



**Urban Councils Association of Zimbabwe (UCAZ), and
Training and Research Support Centre (TARSC)
Bulawayo, Chegutu, Harare, Kariba, Kwekwe, Masvingo and Victoria Falls local
authorities and Ministry of Health and Child Care**



in the Regional network for Equity in health in east and southern Africa (EQUINET)

**Health-promoting urban food systems in
selected local authorities in Zimbabwe**

1. Introduction

Urban food systems significantly influence urban health and well-being. Improved food systems and nutrition are a key performance area in national and international goals. Food systems encompass the range of activities involved in the production, processing, storage, marketing, consumption and disposal of foods and the institutions, actors, social groups involved with these different activities, to provide affordable, safe, nutritious foods in healthy food neighbourhoods. The food system is a key entry point for innovation, collaboration and system-wide change affecting many communities and sectors to support healthy people, healthy ecosystems, and in interaction with other systems, to support an inclusive, productive and regenerative and circular economy that promotes local incomes and food security. Such food systems generate and use evidence and ideas from multiple sources, including from community level, in multi-actor, multisector collaborations, and with governance approaches and capacities that support implementation, innovation and adaptive learning (FAO, 2022; UNEP, 2008; Barbour et al., 2021; Payen et al., 2022; EQUINET, TARSC, 2023).

A number of initiatives promoting healthy urban food systems are underway in urban areas of Zimbabwe. However, these promising approaches are not always systematically documented, known and shared to support exchange and learning. To address this, in 2022-2023 the Urban Councils Association of Zimbabwe (UCAZ) in association with the Training and Research Support Centre (TARSC) in EQUINET and focal persons in seven local authorities gathered and shared evidence on initiatives underway in these Zimbabwean cities/towns to promote healthy food systems, with review input from Ministry of Health and Child Care (MoHCC). The work aimed to share and promote wider uptake of promising practice in Zimbabwe and in the region, and to identify common challenges for policy dialogue.



Sites of the work in Zimbabwe
GIS Geography Under CC

The seven case studies were from Bulawayo, Chegutu, Harare, Kariba, Kwekwe, Masvingo and Victoria Falls. The case studies in each local authority are documented and available online (see Reference list for the url links for each). The case study authors are indicated below. This document, co-authored by the institutions involved, provides a synthesis of the key areas of promising practice reported in the case studies. It discusses common enablers and challenges, and areas for further development to build on and strengthen current practice for health-promoting local food systems, integrating also in Section 10.2 feedback and recommendations from discussion of the findings at the May 2023 UCAZ Health Officers Forum.

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Key messages

Evidence suggests that Zimbabwe's urban households are becoming more food insecure post-2018, including from the impact of COVID-19 and a shift to ultra-processed foods increasing food-related non-communicable diseases (NCDs). Case studies from seven urban local authorities (Bulawayo, Chegutu, Harare, Kariba, Kwekwe, Masvingo and Victoria Falls) in Zimbabwe urban local authorities point to range of initiatives underway to support healthy food systems.

Collectively, the local authorities are setting policy and local by-laws to address emerging food issues, facilitating dialogue with different stakeholders, and supporting new practice in food systems, including and beyond ensuring food standards and safety. Urban agriculture (UA) is being actively promoted with innovations to address local water and land constraints, including hydroponics, aquaculture; using available land in hospitals, schools and public spaces; replacing areas of waste dumping with nutrition gardens and recycling bio-waste to fertilise UA. Local technology has been developed and support provided for maize meal fortification, peanut butter processing, fish and livestock farming and vending, supported by solar energy and boreholes for more reliable inputs. Activities promoting skills to produce and prepare foods are being stimulated in communities, schools and public spaces, including to promote traditional foods, and to tap traditional knowledge. The activities indicate the scope of interventions for urban food systems that could be extended in all of UCAZ's 32 local authorities.

The case studies and the discussions at the Health Officers Forum identified areas for follow up to widen promising practice and to address deficits, detailed in Section 10.2 of this report, including:

1. Framing/updating with local stakeholders a local holistic, integrated, multisector **food system policy**, that can be used to identify local priorities, assets, resources and capacities available and needed.
2. Setting up / strengthening a multi-actor, multi-sector **food and nutrition committee** (FNC) to gather stakeholders and ensure visibility, evidence gathering and co-ordinated intervention. While councils perceive needing a nutritionist for this, formal FNC terms of reference (to be circulated), liaison with district FNCs and training of environmental health personnel (EHP) could support these FNC roles.
3. **Reviewing/updating national law** on food systems, and risk assessment and control across the food chain was seen as a priority, as a foundation for **setting and sharing new and model by-laws** across local authorities for wider enactment of by-laws and on emergent challenges, including (i) the sale, advertising, marketing and labelling of ultra-processed foods, particularly in schools, for young people and in port health; (ii) food safety across the food chain and biosafety of genetically modified and novel foods; (iii) standards for open-air food and informal vendors; (iv) for UA; and (v) on wastewater use in UA.
4. **Increasing environmental health practitioners and budgets** to meet widening demand for **food quality monitoring**, integrating HACCP in law, practice and capacity-building, oriented also informal and small- to medium food systems; and as UCAZ Health Officers' Forum, implementing a gap analysis and setting up an investment proposal and plan to improve **accessible laboratory capacities** for the expanded volume and scope of food testing needed in *all* urban local authorities.
5. Making clearer and more specific central government support and innovative funding for UA, and local planning for **urban agriculture**, including for measures that address water scarcity (eg: drip irrigation, rainwater harvesting); land scarcity (eg: micro-gardening; hydroponics; community gardens); for segregation, recycling of food and bio-waste for fertiliser and energy; and for promotion of climate-adapted foods and traditional grains.
6. Mapping local urban opportunities for and **expanding local processing of locally grown food**, particularly for small enterprises and using locally-manufactured technologies for food processing, with support in business zones/ hubs providing solar energy and other services.
7. Strengthening collaboration with local vendor associations and community groups to build channels for information, consultation and dialogue for joint ownership and implementation of health and environment improvements to expanding **informal sector UA, food handling and marketing**.
8. The UCAZ Health Officers Forum supported **regularly including urban food systems in the Forum agenda** -and in the Housing and Community Services Officers' Forum – and **exchange across urban areas** of approaches, experience and practices; with exchange visits on practices; using the Service Level Benchmarking and peer reviews to strengthen practice, and engaging in regional and international networking for cross-country learning.

2. Methods

The seven local authorities were identified from responses to a short emailed questionnaire from UCAZ to all of its 32 urban local authority members on key features of their urban food systems, responded to by 13 local authorities. While the seven selected towns/cities had varying social, population and geographical features, shown in *Table 1*, they all indicated promising practices in their responses. Focal persons in these towns/cities were identified by the town clerks. An orientation meeting was held with the seven focal persons, TARSC, UCAZ and MoHCC to review and finalise a common template to be used to gather and report both text and photographic evidence on the practices underway. The work was implemented by the focal persons in March-April 2023, with evidence gathered on the contexts, practices and specific actions underway, including their policy or legal basis, and the actors and communities involved. In each area, the case studies also presented information on the mechanisms for consultation and dialogue, the capacities, resources, enablers and challenges faced in implementing the initiatives, together with future plans for the food system. The interventions particularly focused on food safety, control of ultra-processed foods and promotion of healthy food practices; and on urban agriculture and local food processing and marketing. Where relevant, other practices in the urban food system were included. The case studies were revised by the focal persons after peer review by TARSC, UCAZ and MoHCC. The final drafts were edited, and approved by the authors, the local authority and UCAZ.

Table 1: Features of the seven local authorities.

Local authority	Demographic and social context	Geographical and economic context	Nutrition and food security evidence
Bulawayo	2022 population of 653337, 46% male and 54% female (5). In 2018, most (85%) of household heads were economically active (1).	Zimbabwe's second largest city, with a semi-arid climate, wide (11°C) range in seasonal average temperatures, vulnerable to droughts and sharply varying annual rainfall.	Vulnerable households (eg child-and elderly headed) at risk of economic and food insecurity. Above average dietary diversity in 2018 (1). Modernisation has shifted diets towards processed foods, with limited legal and marketing controls of these foods negatively affecting healthy diets.
Chegutu	2022 population of 66258, 47% male, 53% female (5). No informal settlements, all areas formally planned. In 2020 average income only 54% of the national Total Consumption Poverty Line (2).	Seasonal rains between October and April, supporting urban agriculture (UA). The town has agricultural and mining activities in the peri-urban area.	Few (2%) households were food insecure in 2019 (1), and 12% of households had at least one person with chronic illness including HIV, cancer, high blood pressure, diabetes and asthma (1).
Harare	2022 population of 2,2 million (5) 13.7 % of children <18 years are poor (4). Poverty likely to have increased due to COVID-19 impacts and lockdown restrictions.	Zimbabwe's capital city. In region II, part of the agricultural hub of the country.	Households commonly consume processed maize meal (sadza) with vegetable, bean, or meat relish, bread, sugar, white rice and cooking oil (6) 2,2% of households are food poor, living below the poverty datum line (4).
Kariba	30 000 residents (5). High unemployment, with 51% in the informal economy, with insecure lives. Other vulnerable groups include children orphaned due to AIDS.	Small tourist resort near the border with Zambia in a National Park and far from major centres and farming areas. Hot, dry climate and low rainfall. Limited land for UA and housing	Most food sourced from far away as UA in around the town not viable due to wildlife. Available, affordable kapenta and bream fish support food security. 11.5% of children in the town are poor, but none food poor, possibly due to fish as an affordable nutrient (3)
Kwekwe	2022 population of 119863 and Zimbabwe's 7th-largest city (5). Over half the population are informally self-employed. Few informal settlements northwest of the city.	A mining, industrial centre in a tropical scrub zone, and limited land for UA (7). Widespread small-scale gold mining (10), with urban dumps, open pits, and damaging infrastructure.	17,3% of urban residents were food poor in 2018, 5,6% of these are children (3). The most prevalent non-communicable diseases in the city are hypertension, and diabetes mellitus (9).

Local authority	Demographic and social context	Geographical and economic context	Nutrition and food security evidence
Masvingo	2022 population of 90286 (5). Youth emigration to South Africa for improved economic opportunities and a fall in rural to urban migration led to a decline in the city's population growth (11).	Capital of Masvingo province, one of Zimbabwe's oldest cities. Tropical savannah climate, limited and uncertain rainfall. Livestock management, small-scale horticulture, and some manufacture as key activities, and tourism given historical and cultural assets.	Food security in the city affected by drought, economic challenges and household poverty, with COVID-19 adding to this. Under 5-year-old stunting of 26.8%; wasting of 2,8%, and 68% of this age group receiving vitamin A supplementation in the last 6 months (12).
Victoria Falls	2022 population of 35199 (5). Tourism and hospitality a main source of income. Women and girls more socio-economically marginalized and disproportionately affected by HIV (15).	A tourist resort surrounded by National Parks and wildlife, and the famous Victoria Falls (Mosi-Oa-Tunya). Infertile urban red soils and limited public land with the climate a challenge for UA and local food production (13).	Poverty, HIV, limited employment, economic instability, and recurrent climate shocks in the province affect food and nutrition security (14)

(1) ZIMVAC, 2019; (2) ZIMVAC, 2020; (3) ZIMSTAT and UNICEF, 2019; (4) ZIMSTAT, 2019; (5) ZIMSTAT, 2022; (6) FAO et al., 2012; (7) Chenje, 2000; (8) FNC, 2019; (9) Hakim et al, 2005; (10) Muchemwa and Patel, 2022; (11) UN DESA, 2019; (12) Knoema, 2023; (13) UNEP, 2008 (14) Viceisza et al., 2020; (15) FAO, 2018

This synthesis report is based on a structured thematic content analysis of the seven case study reports, to draw common findings. The analysis was used to identify common issues, but also specific practices and processes that may be useful for wider exchange with other urban settings. The findings and recommendations were discussed at the May 2023 UCAZ Health Officers' Forum.

3. Nutrition and food trends demanding attention to urban food systems

As noted earlier, urban food systems play a key role in achievement of the Sustainable Development Goals (SDGs), in ending poverty and hunger (SDG1 and SDG2), and ensuring healthy lives (SDG3) (Barbour et al., 2021; Payen et al., 2022). In Zimbabwe, food insecurity, nutritional deficiencies and insufficient, quality food intake are major challenges, generating significant burdens on households and the health system (UNICEF, 2006), and raising challenges in achieving these SDGs (Zimstat, 2022a).

While rural food insecurity is widely recognized in Zimbabwe, post-2018 evidence suggests that urban households are becoming more vulnerable and food insecure (ZIMVAC 2018; 2019; 2020). In 2020, the ingredients for a simple healthy meal are estimated to cost a working person in Zimbabwe nearly 22% of their average income (WFP, 2020). While households prioritise food purchases, their coping strategies in response to economic stress commonly include reducing the number of meals per day, limiting portion sizes and consuming less expensive or less preferred foods (FNC, 2021a). Urban food insecurity has been worsened by the impact of COVID-19, with lockdowns and interrupted economic activities undermining urban household income, and access to food and basic services. In 2020, 42% of Zimbabwe's urban households were reported to be unable to meet their cereal requirements, compared to 30% in 2019 (Njanike, 2021). During the pandemic, rural households were found to be more able to cope with its impact than urban households (FNC, 2021b).

Liberalised trade and marketing has also shifted urban consumption towards refined ultra-processed foods, high in sugar, trans-fats and sodium, at the expense of more nutrient-rich locally grown foods, vegetables, fruits and cereals that are rich in essential nutrients. There is limited evidence on trends in consumption of these foods in Zimbabwe, Evidence in the region indicates, however, that the rising consumption of ultra-processed foods in young people is raising their risk of chronic conditions (Loewenson et al., 2021).

Together, these trends call for more attention to be given to urban food systems. Government, local authorities and partners in urban areas have been tasked to enhance urban food security, within the aim to achieve improved nutrition in the 2021-2025 National Health Strategy (ZIMVAC, 2020; MoHCC, 2021).

4. Providing affordable, safe, nutritious foods in 'food smart' cities

'Food smart' urban areas ensure that everyone — individuals, families and neighbourhoods — can access and afford a diverse range of nutritious, safe, accessible and culturally relevant food when they need it. All seven local authorities are implementing a range of activities, further detailed in the next sub-sections, to support this goal, including common interventions in line with national and local legal and policy frameworks.

Victoria Falls city has further formally articulated the city's vision of being a smart, competitive, green city, sustaining a well-developed community (Victoria Falls city, undated). Food systems are stated to be at the heart of that city's development, and the elimination of hunger and improved health and nutrition of the population to be central for its development. The city has thus integrated food and nutrition policies within local development plans and across different sectors, including to protect vulnerable groups.

4.1 Food safety

National **legal frameworks**, such as the Public Health Act (CAP 15:17), Food and Foods Standards Act (CAP 15:04), and multiple associated regulations set relatively comprehensive provisions for food safety, and together with the particularly with the National Health Strategy 2021-2015) aim to ensure that food is produced, handled, processed, distributed, consumed, and disposed of from 'farm to fork' in the safest manner, for foods to be safe, wholesome and accurately labelled to support this, with specific measures for particular types of food, such as meat or dairy (GoZ, 2016; 2018). The law requires food to be sold from licensed premises, designated markets or by licensed hawkers. All the local authorities carry out routine inspections of food safety and quality in all food-handling premises, including in food processing, production and storage, to implement the legal requirements.

Many local authorities have their own specific by-laws, adding to national law. For example, Harare regularly updates its by-laws to address emerging issues, with more recent by-laws including the Harare Hawkers' by-law 2013, Harare Vendors' by-law 2014, and Harare Meat Hygiene by-law 2017. Masvingo City Council has also drafted/is drafting new by-laws under the Public Health Act [CAP 15:17] to control health risks from environment, food, solid waste and air pollution. A Food Hygiene by-law has been drafted for national approval to address gaps in current law due to changes in the food system, such as in the growth of open-air food providers. It stipulates the minimum standards food traders should adhere to; the process for licensing; and offenses related to poor food safety. Stakeholders from commerce, industry, councillors, academia, and the community were consulted during the drafting, helping to build ownership and support implementation.

Food safety is monitored and promoted from the planning stage of all food premises. Environmental health officers, town planners and engineers work as a team to approve plans and license establishments that meet legal standards. Food business operators, including food markets, submit plans that are scrutinized to ensure that they meet requirements for water and sanitation; for food preparation and storage, ventilation, lighting, and temporary waste storage (GoZ, 2016). Building inspectorates inspect the premises during construction to ensure that they follow approved plans. Certificates of occupation and operating licenses are only provided after confirmation of compliance with legal standards. Where compliance is possible but not met, applicants are informed of required changes and premises are re-inspected when improvements have been implemented. If conditions are persistently highly unsafe, however, premises can be issued with closure notices.

In all the local authorities, during operations, the Council Environmental Health Practitioners (EHPs) routinely **inspect food premises** to check their licensing status, hygiene, food processes, as well as the personal hygiene and medical certificates of food handlers in compliance with the law (GoZ, 2016; 2018). In Masvingo, for example, EHPs take hand swabs from food handlers and working surfaces, and send these together with food samples to Masvingo Provincial Hospital for microbial testing. Many councils train food handlers, informal food vendors and food business operators and managers. EHPs give face-to-face advice and information during inspections. Key groups also receive organized lectures. Many local authorities note constraints in implementing the desired level of training and frequency and coverage of inspections, discussed later in this document.



Environmental health officer conducting a food inspection S Madamombe. 2023

Health officers collect food samples to test and detain unwholesome or diseased food. The local authorities implement a range of **food sampling practices**. For example, in Bulawayo, groundnuts, a popular food, are tested for aflatoxins, given the link between aflatoxins and cancer. Sampling is also done of fortified foodstuffs to test for the presence of fortificants required in law (GoZ, 2016). With many fresh foods marketed in the city, the Bulawayo City Council Health Department has also assessed residual pesticide levels in vegetable produce and poultry in the city and in surrounding farms. The findings indicated traces of chemicals present, suggesting that farmers supplying city markets were not adhering to withdrawal periods for pesticides (Bulawayo Health Services Department, 2012). Recommendations were made to promote health education and enhance enforcement of the law.



Agriculture produce displayed at 5th

In Harare, ready-to-eat foods from takeaways, restaurants, hotels and canteens are sampled twice a week; dairy products once a week; and meat products such as mince-meat and cold meats and prepacked foods such as fruit and soft drinks, and crisps once a week. Fruit and vegetables are also sampled weekly for pesticide residues and heavy metals such as cadmium. Water used in food processing and in washing is also sampled to test for biological, chemical and physical contamination. Analyses are done of processed foods to check for compliance with food fortification requirements, and for false claims or for adulteration. In Kwekwe, food inspectors collect samples of fresh produce quarterly at council vending markets for bacteriological quality checks. City health inspectors also enforce transport and storage standards to ensure that market produce is not contaminated.



Environmental Health Practitioners collecting water samples for analysis, Harare, C Muwombi, 2022

All the cities, including large cities such as Harare and Bulawayo, do not have their own laboratories for comprehensive **food analysis**, so samples are sent to the Government Analyst laboratory. With limited capacities in these laboratories, some samples are sent to commercial laboratories like the Standards Association of Zimbabwe Laboratory for a fee. The constraints in laboratory capacities and the turnover time for feedback from centralised testing services pose an important limit to effective inspection services, discussed in the later section on challenges. In 2022, the MOHCC sourced and distributed Rapid Food Testing kits to provinces, local authorities and tertiary institutions that provide environmental health training, helping to increase the number of food samples analysed.

At the same time, the demand for food inspection is growing, as urban populations grow and food vending activities expand, including in the **informal sector**. In Bulawayo city, more inspections are now being done in the informal sector, particularly where sub-standard premises may expose food to contaminants. While there are legal standards, their implementation remains a challenge due to the resource and economic constraints faced by low income vendors and small businesses.

Unlicensed meat vending is reported for example in Harare and Masvingo, with urban residents finding cooked meat from such vendors more affordable. The Public Health Act (CAP 15:17) stipulates that animals and birds for food should be slaughtered at registered abattoirs and prohibits unlicensed street cooking and sale of foods. In Masvingo, vending of cooked meat and maize meal often takes place in unlicensed settings by informal vendors. Unlicensed cooked meat vendors are reported in Masvingo to be major purchasers of uninspected meat, such as from stock theft, or from unauthorized abattoirs, commonly referred to as “bush kills.” The latter are known for unhygienic killing and processing methods, raising the risk of food-borne disease. When found on inspection, meat in such unlicensed sale is condemned.



Laws prevent unlicensed vendors from cooking and selling meat, Masvingo S. Madamombe, 2023

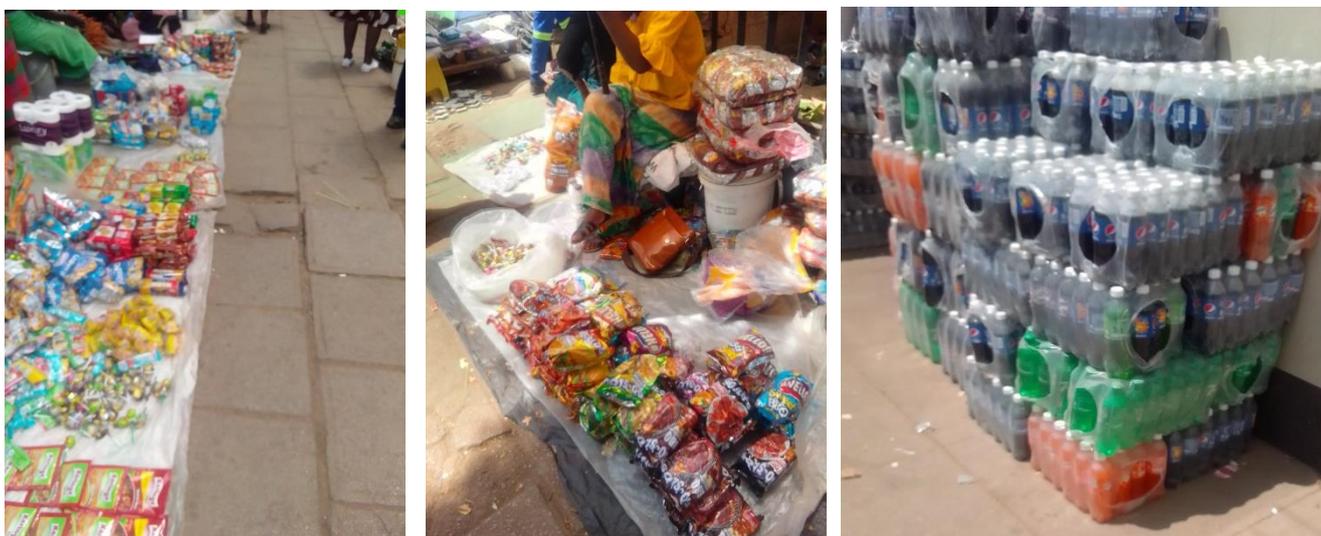
Where food is found to be contaminated or unsafe, including due to refrigeration failures, or found to be expired or non-compliant with law, operators are notified in writing to take **remedial action**. The food items may be removed from sale, or condemned and disposed of in line with the Food and Food Standards Act (CAP 15:04) (GoZ, 2016). For example, after Harare inspectors found a salt product to not contain iodine in line with national law, the manufacturer was advised to adjust the contents. In May 2022, Kariba health officers destroyed flour, drinks, cooking oil and sugar sold by a supermarket, as it had expired or posed specific public health risks. In Masvingo, condemned food is disposed by a team, including the EHP, municipal police, Zimbabwe Republic Police and the owner's representative, to confirm satisfactory disposal. If the food can be safely eaten by animals, rather than burying or burning it, it is provided to animal welfare organisations (SPCA). Masvingo has experienced an anthrax outbreak since October 2022, so the City Council declared the province as a 'non-inspected meat zone', with all uninspected meat condemned. Where foods are found to be unsafe or sub-standard, traders and retailers are also provided by EHPs with education on food safety, and advice on reputable suppliers. EHPs are themselves given refresher training by the MoHCC, although resources constrain the frequency of this training.

These food safety activities are amongst the most commonly implemented food system actions across all local authorities. They do face resource, staffing, testing and other constraints, discussed in the later section on challenges, with demand outstripping services, particularly to ensure food safety in the expanding informal sale of food.

4.2 Control of ultra-processed foods

In health promoting food systems, people, especially young people, are protected from promotion and consumption of harmful, unhealthy, unsafe foods across the whole food chain, including through inspection and testing services, and through laws and their enforcement.

These foods, include sweetened breakfast cereals, soft drinks, packaged fruit juices and snacks, flavoured yogurts, reconstituted meat products (sausages and nuggets), and fast foods. Expanding formal and informal import and sale of these foods is reported in numerous urban areas, such as Kwekwe, Bulawayo, Harare, Kariba and Masvingo. A rise in non communicable diseases (NCDs) may be linked to rising consumption of these ultra-processed foods. Between 1990 and 1997, the annual prevalence of NCDs per 100 000 people in Zimbabwe increased: for hypertension from 1000 to 4000; for diabetes from 150 to 550; and for cerebrovascular accidents from 5 to 15 (Mufunda et al., 2006).



Sale of processed foodstuff and carbonated drinks along 5th Avenue. Bulawayo, P.Ncube, 2023

Sale of ultra-processed foods at school gates by unlicensed or informal vendors is noted to be compounding the problem of unhealthy eating habits amongst young people. There is limited legislation to control the marketing of ultra-processed foods, making it difficult to control their display and sale, and limited laboratory capacity for testing the additives in these foods, an issue that calls for guidance and legal review by the MoHCC.

Kwekwe inspects and samples food, including ultra-processed foods sold in shops and markets, to test for additives that may be considered 'adulteration' and for correct labelling in terms of the Food and Food Standards Act (CAP 15:04) and Kwekwe City (Public Health) by-laws (Statutory Instrument (SI) 501 of 1981). For example, in 2015 Dragon and Twizza energy drinks from South Africa were removed from all shops in the city by environmental health inspectors following a MoHCC notice that the products failed to meet legal requirements by not naming artificial flavours in the ingredient list and by making claims to maximise "mental and physical performance" that could not be substantiated. Similarly in Masvingo, samples of a sweetened orange juice manufactured in Zambia were recently analysed by the Government Analyst Laboratory and removed from sale when the labelling failed to meet the recommended standards, including on declaration of ingredients.

Kariba, with its border location, exemplifies the challenge to manage **cross-border trade and food imports**, faced also in other local authorities. Food imports into Kariba from Zambia have increased with liberalized trade, particularly given the higher prices charged by retailers in Zimbabwe. While Zimbabwe's Food and Food Standards (Import and Export) Regulations (SI.8) (GoZ, 2015) regulate imported foods, regulations between the two countries are not the same. For example Mazoe crush imports from Zambia violate Zimbabwean standards by adding non-nutritive sweeteners without the written permission of Zimbabwe's Secretary for Health and Child Care, as required by Food and Food Standards (Food Additives and Prohibited Substances) Regulations, (SI 136, GoZ, 2001); and by not declaring the flavouring used. Sale of that drink was prohibited in Zimbabwe until the violations were rectified (Sec. H&CC, 2023). While there are such remedies, many people cross the border to buy food in Zambia for sale and consumption in Zimbabwe, and not all return through formal border posts. This poses a challenge for enforcement of port health regulations. Council Health inspectors implement ongoing monitoring of smuggled food products, and have confiscated foods such as orange crush drinks and infant formulae for non-compliance with local regulations.

While the expanding sale of ultra-processed foods is posing new legal, prevention and control demands, local authority health services also have to screen and manage the NCD consequences before they become severe. For example, Bulawayo city health services are implementing measures to meet MoHCC annual targets to reduce NCDs. The city tracks hypertension and has enrolled over 14 000 people for routine blood pressure checks at health facilities. Those with elevated blood pressure are treated and monitored. They are provided with health education to address risk factors and to reduce their salt, saturated fat and trans-fat consumption, and to increase their intake of fruits and vegetables.

4.3 Promoting healthy food practices

While inspection and control of foods is an important feature of a health promoting food system, people should be empowered with information, knowledge, skills and appropriate technologies to store and prepare healthy and safe food, to eat well and to reduce food waste. As noted earlier, **health education** is embedded inside inspection activities. However, specific, additional activities are implemented, such as the integration of information in health service settings noted earlier in Bulawayo, or the advice and information provided by EHPs to processors and vendors, facilitated when these actors form committees or associations to reach their members.

In Harare, Tariro Youth Centre, built by the Stoneridge community, with support from the United Nations Population Fund (UNFPA) offers young people a range of food-related **skills building activities**, including cooking, baking, catering, sewing, gardening, fish farming and mushroom growing. Community Services officers and agricultural extension (Agritex) officers train women groups, people living with HIV, mothers of children living with disabilities and other vulnerable groups in high density areas on these skills, together with entrepreneurial skills to price and sell their products. The City facilitates exhibitions in community halls for community members to show-case their activities and products. A 'First Lady's cooking competition' (promoted by the wife of President E Mnangagwa) in the Harare Gardens, and at Belvedere Teachers' College, showcases a range of traditional foods and dishes, including boiled roundnuts, peanuts, cowpeas, whole maize grain (mutakura/umpakulwa), and dried vegetables (mufushwa/umfushwa) with peanut butter. These activities have widened awareness, preparation skills and consumption of a range of locally grown foods.



Community baking activity, Harare
T. Tizora, 2022

In Victoria Falls city, nutrition education modules are included in the **primary school curriculum** (FAO, 2018). To support this, piggery projects were initiated in 2015 at Dadani Vocational Training Centre for youth, and in 2018 at Chamabondo Primary School for school children. The piggery at Chamabondo Primary school was initiated to support school feeding and to teach school children agricultural skills, to implement government policy on the new curriculum. The pigs are sold to Victoria Falls residents and supply butcheries and residents with meat. The school piggery generates income for the school and provides protein-rich food for the schoolchildren. A rabbit project set up at the same primary school in 2018 teaches children to appreciate different African dishes, and provides skills on rearing these small livestock for their future livelihoods. Harare City's Health Department, guided by the National Nutrition Policy, similarly runs primary school feeding programs high density, lower-income areas, where they promote home-grown foods. Through partnerships with non-governmental organisations, the schools are also provided with bio-fortified seeds to grow orange maize for vitamin A, and nua beans providing iron.

4.4 Food security for vulnerable groups and in pandemics/emergencies

An important feature of healthy urban food systems is their ability to support food security in the most vulnerable groups, and to protect access to nutritious foods during emergencies, pandemics and epidemics for those most impacted.

Evidence of rising urban food insecurity has made it even more important to protect food security in **vulnerable groups**. In Kariba, for example, World Vision assessed households in vulnerable areas to identify beneficiaries for cash transfers in an 'Urban lean season assistance programme', given as coupons to redeem in supermarkets. The programme also supported beneficiaries to transit from direct food assistance to implement UA on Council land and in schools, described further in later sections.

In Chegutu, both rising urban food insecurity and the impact of the COVID-19 pandemic led Welthungerhilfe (WHH) and the World Food Program (WFP) to implement an Urban Social Assistance project between August 2020 and April 2021. The programme provided 12000 vulnerable urban households with e-vouchers valued at US\$12/month that beneficiaries redeemed at selected retailers for food and non-food items. As in Kariba, in 2021, Chegutu Municipality and partners converted this to an Urban Resilience Building Program to provide 1950 vulnerable households - child-headed, poor households or those with elderly, chronically ill members, or with people living with HIV or disabilities - with inputs for community-managed small livestock, with skills training for UA and in nutrition, water and sanitation, financial literacy, prevention of gender-based violence and emergency-related risks. A Shasha Community Group was formed in this process in March 2022, integrating the skills and inputs provided to initiate poultry rearing, peanut butter making and mushroom growing (described later). The group worked with Chegutu Municipality to ensure compliance with food safety measures.

Victoria Falls Council views that it has a responsibility to support the food needs of vulnerable groups, including elderly people and women living with HIV. In 2007, a chicken project was initiated to support healthy and nutritious diets for the elderly people in an old-people's home in the city, given the difficulties they faced with meeting food needs in the hyper inflationary economy of that time. While the products were initially only used in the old people's home, the fowl-runs now accommodate up to 1000 birds at one time, and the poultry are sold commercially, with the income from the sales supporting poultry feed and other inputs. In 2003, the Council implemented a nutrition and herb garden for women living with HIV in a 'Joy Support Group' to garden herbs and vegetables. The vegetables (chomoulier, carrots, green beans, peas, lettuce, spinach, tomatoes, onions and herbs) are used to cook nutritious foods to boost their immunity. The city has supported the women by fencing and connecting the gardens to the council water system, while local non-government organisations have provided advice on pest control and marketing. The women sell the surplus vegetables to the local community and the city's main supermarket. Their vegetables are preferred as they use organic fertilisers.



Joy support garden, Victoria Falls, D Ncube 2023

The COVID-19 pandemic led to food system challenges. To support food security, grain storage silos around the country remained open and food manufacturing industries and food establishments were allowed to continue to operate, with local authorities playing a role in maintaining strict food hygiene and COVID-19 control measures.

Chegutu's numerous urban fruit, vegetable and traditional food markets played an important role during the pandemic, as they provided accessible sources of food from nearby farmers, when supply chains for commercial foods were interrupted by movement and cross-border trade restrictions. People had time during lockdowns for backyard UA, enhancing food supplies.



Food market in Chegutu
K.Salima 2023

In Kwekwe, both during the COVID-19 pandemic and the 2008-9 cholera epidemic, the local authority bolstered preventive and control measures guided by Public Health Act (CAP 15:17) and the local authority's own Emergence Response Preparedness Plan. All food outlets were strictly monitored, and health promotion activities were increased. Local companies assisted with potable water treatment chemicals and other non-state actors (Oxfam, Plan International and others) supported the response with tents, medicines, protective equipment, buckets, beds, and allowances for frontline health workers. The robust, multi-actor response and a better potable water supply and sanitation compared to neighbouring local authorities meant that Kwekwe had no local cases of cholera in that national epidemic (Cuneo et al., 2017).

During the COVID-19 pandemic, Victoria Falls hospital staff affected by the pandemic came together in 2020 and started a hospital nutrition garden. The MoHCC supported the staff to initiate the garden, which provided both hospital staff and patients with food for a healthy diet. The MoHCC provided the land, seedlings and irrigation infrastructure and the garden was set up in under-utilized land behind the hospital, converting a dumping site into a productive garden. About 38 hospital staff members work in groups in the garden when off-duty, together with patients able to provide this input. The garden supplies the hospital and urban residents with vegetables.



Hospital garden, Victoria Falls, D Ncube, 2023

The hospital has also implemented an orchard, and non-government partners have grafted citrus fruits in the orchard, enabling the trees to bear fruits in a shorter space of time. The hospital uses organic fertilizers from composting leaves and grass, and a water-efficient drip irrigation system. Non-state partners like 'Love for Africa' have provided seeds, and training on nutrition, and on intercropping. The hospital is now discussing breeding small livestock to provide animal protein for the hospital diets.

4.5 Urban agriculture

Urban agriculture (UA) refers to crop-cultivation and livestock-rearing for food, aesthetic and commercial purposes within urban and peri-urban areas, encompassing the production and delivery of inputs, and the processing and marketing of products. UA is not generally prohibited in law. The 2001 Urban Councils Act, the 2002 Environment Management Act (CAP 20:27), and 2018 Public Health Act (CAP 15:17) do, however, regulate UA where it raises environmental and public health risks. Zimbabwe's Comprehensive Agricultural Policy Framework (2012-2032) makes no specific reference to UA (GoZ, 2012), but a government-convened 2021 national dialogue noted that rising food costs make it cheaper to produce than purchase food, with plans to boost UA for food security (MoLAFWRR, 2021).

While there is sometimes a disconnect between policy acceptance and practical encouragement of UA, all local authorities and urban households were involved in a variety of forms of UA, despite land, legal and economic barriers, to support incomes and access to fresh, healthier, unprocessed foods. Where land is available, UA is practised in residential stands, off-plot spaces in open council land, and peri-urban plots, with vegetable and maize crops and poultry providing food for consumption and sale.

Some cities have formalised policies on UA. Bulawayo City Council, for example, approved an UA policy in 2000, noting its promotion of household food security and income and contribution to the affordability, availability and accessibility of unprocessed food in the city (Bulawayo City Council, 2007). The policy affirms the local authority's support for UA. It outlines permitted UA activities, including farming and livestock-rearing, depending on land sizes. While land used is not zoned for UA, it is allocated for this while awaiting other development, with lease periods depending on site, and a provision for renewal.

In other urban areas, such as Kwekwe, UA is not formally organized, but given support given its role in food security. Almost every urban home in the city has a garden, where residents grow crops and keep small livestock mainly for home consumption and some sale. Kwekwe (Public health) by-laws (SI 501 1981) allow for 25 birds to be kept in households without seeking council approval. Urban farmers also cultivate local authority or central government land without title deeds or lease agreements, and at undesignated sites. This has in the past led to conflict between residents and the local authority, with the latter invoking by-laws to prohibit UA and destroying the crops. However, the local authority has now adopted a more people-centered approach, considering the food security needs of low income residents, and noting that UA prevents vacant sites being used for waste dumping. The local authority engages residents growing crops at undesignated sites that pose a danger to public safety and environments, and proposes other open spaces for their UA. This has helped to reduce confrontation between the parties. Problems remain: some residents have damaged or blocked sewer lines to tap raw sewage to water crops, raising the risk of helminthiasis due to food crops being infected with helminths. City health inspectors have advised farmers and communities on this risk and on crops that can and cannot be watered with waste-water, although helminthiasis is still being reported from some clinics.



Community garden, Mbizo 9. Kwekwe
S Nyoni, 2023

In a healthy food system, urban food producers/farmers are supported to **access the key factors of production, land and water**, and to use UA models and practices that increase sustainable, climate-friendly, local production of healthy foods, strengthening food security and livelihoods. There are many examples of this in the different local authorities, some, but not all, of which are captured in this report. Bulawayo city has designated nutrition gardens in residential areas and allocated them to vulnerable groups identified by the council social workers, including for elderly people, those with disabilities and child headed households. Partners offer expertise on the operation of the gardens and have sunk boreholes to enable year-round irrigation of the gardens. In Kariba, Shingirirai garden and Mushroom hub in Lake View primary school, a church school in the town, was set up under an agreement between the members and the school authorities. The school provided land and obtains unlimited access to water from the project borehole. The 20 group members were given starter seed packs, an electric diamond mesh fence, solar energy, an energizer, water reservoirs, and materials to build a storeroom and temporary toilet. Members now operate the project themselves, each with a portion of land growing crops and producing mushrooms in a pole and grass shed. In Chegutu, poultry and peanut butter-making sub-groups in the Shasha Community Group were trained by EHPs to appreciate critical hazard points where their food can be contaminated, with information on basic hygiene procedures to address this; on symptoms of infectious diseases that may affect food safety or be transmitted by food handlers, and on measures to voluntarily avoid handling food when showing these symptoms.



Shasha Poultry Group women holding 5 week-old chickens almost ready for the market
K Salima 2023

Kariba's location in a wildlife area makes land for UA a major challenge. Padare community garden in Mahombekombe Township, the oldest settlement in Kariba town, is a sustainable garden growing and selling fruit and vegetables at affordable prices to members, residents, the town hospital and prison. During the HIV epidemic, council supported a group of people living with HIV to lease this land for free for vegetable gardening, and connected council water in the garden. Its location in a national park brings risk to crops and infrastructure from elephants, hippopotami and baboons, but an electric fence provides protection and members take turns in 24-hour guarding in case of electricity outages. The group, with about 200 members, sourced assistance from a Kariba-based non-government organization, Tony Waite Foundation, for an electric fence, a greenhouse, a water reservoir, a pump, pipes and seeds, although the greenhouse material was poorly adapted to the Kariba climate and later removed. The gardening methods are labour intensive, using simple tools and cheap chicken droppings as fertilisers.

Beyond obtaining support for inputs, health promoting UA is implemented in **circular economy models** and regenerative practices that **support healthy ecosystems** and promote green public spaces in urban areas. There are numerous examples of UA in the local authorities that demonstrate effective and innovative use of available environmental resources, and that build longer term sustainability of UA, and intergenerational capacities.

The economic links with UA go beyond the specific community involved. In Kwekwe, where UA is in schools or other institutions, school children maintain the gardens as part of their curricula, and are taught how to garden, the importance of vegetables in their diet, and how to prepare vegetables for consumption to support future livelihoods and diets. The vegetables from school gardens are sold to staff members, pupils, and residents. The revenue from sales is used by the school for school needs, such as maintaining or repairing toilets, window panes and other infrastructure, buying refreshments for sports functions, or fuel for the school bus.

Nyamhunga Primary school Hydroponics project in Kariba demonstrates how food systems can promote healthy ecosystems, in an area where land is a scarce resource. The project grows plants in containers without soil, producing vegetables for sale to residents and the local market and strengthening food self-reliance. The hydroponics projects started in 2022 at this government primary school, and at Nyanhehwe council primary school. The technology is applied in a greenhouse, drawing on a continuous supply of borehole water, pumped using solar energy. The hydroponics unit is secured by an electric fence to protect against baboons and elephants. Members repair and maintain these assets. The District Development Coordinator, Council, Ministry of Education and Ministry of Agriculture help to manage the projects. The hydroponics and garden activities and the water, sanitation and hygiene facilities are regularly inspected by the town health department, who also educate garden members on safe food handling.



Green house, Nyamhunga school hydroponics project, Kariba, C. Mutumbami, 2023

The Nyamhunga 1 poultry project in Kariba also responds to the local ecosystem. The project was established in 2020 in an open space leased from council on temporary basis. It accommodates chicken runs for broilers and indigenous chicken breeds, with an incubator and a hatchery for indigenous chicks for sale of live broilers and indigenous chickens for breeding and meat. The Veterinary services give professional advice and oversight to prevent disease outbreaks, while the Council Health department ensures that there are no public health and hygiene risks, regularly inspecting adequate cleaning of the chicken runs, proper disposal of waste and control of flies and rodents. The intervention aims to make poultry available for breeding in a non-farming area where poultry is locally expensive and sometimes unavailable. The local community also prefer indigenous chickens for their taste and nutritional value.

In Masvingo, while lease payments generate income for the council, a charge of US\$30 per hectare per season makes land available at an affordable price to residents, while the formal process of land allocation for UA enables protection of water bodies and the environment. Urban farmers are trained through the Department of Agriculture and Rural Extension (AREX) to increase productivity on these plots. With poor rains leading to crop-wilting in some seasons, the city also enables nutrition gardens for local residents, who form farming clubs of more than ten members per garden. The council strategically places the gardens at boreholes, with solar energy driving the machinery, or in schools, with support from partners, such as Action Contre La Faim (ACF) and CARE-Zimbabwe (Bornard, 2010; Chiwanza et al., 2015). A market provides over 300 stalls for local vendors to sell the farm produce. Sales proceeds from nutrition gardens fund other activities that members prioritise. While no vegetable processing is underway, clubs have used the income to purchase plastic waste to make products from reclaimed recycled waste.



Nutrition garden at Sisk township, Masvingo, 2022

4.6 Local food processing

Access, economic returns and the fall in carbon footprints are greater when locally grown foods are locally processed, and marketed and sold in accessible, hygienic markets for communities, schools, health services and other use.

Urban maize milling gained momentum after the late 1990s, given the rising price of mealie meal and costly processed mealie meal brands. In Kariba, maize milling is now largely done in home industry sites and temporary council open spaces, leased on a temporary basis from the council. Residents bring maize for milling that they have purchased from council markets or from neighbouring farms. They pay a fee to the operator of the grinding mill. This assists to make maize meal affordable for low income households. The grinding mills are modern electric mills that do not produce noise or dust. Council inspects their hygiene, health and safety standards and ablution facilities. In Kwekwe, the city has established home industrial zones in six city sites where small-scale food processors operate, with maize-milling, and processing of peanut butter and cooking oil, maputi (maize corn) and 'fizzy' drinks. Various measures are integrated to promote health. Fizzy drink samples are periodically sent to the Standards Association of Zimbabwe for quality and safety compliance checks, paid for by the producer. As a further example, the grinding mill shown adjacent adds iodine and vitamins to fortify maize meal, in line with national law. Council Health inspectors monitor processors to ensure that they comply with health and hygiene standards, including those in the Kwekwe (Registration of Premises) by-laws (SI 812 1979) and Kwekwe (Public Health) by-laws (SI 501 1981).



Sugden Grinding Mill in Mbizo 11 Home Industry, S Nyoni, 2023.

There are other forms of **local processing of local foods**, adding value to the products from UA. In Chegutu, Shasha Community Group members buy peanuts from the local fruit and vegetable market supplied from nearby farms. The peanuts are processed into peanut butter and the product is sold in the local urban market. The community group also processes peanut butter for residents who bring in their own peanuts, charging a fee for this. The processed peanut butter is a high energy food for child nutrition and an important contributor to healthy diets, and used in traditional and modern food preparations. A table spoon of peanut butter, equivalent to 16gms in a single serving has sodium, carbohydrates, saturated fats, protein, sugar, calcium, iron and potassium (Nutrition Value Organisation, 2023). The salt added in the processing is fortified with iodine. The Municipal Public Health Section offers free iodide testing services to ensure this. The group initially had three electric power driven machines, but the ongoing national electricity load-shedding affected production of the peanut butter. Noting this, the group procured two further manual machines that do not require electricity. Further, all five machines used by the group were manufactured locally in the Chegutu Home Industrial area. This enables the servicing and repair of the machinery for a consistent supply of the peanut butter in Chegutu. The Shasha project has thus emerged as an important contributor to a healthy, nutritious diet for the local community..



Peanut butter making machine
I. Jenje 2023

4.7 Promoting health and food safety in local food markets

Almost all the local authorities provide council markets for sale of local produce, building them in compliance with standards for food-handling premises. Many have upgraded these markets to provide a user-friendly, affordable and climate-proofed infrastructure that meets public health standards for local producers and vendors, with piped water supplies, public toilets, storage facilities, and waste management. Inspections also aim to ensure that foods not permitted to be sold in these markets, like groceries, meat or cooked foods are not sold in them.



Nyamhunga fruit and vegetable market, Kariba, C. Mutumbami, 2023

The Nyamhunga people`s market in Kariba was sited and built after consultation between council management, councillors, non-state actors, Ministry of Agriculture, Zimbabwe Republic Police and ZIMRA, and with resident and vendor associations and women`s organisations. The market was built using heavy duty steel members not prone to climate-related risk, with a simple slab providing tables for vendor selling points.

Vendors pay rentals daily of US\$2.80 in local currency for a day`s use of a table, or US\$8.07 monthly in local currency. Operators, usually low income, unemployed people, particularly women, apply and are put on a waiting list to be allocated tables in markets as available. Meetings are held with vendors and their representatives, and the local civil society provides training, information and materials such as face masks and sanitisers. Chegutu council market shed at Pfupajena houses fifty traders,



Pfupajena market under construction in 2022, Chegutu, D. Murambadoro 2022

including the poultry producers described earlier. Harare council has implemented work to improve the market infrastructure, (shown in photographs), so that foodstuffs can be stored off ground level and hygiene standards maintained. Sanitation and washing facilities have been improved in most markets.



Left: Mbare farmers market before improvements. D.Tigere, 2020.



Right: Mbare framers market after improvement showing market bays. D.Tigere 2020

Kwekwe has a grade B abattoir that is currently leased to a private company. A local authority meat inspector ensures that meat sold in the city is free from zoonotic diseases and parasites, as provided in the Public Health (Abattoir, Animal and Bird Slaughter and Meat Hygiene) Regulations (SI 50 1995). The abattoir can slaughter 100 bovines a day, most coming from neighbouring areas. The meat is sold locally in approved butcheries inspected by the local authority`s health inspectors as well as in other towns.

Informal food vending places a further demand to ensure both indoor and open market sites are hygienic and promote food safety, and to control vending in undesignedated or unhealthy sites in streets, open spaces and in homes.

In Bulawayo, areas have been designated throughout the city for the sale of agricultural produce, with individuals allocated bays for which they pay a monthly rental. Vendors marketing in designated areas of the city centre provide a popular `one-stop-shop` for a range of the fresh and unprocessed foods that they prefer at affordable cost. Council policy requires all vending to be conducted in areas where there are basic health requirements, including water and ablution facilities. A recent rise in vending in unlicensed, un-serviced sites poses a risk of disease outbreaks. Foods washed with water from city boreholes may also not be safe, with a finding that most of the 294 boreholes tested by the Council provided water unsuitable (if untreated) for direct human consumption. Council has decentralised provision of markets to the high density suburbs to decongest the central business district so that markets are closer to residential areas. The uptake of bays at these markets has, however, been poor. Some markets have remained unused, as vendors largely perceive business to be better in the central business district.



Vegetables on sale Pumula Vegetable Market, Bulawayo, P. Ncube, 2023

In Kwekwe, designated sites are provided with potable water and sanitation and concrete or paved floors, stalls, and sheds that not only protect the foods sold, but also shelter the traders. The council maintains and repairs infrastructures, including unblocking sewers, and checks product safety from source to sale. In early 2023, toilets in 3 market sites are being refurbished and discussions are underway for a private company to upgrade the CBD farmers market using a 'BOOT' model. In 2020, WHH constructed a live-bird market in Kwekwe on council land, where residents are not charged to sell their produce. The market is fenced, with solar energy. It provided a safe market during the pandemic, and the local authority has now built two further poultry markets for residents.



Welthungerhilfe Poultry Market shed, Mbizo 2. Kwekwe, E Nyoni, 2023



Kwekwe CBD market sheds set to be replaced with modern structures. S Ngwenya, 2023

In Kariba, the Batonga temporary tuckshops were built with prefabricated iron structures on a Council leased stand by an individual in a relatively new township where there were no prior shops. The structures were designed and implemented as temporary on a site reserved for a welfare centre in the development plan. The tuckshops, while temporary, are aesthetically built, with about 6sq meters space, and council provided ablution facilities at the site. They are rented by vendors who sell various foods - except food prepared on site - at lower prices than the large supermarket. The process involved many actors: The tuckshops were initiated after a needs assessment by Council showed the deficit in food outlets, particularly in that township, with consultation on the design and with Council inspection and licensing processes as described earlier.



Batonga Tuckshops, Kariba, C. Mutumbami, 2023

In Victoria Falls, a Kinshasa goat market was set up by the council in 1994 to provide a site for rural area goat farmers to sell meat. After concerns were raised on the sale of meat by the health department, the then director of housing of the Council proposed that farmers bring live goats. A place was allocated for the goats and the market on the outskirts of the town. The initiative intends to benefit young people who are migrating into the city in search of employment. The market has since grown, and accommodates more than 100 goats at any given time. The city intends the goat market to provide the urban community with a source of protein at an affordable price. The goat marketers skin the goats for their clients. After skinning, the youth implementing this task are given a small piece of meat (termed 'intshontsho') to thank them, giving them a daily nutritious meal. The goat- meat marketers hire a veterinary specialist from the government to examine the goats, while the police clear ownership of the goats before sales, to curb theft from the project.



Kinshasa goat market, Victoria Falls, D Ncube, 2023

Small scale fish marketing is another challenge in Kariba, as many small-scale operators have nowhere to sell their fish. Small-scale marketing operates from houses, compromising health and hygiene. Both Council and ZIMRA have needed to regularise these operations from houses, to license, ensure food safety and enable tax collection from operators. The Council has thus created stands for selling fish, and plans for shops have been designed by the Engineering department, including running water, ventilation and smooth internal working surfaces. Council is mobilising funds to build these shops for fish operators to lease and sell under healthier conditions, in line with legal standards noted earlier.

5. Protecting ecosystems and promoting a circular food economy in urban areas

The promotion of health and wellbeing in food systems links health, social, economic and environmental conditions. This involves innovative models and approaches that are developed, tested and demonstrated to identify sustainable options to produce and market foods in ways that support climate, environment and social wellbeing, that reduce avoidable waste and repurpose/recycle unavoidable waste. While there was limited explicit focus on ensuring a circular food economy in the case studies, there were examples of work that implicitly have features that could form the basis for this, especially if further developed.

The Andora Harbour small-scale bream farming aquaculture project in Kariba is a freshwater fish-farming venture established in 2019. It initially aimed to be a crayfish farm (Municipality of Kariba, 2018). However that scheme was halted by National Parks for fear that the crayfish would invade Lake Kariba, negatively impacting on lake fish. The initiative switched to bream farming for local and Harare markets, to also increase the supply of fish, which fell due to overfishing in the lake. The intervention used decommissioned sewer ponds near the lake, leased from the municipality. Freshwater is pumped into the ponds from the lake, and used water flows back into the lake in a simple, relatively un-mechanised process. Solar power is used for security lighting. The project employs three people full-time and four further contracted people during fish-harvesting. The project followed not only public health laws noted earlier, but also the Environmental Management Act, (2006 CAP 20:27), Parks and Wildlife Act, (1975, CAP 20:14), as well as international water law set in a 1999 protocol between the Zimbabwe and Zambia governments regulating fisheries around Lake Kariba (Kinadjian and Bodiguel, 2013). Adherence to standards thus involves multiple sectors, including National Parks and Wildlife, Veterinary services and the Health department through environmental health technicians.

The use of waste-water provides a water-conserving approach, but also poses health risks when used for certain food crops. Planned or unplanned waste-water use occurs in Kwekwe and Bulawayo. In Kwekwe, the local authority has allowed residents to use treated and stabilised waste water or sewage from the Northern Sewage Works and the neighbouring stabilisation ponds to cultivate crops such as maize and small grains. About 50 ha of land near the treatment plant is currently under crop farming, and municipal police regularly patrol and inspect these sites. A new law still under review, the Kwekwe City (Water and Sewerage Drainage) by-laws, provides that "no person shall use any reclaimed water for irrigation of any land on which salad crops, vegetable crops or berry fruits, which are to be eaten raw" (Sec 28). The produce from the plots is sold at city markets and council health inspectors monitor the food from this area for contamination. Although cases of helminthiasis have been reported from the consumption of some unauthorised crops from this area, such as fruity, leafy, and tuber vegetables, prompt control measures have been instituted to protect public health, with reminders of legal obligations and the consequences of failures to comply. Council environmental health technicians obtain weekly information on helminthiasis cases from health facilities and do follow-up investigations. Cases and their contacts are given health education and linked to council clinics. The local authority's Trade Waste Laboratory monitors the quality of the wastewater from the treatment plant to ensure that the effluent meets nationally prescribed standards.

In Bulawayo, water scarcity has led some farmers to use waste water on crops. This violates a legal requirement that no person discharge any effluent liquid onto land or use any effluent liquid for the irrigation of any land, without approval by the appropriate health authority, including for irrigation of crops from sewage-treatment installation or oxidation ponds (GoZ, 2000). Bio-accumulation of heavy metals in crops irrigated by waste-water has been reported, especially for those crops consumed directly by people, such as vegetables and maize (Manzungu, 2012).



Bean crop at a plot in Dutchman's Pool area. Kwekwe. S Nawenva.2023



Plants grown on sewage flows, Nkulumane, Bulawayo, P. Ncube, 2023.

Routine inspections are conducted by Bulawayo Council, and those who are non-compliant with the regulations on waste-water use are prosecuted, but the violations are more wide-spread than the council resources to manage the issue.

While these measures were noted to link health, ecological and economic wellbeing, the food economy and system has potential to link to and support urban public green spaces and to strengthen access to clean energy. While this too was not an explicit focus in most of the case studies, UA does provide green spaces in the cities, as noted below.

In 2009, Victoria Falls City offered a piece of land in 2009 to be used for an Aboretum garden and nursery. A local non-government organisation 'Environment Africa' provided support. The garden provides immune-boosting vegetables and herbs for those living with HIV and other residents in a green space in the city. Environment Africa erected a fence, trained the staff in herb and vegetable production and pest control and disseminated information on the importance of herbs in health. The City Council provided land and water.



Aboretum garden, Victoria Falls, D Ncube,

When Environment Africa ceased operations, those working at the gardens and nursery have sustained the initiative up to the current date. With women's role seen as key in the eradication of hunger and malnutrition, urban planning in Victoria Falls has also designed safe spaces for women for nutrition gardens. This idea dates back to 1993, when the then Victoria Falls town council faced a challenge sustaining refuse collection due to a lack of refuse trucks. Given this situation, residents were dumping litter in open spaces. The then housing director, observing the challenge, provided residents with the opportunity to clean the open spaces and set up 'smart corner nutrition gardens' in them. The biodegradable waste dumped in the open spaces, largely leaves and grass, was converted to compost that was used in the gardens. The vegetables are sold to residents, but also to the hotel industry, given their preference for organic vegetables. This idea has spread. The national parks, police and local non-government organisations worked with the council and the community to develop a community gardens policy, with an aim of creating a nutritional garden in every ward in the city, as a key green space initiative to eradicate urban hunger and malnutrition.

Urban systems also increase ways through which foods and food by-products continue to circle back into the system, contributing value rather than waste. Rather than in a top-down approach, for such circular and ecology supporting approaches, all in the food system need to understand and form new links across the food supply chain and with others to design food systems to promote healthy food production, marketing and access, and to segregate, reduce, recycle and reuse food waste to generate new value for environmental, social and economic benefit. Residents, local authorities, enterprises, producers, retailers thus gather, use and monitor evidence on food waste, waste hotspots, make links between food and other waste (plastic, water) and use evidence to design and implement interventions and to assess the impact of these interventions.



Padare garden tumbler drum and compost, Kariba C. Mutumbami, 2023

For example, Padare community garden in Mahombekombe Township, Kariba, noted earlier, is also a site of innovation. The garden has a pilot scheme to compost organic waste from the township to produce fertiliser, using tumbler drums donated by GIZ, testing an approach for possible city-wide scale-up, to reduce landfill waste. To date, the results indicate that the tumbler drum technology is too costly as the drums are not durable. Group members have thus proposed production of a more durable version of the tumbler drum.

6. Using evidence and ideas in multi-actor, multisector collaborations

The United Nations Environment Programme (UNEP) notes that multidisciplinary collaboration and enhanced dialogue are key to build consensus for change and a joint vision towards sustainable food systems (UNEP, 2019). Improving food systems and the policy-making for this implies establishing a permanent multi-stakeholder platform. A multi-actor forum can provide a platform to draw on and discuss evidence, including from dialogue with local communities, to support authorities, communities and others in the food system and food value chain to understand the distribution of food, nutrition and food related disease, and the actions to respond to challenges. Many of the initiatives described earlier consult with and involve teams within the council and involve other sectors and non-state actors and communities, to draw also on diverse expertise and experience. Some of these are 'project specific' and others are more sustained. The local authorities generally use memoranda of understanding to scope the goals, terms and roles in more formal relationships.

Bulawayo city, for example, states one of its core values to be consultation. All activities involving stakeholders are done in consultation with those involved and with the beneficiaries, to ensure their ownership of the activities. The presence of key groups in the community (elderly people, those with disabilities, women), non-government and social welfare organisations, various sectors of government, churches, councillors and council officials makes it easier for programme activities to cascade to their peers and in communities, as information comes from trusted sources. These processes help to change knowledge, attitudes, beliefs, or behaviours at individual level, but also at the group or societal level, such as by modifying norms and stimulating collective action. They generate a working relationship between council and partners that levers support for the initiatives taken.

Chegutu District has specific sustained mechanisms for discussing food-related issues, in the Chegutu District Drought Relief Committee and the Food and Nutrition Subcommittee. Not all the local authorities have these structures in place. These committees meet when necessary, such as in response to new initiatives and partners; clinic reports of increased malnutrition or other food related disease; or when there are communities in food distress that require intervention. The Food and Nutrition Subcommittee is also activated by food insufficiency in the district. Specific initiatives, such as those described earlier, submit monthly reports to stakeholders, with quarterly review meetings held physically to brief on and improve programming, supported by evidence.

Evidence is gathered and used in various ways. For example, beneficiary selection for the urban activities described earlier in Chegutu triangulated data on potential beneficiaries from a WHH enumeration exercise and evidence from community based health workers, from the government Social Development department and the local authority database. Joint monitoring visits of initiatives with key stakeholders lever appreciation and support from stakeholders, and provide collective feedback on areas for improvement. The monitoring visits assess adherence to project guidelines, and review skills development, gender balance, economic and sustainability issues, and learning from challenges faced. Masvingo city holds quarterly client surveys to obtain feedback and suggestions on issues, with the link to the survey sent widely to various stakeholders. Currently, food management issues are not yet incorporated in these surveys. In Victoria Falls, evidence is complemented by local and traditional knowledge, such as in options for the control of pests in the nutrition gardens. Evidence is used in meetings, while noting the different interests of participants, especially when dealing with political stakeholders. The city thus involves facilitators to support dialogue and participatory processes.

The local authorities also dialogue with other local authorities on urban food systems through the UCAZ Health Officers Forum. Thematic areas are allocated to different local authorities in this forum. For example, Kariba town is presently one of three local authorities selected for risk based food hazard control, with work to guide all urban local authorities to migrate from a food testing 'end-of-pipe' approach to a more comprehensive risk audit of the whole food process. The Health Officers' Forum also shares information on food-borne disease outbreaks and interventions. Exchange visits and tours organised through UCAZ forums have helped to share experiences and learn promising practices, and to provide technical options to address challenges. It would also be useful for direct exchanges across producers to help improve their businesses.

These multi-stakeholder processes enable the connections for the holistic approaches needed for healthy food systems, including for the forms of social enterprise and technology innovation needed for them. Many of the earlier examples demonstrate this potential for innovation, and some for innovation that enables more integrated links across food, environmental and economic conditions in a circular economy.

Masvingo city has a memorandum of agreement with the Great Zimbabwe University to trial crops and to identify recommended seed types and crops that are more suitable for the seasonal conditions in Masvingo, as an important contribution to supporting food security.

As a further example, in 2023, the local authority in Kwekwe entered into an agreement with a company to manufacture organic fertilizer from municipal solid waste. In the pilot stage, biodegradable waste is collected from agricultural markets using council skip bins and delivered to the company's composting sites, with vermicomposting technology used to convert organic waste into fertiliser. If the pilots are successful, this will reduce the transport costs for and amount of solid waste deposited at the Council's dumpsite, reduce emission of methane gas, and generate income for residents involved in waste reclamation and recycling. The company will build composters for residents, and organic refuse will not be placed in bins for municipal collection. The company will purchase the processed compost from residents to make fertiliser, further supporting incomes and UA. In a further example of this potential for innovation, in Chegutu, groups involved in some of the activities outlined earlier were given training in business entrepreneurship and in technologies like hydroponics and aquaponics. Shasha Community group members are involved in 'mukando', a revolving round- table loan scheme where they group together and contribute equal amounts of money. This provides funds for agreed loans to members to boost their earnings, and to create business opportunities, employment and new income sources for other members in the community, especially those with less capital.



Shasha Poultry Group day old chicks brooding. K Salima 2023

7. Governance approaches and capacities for implementation and learning

The processes and approaches described imply new governance practices and collaboration mechanisms, models and accessible processes to strengthen and create new relationships and connected forms of intervention in the food system. These maybe formally defined in law and policy, but also in the processes for shared and using information, resources and capacities, to design and implement solutions and services for healthy farm-to-fork food systems in circular economies. The local authorities draw from Zimbabwe's Food and Nutrition Security Policy, and its aim to move beyond narrow technical interventions towards multi-sectoral broad-based collaborative approaches for addressing food and nutrition security (GoZ, 2012).

The local authorities have demonstrated governance leadership in the urban food system in different ways. Masvingo City council has implemented **legal innovation**, as noted earlier, and has also developed an Urban Agriculture by-law in 2022 (City of Masvingo, 2022b). This by-law recognises UA as one of the city's important livelihood strategies, and stipulates the eligibility criteria and process for obtaining a land for UA and sets standards related to UA. Harare city council uses its **budget process** as a mechanism for consultation. Vendors, residents associations, informal traders or their associations and others are engaged in the 'Service Delivery and Budget' consultation meetings, where the local authority is represented by officials from the Health Services, Housing and Finance Departments. Harare also has the proximity to interact with national levels and mechanisms, such as the national multi-stakeholder Food Safety Advisory Board, and the 'One Health Approach' team, involving diverse government sectors relevant to food systems. Kwekwe local authority has actively facilitated the functioning of **social networks**, such as the Vendors' Association committees, elected by bona-fide vendors every 5 years at every market, who work closely with the Kwekwe Health Department, including on health and hygiene maintenance, levies and licence fees, and provision, expansion, and repair of infrastructure. The Health Department takes issues from the associations through the Town Clerk to the relevant Committee for review and feedback.

While most of these governance processes take place within the country, there are also cross border issues and **exchanges across countries** in food systems. These are generally engaged with at national level, but there are examples of exchanges involving local actors. Kariba, as a border town, has such cross border interactions on food systems. After introduction of kapenta into Lake Kariba in the 1960s, a fishery shared between Zambia and Zimbabwe now contributes to food security and the local socio-economy of both countries (Kinadjian and Bodiguel, 2013). A technical committee involving both countries, set up in 2013, meets periodically to manage the Kapenta Fishery. The number of fishing boats were set in terms of what would make the fishing sustainable and avoid overfishing. Over time both countries have allowed this number to increase, reducing catches, with losses for downstream industries and an escalating price of Kapenta. This is threatening the sustainability of Kapenta fishing in both countries. Kariba Town council was one of the delegates in a Technical Committee meeting held with others from institutions of higher learning, fishery departments, relevant local authorities and kapenta associations of both countries to resolve the situation. The meeting, facilitated by FAO, made clear the need to reduce the number of fishing boats in both Zambia and Zimbabwe.

8. Enablers, capacities and resources

The diversity of practices noted in this report are enabled by different capacities and resources. Having a **robust legislative framework** and access to national and local skills is important for local intervention, as is having the capacity to draft and formulate local by-laws and policy to complement or address gaps in national policy and law. Various other legal measures support practice, including lease agreements securing land, vending sites or other assets; and formal memoranda of understanding to clarify goals, roles and inputs with partners, or incentives for investments.

The practices do demand financial resources, but many are not highly capital intensive. They draw more significantly on state and non-state **capacities, people, land, predictable water supplies, solar energy and a range of appropriate technologies**, especially locally produced technology. The land, water, market and other infrastructures are assets that can be provided by local authorities, the work and maintenance by communities, and non-state/private actors and partners have provided complementary inputs, infrastructure and skills support. The Government Analyst Laboratory, Standards Association of Zimbabwe laboratory and various private sector laboratories enable analysis of food and water samples and swabs, especially when the MoHCC and partners supply the local authority with test kits and reagents, although, as noted later, laboratory services do not meet the scale of demand.

A key enabler across many initiatives has been the income generated from activities that enable more sustained self-financing of the activities, for both host institutions like schools, and for community members involved, including to develop and adapt initiatives, and to make links with other activities like waste recycling or food processing. **Linking food systems to economic activities** is strategic.

The initiatives are often people-centred. A range of **'on-the-ground' personnel** within the local authorities and other services play key roles, such as from veterinary, community, environmental health, health and housing services, Agritex, Women and Youth affairs and municipal police. Community members have themselves been key and enthusiastic contributors to the changes. With relevant training they have managed to generate significant improvements in the food system and in their livelihoods.

Coordination of partner activities has enhanced teamwork and minimized implementation problems, as challenges are openly discussed and solutions proffered. Some urban areas have a shared vision and policy for food systems, or a food and nutrition co-ordination committee. Both are assets for aligning the multiple actors in food systems around common goals and actions. Co-ordination draws on communication capacities, to facilitate and guide key mechanisms like the vendor association committees, and to engage with higher authorities, courts and other systems. It has also enabled links to private sector assets, such as in the collaboration using 'Build-Own-Operate-Transfer' (BOOT) to upgrade vending sites in Kwekwe.

Monitoring and reporting of interventions, particularly when implemented through collaborative mechanisms, has generated evidence useful for planning, but has also built shared understanding and ownership, and enabled easier management of initiatives.

9. Challenges and barriers

There were also a range of challenges encountered. The local authorities face shortfalls in **resources and personnel**. Lack of a nutrition section or nutritionist means there is no dedicated champion for food systems, or reporting system to monitor and provide evidence for improvements in this area. Inadequate 'on the ground' **personnel** like EHPs in some local authorities, including due to staff attrition, limits the ability to respond to expanding demand for inspection and outreach, given the expansion of food sales. EHPs compete for transport with other programmes and lack airtime, computers and internet services. Integrating education during inspections, or in community and school settings or community meetings helps to 'stretch' available resources. **Knowledge** amongst EHPs, food processors and community on the Hazard Analysis Critical Control Point system (HACCP) or ISO22000 food management systems is still limited. There is also limited documentation of **indigenous knowledge** in food systems, such as on herbs, including those that have medicinal properties.

These resource shortfalls are exacerbated where the local authority does not have a clear food system **policy or development plan, a food and nutrition committee**, an implementation strategy, or budget for food systems and UA. Such gaps make the alignment of interests and actors less clear, including with external partners. Projects supported by external partners also collapse when partners stop their support, if they did not successfully ensure ownership by and sustainability with those involved. Conflict can also arise with residents when local authorities cut crops in stream banks and wetlands in line with laws, calling for dialogue, education and provision of alternatives for those involved in these practices.

Demand – for land, market stalls, boreholes or water sources, laboratory services or other inputs- often **outstrips supply**. Poor soil fertility, location in a national park, dependency on unpredictable rains, and lack of secure water affects UA. It has triggered harmful practices such as use of waste water, and suggests scope for improved water harvesting or storage technologies. An expectation of assistance during droughts or emergencies can potentially displace engagement in initiatives that can prevent emergencies or sustain food needs during dry seasons, such as replacing maize with more drought resistant traditional grains.

While there is widespread UA, there is a gap in **local food processing** to add value to products from UA, and some constraints in land, water and other resource inputs for food processing activities. The current load-shedding in many urban areas raises a further challenge for food processing. There was some use of solar energy, or of manual machinery to address these problems, but the need to improve the link between water, energy and effective food systems was evident.

Much food vending takes place in **informal settings and activities**, making standards difficult to enforce. Informal and small-scale retailers may repackage products into affordable but unlabelled small packs, helping with affordability, but posing a risk of inadequate information for consumers. Informal groups face challenges in meeting formal requirements, such as tax clearance certificate requirements, and struggle with changing pricing as a result of wider economic shifts. Home-based poultry slaughtering is difficult to monitor, calling for affordable public alternatives and to formalise or certify home-based businesses to facilitate the monitoring and enforcement of standards.

The National Health Strategy 2021-2025 calls for strengthened monitoring of food fortification, food analytics, inspection of food imports and exports and monitoring of food poisoning (MoHCC, 2021). However, almost all the local authorities identify the **absence of accessible laboratories** as limiting sampling and what can be tested and increasing the time taken to receive results. Paying for costly private laboratories, or private courier services, is not sustainable. Laboratory facilities to test novel and genetically modified foods are not available and this is an area noted to need better labelling and information to consumers. While Government Analyst laboratory provides analytic services, it lacks adequate equipment and instruments limiting the volume and type of food samples it can manage.

While current laws refer to adulterated foods, and MoHCC guidance has triggered action on harmful additives in foods noted in the report, there are gaps in legislation to control the **sale of ultra-processed foods** at schools or other outlets and across borders, limiting local authority intervention.



Crops grown in sewage, Luveve, Bulawayo, P. Ncube, 2023

Given the impact on rising levels of NCDs, there is need for updated legal protections and strengthened monitoring and information outreach on ultra-processed foods. Further while the law has comprehensive provisions for food safety, low fines for infringements and weak political support for action on breaches weaken compliance, and infringements may not be treated with urgency in the courts.

Finally, UA in Kariba and Victoria Falls faces the unique challenge of human interactions with wild life, including elephants and baboons. At night, elephants destroy vegetable markets, eating vegetables and maize and destroy storage facilities for chicken feed and houses where feed is stored. Urban farmers provide an all-day watch for this, but elephants come during the night, when there is no one guarding. Local urban farmers also burn chili or beat drums to discourage elephants. The situation calls for more effective prevention and management of human and wildlife conflicts.



Human and wildlife contact in the city .Victoria Falls, D Ncube, 2023

10. Plans for further development and areas for policy dialogue and action

10.1 Building on current practice and future plans

Notwithstanding the challenges noted in the previous section, a range of initiatives are underway to support healthy food systems in the seven urban areas. Collectively, they cover setting a clear vision and policy and preparing local by-laws to address emerging food issues such as informal vending and UA, complementing national standards. They are gathering and using evidence to plan interventions, and facilitating dialogue with different stakeholders, including cross-border dialogue, and particularly with communities and vulnerable groups. The processes are informing, consulting, engaging on and supporting new practice in food systems, and encouraging community associations or organisations as a vehicle for expanding outreach. Collectively, the initiatives cover a wide range of practice, viz: inspecting, testing and ensuring food standards and safety, promoting a diversity of UA activities that take local conditions, needs and assets into account, and providing safe and hygienic spaces for vending of UA products. Ecosystem challenges have been responded to with innovations, including using hydroponics, aquaculture and solar energy, and using available land in hospitals, schools and other public spaces for UA. Vegetable gardens have replaced areas of waste dumping with productive green zones, recycling bio-waste for use in UA. Local appropriate technology development and support for processing has been applied in composting, maize meal fortification, peanut butter processing, fish and livestock farming and vending, supported by solar energy and boreholes for more reliable inputs. Activities promoting skills in producing and preparing foods are stimulated in communities, schools and public spaces, including to promote traditional foods, and to tap traditional knowledge. The spectrum of activities underway indicates what is possible for a practice in urban food systems in all of UCAZ's 32 local authorities.

The seven local authorities have plans to further develop practice to address gaps, detailed in the case study reports, and covering:

- **Policy and legal development:** Setting up a coordinating committee in line with the 'whole-of – government' and One Health Concept to consult on and produce a policy on urban food management systems including UA (Masvingo; Victoria Falls), and developing by-laws to support UA (Victoria Falls).
- **Strengthened food testing:** Expanding the scope of sampling and testing to include food fortificants; microbiological and chemical contaminants; aflatoxins; pesticide residues in fruit and vegetables and veterinary medicines in meat; and food additives in ultra-processed foods that can lead to NCDs (Harare, Masvingo, Kwekwe). There are plans to establish laboratory capacities for water and food surveillance (starting with poultry and poultry products in Harare; for microbial analysis and food quality checks in Kwekwe and Masvingo) or to send samples to the local polytechnic for analysis (Kwekwe).
- **Supporting UA:** Providing for agro-residential plots that can enable expansion of backyard UA (Chegutu); designating new land areas for UA (Bulawayo); and promoting UA with drought resistant traditional grains (Masvingo). There are plans to invest in water sources, drip irrigation, and water conservation techniques for UA (Bulawayo; Masvingo); in solar energy (Bulawayo) and in communal composting of bio- and food waste for fertiliser (Masvingo).

- **Improving food premises and markets**, with plans to improve structures, water, sanitation, hygiene and infection control, and risk based inspection in peoples markets and food premises (Harare, Kwekwe).
- **Improving local technology, infrastructures and local food processing**, procuring a dryer for herbs and vegetables, and machinery for citrus fruit processing (Victoria Falls); and an abattoir for livestock projects (Victoria Falls). Buy-own-operate and transfer (BOOT) and contracting approaches have been used and further planned to engage private partnership in food system development.
- **Capacity building**: Training staff on water and food quality monitoring (Harare); on food safety in formal and informal sector food handlers (Harare); on improved farming methods (through partnerships with non-state actors in Bulawayo); and on HACCP and ISO 22000 (for EHPs and other food stakeholders (Masvingo).

These plans commonly involve strengthened engagement with stakeholders, drawing on diverse assets and capacities within the cities. Some draw on ideas and experiences from other cities, such as Kariba's involvement in the international Connective Cities Network, or Kwekwe Council's plans to establish a public-private partnership to build and upgrade vending markets, adopting a model constructed by a company in Gweru, and providing 400 wholesale and retail stalls. The model provides storage and refrigeration facilities for farm produce, more spacious, modern public conveniences and a CC-TV system to reduce crime.

10.2 Areas for policy dialogue and action

The case studies suggest potential areas for policy dialogue and action to widen promising practice and to address deficits.

- a. For cities/towns that do not yet have this, it would be important for a consultative dialogue to frame the **local vision and policy for the food system**, aligning to national policy and the local context. Understanding the comprehensive, multi-sectoral nature of urban food systems, the subsection headings of this report indicate the key areas that could be important foci for such policy dialogue, to identify local priorities and opportunities for action, and to align the range of stakeholders and assets. Having such a policy framework can also assist with **investment plans and with assessments of capacities** to address priority goals.
- b. While there is a national intention for all local authorities to have a **food and nutrition committee (FNC)**, not all do. Setting one up and including the different government and non-government stakeholders that play key roles in the local food system appears to be important to ensure visibility, evidence gathering and co-ordinated intervention. While agreeing on the value of FNCs, local authorities at the UCAZ Health Officers Forum noted that they do not have nutritionists, and often limited collaboration with MoHCC nutritionists at district level, which they perceived to be a barrier to setting up and sustaining FNCs. The terms of reference for FNCs do not however specify a nutritionist to be essential, and EHPs often play this role, particularly if supported by adequate training, particularly given the role of the committees to support the stakeholder collaboration on the range of interventions in urban food systems, The MoHCC guidelines on FNCs will be circulated to local authorities, district level FNCs could involve urban representatives and EHPs involved could be provided with training on the operational needs of the FNCs and in urban food systems.
- c. Some **legal gaps** have been identified. While some councils are drafting by-laws to address these gaps, there was consensus in the UCAZ Health Officers Forum that local authority action would be best supported by **updating national food-related law**, to address emergent food system issues, food safety, and risk assessment and control across the food chain and to ensure adequate funding and capacities for this. Ultra-processed foods need more attention, given their link to rising NCDs. This calls for the Food and Food Standards Act (CAP 15:04) to integrate provisions on the sale, advertising, marketing and labelling of ultra-processed foods, with controls in schools, for young people and in port health. This would facilitate local authority action on the production, trade, marketing and consumption of these foods. With the rapid development of modern biotechnology applications in the food industry and the potential for cross-border transmission of genetically modified foods and other novel food risks, Zimbabwe's law needs to include specific provisions related to biosafety in the food system, within national biosafety and/or food safety law. As a further area, by-laws are being developed to address gaps in current law to manage health issues in the growth of open-air food providers, on informal vending, and on UA,

suggesting a need for such by-laws to be developed for other urban areas and review of national law to encourage such practices that are growing contributors to urban food security, while setting the minimum standards and processes to adhere to. The regulations on waste-water use in UA may also need review to address the various forms of expanding practice on this. While national law review is underway and to support action on the emerging local challenges noted above, urban local authorities can also **share by-laws developed by councils** for wider regulatory controls, supported by **setting and disseminating model by-laws** for these key areas.

- d. With the growth in demand for **food quality monitoring**, local authorities need to have more EHPs, a budget for food quality monitoring, and improved laboratory capacities, to expand the volume and scope of food sampling and testing. The current laboratory capacity appears to be a major barrier to adequate inspection services. While some local authorities are making plans to set up laboratories or to involve local polytechnics and other agencies in testing services, and while there has been expansion of laboratory testing of water across councils, UCAZ with MoHCC and partners such as TARSC could carry out a gap analysis to assess gaps in existing capacities for food testing and analysis, and use the evidence to develop and engage government and other stakeholders on an **investment plan for the laboratory needs of all urban local authorities, starting with provincial centres**. Integrating risk assessment across the full food chain and HACCP in law, practice and capacity-building also needs to be tailor-made to suit small- to medium-food businesses, and to be applicable in the expanding informal food economy.
- e. **Urban agriculture** is clearly central to all seven local authorities, and potentially to all local authorities in Zimbabwe. It is leading to a range of interesting practices that could be more widely applied. Given recognition of its key role in urban food security, there is scope for clearer and more specific central government articulation of support for UA in national development policy, building on existing engagement such as the 'pfumvudza' agriculture initiative in urban areas. This also calls for innovative funding support for measures that enable UA, including those that address water scarcity (such as drip irrigation, rainwater harvesting); land scarcity (such as micro-gardening; hydroponics; reclaiming land from waste dumping for community gardens); segregation, recycling of food and bio-waste and reuse for fertiliser and energy; and promotion of climate-adapted and drought resistant foods, including traditional grains.
- f. **Processing locally grown food** calls for more attention. There were very few practices reported that encourage local food processing, despite its support for local food security, and the value-addition it brings to the products of UA, supporting local employment and incomes. Local processing of natural foods can potentially provide healthier alternatives to ultra-processed foods and reduce the carbon footprint of the food system. Experiences of peanut butter processing and fortified maize-milling point to the potential of expanding small enterprise for local food processing, particularly if supported by business zones/hubs in urban areas that provide small enterprises with solar energy, and for use of locally manufactured technologies. Each city may identify its potential for local food processing and engage with key stakeholders to advance it, especially if enabled by innovation funding.
- g. **Informal sector vending** plays a role in providing affordable access to foods. While its expansion has raised demand for inspection and monitoring, the experiences outlined in this report suggests that ensuring healthy informal-sector food vending cannot be done without shared understanding and ownership amongst those involved. While local vendor associations were reported to exist, the case studies and UCAZ Health Officers Forum noted scope to **strengthen collaboration with vendor associations** to engage their channels for information, consultation and dialogue. This can assist to build joint ownership and implementation of improvements to ensure that indoor and open market sites are hygienic and promote food safety, as well as for joint actions to control vending in undesigned sites that maybe harmful to health or environments.

These areas of policy dialogue and action to widen or address the challenges and tap the enablers for promising practices outlined in this report are multidimensional and collaborative. They make links across departments in the local authority, across different sectors of government operating locally, and across different stakeholders and different groups in the community. They also indicate the value of holistic approaches that integrate different areas of action (such as farming, processing, vending, waste ad resource management, technology innovation) in different social spaces and processes.

Rather than one challenge at a time, **the urban food system offers an opportunity to tackle multiple challenges in a holistic and integrated manner.**

There is a significant potential for exchange across urban areas in Zimbabwe, to draw on approaches, experience and practices in one urban area to respond to challenges or gaps in another. UCAZ provides an important forum for this, both in the Health Officers forums or the Housing and Community Services Officers' forums, with the Health Officers Forum in May 2023 agreeing on giving more profile to these food system issues and making **food systems a regular agenda item in the Forum meetings.** UCAZ can also support more direct exchanges between particular urban areas, such as exchange visits on practices, and joint work or policy dialogue to advance some of the areas of follow-up action noted in this report, within or adding to working groups already identified in the Health Officers' forum. Resuscitating the Service Level Benchmarking and peer reviews for them could provide a further window for councils to share good practices on urban food systems, with performance benchmarks jointly developed to strengthen practice in this area.

Food systems have been and are increasingly globalised, especially those relating to transnational production and marketing, and to trade issues and standards for this. Food is an area of cross-border protection of health in the 2005 International Health Regulations, in the Codex Alimentarius, and the WHO and FAO principles for national food law (Kasapila, 2023). Cross-country exchanges will become increasingly important with the liberalised trade under the Africa Continental Free Trade Agreement. There is scope to both learn from, and to share the experience from Zimbabwe's urban areas with those in other countries. Within the east and southern Africa region, for example, a community of practice on urban health in EQUINET, and interaction in regional local government associations can provide wider links for exchange and twinning across cities, while international networks such as Connective cities can provide links for exchange and twinning on food systems at international level.

11. References

Links to case studies

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