



Improving food systems in secondary cities, what can be accomplished through multi-stakeholder collaboration?

Reflections on a learning journey from Arua to Fort Portal in Uganda

Katherine Pittore, Marlene Roefs, Molly Adokorach, and Christine Tabu



WAGENINGEN
UNIVERSITY & RESEARCH

Improving food systems in secondary cities, what can be accomplished through multi-stakeholder collaboration?

Reflections on a learning journey from Arua to Fort Portal in Uganda

Katherine Pittore, Marlene Roefs, Molly Adokorach, and Christine Tabu

This study was carried out by Wageningen University & Research and was commissioned and financed by the Dutch Ministry of Agriculture, Nature and Food Quality within the context of the Knowledge Base programmes 'Food Security and Valuing Water' (KB-35-004-001) motive Feeding cities and migration settlements.

Wageningen Centre for Development Innovation
Wageningen, December 2022

Report WCDI-22-234

Katherine Pittore, Marlene Roefs, Molly Adokorach, and Christine Tabu, 2022. *Improving food systems in secondary cities, what can be accomplished through multi-stakeholder collaboration?; Reflections on a learning journey from Arua to Fort Portal in Uganda*. Wageningen Centre for Development Innovation, Wageningen University & Research. Report WCDI-22-234. Wageningen.

This report reflects on the role that non-governmental, multi-stakeholder platforms can have in supporting food systems transformations in secondary Ugandan cities. Bringing together members of two multi-stakeholder platforms, the Food Change Lab in Fort Portal and the West Nile Innovation Hub in Arua for three days in August 2022, the platform members were able to learn from each other and reflect on best practice, key successes, and ongoing challenges. The report concludes with key opportunities for such platforms as well as remaining research questions.

Keywords: Multi-stakeholder platforms, Uganda, Secondary cities, food systems governance

This report can be downloaded for free at <https://doi.org/10.18174/582426> or at www.wur.eu/cdi (under publications).



© 2022 Wageningen Centre for Development Innovation, part of the Stichting Wageningen Research. P.O. Box 88, 6700 AB Wageningen, The Netherlands. T + 31 (0)317 48 68 00, E info.cdi@wur.nl, www.wur.eu/cdi.



The Wageningen Centre for Development Innovation uses a Creative Commons Attribution 4.0 (Netherlands) licence for its reports.

The user may copy, distribute and transmit the work and create derivative works. Third-party material that has been used in the work and to which intellectual property rights apply may not be used without prior permission of the third party concerned. The user must specify the name as stated by the author or licence holder of the work, but not in such a way as to give the impression that the work of the user or the way in which the work has been used are being endorsed. The user may not use this work for commercial purposes.

The Wageningen Centre for Development Innovation accepts no liability for any damage arising from the use of the results of this research or the application of the recommendations.

Report WCDI-22-234

Photo cover: Marlene Roefs

Contents

1	Introduction	5
1.1	Arua- A regional city in the West Nile region	5
1.2	Fort Portal- A strategic city in Western Uganda	6
1.3	Why food systems governance?	6
1.4	The West Nile Innovation Hub	6
1.5	The Food Systems Lab	7
2	The learning journey	8
2.1	Creating a network of engaged stakeholders	8
2.1.1	Sustainability	8
2.1.2	Horizontal linkages	9
2.1.3	Inclusivity and developing a shared narrative	9
2.2	The District Nutrition Coordinating Committee	9
2.2.1	Key Learnings	9
2.3	Expanding from production to value addition	9
2.4	Regenerative agricultural practices	10
2.4.1	Key learnings	10
3	Next actions and research questions	11
	References	13



1 Introduction

There is a well-recognized need for normative food systems transformations in which actors work together towards food systems which are actively steered and guided to deliver diets that are both healthy for humans and sustainable for the environment (Béné 2022). While food systems transform constantly, with people in many parts of the world consuming diets that would not have been imaginable 30-40 years ago, this transformation has not been driven by a specific strategy but rather by various autonomous developments and global forces. However, the current food system in Uganda is still failing to deliver healthy diets for people, while it is also contributing substantially to environmental challenges including climate change and soil degradation, among others (Webb et al. 2020). The current food system is failing to meet human nutrient needs, which can be seen in the persistently high levels of malnutrition in Uganda (Uganda Bureau of Statistics (UBOS) and ICF 2018). The food system, already under strain from the ongoing stresses, is not able to withstand additional stresses such as those caused by the covid-19 lock down (Nabwire et al. 2022).

In Uganda, like in many African countries, the population is rapidly expanding, due in part to high levels of immigration from neighboring countries as well as an overall increase in the population, which has been growing at a rate of approximately three percent a year since 2002. The government of Uganda also has plans to support urbanization, with an aim of having 60 percent of the population living in urban areas by 2040 (from 16 percent in 2016) which the government feels is a key step in the country's economic development (Arup International Development 2016). To allow for this significant increase in urban population, the government is supporting the development of five regional cities and five strategic cities, by diverting resources from Kampala to these smaller cities (Arup International Development 2016). Secondary cities in Uganda have high levels of (youth) unemployment a lack of industry to provide formal jobs, contributing to food insecurity (Mackay 2019). Additionally, increasing urbanization places increasing stress on surrounding peri-urban and rural areas, where fewer farmers must work to feed increasing urban populations.

This report focuses on a learning journey between members of a multi-stakeholder platform (MSP) in Arua, one of the five regional cities prioritized by the government, and Fort Portal, one of the strategic cities, both of which the government feel have a role to play in the country's development. Regional cities will be given additional funding to support service delivery for a large catchment area, strategic cities, which are expected to play an important role in economic development for the country will also receive additional funding. Both Arua and Fort Portal received the official designation as a city in July 2020 ("Secondary Cities in Uganda: Migration-Related Opportunities and Challenges. – Economic Policy Research Centre" n.d.). The multi-stakeholder platform members were keen to learn from each other about how MSPs can support more deliberate food system changes in secondary Ugandan cities, how they could better incorporate governance issues into their work, and to learn more about regenerative agriculture.

1.1 Arua- A regional city in the West Nile region

Arua is a small city of approximately 30,000 people in the West Nile region in the North West side of Uganda. It is strategically located near the borders of the Democratic Republic of the Congo and South Sudan. Arua city and its surrounding region host a large, and fluctuating number of refugees from neighboring countries. Research carried out in 2016 identified a number of critical challenges affecting the food system in the region including extreme temperatures and drought, crop and livestock diseases, and loss of soil fertility and erosion (Arup International Development 2016). The food system activities in the region can be characterised as predominantly oriented at achieving self-sufficiency. About one-third of the population is still engaged in barter trade (UNHCR & WVU, 2017). As the rainfall pattern in the West Nile region allows for two rounds of crop production per year, food supplies are relatively even throughout the year, which limits the duration of a typical hunger season. However, both refugees and host communities do experience periods of food insecurity. In addition, natural resources (such as water, arable land and forests) are becoming scarce for the growing population (Hengsdijk et al. 2020).

1.2 Fort Portal- A strategic city in Western Uganda

Fort Portal is a small city in the Western part of Uganda, with a current population of 50,000 people, which is projected to grow to 500,000 by 2040 according to the government's development trajectory (Vorley and Boerwinkel 2016). Fort Portal and the surrounding Kabarole district have a favorable climate and produces significant tea, dairy, banana, coffee, honey and horticulture crops ("KDLG – Kabarole District Local Government" n.d.). The region exports key food crops including. A survey under local traders found that only 4 percent of the locally produced maize is consumed locally while 50 percent is exported to Rwanda and 25% percent to Tanzania, despite high levels of food insecurity in the region. Despite the favorable climate and high levels of agricultural production, rates of stunting in Western Uganda are higher than the national average, 44 percent of the children under five are stunted, and many households, especially in more rural coffee producing regions, struggle to consume adequate diets (Uganda Bureau of Statistics (UBOS) and ICF 2018; Vorley and Boerwinkel 2016).

1.3 Why food systems governance?

While the need for food system transformation in the Arua and Fort Portal region is largely recognized, it is hard to change it. Food system actors tend to work together in relatively stable ways and patterns, keeping the overall system from transforming (Leeuwis, Boogaard, and Atta-Krah 2021). However, increased uncertainty and shocks from external factors, which Uganda is facing now in terms of food price increases, may provide incentives to allow meaningful changes to happen. Additionally, the government strategy to support the develop of these new cities provides an opportunity to think about how the food system should develop.

One potential mechanism to support active food systems changes are MSPs, which can bring together actors to work on developing and implementing specific food systems changes, as well as to support actors to monitor what is happening in their food system and to make additional changes as necessary.

This report provides a brief overview of two MSPs which are seeking to actively steer the food system towards one which is better able to supply more diversified, healthy and sustainable diets, and which can more effectively adapt to external food system pressures and changes. The next section introduces the two MSPs, i.e., the West Nile Innovation Hub in Arua and the Food System Lab in Fort Portal.

1.4 The West Nile Innovation Hub

Wageningen University and Research (WUR) and Muni University have joined forces to work towards solutions to improve the local food system in the West Nile region. Through the West Nile Innovation Hub (WNIH), the MSP seeks to bring different stakeholders from government, private sector, NGOs, CSOs, academia and citizens together to collectively identify and implement innovative strategies that are sustainable, inclusive, economically viable and provide healthier diets. Stakeholder collaboration focuses on local food system analyses, experimenting with innovative practices and learning from them, connecting innovators with research, investors, and markets, and informing strategies and policies with evidence and insights. Together with other partners, the platform aims to grow and work towards a regenerative and inclusive West Nile food system; seeking to create a food system that helps to repair, restore, and improve the food system in an inclusive way.

The hub further provides a way to bring together key food system actors and discusses how practices can fit into an overall vision of agriculture and food systems development in the region. It provides a way to anchor and scale promising new innovations in regenerative agriculture, as well as a space to have broader discussions around food systems issues.

1.5 The Food Systems Lab

The food systems lab has been running in Fort Portal since 2016. The initial aims of the Lab were set in reaction to four critical issues in Fort Portal: high amount of food and natural resources exported from the region with limited local processing and value addition options; high levels of stunting among children in the region, 41% higher than the national average; the monotonous diet that is high in starch and low in proteins and micronutrients; and declining production of traditional crops despite their high nutritional value.

The labs bring together actors working on critical food systems issues, and provides additional information about key issues (research) and provides a space to incubate potential solutions and fundraise. The Food Lab provides a platform for a broad group of actors to come together, although the exact constellation of actor groups will vary depending on the issue, for example stakeholders coming together to address food safety might be different than if the focus of the food lab is on promoting organic agriculture. The lab seeks to provide a space where various food systems innovations can be piloted. The Food lab does not have its own operating budget, but rather it seeks to bring together actors to come up with issues, develop innovative solutions and fund raise together.

2 The learning journey

Over the course of three days in August 2022 the two groups, from the West Nile Innovation Hub and the Food Systems Lab came together in Fort Portal to learn from each other about how MSPs can support more deliberate food system changes in secondary Ugandan cities. The group from West Nile consisted of the manager of the West Nile Innovation Hub, the director of the National Agricultural Research Organization's West Nile Office (ABI-Zardi), the regional nutrition officer in West Nile Region and a lecturer in the agricultural department from Muni University. They were hosted by the Food Systems and Nutrition Programs' Manager at the Kabarole Research and Resource Center. Over the course of three days the group came to better understand how the other is working, learn about interesting innovations, and consider what might be possible to pilot in their respective MSPs. The team from the West Nile Innovation Hub was particularly interested to understand how they could better incorporate governance issues into their work, and to learn best practices from an MSP which had been ongoing for more than eight years. The team from Fort Portal was interested to learn more about regenerative agriculture practices from the West Nile team

2.1 Creating a network of engaged stakeholders

On the first day, the group met with one of the key members of the Food Systems Lab, the Coalition of the willing. The Coalition of the willing brings together alliances of various stakeholder groups representing food system actors from both the production and the consumption side. The coalition is made up of alliances of chefs, consumers, local leaders, women promoting consumption of traditional foods, artists, activist and others who are interested in supporting an improved food system.

The Coalition of the willing representative met with the group and shared what they do, and what motivates each individual to become involved in the Coalition. Key learning points include:

2.1.1 Sustainability

- The importance of working with coalitions or groups rather than individuals. Working only with individuals threatens the longer-term sustainability of the MSP as people may leave. Working with networks ensures greater continuity of the Coalition, even when one individual member leaves others are involved and ready to take that person's place.
- Member involvement with the Coalition should be completely voluntary. Coalition members may seek to work together to raise funds for specific initiative, but otherwise members volunteer their time. This allows sustainability of the Coalition beyond one project.
- The Coalition is convened by the Kabarole Research & Resource Centre (KRC). While KRC is the key convenor, they stress that involvement in the Coalition is voluntary. In addition, members are responsible for developing and fund-raising for their own action plan, reducing the potential dependency on the convening partner.
- Ongoing research, to identify problems and pilot potential solutions, is important. KRC supports the work of the Coalition by carrying our research to identify potential solutions for which the Coalition can advocate. Some examples of research that has been undertaken includes research to improve home gardening activities in schools. One observation by Coalition members was that, although there are many projects which support capacity development for home gardening projects in schools, few parents were establishing home gardens. KRC undertook action research to understand why this might be. Based on this it developed an idea to support uptake of home gardens and set up nurseries at schools which can provide seedlings to parents whose children learn about home gardening in schools.

2.1.2 Horizontal linkages

- The Coalition works mainly in and near Fort Portal, on specific issues with a focus on food systems issues directly affecting the city and the surrounding district. Working at the local level has advantages in terms of understanding the situation. It also has limitations, as some issues need involvement of the district or national government, for example working on issues of climate justice.

2.1.3 Inclusivity and developing a shared narrative

- The Coalition at points has struggled with questions related to inclusiveness versus conflicts of interest, for example involving supermarkets, who may also focus on selling unhealthy foods. However certain issues, for example, collaboration around food safety, have provided concrete entry points for collaboration with a wide range of actors without concern about conflicts of interest.

2.2 The District Nutrition Coordinating Committee

On the second day the group looked at one of the formal governance structures which supports improved multi-stakeholder governance, the district nutrition coordinating committee. The Ugandan National Nutrition Plan specifies that each district should set-up a District Nutrition Coordinating Committee (DNCC). This committee is organized by the district nutrition officer and comes together to discuss planned actions around nutrition undertaken in the district, potential areas where partners could support one another, and to support improved communication and collaboration between both government departments and development partners. While these meetings tend to focus on nutrition actions, which are those usually lead by the health sector such as promotion of growth monitoring for young children, or provision of supplementary micronutrients, many partners also work on nutrition sensitive interventions, for example school vegetable gardens or projects to increase access to dairy.

2.2.1 Key learnings

- Many implementing partners are working on nutrition sensitive agriculture, and schools are a common entry point for such programs. Given the popularity of such programs, action research could support such projects to have more impact, for example looking at the uptake of home gardens by parents or highlighting which areas have the lowest dietary diversity and thus the greatest need for such programming.
- While the West Nile region has a district nutrition committee, the members do not meet regularly, in part because there are fewer implementing partners compared to Fort Portal. The majority of implementing partners focus on support to the refugee settlement areas. However, they see the value in regular meetings and would like to encourage implementing partners working in the settlements to also support projects in the district.
- While the DNCC focuses on nutrition specifically, many of the key points related to nutrition remain relevant to consider in developing structures to steer food systems governance, for example a focus on process and not only on structures (Gillespie, van den Bold, and Hodge 2019). This committee, and how they have supported multi-sectoral engagement is an example that could be built in a transition from working only on nutrition governance to considering food systems governance issues more broadly.

2.3 Expanding from production to value addition

One of the key food systems priorities for the Government of Uganda, according to the Uganda Food Systems Transformation Pathway, which was developed by the government following the United Nations Food Systems summit in 2021, is to support farmers to transition from subsistence agriculture to commercial agriculture, through enterprise development and value addition. The project met one farmer who previously had grown a diverse range of crops for subsistence but has chosen to specialize on growing only one crop, banana, which he uses to produce banana juice. He has built a small banana juice processing facility on his property and now produces banana juice and wine (not yet certified) for local sale. While he was interested in the opportunity of value addition, he faced a number of critical challenges.

Key issues in transitioning from production to a processed product (production to procession):

- The cost of building all the necessary structures, for example, a dining room for employees and separate changing room is prohibitive for a family-owned business to operate. There needs to be more flexibility in the rules which guide what is necessary to provide in order to engage in food processing in order to accommodate smaller companies.
- The costs of the inputs, including the bottles and labels, as well as the taxes that must be paid are so high that it becomes challenging to make a profit. Accessibility in terms of transport is quite hard with poor road conditions and limited available public transport options (mainly motorcycles). Because consumers are not wealthy, the price that you can charge for the finished product is not elastic (the banana juice processor assumes that he cannot charge more than the costs a bottle Coca Cola given his customer base). Given the high costs of inputs, certification, and taxes, the profit margin is small, sometimes none, depending of market prices of inputs.
- The banana juice processor received very limited government support for setting up a small-scale food processing company, while there were significant barriers and taxes constraining the viability of his business. The processor wonders about the strategy of commercialization for farmers such as himself.
- The agenda of promoting value addition and job creation is not backed by policies to support smaller companies, which may prevent significant progress to be made. Rethinking the regulatory environment for small companies will be a critical first step in supporting the government's program to develop agro-processing industries.

2.4 Regenerative agricultural practices

On the final day of the trip, the team visited a number of farmers who have been supported by KRC to use more organic practices on their farms. One of the farmers illustrated how he had been using a visioning approach, where he and his wife create a vision for their farm and what they hope to accomplish as a family in the coming period of time. They showed how far they had come since starting their process, and what they still hoped to achieve. The farmer also showed us how he uses a range of organic methods, including planting herbs which repel insects to grow foods without needing additional inputs. He indicated that he was interested in engaging in more product value addition, while also highlighting challenges relating to market access.

For the final session, the group traveled to a farm called Triple F, which stands for Food, Feed and Forest (feed the soils to feed the plants to feed the people). The farm is run by the Head Department of Agriculture at Mountains of the Moon University and seeks to employ agro-ecological practices to illustrate how these can be applied. The founding principle of the farm is that everything must have multiple purposes, for example providing food for humans, or feed for animals or shade for other plants or a structure for a vine to grow. The farm also seeks to show how humans can grow food in a way that is more in harmony with nature, for example by not killing potential pests but by thinking of ways to provide more natural checks and balances within the system. The farm was established without any external funds, as a way of showing others in the community what could be possible.

2.4.1 Key learnings

- Many farmers are interested in, and are seeking to employ more regenerative agricultural practices. There are a number of successful examples that could be scaled up elsewhere. These include using herbs, rather than chemicals, to repel pests; using organic materials from the farm as composts, and planting of various nitrogen fixing grasses, which can support soil regeneration. These grasses can also be used as fodder for animals.
- Traditional farming practices, for example, growing yam as emergency food in times of food shortages, should be maintained, and not lost in the rush to commercialize.
- The concept of value should be expanded, thinking about the value of other resources, including biodiversity, rather than only financial value that can be derived from a food system.
- Uganda is very rich in biodiversity, and efforts should be made to ensure that crops are grown and are not lost in the transition to commercialization, with a focus on large scale mono-cropping.

3 Next actions and research questions

At the end of the learning journey, the group reflected on what they had learned and what they might be able to implement in their own context. The team from Arua indicated that they were interested in developing their food systems governance activities. They like the idea of the Coalition of the willing, and reflect if they could create a similar type of coalition in Arua. The Kabarole Research & Resource Centre team presented some examples of how they had developed their governance work, including how they approached getting politicians involved.

To get local members of parliament (MPs) interested in the issue of food waste, KRC contacted market inspectors from one of the local markets, and asked if a photographer could accompany them during their regular inspections. The photographer was able to document high level of food waste, as well as the highly unsanitary conditions in the markets, which do not have adequate waste removal services. They also documented the conditions where much of the food sold by informal vendors is prepared. These photographs were presented to a group of local MPs and others from local government who became concerned about the unsanitary conditions that they saw. Based on this activity, it was decided that it would be better not to enforce an old law which bans street vending, which only serves to drive informal vendors to work in unsanitary conditions. While the law has not been officially repealed at the national level, it is not longer enforced in Fort Portal, providing an example of how advocacy around a key issue at the local level can be effective, even in the context where the official policy does not change.

Key learnings from the Arua team The following section reflects on how MSPs can support improved food systems functioning and transitions to more sustainable food systems:

- Multi-stakeholder platforms, especially those which involve academics and other research organizations can provide a link between farmers, research and extension systems and support improved ongoing collaborations between farmers and the extension system. During the visit, the team saw many farmers who were experiencing a type of banana wilt that was devastating the banana crops. Farmers had reached out to researchers to find out what was causing the problem. Researchers would come and collect samples, but did not bring the findings back to the farmers or provide solutions to control the disease. Providing a more formal setting for these groups to come together and discuss support improved uptake of research findings and improve the practices of farmers.
- One challenge that was raised by both famers as well as small scale processers was the issue of having a conducive business environment. High costs of inputs and taxes mean that farmers and innovators are unable to scale up operations. Providing a venue for these stakeholders to discuss their challenges directly with policy makers may lead to improve the situation.
- The team from the West Nile reflected on the positive examples of on farm diversity, and the various organic methods that were being used. A platform could provide an opportunity for farmers to share such practices with each other and identify market linkages for some of their new crops, for example herbs that are grown to repel pests.
- Climate and environmental factors affect the local food system, however environmental policies are often set by national or even supra-national actors. While an MSP bringing together actors at the local level can support improved horizontal coordination, improving vertical coordination, and linking to national actors and policies is also necessary in many situations.
- Addressing bottlenecks around food systems transformation is possible with collaborative efforts of different actors, including political leaders and policy makers. Certain issues seem to be easiest to tackle, especially those where there is broad agreement about the issue and potential solutions. The Food Systems Lab presented an example of how the platform brought together policy makers, market inspectors and informal vendors to develop solutions to food waste issues. However, issues which are more contentious, such as when and how to work with supermarkets, where less successful, suggesting certain types of issues are more conducive for platform engagement than others.
- Learning journeys/exchange visits are important in discovering new knowledge, experiences and practices that are beneficial.

The table below seeks to summarize the key elements for both of the MSPs and reflect on the both the strengths and some challenges for both MSPs. The West Nile Innovation hub is much younger than the Food Change Lab, so the strengths and challenges of both MSPs should be understood within their overall age.

	Arua-West Nile Innovation Hub	Fort Portal- The Food Lab
City	Small but rapidly growing, large refugee population, strategic location for regional trade	Small but rapidly growing, regional hub for a high potential agricultural area
Length of operation of MSP	Recently established, formally launched Nov 2022	Established in 2016
Focus of the MSP	Supporting the uptake of regenerative agricultural practices and production of more diverse diets, linking research and practice	Supporting uptake of sustainable diets, focus on production and consumption with a strong link to promoting traditional foods, strong advocacy function
Convening actor	Muni University (academic)	Kabarole Research & Resource Centre (NGO)
Membership	Currently mainly researchers, including government, and regional planners, would like to expand in the coming years	Broad base of local membership, with alliances representing local government, artists, farmers, informal vendors and local women's groups
Level of operation	Region (West Nile)	City and surrounding region
Strengths	Strong links with academic and research actors, clear vision of promoting regenerative and sustainable agriculture	Strong involvement of a range of stakeholders including often marginalized groups, links to government actors and track record in advocacy
Challenges	Bringing in a broader group of stakeholders, ensuring institutional embedding for sustainability	Improving vertical linkages for working on issues such as environment, developing a process for working on more contentious issues

The group from the West Nile Innovation Hub started the learning journey with the goal of learning more about how to improve food systems governance. After the journey, they came up with the following actions which they would like to implement to move forward with what they have learned.

Next steps to improve food systems governance in the West Nile Region:

- To move the WNIH forward they would like to map all food systems stakeholders in the region, including nutrition implementing partners and district leadership to identify potential platform members and support more inclusive participation and collaboration.
- According to West Nile traditions, there are food system roles that are gender specific. Therefore, it is important to sensitise and involve all genders in activities along the value chain so that all relevant actors can help address and improve the food systems of the region.
- Use the WNIH platform to reach out to more stakeholders, including finance institutions, and areas of focus for further research, advocacy and policies formation to support normative food systems transformations.

Other critical issues which the team would like to work on:

- Various types of new farming can be explored including urban farming to support households to access more diverse diets as well as promoting more mixed farming methods. Food losses and waste in urban areas are other pressing issues in both areas. These issues also align well with the priorities of the WNIH in promoting innovations in regenerative agricultural practices.

Using the platform to engage with actors working on nutrition behavioural change, cultural taboos and other factors which limit women from eating healthy diets can be tackled.

The learning journey provided an opportunity to reflect on how the various regional food systems develop around two rapidly increasing urban cities in Uganda. The exchange provided interesting examples for comparison between the two cities, and actionable insights that can be used to develop more inclusive and sustainable urban cities in the future.

References

- Arup International Development. 2016. "Future Proofing Cities: Uganda-Secondary Cities." Future Proofing Cities. Arup International Development and Cities Alliance.
- Béné, Christophe. 2022. "Why the Great Food Transformation May Not Happen – A Deep-Dive into Our Food Systems' Political Economy, Controversies and Politics of Evidence." *World Development* 154 (June): 105881. <https://doi.org/10.1016/j.worlddev.2022.105881>.
- Gillespie, Stuart, Mara van den Bold, and Judith Hodge. 2019. "Nutrition and the Governance of Agri-Food Systems in South Asia: A Systematic Review." *Food Policy*, Special Issue: Leveraging Agriculture for Nutrition in South Asia, 82 (January): 13–27. <https://doi.org/10.1016/j.foodpol.2018.10.013>.
- Hengsdijk, Huib, Marlene Roefs, Fatima Pereira da Silva, Marleen Hermelink, Jan van der Lee, Ayodeji Deolu-Ajayi, Henk Wösten, et al. 2020. "Food System Analysis of Arua District in Uganda: Working Document KB Project Improving Food Systems in Less-Favoured Rural Areas of East Africa." <https://doi.org/10.18174/525309>.
- "KDLG – Kabarole District Local Government." n.d. Accessed November 22, 2022. <https://kabarole.go.ug/>.
- Leeuwis, Cees, Birgit K. Boogaard, and Kwesi Atta-Krah. 2021. "How Food Systems Change (or Not): Governance Implications for System Transformation Processes." *Food Security* 13 (4): 761–80. <https://doi.org/10.1007/s12571-021-01178-4>.
- Mackay, Heather. 2019. "Food Sources and Access Strategies in Ugandan Secondary Cities: An Intersectional Analysis." *Environment & Urbanization* Vol 31(2). <https://doi.org/10.1177/0956247819847346>.
- Nabwire, Leocardia, Bjorn van Campenhout, Nicholas Minot, Razin Kabir, Rob Vos, Sudha Narayanan, Brendan Rice, and Samson Dejene. Aredo. 2022. "Impact of COVID-19 on Food Value Chains in Uganda: Results of Surveys of Farmers, Traders, and Processors." Working Paper. FPRI: International Food Policy Research Institute. <https://www.ifpri.org/publication/impact-covid-19-food-value-chains-uganda-results-surveys-farmers-traders-and-processors>.
- "Secondary Cities in Uganda: Migration-Related Opportunities and Challenges. – Economic Policy Research Centre." n.d. Accessed November 14, 2022. <https://eprcug.org/eprc-highlights/secondary-cities-in-uganda-migration-related-opportunities-and-challenges/>.
- Uganda Bureau of Statistics (UBOS), and ICF. 2018. "Uganda Demographic and Health Survey 2016." Kampala, Uganda and Rockville, Maryland USA: UBOS and ICF.
- Vorley, William, and Felia Boerwinkel. 2016. "Uganda Food Change Lab: Planning for the Future Food System of Kabarole District."
- Webb, Patrick, Tim G. Benton, John Beddington, Derek Flynn, Niamh M. Kelly, and Sandy M. Thomas. 2020. "The Urgency of Food System Transformation Is Now Irrefutable." *Nature Food* 1 (10): 584–85. <https://doi.org/10.1038/s43016-020-00161-0>.

Wageningen Centre for Development
Innovation
Wageningen University & Research
P.O. Box 88
6700 AB Wageningen
The Netherlands
T +31 (0)317 48 68 00
wur.eu/cdi

Wageningen Centre for Development Innovation supports value creation by strengthening capacities for sustainable development. As the international expertise and capacity building institute of Wageningen University & Research we bring knowledge into action, with the aim to explore the potential of nature to improve the quality of life. With approximately 30 locations, 7,200 members (6,400 fte) of staff and 13,200 students, Wageningen University & Research is a world leader in its domain. An integral way of working, and cooperation between the exact sciences and the technological and social disciplines are key to its approach.

Report WCDI-22-234



To explore
the potential
of nature to
improve the
quality of life



Wageningen Centre for Development Innovation
Wageningen University & Research
P.O. Box 88
6700 AB Wageningen
The Netherlands
T +31 (0) 317 48 68 00
wur.eu/wdci

Report WCDI-22-234

The mission of Wageningen University & Research is "To explore the potential of nature to improve the quality of life". Under the banner Wageningen University & Research, Wageningen University and the specialised research institutes of the Wageningen Research Foundation have joined forces in contributing to finding solutions to important questions in the domain of healthy food and living environment. With its roughly 30 branches, 7,200 employees (6,400 fte) and 13,200 students and over 150,000 participants to WUR's Life Long Learning, Wageningen University & Research is one of the leading organisations in its domain. The unique Wageningen approach lies in its integrated approach to issues and the collaboration between different disciplines.

