



Food and Agriculture
Organization of the
United Nations

Identifying shocks and opportunities for resilience in the Lusaka city region food system



Lusaka City Council

Cholera, Covid-19, floods, drought, and crop and animal diseases remain major shocks and stressors in the Lusaka city region food system (LCRFS). This factsheet presents some of the many and often overlapping shocks that have recently (2017-2022) disrupted the performance of the LCRFS. This factsheet is based on the question: How could Lusaka feed its ever-growing population, improve the livelihood of its food system actors, and thereby prosper in circumstances of increased opacities resulting from disasters and stressors? Between 15 June and 14 October 2022, we conducted 15 interviews with a wide-range of LCRFS actors, and then hosted two focus group discussions to collect their perceptions about:

- shocks, stresses, their impacts that affected the LCRFS;
- collective responsive developed to anticipate, prevent, mitigate these shocks or their impact; and
- immediate, feasible, concrete actions to take forward to foster resilience in the LCRFS.

1. GROWING POPULATION AMID DECLINING FOOD SELF-SUFFICIENCY AND INCREASING URBAN POVERTY

The city region area covers 4.3 million hectares (ha) of land and includes seven surrounding districts as shown in Figure 1. The green areas in the Figure indicate major sources of horticultural, aquaculture and poultry products. The region faces complex challenges, resulting in it being unable to feed all its citizens.

First, its population has grown from less than a million in the 1990s to 3.3 million in 2022. The population continues to grow at 4.9 percent annually, and is projected to reach over 5.2 million by 2035 (Zimmer et al., 2022:4). A Habitat for Humanity report¹ indicates that most of the demographic shift is occurring in low-income informal settlements and poorly serviced peri-urban communities. According to the World Bank,²

25 percent of the population in Lusaka Province is very poor and 45 percent is moderately poor.³ Urban poverty and unsustainable livelihoods directly affect access to food for millions in the region (IOM, 2019).⁴

Second, Lusaka does not produce adequate staples (Consumer Unity and Trust Society, 2020). In 2019 the Food and Agriculture Organization of the United Nations (FAO) and the Resource Centre for Rural Agriculture and Food Security (RUAF) estimated that 40 percent of the food consumed in the region is imported.⁵ During focus group discussions, stakeholders expressed grave concerns about the declining reliability of local food sufficiency amid rapid change in the use of agricultural green areas to built up areas.

Third, markets play a critical role in ensuring access to food. Most citizens in Lusaka city do not grow their own food, but rather access food in the market. Thus, food security is dependent on many people's income and non-farm livelihood activities. In the region's rural areas, households depend on their fields for income and food. More than 70 percent of households in low-income residential areas, which host over 72 percent of Lusaka's population rely on semiformal and informal self-regulating food markets for their daily food needs (Blekking, et al., 2017).⁶ However, the Water and Sanitation for the Urban Poor⁷ organization (WUSP) drew attention to the stark realities of the very poor conditions of water and sanitation services at these food markets, thus, leading to informal settlements and informal markets as perennial epicentres of waterborne diseases.

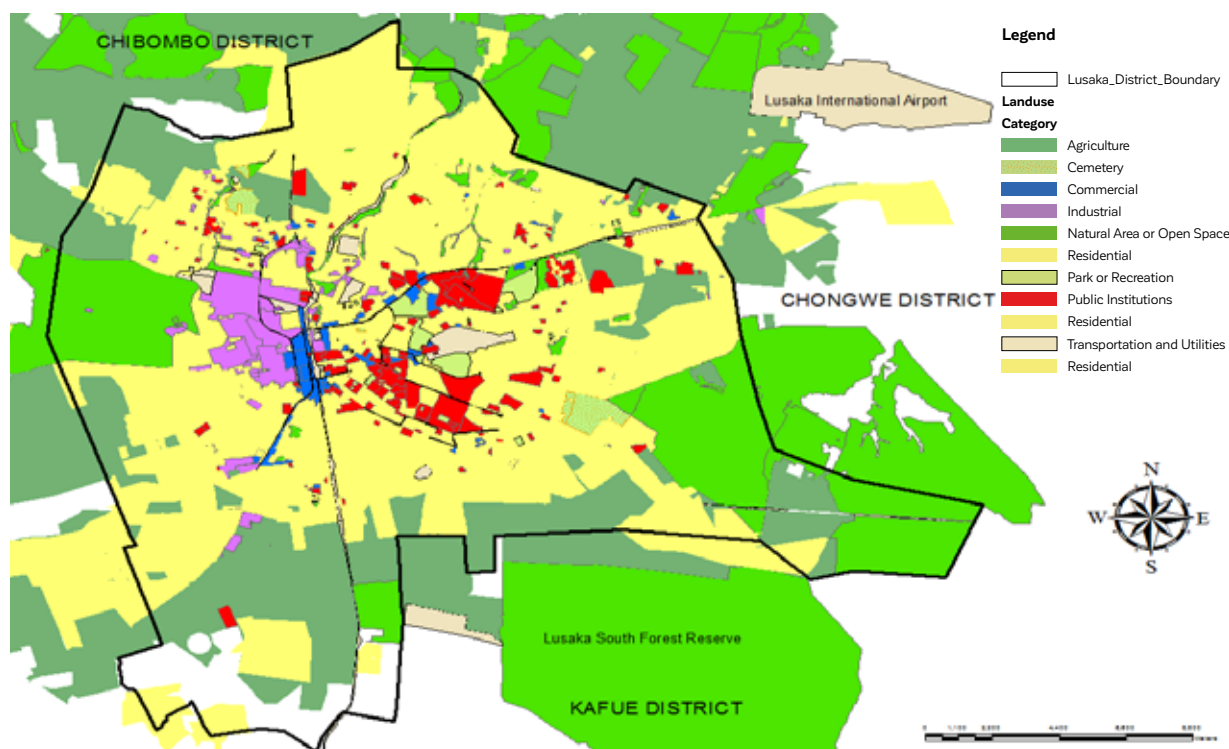
Consumer Unit and Trust Society (CUTS) (2020:7) summarizes the vulnerabilities associated with Lusaka's food chains as:

Even a day's disruption in the current system can lead to food shortages at the household level in Lusaka. For the poor, this could mean a rise in food prices to a level they would not be able to afford.

As a result of this vulnerability, Lusaka City Council partnered with CUTS to launch the first ever Lusaka Food Security Initiative (LFSI)⁸ in 2020. The initiative

- 1 International reports describe the increasing challenges of slums in Zambia. <https://www.habitatforhumanity.org.uk/country/zambia/>
- 2 World Bank report shows high levels of urban poverty. <https://www.worldbank.org/en/country/zambia/publication/mapping-subnational-poverty-zambia>
- 3 <https://zambia.opendataforafrica.org/dajivbb/living-conditions-statistics?region=1000350-lusaka-province>
- 4 https://www.iom.int/sites/g/files/tmzbd1486/files/populations_at_risk_-_implications_of_covid-19_for_hunger_migration_and_displacement.pdf
- 5 <https://www.fao.org/3/ca6078en/CA6078EN.pdf>
- 6 <https://www.mdpi.com/2071-1050/9/12/2191>
- 7 WUSP documents major sanitation challenges in Lusaka's urban markets and slums. <https://www.wsup.com/content/uploads/2017/07/07-2017-Public-Private-Partnerships-Explained-Zambia.pdf>
- 8 The LFSI mentions the overlapping shocks that make the LCRFS vulnerable- <https://cuts-lusaka.org/pdf/policy-brief-the-lusaka-food-security-initiative.pdf>

Figure 1 Extent of the Lusaka city region food system



Source: FAO and RUAF, 2019:12

aims to ensure city residents have access to diverse, health and sustainable foods through policy advocacy, community outreach, research and knowledge dissemination and the promotion of food production.

2. OVERLAPPING SHOCKS IN THE LUSAKA CITY REGION FOOD SYSTEM 2017-2022

During the last five years, the LCRFS has faced persistent disruptions as a result of recent and often overlapping shocks and stresses, including cholera, Covid-19, urban flooding and droughts, punctuated by outbreaks of crop and animal diseases, international wars and conflicts. These shocks have had varied impacts on the food system in the city region (CUTS, 2020; Lubungu and Singogo, 2021) with “the poor being the most affected” (Zimmer, et al., 2022:18). Table 1 provides a summary of the major shocks and their impacts on the LCRFS for the period 2017-2022.

Shocks are often related, and their impacts are intertwined, as Figure 2, created by LCRFS actors, shows, which is the case for floods and cholera outbreaks in 2017-2018. Floods disrupted food production in the city

region; supply chains: distribution and transportation, and led to the closure of markets. In addition, urban flooding triggered a widespread cholera outbreak in the same year (Sinyange, et al., 2018). Cholera outbreaks are endemic to Lusaka because of poor water and sanitation services, poor housing conditions and learning from previous pandemics in the city has been limited. Local media show evidence of the overlap of droughts and crop diseases 2018-2019.⁹

In 2020, Covid-19 led to adverse impacts on the LCRFS such as the high cost of production and rising cost of food. The war in Ukraine in 2022 triggered a further increase in the cost of farming inputs in the region. Stakeholders describe the war in Ukraine as a catastrophe that will affect the future food security of smallholders.

The overlapping shocks affecting the functioning of the LCRFS have rendered the food sector highly vulnerable. First, all named disasters have increased the risk of hunger, malnutrition and worsened poverty levels for low-income households in the region. Loss of non-farm livelihoods related to Covid-19, cholera and loss of assets, and crops and livestock from climate related shocks has resulted in both food and income insecurity for both farmers and consumers.

9 Cholera and crop disease affected food supplies in the region- <http://www.daily-mail.co.zm/tag/armyworms/>

Second, these shocks have affected the growth potential of the food sector in the Lusaka region, thereby, affecting the region's capacity to attain food sovereignty, reduce unemployment and address widespread poverty in urban areas and rural farming communities.¹⁰ Finally, the impact of the overlapping stressors has placed constraints on the region's

ability to invest in and support diversification of the food sector. This against the fact that agricultural diversification is seen as a government top priority. Achieving food diversification and addressing poverty, hunger and unemployment in the LCRFS will require adequate investment in building resilience in the LCRFS.

Table 1 Overlapping shocks to the city region food system and their impacts

Periods	Shocks impacting the Lusaka city region food system	Impacts
2017; 2020	Floods	<ul style="list-style-type: none"> • Outbreak of cholera pandemics • Inaccessible flooded food markets – semiformal and informal markets • Loss of livelihoods and damage to make-shift food market infrastructure • Increased food loss and spoilage • Crop failure and low productivity • Damage to key infrastructure linking food producing areas and the food markets in town • Reduced food supply to the city from traditional production areas in the city region
2017-2018	Cholera pandemics	<ul style="list-style-type: none"> • Complete closure of semiformal and informal food markets, restaurants, and bars • Disrupted transport system • Disrupted food supply and distribution system • Increase in food prices • Increased cost of doing business among food producers and food dealers • Loss of life and livelihoods • Increased hunger and high risk of starvation • Increased food loss and spoilage
2018; 2022	Droughts	<ul style="list-style-type: none"> • Crop failure and low productivity • Lack of adequate and unreliable electricity supply for food preservation and improved storage mechanisms • Failure of irrigation because of lack of adequate water • Reduced food supply • Rise in food prices
2020-2021	Covid-19 Pandemic	<ul style="list-style-type: none"> • Partial closure of semiformal and informal food markets, restaurants and bars • Loss of jobs, income, life, and livelihoods • Disrupted and over regulated public transport system • Increased cost of running food businesses, e.g. cost of adherence to Covid-19 regulations for formal food outlets • Disrupted international food supply chains and supply of farming implements • General economic decline and depreciation of the local currency • Increased cost of food production • Reduced supply of food on the market • Increased local demand and increased cost of food • Increased food loss and spoilage because of limited access to markets
2022	War in Ukraine	<ul style="list-style-type: none"> • Disrupted international supply chains • Increased cost of farming implements and inputs • Increased cost of food production • Sharp rise in fuel prices • Rise in the cost of food

10 The International Institute for Environment and Development presented evidence of the declining food security situation in 2018-2020 as a result of overlapping shocks in Zambia. <https://www.iied.org/beyond-maize-exploring-agricultural-diversification-zambia>

3. A CULTURE OF CENTRALIZED AND REACTIVE DISASTER MANAGEMENT

Stakeholders in interviews and focus group discussion say there is an entrenched culture of reactive disaster management in Zambia, where the focus is placed on absorbing or adapting to impacts. As such, it is unsurprising that this factsheet documents a series of instances where there has been a lack of disaster preparedness (anticipative) and prevention in LCRFS. The findings from various reports and interviews have provided evidence of the reactive nature of institutions when dealing with disasters that affected the LCRFS during the period 2017 to 2022.

Nearly all responses to the documented disasters were driven by the state, and this draws into question the robustness and capacity of the responses to build resilience in the LCRFS. The centralized, state-led interventions, lacked diversity of actors and actions that could seamlessly support adaptation, mitigation, and resilience-building efforts in the LCRFS. As such, the entrenched vulnerabilities of the Lusaka region food sector remain unsolved by documented disaster response measures as discussed following.

3.1. A highly centralized and reactive institution

The Disaster Management and Mitigation Unit (DMMU)¹¹ is responsible for ensuring the nation's disaster management objectives are achieved. However, it is a highly centralized and highly reactive institution under the Office of the Vice President. The Unit participates in, and coordinates, all disaster response efforts in the Lusaka region. However, interviews and focus group discussions revealed that several flaws tarnish the DMMU's interventions.

First, DMMU actions are mostly top-down and bereft of consultations with stakeholder, as shown by the response to the cholera and Covid-19 pandemics. Indeed, the government used public emergency laws and pandemic control statutes to proclaim adaptive measures to curb the pandemic. Key stakeholders in the food sector, such as farmers, food agents, marketers, transporters, bar and restaurant owners, and consumers were not effectively consulted, thereby the consequences of interventions for food system actors were ignored.

In addition, interviews, and conversations during the focus group discussions show that the ordinary individual in the markets and on the farms were left out of the design and the launch of the Covid-19 relief fund and electricity support scheme – measures that aimed to absorb the shocks – and there was zero input from non-state local actors. While stakeholders expressed their appreciation,

and knowledge of the multistakeholder approach, with numerous private sector donations to mitigate the impacts of the Covid-19 pandemic, a functioning coalition was not developed that could respond to the pandemic. The national government has retained its top-down approach and lacks a mechanism through which it can consult ordinary citizens and civil society.

Second, this lack of consultation runs the risk of maladaptation, which has become evident. As a result of the lack of formation of a popular coalition on disaster response in the LCRFS, emergency measures undertaken by the government came at a huge cost to actors. For example, the stakeholders lamented the huge losses incurred by food dealers, when the Soweto market was closed in 2018 at the peak of the cholera pandemic. Worse, the closure of bars and restaurants during the Covid-19 pandemic weighed heavily on the food system, leading to a low level of compliance with Covid-19 measures in restaurants and bars, as reported by local media. Most households in low-income areas argued it was “better to die of Covid-19 than die of hunger” and expressed relief and gratitude at the re-opening of bars and restaurants during the Covid-19 pandemic.

Third, DMMU actions were mostly reactive, as describe in Figure 2 and were illustrated by the failure to prevent the recurrent cholera pandemics. The Keep Markets Clean Campaign (KLC), had been initially designed as a preventive initiative, and did not lead to cleaner markets that reduced the risk of cholera in the city region, because it lacked interagency and institutional support and annual budgetary allocations.

Fourth, the political nature of many interventions was detrimental to their effectiveness. The government used public media to heavily campaign and popularize all disaster responses. This was closely supported by use of ruling party supporters (cadres) to **enforce the implementation** in markets and streets. Interviews and reports from the focus group discussions show there were doubts about the actual performance and inclusiveness and transparency of public cleaning efforts and funding of the same. The participants in the focus group discussions and interviews concluded that the heavy use of public media, and political party cadres from the ruling party (Patriotic Front Party), discouraged many stakeholders from actively participating in the cholera response measures, as they feared being associated with party politics.

Finally, stakeholders argued equally that there was a **lack of transparency** and accountability when administering Covid-19 interventions and funds. This led to poor targeting, low levels of efficiency, and reduced impact of the measures, thereby reducing the capacity of the LCRFS to sustainably maintain food supply chains at the peak of the crises. Stakeholders described this as regrettable and suggested the need to change this approach. Transparency International inferred that

11 <http://www.dmmu-ovp.gov.zm/>

Zambia’s “Ministry of Health’s handling of the COVID-19 donations were a potential conduit for corruption.” [Local media](#) documented disturbing evidence of abuse and mismanagement of Covid-19 resources, as over ZMW 1.3 billion in Covid-19 funds could not be accounted for properly. In the same vein, [researchers](#) believe corruption and petty politics were central to Zambia’s 2017-2018 cholera pandemic and the failed cholera response. Participants in the focus group discussions and interviews largely agreed that perceived corruption was a motivating factor for the lack of involvement of many stakeholders in central government disaster response measures.

3.2. Climate shocks: greater governmental coordination

Regarding both floods and droughts, DMMU actions were better coordinated, but still suffered from a lack of a broader stakeholder consultation and remained reactive centered on adapting to or absorbing the shocks (Figure 2). During the floods, DMMU launched three major interventions: evacuations, administration of relief food to the victims and re-distribution of farm inputs (Table 2). The initiatives built on social cash transfer schemes, the DMMU food relief system and the Farm Input Support Programme run by the Ministry of Agriculture (MoA). The agency worked with transporters, agrodealers, and cooperatives to deliver inputs to farmers and households affected by the flood. As shown in Figure 2, stakeholders agreed there was little coordination in responding to floods and droughts. The efforts to address the droughts

were largely re-distribution of inputs to farmers whose initial planting had failed.

Stakeholders have lamented the limits of a DMMU-led consultation process, which seem to focus on inter-ministerial and intra-government agency coordination, a situation that leaves out other key stakeholders such as farmers, civil society, and consumers.

Government was able to adapt by temporarily distributing agricultural inputs with the help of the FISP system during flood and drought periods, to support food production and supply (Table 2). Without the FISP infrastructure and system, support to food producers and households during the years of flooding and drought would have been difficult to implement. As shown in Table 2 and Figure 2, there was some coordination among government institutions. Stakeholders argued during the interviews and focus group discussions that FISP failed to support farmers to adapt to the changing food context in Lusaka, which requires deeper transformation of the LCRFS.

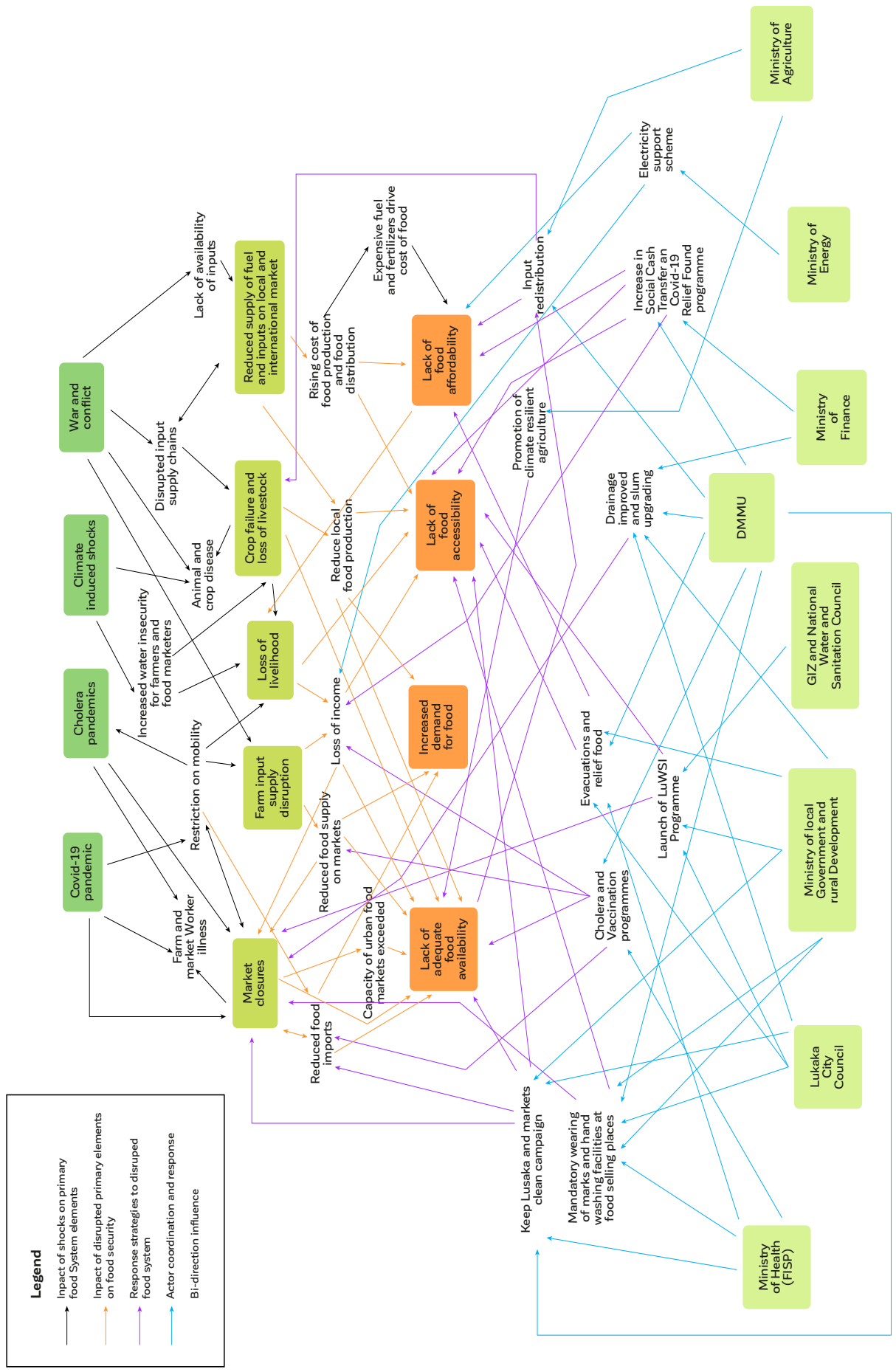
To prevent flood risks and improve water and sanitation services in Lusaka, the German Agency for International Cooperation or GIZ, Lusaka Water Supply and Sanitation Company, and Lusaka City Council launched the Lusaka Water Security Initiative (LuWSI) (Table 2), together with several others. The LuWSI played a key role in responding to Covid-19 in prevention of waterborne diseases and improved hygiene in Lusaka region, as LuWSI is highly consultative and coordinates actions in the water and sanitation sector.

Table 2 Collective actions and policies for the Lusaka city region food system

Stress and shocks	Collective initiatives and public policies	Impacts of the response measures	Characteristics that were or were not impacted by interventions	Mobilized resilience capacities
Cholera pandemic	<ul style="list-style-type: none"> Re-launch of the Keep Lusaka Clean Campaign. Monthly cleaning of public spaces (markets, streets). The Zambian President initially launched this programme in 2007, which was relaunched in 2018 in response to the cholera pandemic. The programme was relaunched at Soweto market. Between 2007 and 2018, publicly supported market cleaning was not possible as stakeholders were not coordinated and there was no budget for the programme. Cholera vaccination programme was launched in 2018. Launch of the LuWSI programme. The key roles of LuWSI involve coordination of stakeholders and actors in water and sanitation investments in Lusaka. The aim is to ensure the sustainable supply of safe and clean water while improving sanitation services for all residents, especially in informal settlements. 	<ul style="list-style-type: none"> Improved quality and cleaner markets. Frequency of cholera outbreaks in the city has reduced since 2018. Food markets have not been closed because of a cholera outbreak since 2018. With declining economic strength because of Covid-19 and loss of jobs, there has been a growth in informal food markets in Lusaka. This shows the limited reach of the Covid-19 measures. Leaders at Soweto market revealed that the campaign has given rise to unblocking drainage weekly at the Soweto market. Improved coordination in water and sanitation sector in Lusaka in part due to LuWSI initiative. 	<p>Food for the majority of urban citizens in the Lusaka city region depends on semi-formal markets to access food. Markets are crucial for ensuring a steady supply availability of affordable food. Thus, the government does all it can to keep markets open and operational. There is one dominant large semi-formal food market in the city region, Soweto market. When this market is well managed, food supply to the city can be assured.</p>	<p>In 2007, public cleaning was about building adaptive capacities. If the effort had continued, the initiative would have created preventive capacities. The on-going cleaning activities are about creating preventive capacity. The cholera vaccination programme builds adaptive capacities. LuWSI aims to build preventative capacities. Most of the reviewed interventions are focused on adaption and not on preventive goals.</p>

Stress and shocks	Collective initiatives and public policies	Impacts of the response measures	Characteristics that were or were not impacted by interventions	Mobilized resilience capacities
Covid-19 Pandemic	<ul style="list-style-type: none"> Mandatory citywide wearing of facemasks and mandatory provision of hygiene facilities at supermarkets. With poor involvement of the public on programme design and implementation, the Covid-19 response measures were unable to be implemented at Soweto market because they were impossible to reinforce. Launch of the Covid-19 vaccination programme. This was implemented to lower the risk of catching the virus, death and to ensure continued functioning of society. Launch of the Covid-19 relief fund and cash transfers in 2020 by the government in partnership with international organizations such as UNICEF, which contributed funds for government social cash transfers. The target was poor households. Launch of electricity support scheme for the vulnerable. LuWSI was expanded to support Covid-19 measures in Lusaka. 	<ul style="list-style-type: none"> Partial closure of food markets affected the availability, accessibility and cost of food. Wearing of facemasks and placement of hand washing facilities at entrances of supermarkets and other public places contributed to reduced infection rates, hence, reopening of food markets, restaurants, and bars. Vaccination drive reduced the risk of infection and death from Covid-19. Covid-19 relief fund and electricity subsidy from the government provided immediate access to finances to sustain livelihoods. LuWSI has led to better coordination in the water and sanitation sector in Lusaka. LuWSI mobilized investments to improve water and sanitation in informal settlements, protect groundwater sources for the Lusaka Water Supply and Sanitation Company. These impacts contributed to improved standards of hygiene as a measure of responding to Covid-19 and cholera prevention. 	<p>The LCRFS is heavily dependent on money. Most consumers depend on income to access food. Hence, the Covid-19 relief funds, electricity support scheme bolstered access to food for vulnerable populations. Food is largely re-distributed at one major food market - Soweto. Therefore, efforts aimed to improve the management of the market to ensure a steady food supply into the city. Apart from measures to clean the market, no other known measures have been put in place to improve the functioning of Soweto market.</p>	<p>Vaccination built preventative resilience capacities. Wearing of facemasks and placement of handwashing facilities at entrances of buildings and supermarkets built adaptive capacities. Covid-19 Relief Funds, cash transfers and electricity subsidy increased adaptive capacities. LuWSI was about build preventive capacities. There is limited investment in measures designed to build preventative capacities. This is so because DMMU is a very reactionary institution.</p>
Droughts	<ul style="list-style-type: none"> Disaster Management and Mitigation Unit (DMMU) launched a crop and seed redistribution programme using early maturing seed for maize and other crops. The DMMU provided relief food to affected households in informal settlements and in rural areas of Lusaka province. Stakeholders linked the occurrence of droughts to crops diseases. The measures to address the crop diseases were same as those for floods and droughts. 	<ul style="list-style-type: none"> Through the replanting programme, households managed to harvest crop for home consumption and for sell. Food relief programme is believed to have helped save human life during the rainy season. LUWSI Initiative has improved policy and institutional coordination in the Lusaka water sector. 	<p>The FISP is a key element in food systems for Zambia and Lusaka in particular. The input distribution system is well established. Hence, the input re-distribution used the database to verify the locations of farmers affected by floods, droughts and crop and animal diseases.</p>	<p>The DMMU led initiative built adaptive capacities while LuWSI initiative built preventative capacities. Replanting was designed to build adaptive capacities.</p>
War in Ukraine	<ul style="list-style-type: none"> Not clear 	<ul style="list-style-type: none"> Not yet clear, as measures do not seem to have been instituted to address the cost of implements. 	-	<ul style="list-style-type: none"> Not clear

Figure 2 Causality chart in the disaster impacts and response pathways in the Lusaka city region food system for the period 2017- 2022



3.3. Analysis of the major gaps

A series of characteristics of the food system are critical for enhancing resilience. Diversity, which is most important, seems to be lacking at all levels of the LCRFS, from production to distribution and marketing.

This lack prevents the development of other critical resilience-enhancing characteristics, such as flexibility or redundancy. Another critical aspect is coordination between actors at all levels. Here again there are constraints, see Table 3.

Table 3 Attributes that strengthen resilience and gaps

Resilience-enhancing characteristics in food systems	What Lusaka city region food system actors perceive
<i>Diversity</i> : multiple types of actors, diverse in size, status, mode of operation, etc. provide the different functions (diverse producers, distributors, wholesalers, retailers, etc.) leaving space for reorganization in the event of shocks and stresses	Diversity in the Lusaka city region food system (LCRFS) is lacking at all levels: rainfed production systems are dominated by the influence of the Farmer Input Support Programme (FISP), while distribution and marketing activities are overshadowed by the semi-formal Soweto market. Disaster response is dominated by the state and is focused on immediate survival and less on resilience.
<i>Responsiveness of city region food system (CRFS) actors</i> : the capacity to respond quickly and efficiently to short, medium and long-term impacts of shocks and stresses in an innovative manner	The responsiveness of LCRFS actors is low. No collective action has been reported triggered by LCRFS actors, beyond the activities of the national government. This does not mean responsiveness at the individual level does not exist, but the ability to adapt and transform arises from the food system responding to changing consumption patterns, changing climate and overlapping pandemics in the LCRFS.
<i>Connectivity and coordination</i>	The LCRFS is highly disjointed. There is no coordination or consultation mechanism to facilitate building of a coalition to drive effective and robust management of the food sector. Production systems (land, water, environment) are beyond the control of local authorities while national and local government institutions contest distribution and marketing systems. The space and opportunity for non-state actors is limited.
<i>Decentralization</i>	All shock-related interventions are centralized, not designed to address local specificities, and therefore subject to maladaptation. While agriculture is a decentralized function in Zambia's governance system, there is no clear function and role of local authorities in the formation and management of policy in the region's food sector.
<i>Flexibility</i> : to be able to quickly diversify sourcing and distribution channels (find new suppliers, new market channels, new crops, etc.) through the accumulation of infrastructure (markets, processing plants, etc.)	There is little flexibility because of the lack of diversity, but the possibility for change is good. The FISP has affected the capacity of the LCRFS to diversify suppliers of inputs, market actors, and the continuity of food sector businesses such as farmers, processors, retailers, but has not created flexibility. However, with changing consumption patterns, the food system may be forced to change and open up to an emerging market.
<i>Openness</i> : the local food system is connected to other local, regional or global food systems to exchange produce and knowledge <i>Openness</i> : the local food system is connected to other local, regional or global food systems to exchange produce and knowledge	The LCRFS is open and vulnerable to FISP dynamics that affect the maize value chain. The LCRFS is largely organized by the state and lacks a consultative and coordination system. The sector is beginning to open up to non-traditional horticultural food systems.
<i>Redundancy</i> : excess capacities (beyond normal requirements) as a buffer (multiplication of input suppliers, processors, storage facilities, market channels, etc.)	This characteristic needs a minimum level of diversity to be able to develop, which is currently lacking in the LCRFS.
<i>Visibility</i> : a clear, transparent understanding of the identity, location and status of food system actors and their relationships	Stakeholders are reasonable aware of the LCRFS. However, their awareness is affected by poor targeting, and the failure to address entrenched weaknesses that characterize the sector. The lack of coordination in the Lusaka food sector has created a large gap in inclusive policy formulation, planning and management. The response to disasters is largely controlled by the state.

Drawing from the previously analysed intervention, and a rapid review of LCRFS resilience enhancing characteristics, major gaps can be identified in strengthen food system resilience:

- **Focus is too much on adaptive interventions at the expense of preventive and transformative actions:** Responses to shocks, as discussed, shows that actions were mostly reactive, with an over emphasis on building absorptive capacities (food relief, FISP focused input redistribution, market closures, wearing facemasks) and less on building resilience through preventive or transformative activities such food diversification, reforming the FISP, irrigation infrastructure, food market expansion, food processing and improving storage and coordination of disaster management. Thus, the food system has not benefited from the previous and on-going shocks and is not resilient.
- **Inherent, systemic challenge of undiversified food system:** There is an inherent and endemic risk that LCRFS will fail as a result of lack of diversification. The food produced and available for consumers on the market does not offer a wide-range of choices, which has been attributed to the impact of FISP. Hence, there is a high risk that the system will fail, which can be caused by a single or overlapping shocks. Radical transformation is slow and lacking policy direction.
- **High risk of impact of anticipated shocks and stresses that have not been addressed:** Food systems that are resilient to climate change have not been adopted widely in the city region. The challenges are linked to implementation of required changes in the FISP, scaling up conservation agriculture and provision of support to food transition measures. Irrigation for agriculture continues to be under funded and under supported. Hence, food production is still vulnerable to climate shocks. The dominance of the Soweto market is obvious, and any citywide disaster could cause closure of this market at anytime. There are few food storage, food loss reduction measures, or food processing and preservation sites in the city. The region has no capacity to store food for use during emergencies and disasters.
- **Wide gaps between expected and real impacts of collective actions and public policies:** During interviews and focus group discussions, actors revealed that most interventions did not factor in the actual drivers of the high level of vulnerability among low-income food consumers. The underlying drivers of vulnerabilities in the LCRFS include high levels of poverty and unemployment, the high cost of food production, lack of coordination among food actors and lack of a clear role and mandate of the Lusaka City Council and other local authorities in the city region to

promote regional food. For example, there are issues related to increasingly fierce competition for land between urban development and food production, which is aggravating problems related to food security.

4. LOOKING AHEAD: INVESTING IN MARKETS AND ALTERNATIVE FOOD PRODUCTION SYSTEMS TO BUILD RESILIENCE

The LCRFS is vulnerable to multiple shocks. Actors in the CRFS have emphasized the minimal focus of the state government on absorbing and adapting to shocks, at the expense of anticipative, preventive and transformative actions. To be able to move in the right direction, the focus of possible solutions that affect the food system in the region should be on strengthening the resilience enhancing attributes of the LCRFS, in particular diversity and coordination:

- **Diversify marketing channels: Decongest large urban food markets and build small farmers' markets in food producing areas:** The first task should be to build resilience, which requires investment in decongesting Soweto market. Participants in the focus group discussions recommended changes in the governance of Soweto. First, food agents need to be better integrated into the food system and transparency guaranteed between food agents and producers in Soweto and all other markets. Second, market traders recommend the production of clear and enforceable guidelines on operations for food and market agents in large urban markets. The Africities Food Project at the University of Zambia (UNZA) and Lusaka City Council offered to lead drafting of the food agent integration guidelines. Further, larger and long-term efforts are required to upgrade and construct several neighbourhood-based markets in phases. The strategic area to start would be to upgrade Mtendere market as a second large-scale food market in Lusaka. In addition, fresh food markets Chongwe, Kafue, Chisamba need to be constructed.

Local authorities should drive urban food market infrastructure development, with support from the central government and international donors. During the focus group discussions stakeholders gave examples of the impact of the European Union funded New Soweto market and how it has improved the role of Soweto in Lusaka food systems. It is expected that the improved food marketing system, will result in farmers producing more, and consumers having increased options at competitive prices. Resilience will be ensured though improved storage, competitive pricing, lower risk of market closure and reduced food waste and loss.

- **Diversify production systems and protect peri-urban farmland:** Actors have recommended opening up food production systems to include horticultural products, use of irrigation and promotion of conservation farming. These measures would mitigate the effects of climate change on food production. These measures can start with building the capacities of cooperatives such as Kasisi Agricultural Training Institute and individuals who already practice conservation agriculture. Actors need to include the Conservation Farming Unit, Ministry of Agriculture (MoA), cooperatives, and individual farmers. To sustain this, farmland in the peri-urban food producing regions of Lusaka needs to be protected from other uses (See Figure 1) by improving urban planning. The relationship between local authorities, and other institutions on land administration, needs to be reviewed and strengthened. The lead actors on strengthening land administration systems should include all local authorities, the Ministry of Lands and Natural Resources, Ministry of Local Government and Rural Development. It is suggested that FAO and UN-Habitat could provide strategic technical support to drive the reforms.
- **Reform FISP and develop a programme for food diversification in the city region:** During the focus group discussions, stakeholders and interviewees noted that consumers were shifting towards horticultural food products, and suggested stakeholders needed to develop an interest in non-traditional foods consumed in the city region. Specific measures include deploying more livestock and horticultural experts in food producing areas such as the areas of Kanakantapa of Chongwe, Chisamba and Chibombo. The MoA and civil society, farmers, should collaborate on transforming from the FISP focused food system to the promotion of a high-value agricultural system in LCRFS.
- **Improve the coordination and management of LCRFS through devolution:** The Lusaka City Council and other local authorities have a minimal role in influencing the performance of their food systems. Risks that are associated with land management, market management, public health, poor targeting of DMMU and FISP policies are partly the result of the limited role local authorities play in the Lusaka food system and Zambia in general. In order to address this limitation, stakeholders such as the MoA, Ministry of Livestock and Fisheries, private sector actors, and international partners need to progressively build the capacity of local authorities so they can take charge

of the food sector in the region and ensure evolution of the food sector. In 2020, LCC and CUTS collaborated in the launching of the Lusaka Food Policy Council (LFPC),¹² a food governance initiative with guidelines to better govern the food system in Lusaka. Building on the will to improve food system governance in Lusaka, and with the increased government support for implementation of the 2013 Revised Decentralization Policy, stable funding for local authorities through use of the Constituency Development Fund (CDF), a functional unit within local authorities could be created urgently to manage and champion the food agenda in the city region. The unit should be mandated to provide land for food production; promote and secure public health needs at food markets and across the region; develop food markets and establish capacity-development for cooperative farming. Actors need to set up a city-region food forum to promote interest in the food system. Hivos International and the Africitiesfood project consortia members have agreed to be among the lead organizations to support the city region food forum for Lusaka. It is suggested that FAO and the European Union could provide technical support for this activity while the Decentralization Secretariat can drive implementation together with the local authorities and relevant ministries.

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12 The LFPC seeks to serve as a collaborative platform to identify solutions to address the complex issues facing the Lusaka food system- <https://zambianbusinesstimes.com/lusaka-food-policy-council-formed/>



Federal Ministry
of Food
and Agriculture

This factsheet is developed by Gilbert SIAME, under the guidance from Thierry Giordano (CIRAD) and support from FAO CRFS team (Guido Santini, Carmen ZuletaFerrari, Roman Malec, Isabella Trapani, Jia Ni), as well as colleagues from the Municipality of Lusaka, Celestina LWATULA and Geoffrey CHOMBA from FAO-Zambia Office.