing the research method starts with the indicators. The project team continues to work from left to right across the columns shown in **Table 22** first they draw up quantitative and qualitative research questions; then they identify data sources; and finally, they determine the data collection methods.

Table 22. Development of research methodology

Indicator	Research questions	Data source	Data collection method
	→	→	→

Drawing up quantitative and qualitative research questions

Some of the research questions to be addressed in the In-depth Assessment are carried forward from the Rapid Scan, as they relate to specific data gaps that need to be filled through collection of primary qualitative or quantitative data. These questions can be listed directly in the "Research questions" column of **Table 22**.

Research questions for the in-depth assessment of the priority areas will need to be drawn up. The starting point for this is the indicator, which is then converted into a quantitative question, beginning (for example) with "**how many**" or "**what percentage**".

For detailed guidance on drawing up qualitative research questions, see:

Tool: Guidance on developing research method for the In-depth Assessment. Access the online Toolkit

Identifying data sources and determining data collection methods

Once the research questions have been established, the next steps are to determine the source(s) of data to answer each question, followed by the most appropriate method(s) for collecting that data.

Although the in-depth assessment involves mainly primary data collection, it is possible that some of the new research questions can be answered using existing, secondary data contained in documents or databases. The project team can therefore start by returning to documentary data sources used in the Rapid Scan and identifying possible new documentary sources. The data collection method is **document analysis**.

For all other research questions, it will be necessary to collect primary data.

For quantitative questions, data sources and appropriate data collection methods will depend on what needs to be quantified:

- To quantify infrastructure or food system assets (such as farms, markets, distribution centres, cooperatives, transportation routes, storage facilities, training centres, etc.), possible data sources are:
  - Existing databases and GIS data sets (data is collected through **document analysis**).
  - Physical presence within the city region (data is collected through a **physical survey**).
  - Stakeholders (data is collected using **participatory mapping**).
- To quantify the number or percentage of stakeholders in a particular situation (e.g. those with/without insurance; those with a secure market for their produce, etc.), possible data sources are:
  - Expert stakeholders with comprehensive knowledge of the situation (e.g. insurance company executives, market analysts (data is collected through expert interviews).
  - Affected food system stakeholders (data can be collected through a survey among a representative sample group).

For qualitative questions, the data sources are likely to be individual stakeholders or groups of stakeholders by value chain node or profession. Data collection methods include surveys, focus groups, or interviews.

- **Surveys** are useful for asking multiple closed-ended questions of a large group of people at a particular value chain node (e.g. producers, market vendors, or heads of household). It is possible to disaggregate responses for factors such as age, gender, socioeconomic status, race, religion, to obtain a more precise impression of impacts on vulnerable groups.
- **One-to-one, in-depth interviews** are useful for asking specific questions of individual professionals or experts on a topic (such as heads of food processing companies or warehouse managers), to tap their knowledge or opinion. Interviews can be semistructured, which gives the option of seeking clarification or following up on interesting answers, which cover points that have not been considered previously. Questions are also open-ended, so the subject can express an opinion in their own words.
- **Focus groups** are useful for obtaining more detailed, nuanced specialist knowledge than is possible from closed-ended surveys, from a homogenous group of 6 to 10 actors, such as farmers, market vendors, or shoppers at a market.

The following tips will help the project team design data collection that is as efficient and cost-effective as possible, while yielding accurate, reliable data.

- Where possible and practical, the project team can identify multiple possible data sources (and data collection methods) for each research questions, to allow for substantiation of findings. Any additional data sources will be approached in relation to other research questions, so asking additional questions will not entail significantly more work or resources.
- Each data source should be approached using only one data collection method, in which all the relevant research questions are addressed. For this reason, it is recommended that the project team conducts a rationalization exercise, once all data sources and appropriate data collection methods have been identified. This will result in a re-ordering of **Table 22** as in **Table 23**:

Table 23. Reorganized research methodology table

Data source	Data collection method	Research questions
Source 1	Method 1	RQ 1
		RQ 2
		RQ 3
Source 2	Method 2	RQ 4
		RQ 5
		RQ 6
Source 3	Method 3	RQ 7
		RQ 8
		RQ 9

- The project team should find out what other data are being collected within the city region, either as part of other research projects or on a systematic basis, and from whom and how it is being collected. This involves active outreach and engagement of other research teams and organizations, working through the SAG to develop contacts and potentially inviting the researchers to join the SAG. Where the data source (group of stakeholders) is the same and where timescales align, it may be possible to insert some additional questions into surveys being conducted by other organizations or local government teams (ensuring that the data collectors are fully briefed on the nature of the data required). Such intelligent links avoid duplication of effort, saving time and resources. This engagement may result in systematization of the questions into regular data collection, beyond the duration of the CRFS project, which will facilitate monitoring.

For detailed guidance on identifying data sources and determining data collection methods, see the following tool:

Tool: Guidance on developing research method for the In-depth Assessment. Access the online Toolkit

Complete list of tools and resources for this activity

Tool: Guidance on developing research method for the In-depth Assessment. Access the online Toolkit

Tool: Step-by-step GIS guide for the CRFS assessment and planning process. Access the online Toolkit

Example: Kigali research method development table. Access the online Toolkit

Training unit 7: Indicators. Access the online Toolkit

Training unit 8: In-depth assessment of the CRFS. Access the online Toolkit

Training unit 9: In-depth assessment of climate and pandemic risks to the CRFS. Access the online Toolkit

Activity 3: Developing data collection instruments

The re-ordered table produced at the end of Activity 2 serves as the basis for designing data collection instruments, such as survey questionnaires, interview guides, and sets of focus group questions. The instrument for each data collection method (column 2) must be suitable for extracting the information needed from the data source for the project team to answer the assigned questions. The precise construction of these tools will vary from project to project.

Broadly speaking, **interviews** with key experts may include questions that are the same or very similar to the research questions. The research questions will need to be reworded for the interviews (rather than being expressed in abstract or third person terms). The questions are open-ended, as the intention is to obtain in-depth knowledge across an entire area. It may also be necessary to break down research questions into several interviews or survey questions to capture every dimension, including sub-questions relating to socioeconomic factors that are vital to understanding how vulnerabilities and capacities vary between different groups of stakeholders.

For **surveys**, on the other hand, the research questions need to be adapted to interrogate the individuals about their own experiences (essential demographic and socioeconomic data need to be captured for each respondent, to enable disaggregation of responses for different characteristics). Surveys are also useful for the collection of spatial data (see Box 4: Kobo Toolbox). The project team needs to ensure that the questions are easy to understand and invite yes/no answers or short free responses. Where the questions are translated into the local language, it is important to test the translated versions with native speakers, to ensure they make sense and will elicit the required responses. It is also a good idea to involve field researchers or enumerators in developing the data collection instruments to ensure they can be administered as expected (if this is not possible, field researchers/enumerators should be thoroughly briefed).

Likewise for **focus groups**, the questions need to be easy to understand and geared towards obtaining individuals' own experiences and opinions. The questions need to be open-ended and invite reflection. It is recommended that not more than 10 questions be addressed in each focus group, and that participants be a homogenous group of 6 to 10 individuals who perform the same role in the food system and have similar characteristics. It is important not to include people who may have power relations over others in the group, as this may impede people's willingness to speak freely.

For detailed guidance on developing interview and focus group guides, see the following tools:

Example: In-depth interview guide. Access the online Toolkit

Example: Focus group guide. Access the online Toolkit

The project team must also consider how data collection will be administered, depending on factors such as resources, availability and size of a field research team, transportation, time communications infrastructure and aptitude among respondents, etc. For instance:

- Will interviews be conducted in person, by phone, or on-line? How long will they last?
- Will questionnaires be completed on paper or will research teams input data into tablets (using apps or software such as Kobo Toolbox, see Box 4)?

The answers to these questions may influence the content and structure of the data collection instruments.

BOX 4

KOBO TOOLBOX

Kobo Toolbox is a suite of free, open-source software tools used to create questionnaires and facilitate field data collection and analysis. It was designed specifically for use in challenging environments, including in the aftermath of natural disasters.

Using mobile devices (such as phones and tablets) Kobo Toolbox allows for spatial inputs based on areas, point locations, and pathways that will help the project team fill gaps identified in the existing data, and supplement or check the accuracy of existing (secondary) datasets on spatial components of the CRFS, such as market locations, access to food storage and agricultural supplies, transport networks, etc.

Kobo Toolbox and technical support for users is available at www.kobotoolbox.org.

For an example of a survey created in Kobo Toolbox for the CRFS project in Kigali, Rwanda, see:

Example Kobo Toolbox survey. Access the online Toolkit

Additional logistical and ethical considerations

Before the researchers head into the field, the project team needs to consider other logistical and ethical arrangements. For instance:

- Where is the best location to hold focus group discussions, and at what time, to enable participation by target stakeholders?
- How will interviewees, survey respondents or focus group participants be recruited?

For example, will potential interviewees be identified by the project team or based on SAG contacts? Or will they be approached through a trade organization, union, or cooperative? Or will an open advertisement be placed in newspapers or on a radio station?

- Is ethical approval required?

If the assessment is being carried out by, or in partnership with a university, it may also be necessary to adhere to the university's ethics procedures. This is particularly likely when research involves working with vulnerable people and/or when the safety and well-being of either the interviewee or interviewer may be jeopardized by their involvement in the research. It may be necessary to obtain ethical approval before fieldwork begins. It is important to find out ahead of time whether this is the case to avoid unexpected delays.

Even if formal ethical approval is not required, fieldwork should, in all cases, be conducted in adherence with the FAO Code of Ethical Conduct. It is good practice to prepare an explanatory brief for interviewees/respondents/participants so that they are fully aware of the purpose of the project, why they have been invited to contribute, and what will happen to the information they share. This enables participants to give their informed consent to participate. Importantly, participants need to know that they can decline to answer any question and can end the interview or survey, or leave the focus group, if they wish to.

For an example explanatory research brief and consent form, see the following:

Example: Sample explanatory research brief and consent form. Access the online Toolkit

In addition, the project team should consider how the findings will be reported back to the interviewees/study participants. It is not viable to invite every interviewee to participate in the multistakeholder workshop to discuss and validate the findings, but the project team should certainly ensure that community leaders or representatives of the stakeholders are included in the SAG, both to verify that findings are accurate, and to channel the findings (and recommendations) back to their communities.

Complete list of tools and resources for this activity

Example: In-depth interview guide. Access the online Toolkit

Example: Focus group guide. Access the online Toolkit

Example: Kobo Toolbox survey. Access the online Toolkit

Example: Sample explanatory research brief and consent form. Access the online Toolkit

Training unit 8: In-depth assessment of the CRFS. Access the online Toolkit

Training unit 9: In-depth assessment of climate and pandemic risks to the CRFS. Access the online Toolkit

Activity 4: Analysing findings

4.1 Why conduct an analysis?

The **initial analysis** of data collected during the in-depth assessment allows the project team to answer the research questions.

A **second level of analysis** allows the project team to make sense of these answers, first by building up a picture of the situation in relation to the priority area/indicator to which the questions relate, and second by considering the knock-on implications across all CRFS components.

As a result, it will be possible to identify the most significant problems, bottlenecks and weaknesses that undermine the sustainability and resilience of the CRFS, and their causes.

For the multirisk track, it will be possible to identify the risk determinants (hazards, exposure, vulnerabilities, (lack of) resilience capacities), and the causes of these risk determinants, that pose the most serious risks to the CRFS.

These causes may inform the specific priorities for action planning (possibly alongside other criteria). Tentative findings may be shared with the SAG (or selected members) for comment and validation, prior to – or during – compilation of the in-depth assessment report.

4.2 Initial analysis

4.2.1 Quantitative analysis

Some survey software has built-in analysis function, including KoBo Toolbox (see **Box 3**). This enables easy sifting and organization of quantitative data (as well as some qualitative data from close-ended questions) and the creation of charts, graphs and tables.

4.2.2 Qualitative analysis

As for quantitative analysis, survey software with in-built analysis can be used to organize and display some qualitative data that are obtained from closed-ended survey questions.

For the analysis of data from open-ended survey questions, interviews and focus groups, it will be necessary to systematize the responses from multiple sources in order to answer the research questions. This involves developing a coding framework based on the research questions, which is used to code relevant sections of the transcribed interviews/ focus groups. Several software solutions exist to enable researchers to code text and to re-organize text selections by topic, for systematization of responses by multiple participants. For more details, see:

Tool: Qualitative analysis software. Access the online Toolkit

4.3 Spatial analysis

Spatial analysis involves cross-referencing of datasets used to compile base maps in the Define the CRFS and Rapid Scan modules against spatial data obtained from the in-depth assessment on key critical infrastructure. This enables the project team to identify patterns between data layers, such as infrastructure coverage and relationships between interdependent infrastructure types, which may indicate problems or bottlenecks, as shown in **Figure 12**.

The selection of layers to be cross-referenced is context specific. The maps produced from spatial analysis can be used as inputs into analysis of quantitative and qualitative data to answer the research questions.

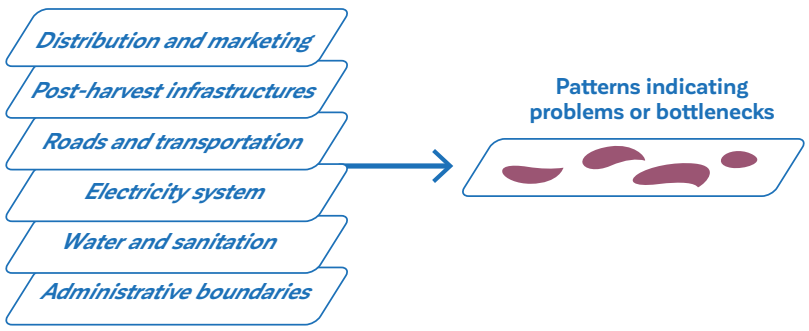


Figure 12. *Example combination of data layers contributing to critical infrastructure analysis*

For projects focusing on multirisk resilience, spatial analysis involves cross referencing of data sets from the Define the CRFS and Rapid Scan modules with spatial data on hazard exposure, as shown in **Figure 13**.

Again, the selection of layers to be cross-referenced is context specific. The maps produced from this spatial analysis contribute to the risk analysis as they can be used as inputs into analysis of quantitative and qualitative data.

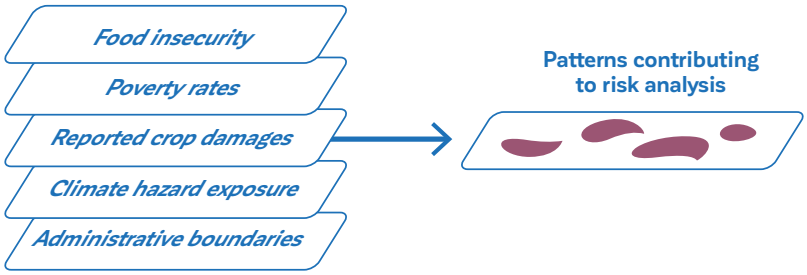


Figure 13. *Example combination of data layers contributing to risk analysis*

For projects that are following the main track and the multirisk track in conjunction, spatial data on hazard exposure can be combined with data on critical infrastructures, to provide even richer insights.

For more information on spatial analysis, see:

Tool: Step-by-step GIS guide for the CRFS assessment and planning process. Access the online Toolkit

4.4 Second level analysis

4.4.1 Developing a narrative around priority areas/indicators

Once the project team has answered each of the quantitative (how many/what proportion) and qualitative (what, how, who, which, why) questions relating to each priority area/indicator, they will be able to build a narrative to explain the problems identified, and their causes. The narrative will form part of the in-depth assessment report (see **Activity 5**).

It may be helpful to tabulate the answers to the research questions, with columns for noting identified problems and their causes, as shown in **Table 24**.

Table 24: Table for noting answers to research questions, identified problems, and causes

Indicators	Research questions	Answer	Identified problems and causes

For the multirisk track, the analysis involves using the risk equation: risk = hazard + exposure + vulnerabilities/resilience capacities to identify which stakeholders (as well as their livelihoods, assets, infrastructure, and ecosystems on which they rely) are most at risk of negative impacts from a hazard, and the underlying causes relating to each risk determinant. For a reminder of the risk equation, see:

Definition of risk elements. Access the online Toolkit

Project teams following the multirisk track may tabulate the answers to the research questions in an adapted table (with columns for noting the identified vulnerabilities, resilience capacities, and causes), which can be used as the basis for the narrative (see **Table 25**).

Table 25: Table to record answers to research questions in multirisk track

Indicators	Research questions	Answer	Vulnerabilities	Resilience capacities	Causes related to risk determinants (exposure vulnerabilities, resilience capacities)

For an example of a table used to develop a narrative on risk determinants and causes, see:

Examples: Following the process from priority setting, to assessment, to action planning. Access the online Toolkit

For more information, see:

Tool: Analysis guide. Access the online Toolkit

4.5 Food system analysis

The next step is to consider the implications of each problem, bottleneck, vulnerability, or lack of resilience capacities across the CRFS as a whole.

The project team will need to:

- Identify the actual or likely knock-on impacts on other food value chain nodes.
  As under "narrative-building" above, for the multirisk track this involves using the risk equation: risk = hazard + exposure + vulnerabilities / resilience capacities.
- Consider the impacts on the outer circle of contextual components (food security and nutrition, social inclusion and equity, environmental and eco-system services; livelihoods and economic development).
  Consequently, the project team will be able to see which problems, bottlenecks, vulnerabilities, and lack of capacities have relatively localized impacts on the CRFS, and which would broadly impact multiple parts of the CRFS.

For more information and detailed guidance see:

Tool: Analysis guide. Access the online Toolkit

It will also be helpful to refer to the following resource:

Explainer: Understanding food systems. Access the online Toolkit

4.5.1 Analysis of existing plans, strategies and measures

Once the project team has identified the strengths, problems, bottlenecks, vulnerabilities and lack of capacities, and their causes, and the main risk elements and their causes, they need to assess whether they are already being address through plans, strategies, policies or programmes – and if so, to what extent. This exercise will draw on the policy and institutional analysis in the Rapid Scan module, and policy documents will be revisited to identify any existing interventions or measures. Consultation with the SAG may also yield some information on current relevant plans, strategies, programmes, and other interventions.

It is quite likely that some relevant interventions or measures will be identified but they will probably be fragmented and/or developed at the national level, with neither involvement of municipalities nor specific actions for the municipal level.

This exercise will help the project team prioritize causes of problems, bottlenecks, vulnerabilities and lack of capacities for action planning, as they may focus on those that are not currently being addressed. Also – importantly – it gives a basis for the project team to see where existing interventions can be modified and strengthened during action planning, rather than needing to develop all-new actions from scratch.

Complete list of tools and resources for this activity

Tool: Analysis guide. Access the online Toolkit

Examples: Following the process from priority setting, to assessment, to action planning. Access the online Toolkit

Tool: Selection of qualitative analysis software options. Access the online Toolkit

Tool: Step-by-step GIS guide for the CRFS assessment and planning process. Access the online Toolkit

Training unit 8: In-depth assessment of the CRFS. Access the online Toolkit

Training unit 9: In-depth assessment of climate and pandemic risks to the CRFS. Access the online Toolkit

Activity 5: Reflection and reporting

Reflection on specific priorities for action

The starting point for the indicator framework and assessment methodology are the priority areas that were identified through the Rapid Scan, taking into account the participatory visioning.

In light of the findings of the In-depth Assessment, for each priority area a long list of specific priorities can now be identified to address the problems, bottlenecks and risk components within the CRFS and their underlying causes. These specific priorities will be taken forward as recommendations for consideration during the Action Planning module.

To develop the long list of specific priorities, the project team lists the causes of problems, bottlenecks from Table 26 (and the causes of the risk components from **Table 25**, if following the multirisk track). Depending on the number of causes identified, the project team may choose to concentrate only on those that have the broadest and most profound consequences (see **Table 26**).

Table 26: Table used to identify specific priorities for actions

Cause	Geographical areas	Value chain	Stakeholder affected	Specific priorities

For an example of reflection on specific priorities for actions, see:

Examples: Following the process from priority setting, to assessment, to action planning. Access the online Toolkit

For guidance on cause selection, see:

Tool: Analysis guide. Access the online Toolkit

For each cause, the project team identifies which geographical areas, which stakeholders, and which commodity or food group value chain(s) are concerned.

The specific priority is a means for addressing or remedying the cause, in relation to the relevant geographical area, value chain(s) and stakeholders. The components of the process can be set out in a table for quick reference.

Refining/ updating the customised indicator framework

Once the project team has completed the in-depth assessment analysis, checking in with the indicator framework is recommended, to ensure it is still valid in light of the new information about causes of problems, bottlenecks, and risk components (vulnerabilities, lack of resilience capacities, exposure). To do this, the project team repeats the process set out in Activity 1, starting with the specific priorities. For more information, see:

Tool: Detailed guidance on developing indicator framework. Access the online Toolkit

The draft adjusted indicator framework will need to be validated by the SAG. This may be done in the multistakeholder workshop at the start of the Action Planning module.

Reporting

The findings of the In-depth Assessment will be compiled into a detailed written report, including the narratives developed during the analysis of findings (see Activity 4). The report also includes sections on local contexts and characterization of the CRFS from the Define the CRFS and Rapid Scan modules.

The narrative will be supported by maps showing the spatial data and relationships between data sets. For some example maps, see:

Tool: Step-by-step GIS guide for the CRFS assessment and planning process. Access the online Toolkit

The report also includes the long list of specific priorities to address the causes of problems, bottlenecks and risk components within the CRFS, which are recommended for consideration during the Action Planning module. The indicator framework (including any draft revisions) is also included.

For guidance on how to structure the In-depth Assessment report, see:

Template: In-depth Assessment report. Access the online Toolkit

The draft report will be circulated to the SAG for verification of findings and for feedback. The findings will be communicated, discussed and validated during the multistakeholder workshop at the start of the Action Planning module, along with any changes to the indicator framework and the recommendations on action areas.

In addition, the full in-depth assessment report will be used as the basis for short, accessible, visual presentations of key findings, such as infographics, dashboards, videos and factsheets. Such visual presentations facilitate outreach and communication with policy-makers, and use of data in the design of new policy. Visual representation will also support sharing of the results with key stakeholders and policymakers in the multistakeholder workshop at the start of the Action Planning module. Preparing the visual representation may require a communications or data visualization expert.

Complete list of tools and resources for this activity

Examples: Following the process from priority setting, to assessment, to action planning. Access the online Toolkit

Template: In-depth Assessment report. Access the online Toolkit

Tool: Step-by-step GIS guide for the CRFS assessment and planning process. Access the online Toolkit

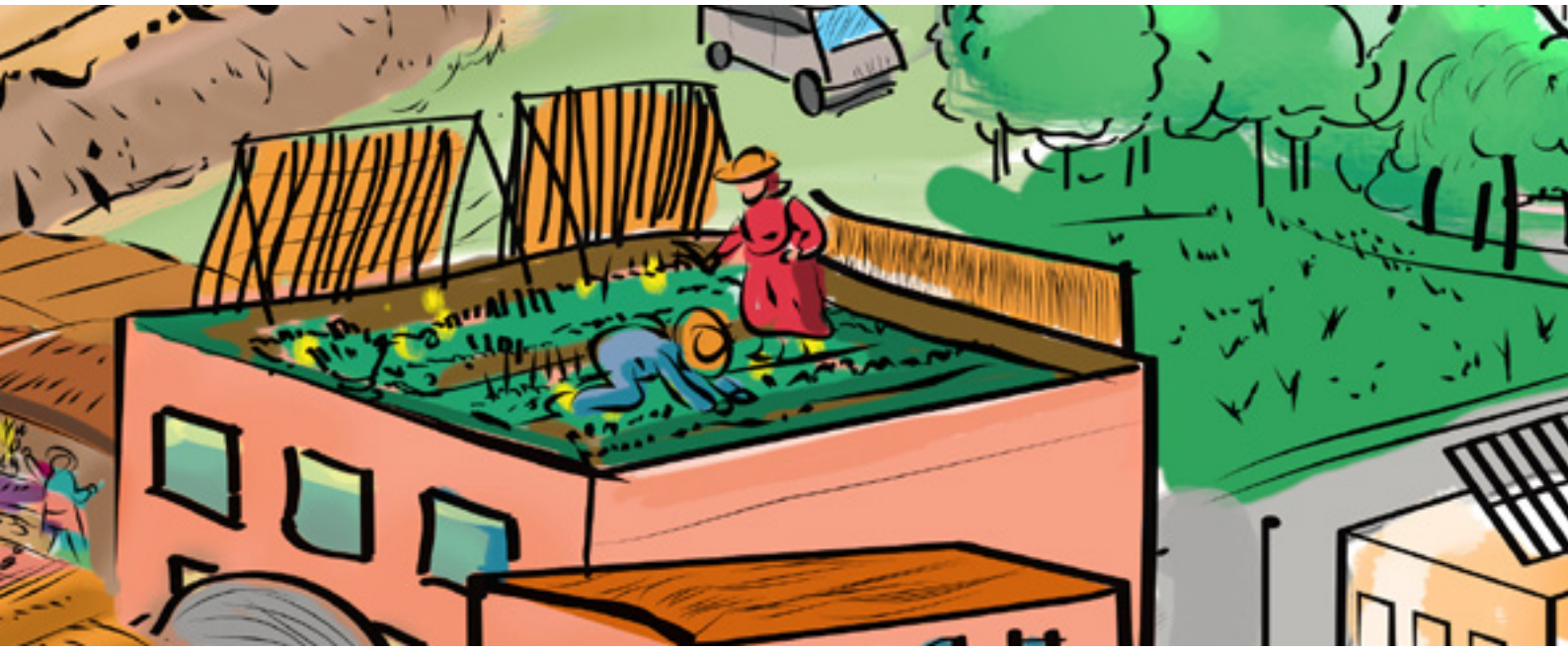
Tool: Detailed guidance on developing indicator framework. Access the online Toolkit

Training unit 8: In-depth Assessment of the CRFS. Access the online Toolkit

Training unit 9: In-depth Assessment of climate and pandemic risks to the CRFS. Access the online Toolkit

Where next?

- After completion of the In-depth Assessment, the logical next step is to embark on the Action Planning module, beginning with a multistakeholder workshop to validate the findings and specific priorities for action.
- Key findings of In-depth Assessment should be shared widely to stakeholders throughout the CRFS (and at the national level), using the accessible and visual presentations during ongoing outreach and engagement activities.



2.5 Action planning

Before you begin

Before embarking on the Action Planning module the project team will have conducted an in-depth assessment of the CRFS; this may have focused on key commodity or food group value chains. Through the assessment, the project team will have identified a number of problems, bottlenecks and vulnerabilities (and, for those following the multirisk track, risk components), and their underlying causes.

Analysis of the findings will have led to a long-list of specific priorities, which form the basis of action planning.

Advance action planning

Project teams may have already started planning some actions during earlier modules, for example, as part of the visioning process, or during participatory decision-making over priority focus areas and value chains at the end of the Rapid Scan module. Any preliminary action planning **will not** cause the full Action Planning module to become redundant. Rather, actions that have already been determined should be further developed (including outreach and engagement to facilitate implementation), and new ones added.

The purpose of this module is to conduct targeted, context-specific action planning to address specific priorities identified from the findings of the CRFS assessment (both the Rapid Scan and the In-depth Assessment).

The project team leads Action Planning but with the continuous involvement of a range of stakeholders, some of whom are organized into thematic working groups. In addition to local government actions, non-governmental stakeholders can develop actions through their own organizations.

During Action Planning, the project team and stakeholders address four questions, as shown in **Figure 14**:

Where are we now? Answering this question involves stocktaking of the specific priorities identified from the in-depth assessment.

Where do we want to be? Answering this question involves identifying desired outcomes.

How will we get there? Answering this question involves:

- Identifying actions to improve conditions, including those based on or complementing existing policies and initiatives.
- Exploring in detail how, by whom, and within what timescale these actions can be put in place, in light of local policy powers and responsibilities, stakeholder capacities, and resources.

Figure 14. *Four questions for action planning*

- Determining how each action (through a policy, programme, strategy, regulation, project, campaign, or other kind of intervention) will be implemented, including resources needed.

How will we know when we have got there? Answering this question Involves envisaging monitoring of outcomes and impacts, including determining indicators, establishing baselines, planning data collection, and ensuring transparency.

These questions are not necessarily addressed in sequence. Several activities, conducted by different stakeholders and in different settings, contribute to general progression around the cycle shown in Figure 14.

Moreover, action-planning paves the way for ongoing work beyond the end of the CRFS project, including the evolution of the SAG into a long-term governance platform. The arrow at the top of Figure 11 (between ***How will we know when we have got there?*** and ***Where are we now?***) indicates a continuous, circular process to strengthen the CRFS and address emerging needs, which will be taken up by the governance platform.

The Action Planning module contains five activities during which one or more of the questions in Figure 11 are addressed.

1. Action planning workplan and workshop preparation.
2. Multistakeholder workshop.
3. Working group and SAG meetings.
4. Outreach and engagement.
5. Final multistakeholder meeting.

Activities 3. and 4. overlap, as outreach and engagement activities are planned during the working group meetings and immediately put into effect.

Outputs of the Action Planning module

By the end of the action-planning phase, the project team will have identified actions to address specific priorities. Actions may either be amendments to existing policies, programmes and interventions, and using existing funding, or new ones. The following will have been developed for each action:

- a detailed roadmap to put the action in place, including outreach and engagement activities;
- an implementation plan;
- a monitoring plan.

Outreach materials will also have been produced, such as policy briefs, cost-benefit analyses, press releases and media articles.

It is not expected that all actions will be in place and implemented by the end of the project, but progress will have been made towards putting them in place.

A long-term governance platform will have been formed, with terms of reference, which takes responsibility for overseeing progress towards putting in place and implementing actions, monitoring change and identifying new needs.

Timing

Action Planning is not just a short or one-off exercise to produce a list of actions to be implemented.

It is recommended that around six months are spent on Action Planning, with an initial concentrated effort made during the two months that include the multi-stakeholder workshop and first thematic working group meetings. The remaining four months allow for the working groups to draw up detailed plans, as well as outreach and engagement activities that focus on putting them in place.

Options

Action Planning is highly context specific. It is informed by the specific priorities that were identified from the findings of the In-depth Assessment.

During Action Planning, stakeholders will need to take decisions over which specific priorities to take forward for Action Planning, and the criteria for selecting suitable actions.

Members of the SAG will also need to determine a suitable model for the ongoing governance platform, and develop appropriate terms of reference.

Summary of multistakeholder participation in the Action Planning module

Key moments for multistakeholder participation in action planning are:

- Multistakeholder workshop, which includes:
  - Review of vision and specific priorities.
  - Setting action-planning principles.
  - Identifying ideas for actions.
  - Scenario-building.
- Thematic working group and SAG meetings.
- Final meeting.

Activity 1. Action Planning workplan and workshop preparation

The action planning process can be complex, since it takes place over several months and involves many stakeholders in various different working groups. The project coordinator (or project team) may find it helpful to draw up a detailed workplan at the outset, based on the activities set out in this module. This workplan can include, for example:

- an agenda for the multistakeholder workshop;
- allocation of budget to different activities;
- timing and planning of working group meetings;
- identification of non-financial resources that will be needed;
- tasks assigned to project team members.

The Action Planning workplan can be revised as the action plan takes shape.

For an example Action Planning workplan, see:

Example action planning workplan. Access the online Toolkit

The project coordinator may find it helpful to review the action-planning experiences in the pilot CRFS projects, by reading the action planning sections of their process reports.

CRFS pilot city process reports. Access the online Toolkit

In addition, it is recommended that the project coordinator, or project team review information collected during the Rapid Scan module on governance of the CRFS. They may prepare a short, accessible overview of existing policies, programmes and other practical initiatives, and institutionalized funds or budgetary allocations, which will inform discussions over whether new policies, programmes, initiatives, or funding are required to address specific priorities, or whether actions can be integrated into existing policies, programme or initiatives, using existing funds.

Complete list of tools and resources for this activity

Example action planning workplan. Access the online Toolkit

CRFS pilot city process reports. Access the online Toolkit

Activity 2. Multistakeholder workshop

The purpose of the multistakeholder workshop is to communicate, take stock of, and validate the in-depth assessment findings, to verify the vision and direction of travel, and start the collective process of generating and sharing ideas to address key issues.

The workshop may be led by the project coordinator, or another member of the project team with the necessary facilitation skills. If not, hiring a professional facilitator may be considered.

For an example workshop outline, including timings, see:

Example action planning workshop outline. Access the online Toolkit

The following are suggested agenda items:

Agenda item 1: Presentation of findings from the Rapid scan and the In-depth assessment

The presentation of findings addresses the question: Where are we now?

The presentation is given by the project coordinator or another designated member of the project team and includes the findings from both the Rapid Scan and the In-depth Assessment. It covers:

- Context of the CRFS.
- Characterization of the CRFS.
- Strengths, problems, bottlenecks, vulnerabilities, and (lack of) capacities (including resilience) within the CRFS.
- Causes of the problems, bottlenecks, vulnerabilities and lack of capacities, some of which will be addressed by action planning.

The presentation recaps the logical, priority and indicator-led process:

- How the findings of the Rapid Scan led to identification of the (ideally 3 to 5) priority areas.
- How the priority areas were used to develop the indicator framework.
- How the indicators were used to develop quantitative and qualitative research questions.
- How the answers to the research questions were used to identify the causes of problems, bottlenecks vulnerabilities and lack of capacities within the CRFS that affect its sustainability and resilience.
- How these causes have informed the long-list of specific priorities.
- How some of the specific priorities on the long-list were chosen, and recommended for addressing through action planning.

The presentation makes use of maps and the results of spatial analysis, to demonstrate visually the need to address the specific priorities, including the areas of the CRFS they relate to.

Adequate time is allocated for stakeholders to comment upon and ask questions about the findings. Ideally the agenda item concludes with validation of the findings, and review of the list of specific priorities to be taken forward for Action Planning.

The review of the long list of specific priorities presents an opportunity for stakeholders to consider the question: **Where do we want to be?**

Reminder of narrowing focus over on priorities

The priority areas for assessment and planning have been gradually refined throughout the CRFS assessment and planning process, as shown in **Figure 15**.

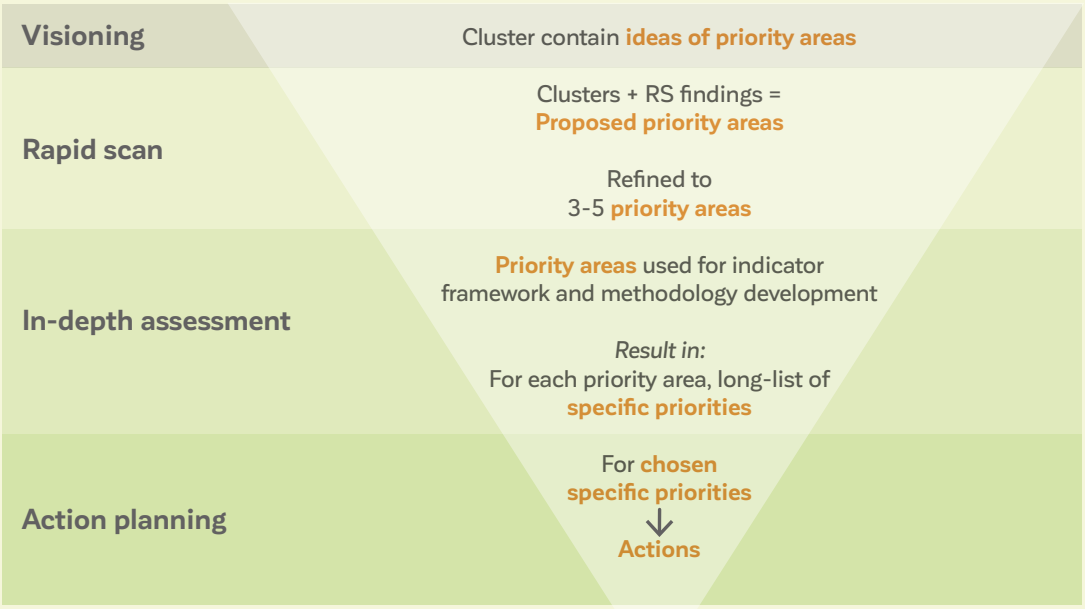


Figure 15. *Reminder – Narrowing focus on priorities*

Agenda item 2. Review of the vision

In light of the review of the specific priorities under Agenda item 1, participants are reminded that the vision statement is a useful communications tool.

It is therefore helpful to display the latest version of the vision and vision statement and check to ensure it still fits the specific priorities. If there is inconsistency or if significant new information has emerged, the vision and vision statement may be updated.

For a reminder of how to update the vision and vision statement, see:

Tool: How to develop a vision and summary vision statement.
Access the online Toolkit

Agenda item 3. Setting criteria for action selection

Setting criteria for selecting actions is a first step towards addressing the question: ***How will we get there?***

Before stakeholders start exploring potential actions to address each chosen specific priority, they need to agree on a set of criteria to determine the kind of actions that are suitable. These criteria can be used as a checklist to help ensure suitability of proposed actions.

The principles should be decided collectively. Examples of criteria include:

- the action addresses urgent issues;
- the action addresses the needs of particular stakeholder groups – such as:
  - particular marginalized or vulnerable groups (e.g. youth, women, Indigenous Peoples);
  - stakeholders at certain food value chain nodes (e.g. producers, marketers, etc.);
  - people in specific exposed areas.
- the action can be implemented using existing resources;
- the actions can be implemented within a specified time frame (e.g. election cycle);
- the action can be monitored in a straightforward way, or using existing, continuous data collection mechanisms.

Agenda item 4: Reflection on types of action

Reflection of types of action contributes to addressing the question: ***How will we get there?***

Different issues are best addressed through different types of action – i.e. policies or regulations, or practical interventions such as programmes, projects, campaigns, etc.

To determine which type of action is best for delivering the desired outcome, the facilitator leads participants through the questions in **Figure 16**.

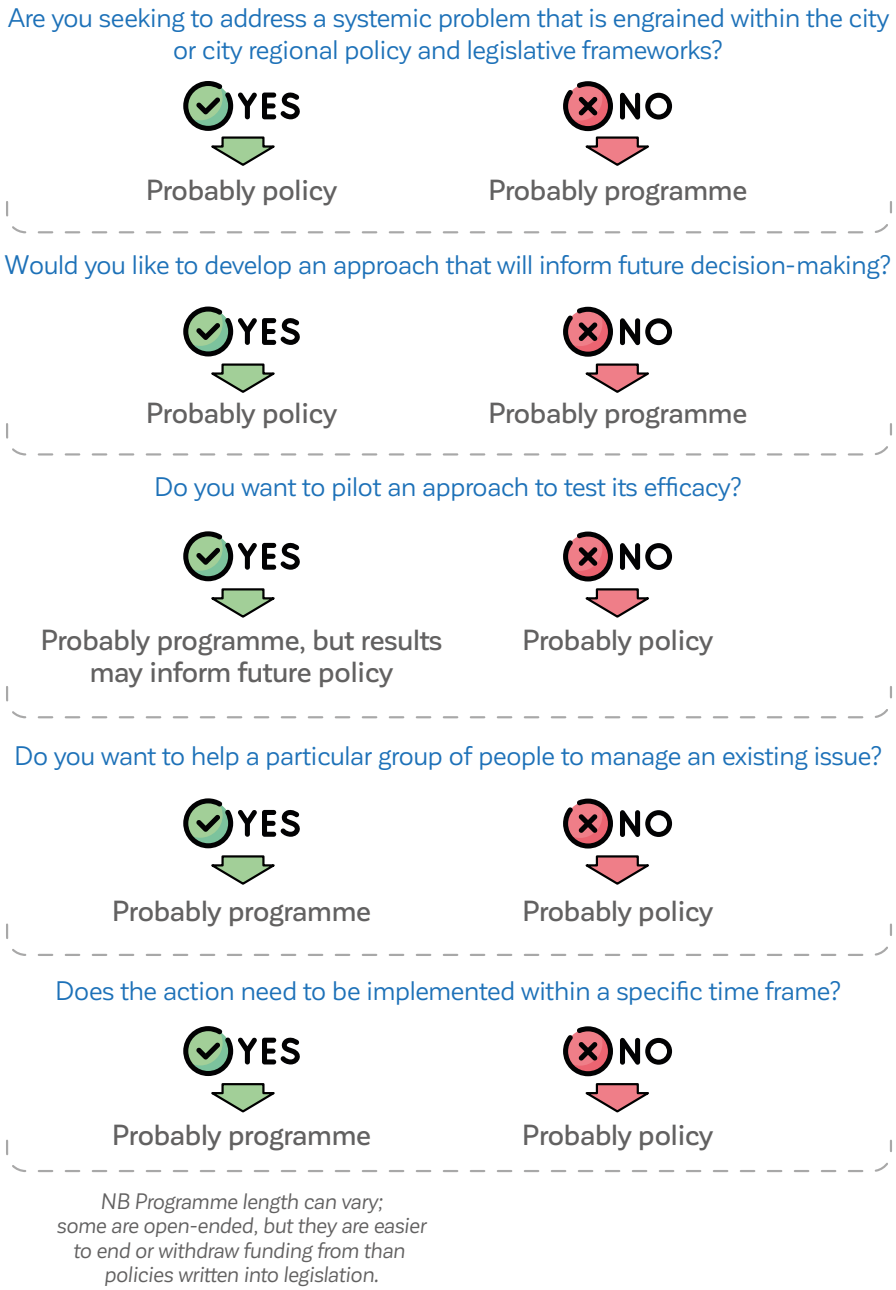


Figure 16. *Questions for determining whether a policy or programme is needed*

For a blank version of **Figure 16** that can be completed during the workshop, see:

Template for determining whether a policy or programme is needed. Access the online Toolkit

Agenda item 5: Generation of action ideas

- New or amended policies, programmes and initiatives.

Once the stakeholders have determined whether each issue requires a policy or programme, they then need to decide whether a **new** policy or programme is needed, or whether the issue can be addressed through policy or programme that exists already.

It will be helpful for the project coordinator or project team to have the list on hand of existing policies, programmes and other practical initiatives, and institutionalized funds or budgetary allocations, so that they can refer to it during discussions.

The questions in **Figure 17** facilitate decision-making and allow stakeholders to start considering potential actions.

Responses to the last set of questions are **actions** that can be taken forward for scenario-building and possibly further development.

For an example on identification of actions for scenario-building and further development, see:

Examples: Following the process from priority setting, to assessment, to action planning. Access the online Toolkit

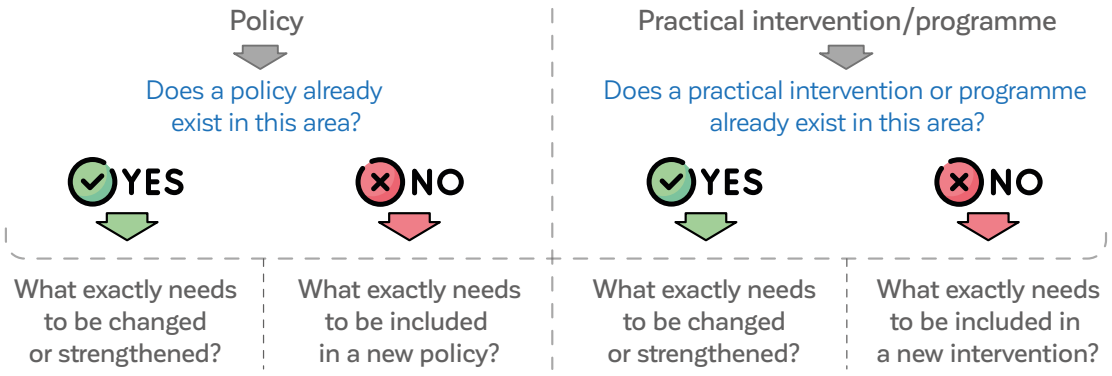


Figure 17. *Questions to help stakeholders start considering actions*

- Possible stakeholder actions.

In addition to government-led actions (whether policy/regulatory or practical), all stakeholders should consider what actions they might introduce to address each issue, through their own department or organization.

This exercise encourages stakeholders to start reflecting on potential actions, contributing to addressing the question: ***How will we get there?***

- Five members of the core team each set up a table with a very large sheet of paper, on which an issue to be addressed is written.
- Stakeholders are divided into groups. Each group spends about 15 minutes at each table.
- The core team members solicit ideas from each group on how the issue might be addressed through the stakeholders' organizations/departments, bearing in mind their objectives, activities, responsibilities and powers.
- The process continues until all the groups have visited all the core team members at their tables. For more details, see:

Detailed explanation of the food systems approach. Access the online Toolkit

The responses are **actions** and can be taken forward for scenario-building and further development.

Key considerations

These actions will be developed later in the Action Planning process, but it is helpful, at this point, to begin to consider:

- how to put actions in place;
- how to implement them;
- who needs to be involved;
- resources needed;
- expected outcomes;
- how the process and outcomes will be monitored (based on the indicator framework).

Agenda item 6: Scenario-building

If the multistakeholder workshop takes place over two days, scenario-building takes place on day two.

Scenario-building is a rapid exercise that considers both ***Where do we want to be*** and ***How will we get there***. It allows stakeholders to start unpacking the details of how one or more proposed actions might be implemented and what its effects might be.

For each specific priority, it is recommended to consider several potential actions. This will allow for comparison between them, and further development of those with the highest expected future impacts.

For each potential action, stakeholders ask:

- What are the target groups of the action whose behaviour and decisions are to be enabled and influenced (e.g. youth, women, Indigenous Peoples; stakeholders at certain food value chain nodes, such as producers, marketers, etc.; people in specific exposed areas; etc.)?
- Who are the beneficiaries of the action (who are intended to benefit from this action)?
- What are the potential challenges to putting in place and implementing the action?
- Can the action be put in place and implemented using existing resources? If not, what new resources are needed? Where from?
- What would the likely outcomes/changes be?
- How would the outcomes/changes be measured (i.e. what would the indicator be)?

Delayed scenario-building

If scenario-building is not possible during the multistakeholder workshop, there will be a further opportunity to do this during the first working group meeting (see Activity 2).

Agenda item 7: Introduction to working groups, expressions of interest

Before the end of the stakeholder workshop, the project coordinator explains the rest of the action planning process, which will take place largely though thematic working groups and the SAG.

It is recommended that three thematic working groups are formed. Each thematic working group takes up one or more of the specific priorities (depending on how many specific priorities are to be addressed through action planning).

The working groups focus on the questions: ***How do we get [to where we want to be]?*** and ***How will we know we have got there?.***

Specifically, working group members:

Further investigate the ideas for actions (both policy/regulatory and practical interventions);

- Refine the long list of potential actions by identifying those that are most viable, impactful, and meet the action-planning principles.
- Further identify how to put each action in place, including integration into existing policies and programmes, as well as new ones.
- Work out how each action can be implemented (by whom, what resources are needed).
- Develop or revise indicators, draw up monitoring plans.
- Plan outreach and engagement activities that will pave the way towards putting actions in place and their implementation.

In addition to the thematic working groups, the SAG continues to function as a cross-cutting group that:

- Promotes synergistic, integrated working between local government departments and organizations.
- Develops actions to promote governance of the CRFS beyond the end of the project (e.g. drafting the terms of reference for a governance platform).

Importantly, the SAG action planning meetings does not remove the need for the thematic working groups to consider policy actions or governance. Rather, it plays a supporting role to ensure that the thematic working groups are not siloed, and to develop actions to address broader, long-term governance issues.

Before the end of the multistakeholder workshop, the project coordinator solicits initial expressions of interest from stakeholders in participating in – or leading – the thematic working groups.

Post-workshop: Documenting and systematizing workshop outcomes

After the workshop, the project coordinator (or another nominated member of the project team) summarizes discussions and decisions relating to the Rapid Scan and In-depth Assessment reports, the vision, priority areas, specific priorities, and principles for action planning. The summary document is circulated to all stakeholders (including those who were unable to attend the meeting and with future working group members to frame their discussions (see Activity 2).

In addition, the project coordinator compiles all the ideas for actions (policies, programmes and interventions) that were shared to address each specific priority into a single document or table (see **Table 27**).

Table 27: Ideas for actions by specific priority

Specific priority to address: .....

Proposed action	Policy/ programme	New/ amended	Target groups	Intended beneficiaries	Potential challenges	Resources needed	Likely outcomes	Monitoring / relevant indicator

For a blank version of **Table 27**, to be completed by the project coordinator, see:

Template for table of action ideas. Access the online Toolkit

The amount of detail in the table depends on whether it has been possible to include an exercise on scenario building in the multi-stakeholder workshop – and if so, how many possible actions have been considered, and in what degree of detail. Certainly, the project coordinator cannot complete the tables for all action ideas; nor should they attempt to do so individually. More details will be completed during the working group meetings.

Complete list of tools and resources for this activity

How to develop a vision and summary vision statement. Access the online Toolkit

Template for determining whether a policy or programme is needed. Access the online Toolkit

Detailed explanation of the food systems approach. Access the online Toolkit

Examples: Following the process from priority setting, to assessment, to action planning. Access the online Toolkit

Template for table of action ideas. Access the online Toolkit

Training unit 10: Action Planning. Access the online Toolkit

Activity 3: Working group and stakeholder advisory group meetings

Preparing for the working group meetings

Organization

The formation of thematic working groups will have been discussed during the multistakeholder workshop (Activity 1), so some stakeholders may already have volunteered to participate. The project team identifies more potential working group members based on the stakeholder maps produced during the Define the CRFS and Rapid Scan modules. If necessary, a stakeholder may delegate participation to someone else in their organization with specific technical skills. It is suggested that each working group:

- Is made up of a balance of stakeholders from relevant government departments, civil society, academia and the private sector; between urban, peri-urban, and rural areas; between people with strategic and technical roles; and representatives of intended beneficiaries of action and/or those whose practices need to change.
- Includes members who have specific knowledge and expertise related to the specific priority or priorities to be addressed, a degree of influence, and the authority or mandate to act upon the working group's decisions, and some influence.
- Does not have an excessive number of members; a few people can make a lot happen.

The project coordinator sends an invitation to each prospective working group member, including a briefing document that clearly explains the tasks they will contribute to and the expected outcomes. This is an important first step towards fostering mutual trust and confidence between working group members. A second step is to establish terms of reference for the working groups.

For example, terms of reference, see:
Example terms of reference for working groups

Each working group holds at least three half-day meetings to allow sufficient time for discussion and decision-making. If necessary, full-day meetings can be organized. The project coordinator sets the date and location for the first meeting (at least) and secures a commitment from each working group member to participate in all three meetings.

Working group meetings 1 takes place soon after the multistakeholder workshop (ideally within one month) to ensure momentum among stakeholders.

Likewise, working group meeting 2 takes place no more than one month later, giving stakeholders enough time to obtain additional information and consult over feasibility, while maintaining momentum.

Working group meeting 3 may take place between one and three months later, to allow time for initial implementation of engagement and outreach activities (depending on number and complexity).

The project team also identifies and recruits a leader for each thematic working group, who has specialist knowledge related to the specific priority. The role of the working group leader is to:

- Provide a briefing on tasks.
- Give a resume of ideas (during the first meeting).
- Keep track of tasks to be conducted between meetings and by whom.
- Identify any synergies or complementarities between working groups (in liaison with the institutional focal point, who may not be able to participate in all working group meeting, and the SAG).
- Keep in mind, and refer to, existing policy frameworks, to avoid duplication of efforts and identify where existing actions may be amended.

Ideally each working group will have a separate facilitator. A member of the project team with the necessary skills can fill the role of facilitator. Alternatively, an external professional facilitator may be hired to direct the discussions, ensure everyone has a say, and solicit decisions. It is not recommended that the project coordinator lead or facilitate all the working groups themselves, as they will quickly become over-burdened.

It will be helpful to appoint a note-taker for each group who is responsible for producing reports of discussions and decisions for circulation and validation by members after the event. The note taker may be a member of the project team, or a working group member.

Table 28 sets out the purpose and expected outcomes of each of the thematic working group meetings and the SAG during action planning.

Table 28: Purpose and expected outcomes of working group meetings

	Priority working group 1	Priority working group 2	Priority working group 3	Stakeholder advisory group
Invited stakeholders	*[Names, organizations]*	*[Names, organizations]*	*[Names, organizations]*	*[Names, organizations]*
Meeting 1	Purpose: Reviewing and refining list of actions Outcomes: Ranked list of potential actions – i. preferred/ feasible; ii. need more info; iii. less interesting at present Assignment of follow up tasks *[Date, time, location]*	Purpose: Reviewing and refining list of actions Outcomes: Ranked list of potential actions – i. preferred/ feasible; ii. need more info; iii. less interesting at present Assignment of follow up tasks *[Date, time, location]*	Purpose: Reviewing and refining list of actions Outcomes: Ranked list of potential actions – i. preferred/ feasible; ii. need more info; iii. less interesting at present Assignment of follow up tasks *[Date, time, location]*	
Between meetings – ca. 1 month (suggestion)	Obtaining additional information, consulting with stakeholders over feasibility			
Meeting 2	Purpose: Selection of actions, consider how actions will be implemented and monitored, and how they will be put in place Outcomes: • Draft implementation plans; • Monitoring framework or indicators; • Roadmap or task list for each working group member and the project coordinator, including outreach and engagement activities *[Date, time, location]*	Purpose: Selection of actions, consider how actions will be implemented and monitored, and how they will be put in place Outcomes: • Draft implementation plans; • Monitoring framework or indicators; • Roadmap or task list for each working group member and the project coordinator, including outreach and engagement activities *[Date, time, location]*	Purpose: Selection of actions, consider how actions will be implemented and monitored, and how they will be put in place Outcomes: • Draft implementation plans; • Monitoring framework indicators; • Roadmap or task list for each working group member and the project coordinator, including outreach and engagement activities *[Date, time, location]*	Purpose: Discussion of synergies between WGs; discussion of governance challenges to putting in place and implementing actions; discussion of options for long-term governance platform. Outcomes: • List of supportive actions, roadmaps and tasks; • List of actions to strengthen governance, with associated roadmap and task list; • Outline of preferred governance model(s) and tasks for further investigations. *[Date, time, location]*
Between meetings – 1 to 3 months (suggestion)	Initial implementation of targeted outreach and engagement			
				Further investigation of governance models
Meeting 3	Purpose: Roadmap progress review; trouble-shooting Outcomes: *[Date, time, location]*	Purpose: Roadmap progress review; trouble-shooting Outcomes: *[Date, time, location]*	Purpose: Roadmap progress review; trouble-shooting Outcomes: *[Date, time, location]*	Purpose: Roadmap progress review; trouble-shooting Developing draft terms of reference Outcomes: *[Date, time, location]*

For a blank version of Table 28 to be completed by the project coordinator, see:

Template for planning working group meetings. Access the online Toolkit

Review of food-related policies, programmes, and governance arrangements

Before the working groups, the project coordinator or project team will review the information collected during the Rapid Scan on governance of the CRFS.

First, if a short, accessible overview of **existing policies, programmes and other practical initiatives, and institutionalized funds or budgetary allocations** was not produced before the multistakeholder workshop (see Activity 1), it is strongly recommended to do so now. At this stage, the overview may focus on policies, programmes, initiatives, and budgets that are clearly relevant to likely specific priorities for action planning.

The overview will provide a basis for the working groups to amend existing policies and practical initiatives and to integrate new actions. It may also be helpful for the SAG to be reminded of existing policies and programmes, as they identify possible synergies between actions proposed by the working groups.

Second, the project coordinator reviews information on **institutional and organizational arrangements** for CRFS governance, which was collected during the Rapid Scan. This includes:

- The main food-related roles, powers and responsibilities at the local/regional government levels.
- How these roles and responsibilities are shaped by higher levels; the roles of different government departments related to food.
- The existence of a food council or other governance mechanism.
- The existence of neighbourhood or community networks that work on sustainable food or community resilience.

This information will help the thematic working groups and the SAG to identify facilitators and the possible challenges to putting actions in place; and identify governance arrangements that might need to be changed (see SAG action planning meetings).

Case study research

The project coordinator (or other members of the project team) identify some documented cases of cities or city regions that have introduced actions (either policies/regulations or practical interventions) to address the same or similar issues.

Documented "tried and tested" actions that have yielded positive results elsewhere can:

- Provide additional ideas of actions for the working groups, which should be added to the table of ideas for actions for further exploration.
- Be highly persuasive when presented to decision-makers during in outreach and engagement activities.

As well as identifying case studies of actions, the project coordinator reviews case studies on governance models that have been put in place in other places that might be suitable in the CRFS in question.

While it might not be possible to transfer precisely the same action or governance model to a new CRFS context because of local conditions and policy and institutional frameworks, it is sometimes possible to adapt actions and approaches. The project coordinator may be able to have a discussion with the programme or policy lead that has already implemented the action elsewhere, to obtain advice and lessons learned, and to be informed of challenges encountered. A number of guides and check lists for establishing or reviewing governance mechanisms are also available.

For case studies and sources of case studies, see:

Sources of documented case studies for food actions. Access the online Toolkit

Guides and checklists for establishing or reviewing governance mechanisms. Access the online Toolkit

Pilot city process reports. Access the online Toolkit

For case studies and other resources on governance models, see:

Common food systems governance models and resources. Access the online Toolkit

Thematic working group meeting 1: Reviewing and refining list of actions

The purpose of the first working group meeting is for members to review the specific priority or priorities to be addressed, to review and refine the list of ideas for actions (bearing in mind the principles and feasibility), and to generate additional ideas. The following subsections are suggested agenda points.

1. Review the specific priority/priorities and indicators

   Members refresh themselves about the priority area and the specific priorities that emerged, and the related indicator framework, keeping in mind the four questions from Figure 9.

   From the start, it is important to recognize that the indicators are integral to detailed action planning and underlie the answers to the questions: "***Where are we now?",*** "***Where do we want to be?",*** and "***How will we know when we have got there?"***

   Indicators should be at the forefront of members' minds while actions are being decided, to ensure that the actions are relevant and effective – and that their effectiveness can be measured. How to measure the impact and efficacy of each action should be considered throughout the process, not only at the end.

2. Review action ideas, conduct extended scenario-building

   The members review all the action ideas that came out of the multistakeholder workshop, and any new ideas that have emerged since the multistakeholder workshop – including those identified from case studies in other cities.

The members carry out a scenario-building exercise for each of the action ideas in turn (see Activity 1 for details). If some scenario-building was done during the multistakeholder workshop, this is an opportunity to continue the exercise. Particular attention is paid to the likely outcomes or changes, whether these are aligned with the answer to ***"Where do we want to be?"***, and how they will be measured (***"How will we know we have got there"***). Any action ideas that will not yield the desired outcomes may need to be set aside.

Stakeholders also consider any potential trade-offs or negative consequences to the action that would be experienced by groups other than the intended beneficiaries. Identifying trade-offs at this stage can help anticipate, mitigate or avoid negative impacts. Action ideas that would have excessive, unavoidable negative impacts on some people, may also be set aside.

The proposed actions are also be checked against the action planning criteria. Any that do not adhere to the criteria may be set aside.

At this point, working group members also start considering the question "How will we get there" with respect to each action, i.e., how to put the action in place; and how to implement the action. The working group refers back to the existing related policies and programmes that were identified by the project coordinator or project team in preparation for the working group meetings.

The actions are assessed for feasability, bearing in mind anticipated challenges. This can include conducting "Forcefield analysis" to analyse pressures for and against change, as in **Figure 18**. Forcefield analysis allows for informed decision-making about whether to go ahead with an action, as well as identifying which supportive "forces" to strengthen and which opposing "forces" to weaken to increase the chances of success.

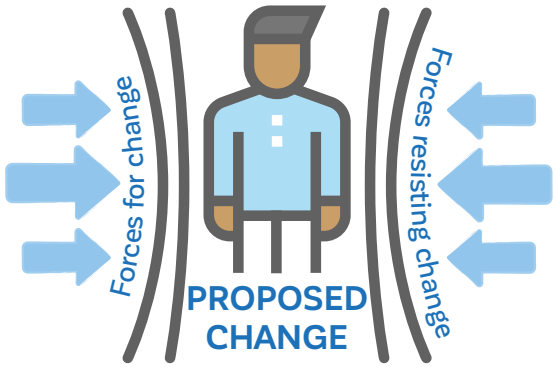


Figure 18. *Forcefield analysis*

For more information, see:

Tool: Useful action planning tools. Access the online Toolkit

3. Taking account of all the information to date, the action ideas can be assigned to one of three suggested categories:
   - Preferred/feasible.
   - Need more information.
   - Less interesting at present.

For the action ideas in category ii, members determine exactly what additional information is needed, and where and how to obtain it.

Members are asigned responsibility for obtaining specific information before meeting 2.

Thematic working group meeting 2: Building a roadmap towards selected actions

The purpose of the second working group meeting is to make a selection of preferred feasible actions, develop implementation and monitoring plans, and develop a roadmap to put them in place, including outreach and engagement activities. The following subsections are suggested agenda points.

1. Decide actions to pursue

   Members present the additional information they have obtained for action ideas that were assigned to category ii) "need more information" in the first workshop. This allows them to complete the scenario-building table and reassign the action ideas to category i) "preferred/feasible" or to category iii) "less interesting at present".

   Those in the latter category are set aside, but it is recommended that the project team carefully conserve all related information for future use if needed. It could be handed over to key stakeholders involved in the long-term governance platform for safeguarding).

   Next, members determine whether they will pursue all the preferred/feasible actions concurrently or whether another round of selection is needed. **Figure 19** is a useful model for conducting this second-level selection.

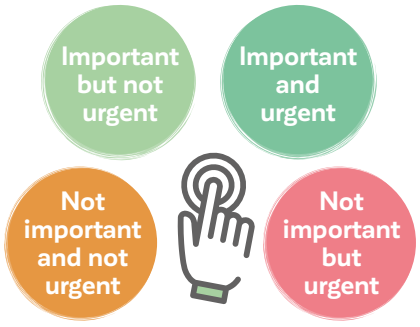


Figure 19. *Selecting actions*

For more information see:
Tool: Useful action planning tools. Access the online Toolkit

2. Draft implementation plans, including indicators

For each selected action, working group members draft a detailed implementation plan. For a template, see:

Tool: Implementation plan template. Access the online Toolkit

Drafting the implementation plan involves identifying a series of steps to be taken to enact the policy once it has been adopted, or to implement a practical intervention (programme, project, campaign, etc.) once it has been established. For each step, the working group determines:

- Responsibilities (who will do it).
- Timeline (by when).
- Resources (financial, human, political, and other; both available and needed resources).
- Potential barriers (individuals or organizations that might resist; how they might resist).
- Communications (who is involved; channels; frequency).

Where the action is an amendedment to an existing policy or practical intervention, it will be necessary to refer to and adjust existing implementation plans. Wherever possible, the new action should be integrated using existing resources (budgetary and other) and capacities.

The working group members need to review the indicators associated with the specific priority that each action is intended to address. They then need to develop monitoring mechanisms to track performance of the action as it is implented. Once fully implemented, each action should contribute to the achievement of the desired outcome in the indicator framework (see **Figure 20**).

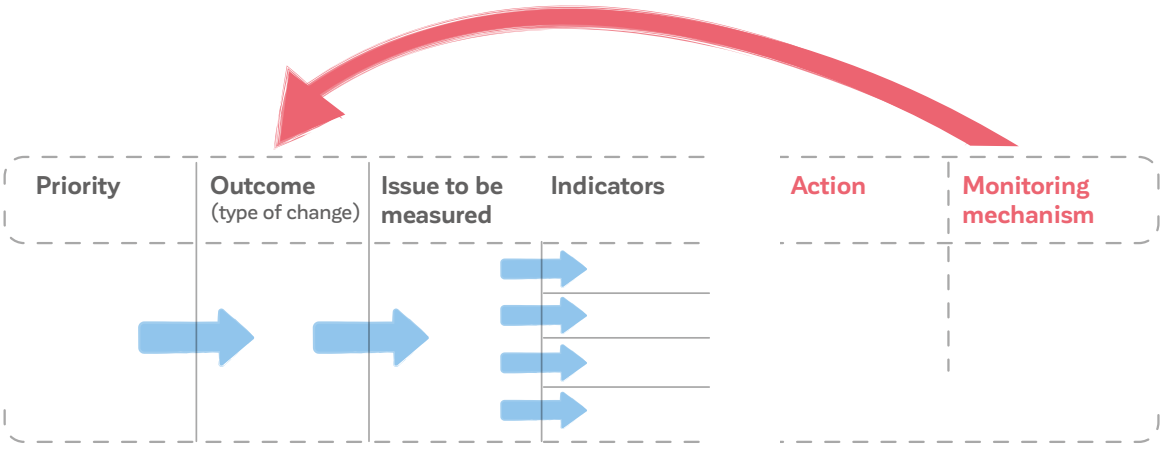


Figure 20. *Contribution of each action to outcome*

For guidance on how to do this, see:
Tool: Developing monitoring mechanisms for actions. Access the online Toolkit

It may not not be possible to complete the implementation plans for all the actions during the meetings if additional information is needed, or if particular stakeholders need to be engaged before their participation can be confirmed. The engagement needs should be noted and incorporated into the roadmaps (see below).

The implementation plans will be updated during the third working group meeting.

3. Develop roadmaps to put actions in place (including outreach and engagement)

Working now with the final selection of actions, members focus on how to put each action in place and to pave the way for implementation. This exercise is carried out both for integration of actions into existing policies, programmes, initiatives, budgets, and for new ones.

It may be helpful to use the SCHEMES checklist to develop the roadmap, as shown in **Figure 21**:

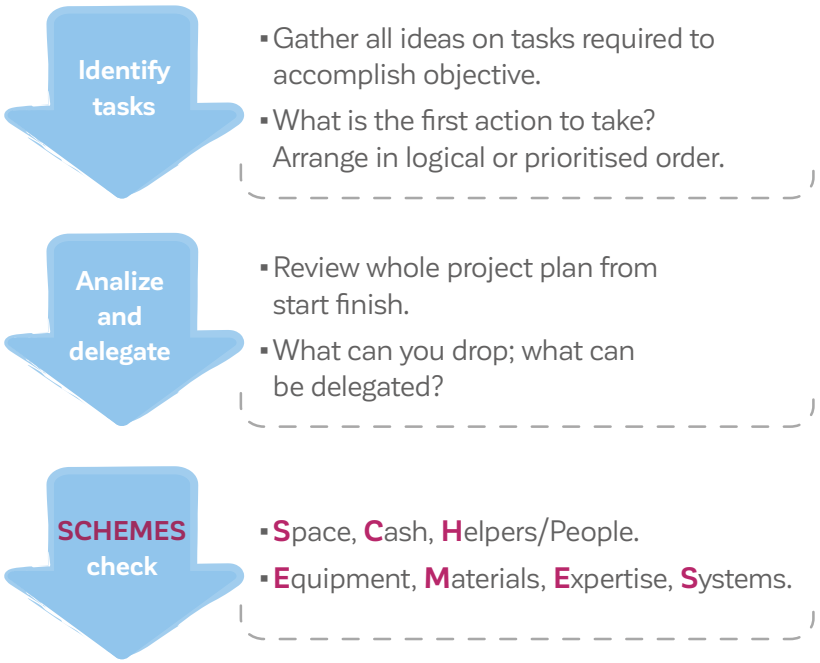


Figure 21. *SCHEMES checklist*

For more information see:
Tool: Useful action planning tools. Access the online Toolkit

For an example roadmap, see:
Example: Simple workplan template. Access the online Toolkit

Importantly, working group members will not be able to perform all the tasks needed to put in place an action themselves. Some tasks are contingent on the support and buy-in from decision-makers within local government or other organizations, whose awareness of – and engagement in – the CRFS process will vary considerably.

Thus, the roadmap for putting each action in place includes a series of outreach and engagement activities, including which working group member should lead them. For ideas of outreach and enagement tactics see Activity 4.

- For each task it is necessary to ask:
  Whose support or buy-in is needed for this task to be fulfilled?
- Are they already aware of and/or actively engaged in the CRFS process?

Where the people whose support and buy-in is needed are **not** currently aware of and/or actively engaged in the CRFS process, it will be necessary to target them using (a combination of) appropriate outreach and engagement methods – such as, for example, direct dialogue with policymakers, policy seminars, policy briefs, cost-benefit analysis.

It is also helpful to conduct media outreach, focusing on outlets whose audience includes either the person/people whose support is needed directly or influential stakeholder groups (e.g. business leaders, farmers, etc), in order to build a critical mass of support.

The roadmaps for all three of the thematic working groups will need to be cross-checked and systematized by the project coordinator, to ensure outreach and engagement activities are streamlined and there is no duplication.

For example roadmaps for putting actions in place, see:
Examples: Following the process from priority setting, to assessment, to action planning. Access the online Toolkit

Thematic working group meeting 3: Reviewing progress, update implementation plans

This meeting takes place between 1 and 3 months, after the second working group meeting to allow time for initial implementation of engagement and outreach activities.

It is **not expected** that the roadmaps will have been fully implemented, and for actions to be in place, before this meeting.

Rather, the purpose of the third working group meeting is to take stock of initial progress towards putting the actions in place (the roadmap), including impacts of outreach and engagement activities so far, identification of challenges encountered, and discussion of

remedial action; and to update the implementation plans to take account of new information or engagement or target/beneficiary stakeholders.

The following subsections are suggested agenda points.

1. Progress report

   Taking each action in turn, working group members review the progress on tasks within the roadmap, asking:

   - Which tasks have been completed? What have been the results?
   - Which tasks have not yet been completed? Why not?
   - What challenges or barriers have been encountered? Why? From whom?
   - Are there any obvious solutions to these challenges? What do they entail? Are resources required?
   - How does the roadmap need to be revised?

   It may be that some actions are more straightforward to put in place than anticipated, while others will take considerably more time and resources. While it is unlikely that any action will need to be abandoned entirely, it may be necessary to de-select the actions.

2. Updating implementation and monitoring plans

   The draft implementation and monitoring plans that were developed during the second working group meeting are adjusted to take account of new information and the results of engagement activities. In addition, any complementarities or synergies identified with the plans of the other working groups (as identified by the project coordinator and the SAG) are taken into account.

   The implementation and monitoring plans for each thematic working group are compiled and presented during the final SAG (see Activity 5).

Stakeholder advisory group action-planning meetings

During action planning, the SAG serves:

- As a cross-cutting group that is responsible for identifying synergies and complementarities between the action plans of the thematic working groups, as well as potential points of incoherence.
- As a working group to promote strengthened governance of the CRFS beyond the end of the project, including its own conversation into a long-term governance platform (such as a food policy council or partnership).

Identification of synergies is facilitated by the involvement of some SAG members in each of the thematic working groups. The institutional focal point also plays a key role in ensuring integrating between policy areas and engaging multiple relevant local government departments, as well as establishment of a long-term governance platform.

Stakeholder advisory group action-planning meeting 1

The first SAG action-planning meeting takes place after the **second** thematic working group meetings. The purpose of this meeting is to discuss potential synergies between the actions proposed by the thematic working groups, and how they might be maximized; to discuss governance-related challenges to putting in place and implementing actions that have been identified by the thematic working groups, and ways to address them; to discuss the formation of a long-term governance platform after the end of the CRFS project.

- **Discussion of potential synergies** involves cross-sector discussion of each action selected by each thematic working group, to identify specific ways in which stakeholders, who are not involved in the relevant working group could provide support. The institutional focal point plays a key role in this discussion.

The discussion may result in a list of supportive actions, with associated roadmaps and assigned tasks.

- **Governance-related challenges** may concern:
  - **Integration of food-related policies and programmes between local government departments and services**, including lack of engagement in food issues by some departmental heads, conflicting or counterproductive approaches within policy silos, and policy voids where no department or service has responsibility for a particular issue, lack of understanding of the food system, budgetary constraints.
  - **Multilevel governance**, where local government cannot address an issue because it lacks the necessary devolved policy powers, responsibilities and budgets, or because it is constrained by policy frameworks at the national or regional level. These difficulties can be exacerbated where opposing political parties are in power at different levels, and where the dominant discourse differs between levels.
  - **Territorial governance**, where local governments within the CRFS have different interests or agendas and where cooperation is uneasy. These difficulties can be exacerbated where opposing political parties are in power in neighbouring local government areas.

For more information, see:
Governance dimensions explained, with examples. Access the online Toolkit

Some of these challenges can be addressed through outreach and engagement of specific stakeholders, which may already be included in the thematic working groups" roadmaps. Others will take longer to address or will require work-around solutions to be developed.

Bearing in mind the institutional and organizational arrangements for the CRFS (as reviewed by the project team in preparation for the working group meetings), the SAG members draw up a list of organizational actions to strengthen governance.

Some examples actions for strengthening governance include:

- Recommending (re)assignment of specific food-related responsibilities to local government departments.
- Formation of a multi-departmental food interest group within local government.

- New channels of communication and means of cooperation over food issues between counterparts in different local governments within the CRFS (such as, for example, between the public health directors in the city government and in one or more peri-urban local governments.

For each selected action to strengthen governance, the SAG develops a road map, including outreach and engagement activities, and assigns tasks to SAG members.

- Long-term governance platform, it is strongly recommended to form a long-term governance platform to continue the work of the SAG after the end of the CRFS project. Such a platform is likely to include some (or all) of the members of the SAG, it may be seen as the SAG's conversion into a long-term platform.

Drawing on the models identified by the project coordinator from case studies in preparation for the working group meetings, the SAG 3), the SAG identifies one preferred model, or several possibilities, for the governance platform.

Responsibility of SAG members is assigned to further investigate the preferred model(s), if required.

For more information, see:
Common food systems governance models and resources. Access the online Toolkit

Stakeholder advisory group action-planning meeting 2

The second SAG action planning meeting takes place no more than one month after the first SAG action planning meeting, to ensure momentum is maintained.

The purpose of this meeting is to review progress on the roadmaps towards actions to strengthen governance, and troubleshoot if necessary; and to draft terms of reference (TOR) for the SAG's conversion into an ongoing governance platform.

Elements of the TOR include:

- What could the platform's role be? (e.g. advising on implementation; holding to account; monitoring; identification of new issues; gathering new information and sharing; advocacy; making recommendations).
- Where would its institutional home be? (e.g. within local government, within an NGO, within academia, or in a neutral space).
- How, where, and how often does it meet?
- Which stakeholders, organizations should be involved?
- How are members selected (e.g. by application or by appointment).
- How long do they serve? (e.g. fixed-term or open-ended).
- How are disputes/conflicts managed?
- How are decisions made (e.g. by vote, by one or two leaders based on opinions) .
- Who chairs?
- Who provides secretariat function?
- How could it be funded?

The institutional focal point is likely to play a key role in structural questions, such as the location of the platform's institutional home and membership.

By the end of the meeting a first draft of the TOR will have been created. Following the meeting, the project coordinator and project team may solicit input from any SAG members who were not present and make necessary adjustments.

The final TOR are presented and validated at the final SAG meeting (Activity 5).

For more information, see:
Example terms of reference for governance platforms. Access the online Toolkit

Complete list of tools and resources for this activity

Example terms of reference for working groups. Access the online Toolkit

Tool: Template for planning working group meetings. Access the online Toolkit

Examples: Following the process from priority setting, to assessment, to action planning. Access the online Toolkit

Tool: Sources of documented case studies for food actions Access the online Toolkit

Guides and checklists for establishing or reviewing governance mechanisms. Access the online Toolkit

Pilot city process reports. Access the online Toolkit

Common food systems governance models and resources and resources. Access the online Toolkit

Tool: Useful action planning tools. Access the online Toolkit

Tool: Implementation plan template. Access the online Toolkit

Tool: Developing monitoring mechanisms for actions. Access the online Toolkit

Tool: Simple workplan template. Access the online Toolkit

Governance dimensions explained, with examples. Access the online Toolkit

Example terms of reference for governance platforms. Access the online Toolkit

Training unit 10: Action Planning. Access the online Toolkit

Activity 4: Outreach and engagement

While outreach and engagement take place continuously throughout the CRFS process, the purpose of this activity is to enact the outreach and engagement plans that were developed during the second working group meeting to pave the way towards putting actions into place. This concentrated effort begins as soon as possible after the meeting, subject to cross-checking and systematization between the working groups by the SAG or project team, to ensure activities are integrated, coherent, and to avoid duplication).

Outreach and engagement are open-ended, but some reporting back on the results of initial efforts is required during thematic working group meeting 3, particularly where challenges have been encountered.

It is important for working group members to be directly involved in outreach and engagement activities (rather than leaving them to project coordinator and project team alone), to consolidate their own engagement and build ownership over the process.

The following sections set out a few possible outreach and engagement activities, what exactly they entail, who they may be targeted at, and why they are effective. Importantly, these activities are not necessarily stand-alone, but several can be used together to address the same target stakeholders.

1. **Direct dialogue with policymakers** may take place within SAG or working group meetings. These are crucial forums for securing and retaining engagement in the CRFS process, which can translate into the will to put actions in place.

In addition, one-on-one engagement of policymakers is needed to secure explicit support for policy to be changed, for a programme to be put in place, and for budget to be allocated for implementation. Working group members (and the project coordinator) make personal visits to policymakers' offices, where they make tailored representation of the issues using framing that shows the connection with the target's agenda, and address any questions.

Policymakers may also be invited on a field visit to a place where people, assets, infrastructure have been directly impacted by the issue to be addressed. Field visits can be an effective means of immersing the target in the issue by showing them the impacts rather than just telling them about it.

Tips:

- Direct dialogue should be followed up rapidly to secure engagement and determine next steps to be taken.
- It may be possible to combine field trips with media outreach (if the target policymaker gives their approval) by publishing a report and photographs from the event.

It may be helpful for the project team to refer back to the Inception module, Activity 1, and deploy some of tactics for securing political buy-in (see **Table 8**).

2. **Policy seminars** are vehicles that stimulate discussion between groups of policymakers over a specific issue. They bring together policymakers from several different government departments or policy areas, to discuss how they might address an issue in an integrated, synergistic way.

Policy seminars can also include technical staff, who will be responsible for implementing actions. This is particularly helpful for identifying potential hurdles to implementation that need to be taken into account, and for ensuring that technical staff members fully understand the importance of the action and their own role in effective implementation.

Tips:

- Organize policy seminars at times and in locations that will make it easy for target stakeholders to attend.
- To enable technical staff to attend during working hours, secure the approval of their managers/supervisors in advance.

3. **Policy briefs** are short, accessible, written documents that make a clear case for one or more specific actions, which are circulated directly to key policymakers (via post or email, or handed to them directly). The intention is to inform the policymaker of the problem, at the same time as providing them with potential solutions.

Policy briefs are particularly effective as a preliminary tool to attract attention and pave the way for more detailed conversations (such as direct dialogues and policy seminars).

A policy brief should include:

- a short, descriptive and punchy title;
- a short introduction warning about the problem and making the case for urgent action, to hook the reader's attention;
- bullet points of actions that are needed;
- a more detailed (but accessible) explanation of the context, nature, and root causes of the problem, the policy implications, reasons why the current approach is not working, and facts and figures to pack up the article;
- more detailed, subtitled explanations of suggested actions that can help solve the problem;
- a concise, inspiring conclusion with a positive message.

Tip:

- A policy brief can also be sent to journalists as an attachment to a news release, providing accessible, detailed information to support the key messages.

Template: Policy brief. Access the online Toolkit

4. **Cost-benefit analysis** (CBA) is a comparative economic analysis of implementing versus not implementing actions to address a particular problem. As it presents the need for action in stark, financial terms, it can make for an extremely compelling case to present to financial decision-makers.

Preparing a cost-benefit analysis requires some amount of research and financial modelling; it may be necessary to bring in additional expertise (such as an economic analyst or researcher). Alternatively, to save time and resources, CBA results can be drawn from other contexts and adjusted to the city region. The project coordinator may identify suitable CBA during their case study review prior to the working group meetings (see Activity 3).

It is suggested that the CBA be presented in a visual format, with the benefits able to be seen at a glance and supported by short explanatory text and calculations. If possible, a CBA includes several different timescales, including the current or next electoral cycle, for policymakers to acknowledge the implications on their own budgets.

Tips:

- Key figures from a CBA can be presentation at a policy seminar or incorporated into a policy brief.
- The CBA can be provided as a supplementary flyer to a policy brief or media materials to add weight to the argument.

For more information, see:

Tool: Conducting a cost-benefit analysis. Access the online Toolkit

Example: Cost-benefit analysis. Access the online Toolkit

5. **Ambassadors** are the members of the working group, who should be prepared to serve, making the case for action at every opportunity. This includes exploring how their own organizations might contribute to addressing the issues, whether through concerted programmes or change to existing practices, as well as discussing within their own professional networks.

Members who are not decision-makers within their own organizations should identify routes to power and lobby the organizational hierarchy to engage with the need for action.

6. **Media outreach**
   Ideally some local and national media outlets will have been involved in meetings of the wider stakeholder group, so will already be familiar with the CRFS project by the time the Action Planning module is carried out. They may have reported periodically on its progress.

Nonetheless, a concerted effort is made to re-engage journalists during the Action Planning module, to raise public awareness of the specific priorities and mobilize public support for proposed actions. Media coverage, and the public support it can generate, can be extremely effective for securing commitments from politicians, who wish to retain the favour of the electorate.

If they have not already done so, project teams analyse local media outlets, including their audience, political slant, frequency, editor contact details, preferred contact method (e.g. press release via email, telephone call, etc.). This allows for development of an effective media plan to reach target groups within the population.

For example:

- If farmers receive most of their news via local radio, a radio interview and Q&A phone in could attract support and pave the way for take up of a policy/programme by the target stakeholder group.
- To reach business owners, it might be best to send a press release to the business editor of a local or national newspaper, making it clear exactly what the news message is and how it affects the target audience.

Contact details of an agreed spokesperson (e.g. the project coordinator or a designated working group member) are included for journalists to contact for more information. The spokesperson needs to be ready to respond immediately to requests for interviews and more information, as many journalists work to very tight deadlines. Once contact is made with a journalist they should be kept informed of key developments.

It is helpful to prepare a CRFS media pack to introduce the project, the CRFS concept and area covered, the vision and priority areas, and fact sheets containing summarized findings from the Rapid Scan and In-depth Assessment. The media pack may also contain photographs that can be used to accompany news stories.

For more information, see:

Example media plan. Access the online Toolkit

Template: Press release. Access the online Toolkit

Example CRFS media pack. Access the online Toolkit

Complete list of tools and resources for this activity

Template: Policy brief. Access the online Toolkit

Tool: Conducting a cost-benefit analsyis Access the online Toolkit

Example: Cost-benefit analysis. Access the online Toolkit

Example: Media plan. Access the online Toolkit

Template: Press release. Access the online Toolkit

Example: CRFS media pack. Access the online Toolkit

Training unit 10: Action planning. Access the online Toolkit

Activity 5: Final multistakeholder meeting

The final stakeholder meeting takes place up to six months after the start of action planning.

The purpose of the final SAG meeting is to present a summary of the entire CRFS process, including progress towards putting the actions in place and implementation and monitoring plans; to discuss and validate the TOR for the on-going CRFS governance platform; and to discuss next steps for CRFS resilience and sustainability.

As well as the SAG and working group members, all stakeholders who have been targeted through outreach and engagement activities are invited to this meeting. This should include local media representatives, whose reporting on the outcomes and next steps – including the launch of the long-term governance platform – is crucial for maintaining broad awareness and momentum.

The final meeting should **not** be presented as the closing of the project. Rather the meeting is the springboard for a new era of building resilience and sustainability of the CRFS as the actions are implemented, and stakeholders agree to put in place the long-term governance platform.

By the end of the meeting, participants will have:

- Acknowledged the achievements of the project and progress made.
- Identified ongoing work of all three thematic working groups to put in place and implement actions, as well as synergies between them; and secured commitment from working group members to continue implementing the roadmaps through their own organizations.
- Agreed on the TORs for the long-term governance platform; the platform may be officially launched at this meeting.

Importantly, participants will understand that work to improve the resilience and sustainability of the CRFS is ongoing and continuous. In keeping with **Figure 14**, as actions are implemented and change is monitored, new plans are made. Other issues that were not selected as specific priorities may need to be addressed in the future, and new issues will undoubtedly emerge.

Where next?

- Stakeholders continue to implement tasks focussed on putting in place and implementing actions, including outreach and engagement.
- Overseeing progress is taken up by the long-term governance platform; as actions are put in place and implemented, change is monitored and new plans are made.
- Members of the long-term governance platform are strongly encouraged to engage in city-to-city exchange, so as to:

- Share their experiences with other cities, including what actions have been put in place, what barriers have been encountered, and how they have done so.
  The experiences of city regions that have undertaken the CRFS process are extremely valuable to those that are embarking on their journeys, and they raise the profile of the city region in the international arena.

- Learn what actions other cities have put in place, and how, to help inform their own ongoing efforts

- Contribute to the enrichment of the CRFS Toolkit, including the identifying need for new guidance materials and emerging topics or issues to be addressed.

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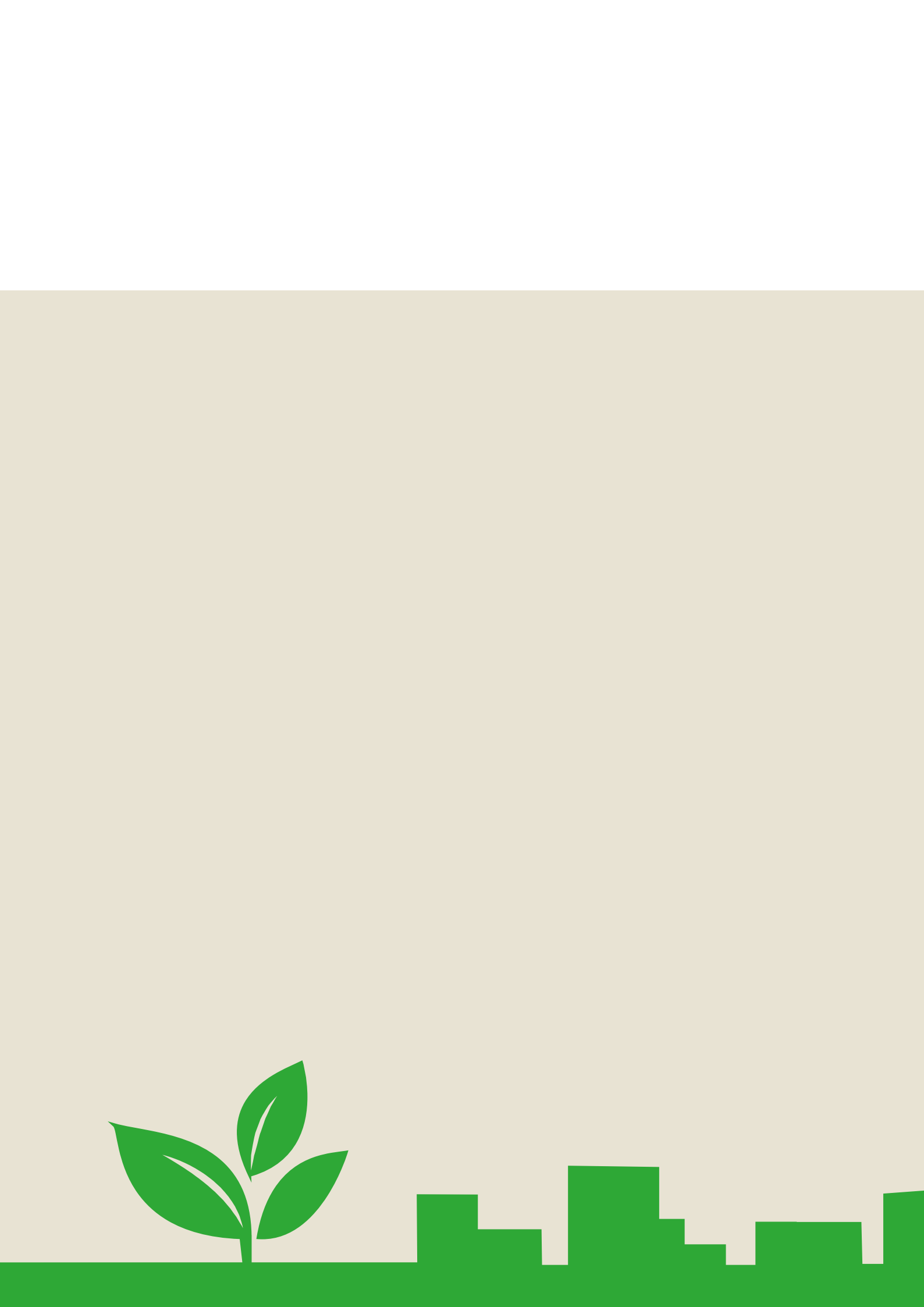

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