



Case study on health-promoting urban food systems in Harare

Background

A number of initiatives promoting healthy urban food systems are underway in urban areas of Zimbabwe, but these promising approaches are not always systematically documented, known and shared to support exchange and learning. To address this, the Urban Councils Association of Zimbabwe in association with the Training and Research Support Centre in EQUINET, with review input from Ministry of Health and Child Care (MoHCC) is implementing work in 2022-23 to gather and share evidence on initiatives underway in Zimbabwean cities/towns to promote healthy food systems, to share and promote uptake of promising practice through UCAZ in Zimbabwe and through EQUINET in east and southern Africa. Harare is one of the urban case studies, using a collectively developed shared framework.

Harare context for urban food systems

Harare is the capital city of Zimbabwe, as a district in Harare Province, it is located in the north-east of the country and has a population of 2,2 million (Zimstat, 2022). In Harare city 13.7 % of children under 18 years are poor, and 2,2% food poor, living in households that are below the poverty datum line (Zimstat, 2019). The proportion of poor households is likely to have increased due to the effects of COVID-19, that saw some people losing their means of income due to restrictions imposed to curb the spread of the disease. The city is in region II, part of the agricultural hub of the country (Mugandani et al., 2012).



Harare in Zimbabwe
GISGeography Under CC

Urban food systems in Harare

The city's food supply comes from food industries located in the city and other urban areas of Zimbabwe, and food imported from other countries. Fresh fruits and vegetables are mostly obtained from the people's markets, shops, hawkers, unlicensed vendors and from production in resident's back yards for home consumption and sometimes for sale to supplement incomes. People's markets and shops are supplied by large- and small-scale and household producers and from imports. Whole grain is primarily bought from the Grain Marketing Board and people's markets supplied by farmers. Harare's households commonly consume processed maize meal (sadza) with vegetable, bean, or meat relish, bread, sugar, white rice and cooking oil (FAO et al., 2012). While maize meal is usually bought from shops as it is easier to prepare than whole grain, but some residents also produce grain ground from maize cultivated in backyards or open spaces in the city.

Produced March 2023. Written by Mrs Ruby Tapera, Manager Environmental Health Services Division with Mrs Varaidzo Mavetera, Chief Environmental Health Officer, Harare City Council, with guidance, peer review and technical edit from Dr. R Loewenson, Mr. A Kadungure, TARSC; Mr T Machinda, UCAZ and Mr V Nyamandi, Ministry of Health and Child Care (MoHCC). The authors extend thanks to Mr J Manyara, Chief Environmental Health Officer, Ms R Chituwu and her team in the Nutrition unit in the Office of the Director of Health Services, and to the Health information office for population data, Mrs L Muchena, Head Education and Social services manager, Ms M Chirinyu, Chief Community Services officer, Mr E Banda, Principal Markets Officer and Mr D Tigere, Business Development Officer, all from the Department of Housing and Community Development. Finally, acknowledgements go to the Town Clerk and Director of Health Services City of Harare, who nominated the authors of this case study.

**Harare City
Council**

with Urban Councils
Association of
Zimbabwe (UCAZ),
and Training and
Research Support
Centre (TARSC)



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



Meat consumed in the city is supposed to be sold in licensed butcheries, supplied by abattoirs in Zimbabwe. The Public Health Act (CAP 15:17) stipulates that animals and birds for food should be slaughtered at registered abattoirs. However, unlicensed meat vendors are selling meat on the streets, posing a health risk. Some residents keep poultry in their yards, for consumption, and for sale of live or dressed poultry to residents or shops. Ready-to-eat foods are sold from licensed takeaways, restaurants and hotels, as well as unlicensed caterers. Economic hardship and knowledge gaps weaken healthy food choices and raise the risks of food-related disease. Producers, retailers, and those involved in food-preparation play a role in preventing food-borne diseases, micronutrient deficiencies, and environmental degradation. The local authority is thus implementing activities and enforcing law through a multi-sectoral approach.

Promoting food safety and control of ultra-processed foods

The City Health Department's Environmental Health Division conducts regular monitoring to ensure the food sold to the Harare public is safe, applying standards in the Codex Alimentarius, national public health and food laws the Public Health Act (CAP 15:17) and Food and Food Standards Act (CAP 15:04) - and city by-laws, including the Harare Public Health by-laws 1962, Harare Licensed Premises by-law 1975, Harare Food Hygiene by-law 1975, Harare Meat Hygiene by-law 2017, Harare Hawkers' by-law 2013 and Harare Vendors' by-law 2014.

Food safety is taken into consideration from the planning stage of buildings where food will be handled. Food is required in law to be sold from licensed premises, a designated market or by a licensed hawker who does not stay at one place for more than fifteen minutes. Food business operators are required to submit plans, as are designated peoples markets where fruits, vegetables, grains and other natural foods are sold, such as the large Mbare market, or smaller suburban peoples' markets. The Environmental Health and other city divisions scrutinize plans to ensure before approvals that they include facilities for sanitation, washing up of food or utensils, for food storage, ventilation, lighting, and temporary waste storage. The Works Department building inspectorates inspect the buildings during construction to ensure construction according to approved plans. After satisfactory completion, the food business operator is issued with a certificate of occupation, and after inspection and confirmation of compliance with the by-laws and standards noted earlier for food premises by an environmental health officer, the premises are issued with an operating license by the City Health Department. Where compliance is possible, but not immediately met, applicants are informed of required improvements and premises are re-inspected once these have been implemented. If now compliant, a license is recommended, or if not, a license is refused.

During its operation, environmental health officers routinely inspect food businesses to check their licensing status, hygiene, food processes and the personal hygiene and medical certificates of food handlers and compliance with the Food Handlers Medical Examination Order, 1994. Food is inspected to check for compliance with the Food and Food Standards (Food Labelling) Regulations 2002, including for food deterioration or damage to packaging. Food sampling is done to analyse processed and whole foods. 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.



Analysis of Aflatoxin in Roasted Peanuts by environmental health officers.

Aflatoxin Positive
Result from
Peanuts Bought
from a Vendor.
G Manyembere,
2022



As the city does not have its own food analysis laboratory, the samples are sent to the Government Analyst laboratory, or to commercial laboratories for a fee, to check for microbiological, chemical and physical contamination. Water that is used for washing and manufacture of food is also sampled to test for biological, chemical and physical contamination. Analyses are also implemented on processed food to check for compliance with food fortification requirements and for any false claims or adulteration.

These analyses apply standards in the Food and Food Standards Act (CAP 15:04), Dairy Act (CAP 18:08) and the Public Health Act (CAP 15:17) and their regulations to interpret laboratory analyses.

Where food is found to be contaminated or contents to be non-compliant with law, operators are notified in writing to take remedial action, and the food items may be removed from sale, condemned and disposed of. For example, when a salt product was recently found to not contain iodine in line with national law, the manufacturer was visited and advised to adjust the contents.

Food handlers, informal food vendors and food business operators and managers are given face-to-face advice and information by environmental health officers during inspections and in organized lectures for key groups.

Environmental health officers are themselves also provided refresher training by senior personnel and MoHCC, although this has been limited by funding shortfalls.



Top and bottom: Environmental Health Practitioners collecting water samples for analysis. C Muwombi, 2022



Top and bottom: Environmental Health Practitioners collecting water samples for analysis. C Muwombi, 2022

Urban agriculture and processing locally grown food in Harare

Urban agriculture (UA) is one source of Harare's food supply. UA is conducted in gardens and backyards of resident's homes, in areas of the city zoned for agricultural purposes, including local authority and private land for cattle and dairy farming and other crops grown on a larger scale. Almost every household grows seasonal foods, such as vegetables, tomatoes, sweet potatoes, maize and legumes. Some households also keep poultry for home consumption and sale.

Harare's Education and Social Services Division in the Department of Housing and Community Development promotes UA for family nutrition to support vulnerable groups, in line with the Urban Councils Act (CAP 29:15). The department manages forty community centers, amongst which are 18 centers with community gardens, 16 of which are currently viable. The City assists the community to site community gardens where land and boreholes or municipal water is available, while the community provides inputs for farming. The community groups grow seasonal crops such as vegetables, maize, peas, beans and sweet potatoes. Members eat what they grow and also sell some of the grown foods to raise incomes.



Tariro Youth Centre Community Garden.
E Mawire, 2023

Groups involved in these centers are located in various suburbs of the city, including Glen-norah B, Mufakose, two sites in Mbare, Highfields, Zimbabwe Hall and Tariro Youth center located in Stoneridge. Tariro Youth Centre, was built with labour from the Stoneridge community, with support from the United Nations Family Planning Association (UNFPA). The center offers young people a range of skills building activities, including cooking, baking, catering, sewing, gardening, fish farming and mushroom growing.



Tariro Youth Center sign. E. Mawire, 2023

Community Services officers and agricultural extension (Agritex) officers train women groups in high density areas of the city on food-related skills, including cooking, baking, fish farming and mushroom growing, as well as sewing and dressmaking. Vulnerable groups, such as people living with HIV and AIDS, mothers of children living with disabilities and others are included in these skills activities and taught entrepreneurial skills to price and sell their products.



Community baking activity. T. Tizora, 2022

The City facilitates exhibitions for community members to show-case their activities and products. They sometimes compete, with their displays judged and prizes offered, but most often they do not compete. The exhibitions are held in community halls, with participants from members of the community gardens and from members of community clubs.

The City participates in a 'First Lady's cooking competition', where traditional foods are prepared. This is a recent event that was in the Harare Gardens, a large green space in the city, and at Belvedere Teachers' College. The First Lady convened competitions involve preparation and cooking of traditional foods by women from the community groups. A range of traditional foods and dishes are showcased, including boiled roundnuts, peanuts, cowpeas, whole maize grain (mutakura in Shona), and dried vegetables (mufushwa) with peanut butter.



Zimbabwe First Lady 'cook out' at Belvedere Teachers' College, Harare T. Tizora, 2022

These activities have widened awareness and preparation skills and promoted consumption of a range of locally grown foods. They have been supported by a range of partners, including UNFPA, as noted above, Oxfam for community gardens, and Future of Hope training women in Mabvuku on mushroom farming. However, the Education and Social Services division has observed that the city lacks adequate partners for supporting the range of community gardens with seeds, fertilizer and fencing. In promoting organic agriculture,, the members use organic manure from backyard composting of bio-waste from the gardening, also as an activity supporting the environment.

The Nutrition Section in the City Health Department, guided by the National Nutrition Policy, runs school feeding programs where they promote home grown foods. The programme targets primary schools in high density, lower-income areas. The schools were chosen on basis of availability of space and water, most using their borehole water. Through partnerships with non-governmental organisations such as Oxfam, the Nutrition unit provides bio-fortified seeds for orange maize that provides vitamin A, and Nua beans that provide iron. Schools grow these foods in their gardens and feed vulnerable learners. Use of organic manure is encouraged. Mothers coming to clinics are also taught healthy food practices and nutritious foods for children, and some use the knowledge to establish nutrition gardens at home. The program was disrupted during the COVID-19 pandemic's restrictions on movement, as personnel also shifted focus to manage the pandemic and improve water and sanitation activities. The city has plans to re-engage partners to resuscitate it.

Beyond these local initiatives, the City owns a number of markets in which food products grown within the city, or brought in from other areas of the country are sold. The city has implemented work to improve the market infrastructure, as 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, including Harare's major market in Mbare.



Lusaka Market-Highfields, after improvement showing ablution facilities building (green) and water supply tanks. D.Tigere 2020



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



Mbare farmers market after improvement showing market bays. D.Tigere 2020

Other aspects of Harare's urban food system

During the COVID-19 pandemic, the government allowed food establishments to remain open during lockdowns, while maintaining strict food hygiene measures and COVID-19 control measures, including mask-wearing, hand-washing and sanitization and physical distance. The Environmental Health Division maintained hygiene and preventive measures for COVID-19 in food establishments in the city, also implementing the multiple statutory instruments passed to respond to the pandemic. To ensure food security, including in Harare urban area, grain storage silos around the country remained open to receive maize and other grains, and food manufacturing industries were allowed to continue to operate.

Dialogue and co-production in the food system

The city council has mechanisms for consultation with vendors, residents associations, informal traders or their associations through 'Service Delivery and Budget' consultation meetings, where the local authority is represented by officials from the Health Services, Housing and Finance Departments. The Harare local authority teams interact with colleagues in the Ministry of Health and Child Care (MOHCC) in a range of ways, submitting reports to the ministry on water and food quality monitoring, among other issues.

The local authority communicates with stakeholders in the food system in the national Food Safety Advisory Board, gathering representatives from MOHCC, Consumer Council of Zimbabwe, and various sectors, including industry and commerce, lands, water, fisheries and rural resettlement.

The local authority is also a member of the 'One Health Approach' team, involving government sectors from health, lands, agriculture, fisheries, water, rural resettlement, environment, tourism, home affairs and education. This team is dealing with zoonotics and antimicrobial resistance, in which food and water quality is an important aspect. As a member of UCAZ, and in association with training and research institutions like TARSC, the local authority implements assessments and knowledge exchanges, such as this case study.

Enablers and challenges

The city benefits from a robust legislative framework for control of food and water quality, and from its access to national level skills, mechanisms and processes. The personnel in the local authority play important roles in enabling the activities documented in this brief. Although the Health Department has qualified staff in food and water quality monitoring, there is a deficit due to staff attrition.

The Government Analyst Laboratory and City Chemist Laboratory both provide capacities for analysis of food samples, and the Harare Water laboratory provides analysis of borehole water samples. Analyses are enabled by the provision of a range of kits, including field water testing kits (Wagtech, Aquasafe and Palin) from MOHCC, aflatoxin B1 and iodine test kits from MoHCC, water sampling bottles by Government Analyst laboratory, autoclave, water sampling bottles and water testing reagents from Goal Zimbabwe.

Notwithstanding this, the demand for analysis of samples exceeds the available capacities. The Harare Health Department does not have its own laboratory to match the huge sampling requirement in the city. The Government Analyst laboratory faces equipment challenges, and currently lacks functional instruments to analyse the chemical content of water or to analyse meat samples, adding to other capacity limits on the number of food samples it can manage.

The city lacks swabs and transport media for surface swabs from food establishments, the petty cash for purchasing samples is not always available, and the environmental health practitioners compete for transport with other programmes and lack airtime, computers and internet services. Notwithstanding the robust legal framework, its implementation can also be weakened by weak political support for control of food sales that breach current law.

Future plans

Building on existing activities, the City of Harare is planning to continue to improve the structures, water, sanitation, hygiene and infection control measures at its markets, to facilitate and maintain hygiene standards. It also aims to expand medical examination of food handlers from designated peoples markets, and to intensify its enforcement of this requirement at all food establishments.

The city aims to intensify risk-based inspection, collecting samples for microbiological and chemical contaminants, including food additives that can lead to non-communicable diseases, and sampling and analyses for food fortification. In relation to chemical contaminants, the city intends to intensify testing for aflatoxin, and resuscitate surveillance and testing for residual pesticides in fruit and vegetables and for veterinary medicines in meat.

For this, the city will continue its training of staff on water and food quality monitoring and of food handlers in both the formal and informal sector. The City has an intention to establish a food analysis laboratory to capacitate environmental health, food and water quality monitoring in Harare.

In addition, as new plans, the local authority in Harare plans to improve antimicrobial resistance surveillance in water and in food, starting with poultry and poultry products. There are also new plans to carry out awareness campaigns to the public in a range of settings and processes in the city on healthy food systems.

References

1. Food and Agriculture Organisation (FAO), European Union, International Center for Research and Decision Support (CIRAD) (2022) Food Systems Profile. Zimbabwe Catalysing the Sustainable and Inclusive Transformation of Food Systems. FAO, Rome,
2. Government of Zimbabwe (1962) Harare Public Health by-laws, Govt Printers, Harare.
3. Government of Zimbabwe (1975a) Harare Food Hygiene by-laws, Govt Printers, Harare.
4. Government of Zimbabwe (1975b) Harare Licensed Premises by-laws, Govt Printers, Harare.
5. Government of Zimbabwe (1977) Dairy Act Chapter 18:08, Govt Printers, Harare.
6. Government of Zimbabwe (1994) Public Health (Medical Examination)(Food Handlers) Order 1994, Govt Printers, Harare.
7. Government of Zimbabwe (1995) Public Health (Abattoir, Animal and Bird Slaughter and Meat Hygiene) Regulations
8. Government of Zimbabwe (2013) Harare Hawkers' by-laws, Govt Printers, Harare.
9. Government of Zimbabwe (2014) Harare Vendors' by-laws, Govt Printers, Harare.
10. Government of Zimbabwe (2017) Harare Meat by-laws, Govt Printers, Harare.
11. Government of Zimbabwe (2018) Public Health Act Chapter 15:17, Govt Printers, Harare.
12. Mugandani, R., Wuta, M., Makarau, A, Chipindu, B. (2012) Classification of Agro Economical Regions of Zimbabwe and Climate variability and Change *African Crop Science* 20:52;361-369 <https://www.ajol.info/index.php/acsj/article/view/> accessed 25/02/2023
13. Zimbabwe National Statistical Office (Zimstat) (2019) Zimbabwe Child Poverty Report, Zimstat, Harare
14. ZimStat. (2022). Population and Housing Census Report Preliminary Results on Fertility. Zimstat, Harare