



# Towards resilient and healthy urban food systems

Five findings forward in strategizing urban food futures

Dialogue report - Feeding cities and migration settlements  
Programme Food Security and Valuing Water (KB-35-002-001)



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## Colophon

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*Cover photo:*

*Fish in Kibera - Katrine Soma (Wageningen University & Research)*

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# Introduction

In increasingly urbanizing societies, people rely heavily on food systems that still prove vulnerable and often not able to provide food and nutrition security. Global challenges, including climate change, (geo)political disturbances, demographic shifts and disease outbreaks, such as the recent COVID-19 pandemic, cause considerable disturbances in food supply chains, highlighting the fragility of the current situation. This calls for systemic action, starting with increasing understanding of how the current food systems work, in order to develop strategies to transition from the current food system toward a desired future food system that is more sustainable, resilient, and equitable.

*It's not (all) about the destination - The journey also counts.*

Over the last four years, Wageningen Research has sought to better understand the impacts of urbanization on food systems. This understanding can support identification of potential leverage points and the development of strategic interventions to rethink and improve food systems in relation to urbanization. This understanding can further support stakeholders in working together towards creating more resilient food systems that deliver healthier, nutritious and more secure diets, within planetary boundaries and possibly working towards a nature positive society.

On Wednesday 16 November 2022, a hybrid dialogue was organized to present our main findings and recommendations and open discussion with a broad audience and stakeholders - A journey into feeding cities and beyond.



**Figure 1** Food as a driver and Drivers to food

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*What are potential solutions and strategies?*

Often, approaches to improving the food system remain technologically focused, with new ideas for improving current techniques, value chains, or improving our understanding of the system. On our journey, we came across a range of initiatives and concepts, varying from city region foods system to more concrete new value chain developments and new techniques. However, often the focus remains on understanding the current system, and many solutions focus on new technologies to be implemented, which is similar to what is seen in climate adaptation strategies. The biggest challenge is to put them into effect and achieve systemic change.

There is a need for comprehensive strategies: comprehensive strategies that bring together different actions ranging from empowerment and governance to value chains and techniques, always considering trade-offs and the effects of these various actions at multiple levels; comprehensive strategies for systems change that emerge and require a joint process. It is not only about the destination, most of all, it is about a joint journey. Nonetheless, the outcome should be a more resilient and healthier food system for an urbanizing society.

*"What issues should we consider in moving forward, especially in terms of working with rural-urban linkages and informality?"*

There is significant diversity in the system. As researchers, we need to work in a way that takes into account all of the diversity in the system, rather than seeking to simplify it, or work only with the formal system.

There are benefits and trade-offs for almost any type of food system which is developed. The role of research should be to make these various trade-offs clear and support various actors to develop solutions that maximize the resilience of the system. There is no 'one-size fits all' solution.

*"What role do we as Wageningen University and Research and as UR/ researchers play in the food system?"*

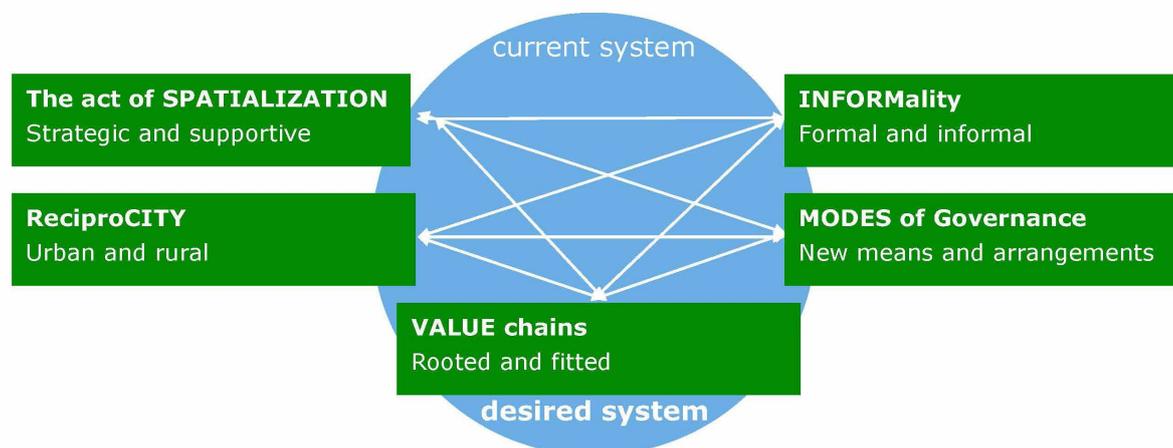
By choosing to engage in the food system, we play a role in shaping it, whether that is considering the role of international companies, and how the export market shapes the food system in a given area, or the links between the trade and production of food for export versus the local market. We should also be aware of the power we/our research could have in shaping various food systems and be more explicit about that power.

As 'outsiders', we will never fully understand what is going on and we need to take power struggles and conflict management into account. However, we should not allow an incomplete understanding to stop us from engaging in the discussion.

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# Five findings, one strategy

While we present five key findings – each of which are important, for true systemic change - it's about the connections and strategizing food within a changing environment.



**Figure 2** Five findings, one strategy

## The five key findings are:

### **Spatialization**

Cities in isolation do not really exist. Often cities are just defined by governmental boundaries, while the urban system (and urban food system) extends beyond those boundaries. A spatial perspective helps to extend beyond those boundaries. Spatialization needs to be incorporated into the work on food systems in a meaningful way. Examples of how this has been done include the Dhaka Food System Project, in which a geographical information system (GIS) was developed to map key features of the current food system - and used to answer key questions. In Kibera (an informal settlement in Nairobi, Kenya, Africa), an iterative approach for spatial analysis was used. The important takeaway message is that the spatial approach should be integrated into our work and used to improve both our understanding of the current system, as well as to support planning for future food systems.

### **Reciprocity**

There is an increasing need for shared strategies that include urban and rural concerns. Strategies that take into account the flows of resources, goods, services and people between urban and rural areas. While administrative boundaries place clear boundaries between urban and rural areas, in reality, these do not reflect the true flows. They also do not help in understanding and guiding change. Expanding cities lead to shifts in (intensification of) land use around cities and have socio-economic and ecological consequences in rural areas. Knowledge of the effects of urban sprawl on agricultural development opportunities is needed for sustainable planning and management of urban and rural food systems.

### **Informality**

While the informal sector is critically important for resilience and supplies many urban dwellers with both food and livelihoods, we do not know much about how the sector really works, or how to best engage with informal actors. While recognizing that the informal systems are critically important, we need to increase our knowledge about how these systems work, what motivates individuals working within these systems, and how to engage with them most effectively. The solution is not formalization, but better understanding how most effectively work within the existing systems.

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### Improving the governance of food systems

To actually transform food systems, some type of governance structure is needed. In most places, food systems are not intentionally governed but rather exist through the complex interplay of various market forces and stakeholder (including government) influences. In order to steer urban food systems in a direction that delivers healthier, more sustainable diets, specific governance strategies will be necessary. However, because of the complexity of the food system, the type of governance structures that are necessary is less clear. Multi-Stakeholder Platforms (MSPs) are one promising solution, but we need more understanding of how to create and arrange such platforms, how they work in practice, and how they can be used to develop a consensus about how to get to the desired new food system.

### Expanding our thinking about value chains

When thinking about urban food systems, we need to think beyond the current focus on production and consumption and recognize the importance of other actors in the longer value chains that are necessary to feed urban areas. Currently, much of the food in urban areas comes via informal value chains, which are effective, but not always efficient, with high levels of food loss and waste and quality deterioration along the value chain. As urban areas grow, there is a need to increase the efficiency of these chains, to ensure that more healthy, safe and affordable food reaches the consumers. There are many potential technical solutions, but often the challenge is ensuring uptake of these solutions, rather than developing new technologies.

## Bringing theory into practice

To make the five key findings more practical, three case studies illustrate how these issues were dealt with in practice.



*Dhaka -Bangladesh*  
(photo credits: FAO Dhaka)



*Kibera -Kenya*  
(photo credits: WUR)



*Arua -Uganda*  
(photo credits: WUR)

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# Stories from the field

## **Dhaka (Bangladesh)**

### **Improving Dhaka's food system**

The KB project allowed for additional research to be carried out within the context of the Dhaka Food Systems Project, which was implemented by the Food and Agricultural Organization of the United Nations and Wageningen University and Research. In the project, four municipal governments (city corporations) in Dhaka were supported towards developing a Food Agenda for the city food system in 2041. The project was able to support improved collaboration between the various stakeholders, which resulted in the development of a number of solutions, including peri-urban agriculture, bio-digesters, and waste management, among others. However, these are short term interventions and there is a need to have a supporting governance structure to facilitate institutional embedding beyond the life of the project. However, because Greater Dhaka comprises of four cities, the challenge is to bring the different cities together. For example, do all the cities have the same ideas around linking urban and rural production? While this is one specific example, similar issues are seen in many contexts. Research undertaken in the project found that there is a need to have a systematic view in developing solutions for the food system, as working on single issues will not lead to the necessary level of change.

## **Kibera (Kenya)**

### **Creating a new value chain**

In Kibera, a new fish value chain was created to support people living in a lower income area (slum) of Nairobi, Kenya. The project supports formative research with the community to better understand what challenges they faced and found that social capital and the strength of community ties were very important. Building on this social capital, a new fish value chain was established. Trusted vendors were provided with fish as a loan, allowing them to earn some money during the COVID-19 lockdown and its aftermath. The new fish supply supported those living in the informal settlement by providing increased access to affordable and nutritious healthy food. The project demonstrated how research and working together with a community to develop solutions together, can be an effective way of engaging informal actors. We refer to this way of working as: Co-creation Living Labs (CC-LL).

## **Arua (Uganda)**

### **Governance of food systems through non-governmental MSPs**

Arua, in the North West of Uganda, is a poor area of the country, with high levels of migration from neighbouring countries (mainly South Sudan). The city is growing rapidly, placing a strain on the food system and leading to soil depletion, and loss of natural resources. High levels of post-harvest losses and weak value chains, along with unemployment and income insecurity, and a dependence on the World Food Programme, which is not able to meet the needs for many refugees, is leading to food and nutrition insecurity in the region. However, the city is also strategically located for trade to both South Sudan and the Democratic Republic of the Congo, and there are strong links between people in the region, in part due to the high levels of migration, which can facilitate trade and increase the area's potential as a food basket for Uganda and neighbouring countries.

The West Nile Innovation Hub was established to help steer development of the food system by bringing together stakeholders working in the food systems and providing a space for food system actors to come together and discuss how the food system can be strengthened and improved. The platform allows for improved collaboration between the researchers and innovators, supporting dialogue between these groups; working with Muni University and National Agricultural Research Organization to identify and pilot innovations in regenerative agriculture. Examples of current innovations that are being piloted include vegetable production on limited land (in the refugee settlement areas), circular farming and ensuring that all the by-products are reused on the farm - and a new technology for fish preservation.

*"We often learn more from challenges and struggles than what went well. What would you do differently if you were to start the project again?"*

The answers to this question varied, from very specific answers linked to implementation of the various projects to broader reflections about the opportunities and challenges of developing transdisciplinary food system solutions.

Operationalizing the food systems approach, in such a way that it was possible to come up with practical solutions, was a challenge. While in theory taking a food systems approach makes sense, it can be very hard to operationalize and come up with concrete solutions to challenges.

Thinking about how multi-stakeholder platforms can most effectively find solutions to hard topics or controversial topics. In our work, we found MSPs work well to bring actors together around issues, for which there is broad agreement (e.g. improving sanitation in informal markets) but less well in creating consensus around issues where different stakeholder make have very different states or ideas about what the best solution is. Additionally how do you maintain interest in, and engagement with MSPs in the longer term?

West Nile (Arua) depends on NGOs for delivery of many services. As these NGOs often focus on providing support to settlements, the refugees benefit more than Ugandan nationals living in the peri-urban areas where there are few jobs and not enough service delivery. Dependency syndrome, and how to get people to stay involved without providing financial support is another key challenge.

In Kibera, there are numerous problems and challenges, such as organizing licenses, obtaining fish, communication issues, access to capital - especially during times of widespread challenges. Perhaps the focus is now too much on one specific type of fish and how to deal with consumers receive grants from the vendor, but the consumer also has job insecurities.



*Dhaka -Bangladesh*

*(photo credits: Sharada Prasad CS via Flickr)*

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# To conclude

Dialogue was not just aimed at disseminating the results and insights gained of our research of the last four years, it has served as verification and platform for further outreach, engagement and follow-up actions. Clearly, it's not a case in which single actions or a fixed process are required only. Changing and improving food systems requires different actions and processes, but most of all different mindsets and views. We trust our insights will contribute to this change and sustaining and improving our future food systems.

## Further reading

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