

Health, wellbeing and nutrition: Domain report

Cecilia Tacoli, Rachel Tolhurst, Paul Currie, Henry Bazira, Wiseman Chijere Chirwa, Lamech Malekano Chimphero, Ayagirwelarha Cishibanji, Katy Davis, Mary H Hodges, Muallem Kamara, Liliane Nabintu Kabagale, Regina Mamidy Yillah, Veronica Mwangi, Inviolata Njoroge, Bossisi Nkuba, Andrew Gerald Omoding, Lilian Otiso, Samuel Owuor, Nicola Rule, Gloria Seruwagi, Maria Ssematiko, Sia Tengbea and Hamid Turay

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Cecilia Tacoli

Senior Associate, International Institute for Environment and Development (IIED), UK

Rachel Tolhurst

Reader in Social Sciences in International Health, Liverpool School of Tropical Medicine (LSTM), UK

Paul Currie

Director: Urban Systems, ICLEI Africa, South Africa

Henry Bazira

Research Associate, Centre for Health and Social Economic Improvement (CHASE-i), Makerere University, Uganda

Wiseman Chijere Chirwa

Research Director, Urban Research and Advocacy Centre (URAC), Malawi

Lamech Malekano Chimphero

Senior Lecturer and Director of Academic Affairs, Malawi School of Government, Malawi

Ayagirwelarha Cishibanji

Lecturer, Catholic University of Bukavu, Democratic Republic of Congo

Katy Davis

Postdoctoral Research Associate, Liverpool School of Tropical Medicine (LSTM), UK

Mary H Hodges

Professor of Community Health Sciences, Njala University, Sierra Leone

Muallem Kamara

Research Coordinator, Institute for Development Sierra Leone (IFDSL), Sierra Leone

Liliane Nabintu Kabagale

Lecturer, Catholic University of Bukavu, Democratic Republic of Congo

Regina Mamidy Yillah

Chief Executive Officer, Institute for Development Sierra Leone (IFDSL), Sierra Leone

Veronica Mwangi

Lecturer, University of Nairobi, Kenya

Inviolata Njoroge

Research Officer, LVCT Health, Kenya

Bossisi Nkuba

Professor, Catholic University of Bukavu, Democratic Republic of Congo and Professor, University of Antwerp & RMCA, Belgium

Andrew Gerald Omoding

Research Associate, Centre for Health and Social Economic Improvement (CHASE-i), Makerere University, Uganda

Lilian Otiso

Executive Director, LVCT Health, Kenya

Samuel Owuor

Associate Professor, University of Nairobi, Kenya

Nicola Rule

Professional Officer, ICLEI Africa, South Africa

Gloria Seruwagi

Director, Centre for Health and Social Economic Improvement (CHASE-i), Makerere University, Uganda

Maria Ssematiko

Research Associate, Centre for Health and Social Economic Improvement (CHASE-i), Makerere University, Uganda

Sia Tengbe

Monitoring Evaluation and Learning Technical Officer, Sierra Leone Research Centre (SLURC), Sierra Leone

Hamid Turay

Lecturer, Milton Margai Technical University, Sierra Leone

CRedit statement:¹

CT: Conceptualisation, methodology, writing - original draft, writing – review and editing, project administration; **RT:** Conceptualisation, methodology, writing – review and editing, project administration; **PC:** Conceptualisation, methodology, writing – review and editing, project administration; **KD:** Writing – original draft, writing – review and editing; **MHH:** Conceptualisation, methodology, investigation; **MK:** Conceptualisation, methodology, investigation; **RMY:** Investigation; **LC:** Conceptualisation, investigation; **AC:** Methodology, investigation. **WCC:** Conceptualisation, investigation; **HB:** Methodology, investigation; **LNK:** Methodology, investigation; **VM:** Methodology, investigation **IN:** Methodology, investigation; **BN:** Methodology, investigation; **AGO:** Methodology, investigation; **LO:** Conceptualisation, methodology, investigation; **SO:** Conceptualisation, methodology, investigation; **NR:** Writing – original draft; **GS:** Methodology, investigation; **MS:** Methodology, investigation; **ST:** Investigation; **HT:** Methodology, investigation.

Abstract

The escalation of global political, economic and ecological crises and associated price surges has contributed to interdependent forms of malnutrition – undernutrition, overweight and obesity – with enduring societal consequences. This study investigates the factors influencing the adoption of healthy diets in five African cities – Bukavu, DRC, Freetown, Sierra Leone, Kampala, Uganda, Lilongwe, Malawi and Nairobi, Kenya. It explores the engagement of policymakers, consumers, private actors and

¹ Author's initials followed by their input to the paper.

further stakeholders in food and health systems. Across all cities, rising food insecurity and the prevalence of non-communicable diseases (NCDs) linked to unhealthy dietary patterns, notably around consumption of ultra-processed foods, are observed. Despite urban residents generally experiencing lower food insecurity than rural counterparts, people with low incomes, particularly those living in informal settlements, remain vulnerable. Additional axes of vulnerability that intersect with low incomes are gender, age, disability and migrant/refugee status.

Socioeconomic drivers that exacerbate food and nutrition insecurity include the high cost of nutritious diets, inadequate market, road, water and sanitation infrastructures, and the proliferation of unhealthy processed foods. Policy responses predominantly prioritise food quantity over quality, overlooking the importance of healthy diets. Additionally, profit-driven dynamics, within food and healthcare systems, and inconsistent resident knowledge of healthy, balanced diets, perpetuate the cycle of ill-health driven by poor nutrition, while informal food vendors, vital for low-income urbanites, face neglect or harassment.

However, city governments possess avenues for intervention, such as awareness campaigns, social security mechanisms, and social and technical infrastructure support for water and sanitation, markets and street vendors. Primary healthcare services and community health workers play crucial roles in addressing malnutrition, youth development and adolescent health. Multisectoral collaboration is advocated for broadening the impact of strategic interventions from neighbourhood to city level. Reform efforts necessitate broad coalitions, encompassing governments, civil society and the private sector.

Keywords: Healthy diets, health, nutrition, food environment, urban poverty, urban food systems, health systems, wellbeing

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Executive summary

Global food insecurity has increased in recent years as a result of a series of crises and related price hikes. This has taken place against a backdrop of longer-term decline in food quality in many places, which has created a “double burden” of malnutrition, whereby undernutrition and overweight co-exist within individuals, households and at the population level, with long-term societal implications.

Urban residents rely primarily on purchased food, and are therefore especially vulnerable to increases in the costs of essential, healthy foods. In the African context, moreover, the large proportion of urban populations live in informal, underserved neighbourhoods, where they are exposed daily to additional risks related to a lack of basic infrastructure and services. Efforts to address food and nutrition insecurity in African urban settings need to take into account how such insecurity may be exacerbated by the various structural constraints specific to urban poverty and informality.

Figure 1: Health, wellbeing and nutrition domain cities



Access to healthy diets is essential to wellbeing and good health. We explore the limiting and enabling factors for the uptake of healthy diets in Bukavu, Freetown, Kampala, Lilongwe and Nairobi, and examine how policymakers, consumers and key actors in the food and health systems engage with the concept of healthy diets. The five city teams used a broadly similar mixed-methods approach to explore the challenges and opportunities shaping residents' dietary practices.

This approach included a review of the literature and secondary data to map the policy landscape and key systems and actors, and to explore patterns of food security and related ill-health, with special attention to their relation to socioeconomic factors (such as income and education) and spatial dimensions (such as residence in under-serviced informal settlements). This was followed by key informant interviews with local and central government, civil society actors, including NGOs and INGOs, local leaders and public and private services providers. Focus group discussions were conducted with communities in informal settlements to gather their insights. These were supplemented by participant observation of operations in food markets and related WASH aspects, existing systems and infrastructure, dietary behaviour in different sites and general living conditions in informal settlements/workplaces. Finally, meetings and validation workshops were held with key stakeholders at different phases of the project.

In all five cities, we note an increase in food insecurity and in the incidence of non-communicable diseases (NCDs) related to unhealthy diets, especially diets consisting of ultra-processed, energy-dense but nutrient-poor foodstuffs. While, on average, urban residents are less food-insecure than rural residents, residents of low-income, informal settlements – the majority of the population of all five cities – are likely to be equally if not more food-insecure than their rural counterparts. However, in all cities, with the exception of Nairobi, disaggregated data reflecting the health and nutrition status of residents of different neighbourhoods is limited or non-existent.

We identify a number of income and non-income drivers of food and nutrition insecurity in the five cities, most importantly:

1. **High costs:** consuming a healthy diet that includes fresh fruit and vegetables is expensive for urban residents who depend on food purchases, and especially so for low-income earners. This is exacerbated by all five countries' dependency on international food markets, increasing their vulnerability to price hikes.
2. **Inadequate access to basic infrastructure and housing:** this results in the pervasive incidence of water- and food-borne illnesses. Access to safe drinking water is a priority for the residents of all five cities.
3. **Expanded access to (energy-dense, nutrient poor) ultra-processed foods,** with high levels of salt, sugar and fats: there is a severe lack of regulation covering food manufacturing processes, distribution and advertising. There are mixed levels of knowledge about healthy diets in the five cities; and even where such knowledge exists, affordability remains a major challenge.
4. **Exclusion of important actors:** informal food vendors provide affordable essential nourishment in poor neighbourhoods, yet suffer regular harassment

and discrimination. They are either neglected or actively harassed, although they typically pay business taxes to the municipality, as well as bribes. Large commercial food importers and manufacturers wield greater influence on national policymakers to resist regulating unhealthy food environments.

5. **Control by powerful elites:** both the food distribution system and the increasingly privatised health system are highly profitable and, as such, they are controlled by powerful elites, who also have strong links with policymakers. The result is a profit-driven vicious cycle, whereby unhealthy diets have become a major driver of ill-health, which in turn requires curative treatment for those who can least afford it.

Growing global attention on tackling malnutrition provides impetus for domestic policymakers to elevate food and nutrition as an urban priority to be addressed locally. In all five cities, there are several programmes and initiatives aiming to improve access to staple foods and public healthcare. Support for such programmes is recurrently promised in election campaigns (often with commitments to providing state subsidies). However, such programmes invariably compete for scarce resources and have limited success – that is, if they actually get implemented.

These shortcomings in nutritional health policy and programming can be addressed through the following approaches:

Coordinating governmental action: Siloed technocratic approaches must be replaced with coordinated governance, recognising cities' frontline roles. There need to be clearly designated mandates plus financing to promote healthy diets, making connections across related mandates like water, food markets and planning. There must also be a focus not just on the quantity, but also the quality, of food available, which has been somewhat disregarded in policy debates and initiatives.

Shaping behaviours and markets: While city governments cannot do much to rein in price hikes linked to global events, they can run successful awareness campaigns – engaging community healthcare workers – and contribute to modifying consumer preferences and behaviours. They can also act on distribution, by lowering business taxes for food retailers and recognising and supporting the role of street vendors as key providers of food to low-income consumers, for example, by upgrading informal food vendors' rights and facilities. This requires addressing political interests, power imbalances that marginalise low-income urban residents, and commercial sectors promoting ultra-processed foods.

Mobilising healthcare services: *Primary healthcare services* – including access to supplementary and therapeutic foods for malnourished children, and access to family planning – remain important entry points for addressing and preventing malnutrition in low-income communities, with community health workers sometimes acting as a critical link to services. *Universal healthcare, community health worker* and emergent *non-communicable disease* strategies may continue to offer strategic points for multi-sectoral collaboration on improving healthy diets. *Youth development* and *adolescent health* policy strategies are another point of potential policy and multisectoral convergence, since resources and support for preventing adolescent pregnancy and

supporting adolescent parents are important in breaking intergenerational cycles of poor nutrition and ill-health.

Promoting effective advocacy: Finally, substantial barriers will persist if wider systemic change is not secured. Sustained advocacy and activism are vital amidst wider political, climate and food pricing crises that magnify diet-health challenges. Within cities, concentrated efforts can seed gradual broader transformation, if backed by political will and resources. Civil society is an active player in all five cities examined here; however, it needs to form wider reform coalitions with local and national governments, community organisations and the private sector – the last of which comprises both formal and informal, small-, medium- and large-scale actors. The evidence from Nairobi indicates the effectiveness of combined top-down and bottom-up pressure for reform, involving wider coalitions spanning government, businesses, civil society and communities pushing a shared agenda.

1. Introduction

Good health and adequate nutrition are cornerstones of wellbeing, but access to the income, basic services and infrastructure that underpin them is in many cases a formidable challenge for low-income urban residents. Recent global crises have shown that advances in food and nutrition security in urban centres are fragile and that health and food systems are easily disrupted. The Covid-19 crisis has illustrated the specific and structural health vulnerabilities in cities and their importance to national and global health security, with the pandemic and the measures to contain it leading to the disruption of supply chains and greater food and nutrition insecurity, especially among the urban poor (FAO et al., 2020). More recently, the conflict in Ukraine and related price hikes in food, fertiliser and energy have resulted in a global cost of living crisis. Exacerbated by climate-related disasters, these crises have disproportionately affected the large numbers of residents of cities in low- and middle-income countries living in informal settlements (Corburn et al., 2020; Sverdlik and Walnycki, 2021). These crises have also affected national economies: about 60% of low-income countries are now considered at high risk of (or are already in) debt distress, with rapidly increasing rates of hunger and poverty (IPES-Food, 2023).

It is essential to note that such crises take place against the backdrop of what is often described as the double burden of malnutrition, in which both undernutrition, and overweight and obesity appear simultaneously. While the latter have long been a higher-income country problem – albeit typically affecting low-income groups within them – rates of obesity and overweight have increased in many low- and middle-income countries (LMICs), with this double burden most concentrated in Africa (Development Initiatives Poverty Research, 2020). This is due to very rapid changes in the food system, especially the availability of cheap ultra-processed foods and beverages, as well as major reductions in physical activity closely linked to urban lifestyles (Popkin et al., 2020). The worldwide prevalence of obesity nearly tripled between 1975 and 2016. Obesity is now recognised as one of the most important public health problems facing the world today, and it is estimated that by 2035 half the world's population will be overweight or obese, and that childhood obesity will increase by 100% between 2020 and 2035 (World Obesity Federation, 2023). At the same time, the world is moving backwards in its efforts to end hunger, food insecurity and malnutrition in all its forms. We are now only seven years away from 2030, but the distance to reach many of the SDG 2 targets is growing wider each year (FAO et al., 2021).

Environmental determinants of health, nutrition and associated wellbeing are important and there are strong linkages between poor access to adequate housing and clean water and sanitation, on the one hand, and, on the other, malnutrition, and vulnerability to communicable diseases such as malaria and TB, as well as non-communicable diseases as a result of household and neighbourhood air pollution (linked to energy sources) and to energy-dense and nutrient-poor diets (DfID, 2014; Kimani-Murage et al., 2015; Tydeman-Edwards et al., 2018; GBD 2017 Diet Collaborators, 2019;

Oyekunle et al., 2022; Karuga et al., 2022;). Lack of access to affordable, quality basic services is a critical underlying determinant that includes primary healthcare (including maternal, neonatal healthcare and nutritional monitoring/care for mothers and children; NCD management), childcare and education (Müller and Krawinkel, 2005; Bryce et al., 2008; Darnton-Hill and Samman, 2015).

This paper synthesises the findings from research in Bukavu, Freetown, Kampala, Lilongwe and Nairobi. While each city presents unique physical, geographical, political and socioeconomic characteristics, they have all experienced rapid population growth and large proportions of their residents live in informal settlements. In this respect, they are typical, if not representative, of many African cities. The findings contribute to knowledge on health, wellbeing and nutrition, especially in cities of low-income countries, but they also help inform wider debates and initiatives, as policymakers become increasingly aware of the crucial importance of health and nutrition for individual wellbeing, as well as for society at large: the World Obesity Federation estimates that global economic impact of overweight and obesity in 2035 at US\$ 4.32 trillion (World Obesity Federation, 2023). Even in high income cities in the world, far too many children go to school hungry, affecting their ability to concentrate and learn. Recognising this as a major challenge, with long-term implications, many national and sub-national governments around the world have developed free or subsidised meals programmes for primary school children (WFP, 2022).

Health, wellbeing and nutrition feature strongly in the SDGs. Targets for health and nutrition are clearly defined, although nutritional targets have been critiqued for being narrow (Gil et al., 2019); wellbeing is recognised as important, but its multidimensional nature, including its subjective and relational dimensions, has meant it is less well defined, pursued and assessed in policy, planning and programming. Progress in achieving Goal 2, measured through the current indicators that focus on moderate and severe food insecurity, undernutrition, proportions of sustainable agriculture, preservation of crops' genetic diversity and agricultural production intensity, to name a few, is markedly poor, with only three African countries showing “moderate improvement”, while the rest show stagnation (Sachs et al., 2023). Political dimensions of health, wellbeing and nutrition are related to the significance of access to affordable, quality health services, basic infrastructure and basic foodstuffs for wellbeing, as well as to health workers as a staff constituency of potential importance. The political responsibilities for food and health are often held in national or provincial government, with local government either failing to see the linkages between their mandates and food and health systems, or being under-resourced to support implementation that could aid systems transformation. Considering the interdependencies between multiple urban systems that contribute to good nutrition, health and wellbeing, identifying politically and technically sound ways to engage these systems proves challenging, yet these are important to consider. Voices of cities are being increasingly recognised in global food advocacy platforms, yet there is much work to be done in resourcing them appropriately (FAO and ICLEI, 2022). African cities are also sites of emergent, indigenous and often informal systems that address the challenges of nutrition and

healthcare. These systems are often misunderstood or dismissed by traditional research and policy approaches, but it is essential to engage with their actors and with residents and community organisations to articulate the specific barriers and entry points to long-term structural change for improved wellbeing.

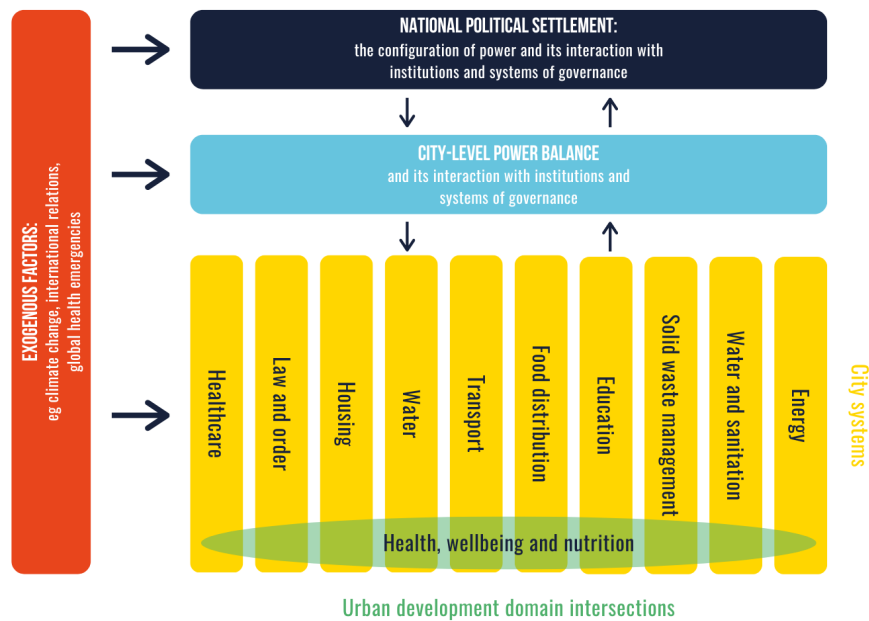
This is clearly a vast domain, encompassing several systems, which requires a shared entry point at the intersection between health and nutrition. Through workshops as a domain team, we identified the idea of “healthy diets” as a simple bridging concept that connects health, nutrition and wellbeing. It offers an accessible terminology for researchers and residents, and is gaining currency among policymakers in multiple contexts. We therefore ask: “what is limiting and enabling the uptake of healthy diets in Bukavu, Freetown, Kampala, Lilongwe and Nairobi?”. In asking this question, we pay special attention to low-income groups and the residents of informal settlements.

The paper begins with an overview of the ACRC's overarching conceptual framework, followed by a summary of prior knowledge from published literature, the health, wellbeing and nutrition conceptual framework, and methods for the study. We then present a thematic synthesis of findings from the five cities. Finally, we discuss implications of and conclusions from our analysis.

1.1. Introductory overview

The ACRC's holistic framework for analysing urban development in Africa has three integrated components – **politics**, **systems** and **development domains**. The politics component uses “political settlements” theory to model how power is configured at the national and city levels, and then analyses how these configurations of power shape (and are shaped by) urban development processes in the given city. The systems component analyses the functioning of the key systems (composed of physical infrastructure and people organised in various ways) that sustain and/or improve urban life in the city. The domains component looks at some of the distinct fields of discourse, policy and practice that have formed around complex, inter-systemic development challenges in the city, and analyses how the actors (political, bureaucratic, professional, and popular) engaged in these fields collaborate and/or compete for authority. Figure 2 below indicates how these three components come together.

Figure 2: ACRC's conceptual framework



2. Summary of prior knowledge

2.1. Definition of healthy diets

Definitions of healthy diets are subjective, constantly shifting and depend on needs, cultural context and customs (WHO, 2015) but have classically referred to a diet that “promotes optimal human growth and development and prevents malnutrition in all its forms” (Kumanyika et al., 2020: S8). Definitions have focused on the intake of foods that prevent disease and positively influence health (Cena and Calder, 2020), and it is recognised that a healthy diet is more than just an adequate diet; it reflects a wide range of nutrient-dense foods that are essential for good health (Ritchie, 2021). Beyond definitions, development of specific dietary guidance is challenging. The increasing focus on food systems reflects the understanding that they “have the potential to nurture human health and support environmental sustainability”, and thus the intersection of food systems and healthy diets is of increasing interest (Willett et al., 2019: 2). It is recognised that healthy diets must be accessible and affordable to all, including disadvantaged and marginalised populations, but that, globally, food systems fail to provide healthy diets to all, and supply- and market-oriented strategies dominate policy and interventions (Brouwer et al., 2021). In Africa, healthy diets are not affordable to most of the population (FAO et al., 2021). There is limited scientific research on the links between diet and health (Kumanyika et al., 2020), variation between children and adults, and differences in culturally important elements to food choice, food practices and what is considered a healthy diet (Monterrosa et al., 2020).

Food security and insecurity dictate the extent to which people can access healthy diets. At the 1996 World Food Summit, food security was defined as access to sufficient, safe and nutritious food to meet dietary needs and preferences at multiple levels (FAO, 1996). The “pillars” framework proposes food security in terms of four intersecting themes: consistency of availability of food, ability to access healthy food, capacity to utilise accessible food, and stability of food systems (Pritchard, 2016). Recently, these pillars have evolved to include sustainability and agency, the second of which refers to the “the capacity of individuals or groups to make their own decisions about what foods they eat, what foods they produce, how that food is produced, processed and distributed within food systems, and their ability to engage in processes that shape food system policies and governance” (HLPE, 2020: 9). But there is also understanding that viewing agency only at the individual or household level can be limiting and problematic and there is a need to turn to wider structural and political factors (Battersby et al., 2023a). It is thus increasingly argued that food system transformation must take a healthy diets perspective, in which consumer needs, preferences and agency drive food system solutions (Béné et al., 2019; Brouwer et al., 2020, 2021). There has been a dominance of food security research in rural African contexts but far less research has investigated urban contexts, including metrics or concepts of relevance for food security and healthy diets in urban contexts (Battersby, 2017; Blekking et al., 2020).

2.2. The growing evidence of the importance of healthy diets in African cities

Urbanisation in Africa is accompanied by a nutrition transition characterised by increased obesity and nutrition-related non-communicable diseases (such as type 2 diabetes, cardiovascular diseases and certain cancers, which are rapidly increasing among adults and children), alongside persistent undernutrition, in what is referred to as the “double burden” of malnutrition and obesity (Osei-Kwasi et al., 2021; Oyeyemi et al., 2023). There is a particularly high prevalence of food insecurity and malnutrition among low-income urban residents and those living in informal settlements (Karuga et al., 2022; Fongar et al., 2023; Wilkinson et al., 2020; Crush and Frayne, 2010; Mberu et al., 2016). Food access, affordability and storage are a particular problem (Smit, 2020). Undernutrition contributes significantly to the intra-urban health inequalities that begin at birth and are reproduced over a lifetime, with residents of informal settlements at a disadvantage, including infant and under-five mortality, communicable and non-communicable diseases (Corburn et al., 2022; Ezeh et al., 2017; Sverdlik, 2011). Undernutrition contributes to low birthweights as well as increasing risks of diseases such as malaria in infancy and childhood. There are established bi-directional relationships between malnutrition and diseases such as tuberculosis and there is a growing body of literature showing how disease risks and severity, poor mental health and poor nutrition cluster to synergistically worsen health and wellbeing outcomes for marginalised people, including urban informal settlements (Sverdlik, 2011; Weimann and Oni, 2019; Zerbo et al., 2020; Himmelgreen et al., 2022) Risks of poor nutrition, diseases and poor mental health and their interactions are all exacerbated by limited access to healthcare and family planning services, water, sanitation and clean energy,

as well as inadequate housing and livelihood opportunities (DfID 2014; Kimani-Murage et al., 2015; Tydeman-Edwards et al., 2018; Oyekunle et al., 2022; Karuga et al., 2022). However, this research has often focused on an individual or household level and has not fully engaged with the complexity of the broader urban food environment.

The complex food environments of African cities are characterised by the co-existence of formal and informal food markets and vendors (Smit, 2020), which provide a diversity of obesogenic and anti-obesogenic foods found alongside one another (Kamanga et al., 2022; Busse et al., 2023). Street vendors play an important role in providing affordable food in low-income areas, but often lack access to shelter, energy and water infrastructure, and are frequently subject to the threat of relocations and evictions (Smit, 2020). The location of food outlets, and of infrastructure available to informal vendors, impacts access to food (Smit, 2020), and open-air markets and informal vendors continue to be popular, despite the increasing presence of supermarkets in African cities (Hannah et al., 2022). Research has documented urban community members' strong awareness of the socioeconomic change and urbanisation-driven threats to health (Oyeyemi et al., 2023). Solutions are therefore needed that tackle multiple burdens of malnutrition, and the uptake of healthy diets is thus an emerging policy issue that strongly resonates in African urban contexts. Research is needed that embeds the study of access to healthy diets within the broader food environment, with particular focus on the informal food sector.

Urban agriculture (the growing of crops and raising of small livestock on land within the urban boundaries of cities and towns (Poulsen et al., 2015)) has been proposed as a solution to the challenge of sustainable agricultural production practices and food supply chains (Steenkamp et al., 2021), and it remains a significant livelihood strategy, particularly for the urban poor, though experiences between cities vary widely (Kanosvamhira, 2021). Urban agriculture is thought of by some as well positioned to improve food security and urban poverty, particularly in the context of climatic change (Mkwambisi et al., 2011; Nkrumah, 2018) but its relation to food security and improved urban livelihoods has been questioned by others (Crush et al., 2010). Barriers to its success include settlement informality, property rights and distance from food retailers (Davies et al., 2021). Additionally, urban agriculture tends to be applied as a household level poverty alleviation method (Zezza and Tasciotti, 2010) and can be apolitical and ahistorical in application (Battersby, 2013), shifting responsibility from the state to the poor themselves (Maxwell, 1999). Local governance has had mixed responses, with some examples of urban agriculture being rejected as being opposite to the image of the modern city (Battersby, 2013). However, there are examples of urban farmers exercising agency in their ability to organise and engage in collective action, both formally and informally (Kanosvamhira, 2021).

2.3. Determinants of dietary choices in African urban areas

A diversity of factors affects dietary choice in urban African populations, including education, food knowledge, time, family and social network, cultural factors and the physical environment (Gissing et al., 2017; Yiga et al., 2020). Food price and

affordability are among the most important determinants of dietary choice and thus socioeconomic status and economic access are major factors in the ability to access nutritionally safe and healthy foods (Pradeilles et al., 2021; Tay and Ocansey, 2022; Mabuza and Mamba, 2022; Onyango et al., 2023). Barriers to accessing healthy diets stem from poverty and high food prices intersecting with individual preference (Headey et al., 2023). Households with inconsistent access to electricity, water and cooking fuel are at higher risk of food insecurity (Vilar-Compte et al., 2021; McCordic and Abrahamo, 2019). The inequities that underly the structural determinants of access and affordability are rooted in historic colonial legacies (Battersby et al., 2023b). Ongoing colonial and neocolonial processes involving oppressive political-economic structures have seen a 400-year nutritional transition, with traditional food habits replaced over time by a global food system dominated by multinational corporations, undermining food security and health (Raschke and Cheema, 2008) through environmental destruction, suppression of self-sustainability and economic dependence, and dispossession and marginalisation of particular urban communities (Battersby et al., 2023a,b). Despite this, research on factors influencing dietary behaviours in urban African food environments focus predominantly on individual and micro-level factors (Osei-Kwasi et al., 2020), and understandings of the equity dimensions of dietary choice and access rarely go beyond income and gender inequalities (Battersby et al., 2023b). There is, therefore, a need for research that focuses on complex, intersectional understandings of inequity in access to healthy diets.

Food price increases often decrease dietary diversity (Onyango et al., 2023), and stable, formal income has been shown to improve urban households' food security beyond the significant effect of income (Wu et al., 2022). Job insecurity represents a broader social determinant of health (Kessides, 2006; Ezeh et al., 2017) and urban dwellers in casual employment with lower and irregular income face chronic food insecurity (Mohamed et al., 2016). Socioeconomic inequalities are particularly a distal determinant of undernutrition in women and children (Victora et al., 2021; Tay and Ocansey, 2022), which can also be common among sexual and gender minorities (Hamill et al., 2023). Some low-income groups compensate poor access to food by engaging in food sharing networks, thus lack of social embeddedness in a city can lead to greater food insecurity (Hemerijckx et al., 2022). Migrant populations and internally displaced people thus can experience stigma and a particular lack of food security and livelihood and educational opportunities, as well as barriers to formal healthcare accessibility (Afeadie, 2022; Adejoh et al., 2022; Dauda and Jaha Imoro, 2022). There is a need for more research into the specific barriers these communities face in accessing healthy diets, and the role of networks.

Food purchasing patterns vary between cities but there is often preference for open air markets and whole foods among low- to middle-income households, partly due to the relational experiences such spaces provide (Hannah et al., 2022; Mackay, 2019). For example, purchases may be driven by access to trusted vendors (who may provide discounts or credit) amid unpredictable prices, and there may be mutual expectation of conformity to shared social norms, including between vendors and between vendors

and customers, including trust, cooperation and loyalty (Nordhagen et al., 2023). Food habits and sociocultural preferences are also significant contributors to dietary choice (Osei-Kwasi et al., 2021). Food is related to the construction of identity in urban areas, including in intersecting sociospatial, gendered and generational dimensions, culture and personal preference (Riley and Dodson, 2017).

Transport systems also influence access to healthy foods across the supply chain, with refrigerated road transport not accessible to many, and road networks frequently in poor condition or congested (Smit, 2020). Urban transport and transport disadvantage is also increasingly recognised to be a mediating factor in wellbeing (Oviedo and Sabogal, 2020). Particularly in informal settlements, poor transport networks affect people's ability to access food (Ezeh et al., 2017). Structural deficits and inadequate urban planning and development constrain sustainable transport for low-income areas, which affect access to everyday essential services and dietary options (Oviedo et al., 2021), as well as access to employment opportunities and income (Collier et al., 2019). There is a need for research on the direct and indirect ways in which urban planning shapes access to healthy diets in spatial and temporal ways.

2.4. Urban planning, diets, health and wellbeing

Africa has the world's highest urban population living in informal settlements: 56% as of 2015 (UN-Habitat, 2010; Zerbo et al., 2020). The built environments of African cities encompass a range of forms of housing, an increasing population density and neighbourhoods are generally not formally planned (Ngom, 2019). The socio-material environment shapes diets in a range of direct ways (Battersby et al., 2023a). Depending on the type of housing, access to space for cooking and to store food may be limited (Smit, 2020), as well as households' ability to grow their own food, with participation in urban food production being particularly low in informal settlements (Crush et al., 2010). Those in the informal sector often have to navigate exclusionary city planning, and low-income neighbourhoods often lack designated spaces for markets and commerce, and supermarkets are often located in city centres, influencing the accessibility of healthy foods (Fuseini et al., 2018). In such cases, household micro-enterprises play a pivotal role in providing access to both groceries and prepared food (Battersby, 2019). The infrastructure of the built environment and housing type also influences access to basic services such as shelter, storage, refrigeration, waste collection, water and sanitation, affordable energy and efficient public transport (Smit, 2020), with some conditions potentially pushing traders towards processed foods (Fuseini et al., 2018).

Water and sanitation infrastructure have a major influence over the ability of households and food vendors to prepare and consume food safely (Smit, 2020). In contexts of poor water, sanitation and hygiene (WASH) infrastructure, food contamination and adulteration are key concerns (Pradeilles et al., 2021), particularly in informal settlements (Lilford et al., 2017), and the intersections of WASH conditions with malnutrition are significant (De Vita et al., 2019). There is dependence on private, small-scale and informal water and electricity vendors where state provision is lacking,

with associated uncertainties and often higher unit costs compared to formal access (Pradeilles et al., 2021). Access to different forms of energy impacts cooking methods for households, influencing diets available to households (Battersby, 2019).

Affordability of energy, as well as of food, influences how regularly households are able to cook, and what foods they are able to cook, with energy poverty often being inversely related to food security (Ahmed et al., 2023). Certain meals require energy-intensive slow cooking. Where households struggle to afford firewood or charcoal for cooking, neighbourhood vendors of cooked food may provide a more affordable alternative. For these vendors, the price of fuel influences the viability of their livelihoods. Access to electricity may enable electric cooking, where power supply is sufficient and stable. Access to and affordability of electricity also influences whether households and communities have access to refrigeration. Without refrigeration, fresh foods, especially animal products, cannot be safely stored, meaning households are not able to buy in bulk and may not frequently use fresh foods. Contextual understanding of the dynamics of urban cooking energy transitions in African cities remains limited (Das et al., 2023).

Deficiencies in the built environment in informal urban settlements further contribute to broader health and wellbeing challenges that interact with diets and nutrition. Inadequate water supply, sanitation, drainage and solid waste management in informal settlements create risks of diarrhoea, typhoid, hookworm and cholera (Tay and Okansey, 2022). The environment of informal settlements exposes residents to health risks of injury from fire, extreme weather, and crime (Ezeh et al., 2017), but there is a lack of timely and targeted information systems and emergency response to ensure preparedness for extreme weather events in urban areas (Codjoe et al., 2020). Lack of safe and durable housing intersects with vulnerability to flooding in some areas. Poor building conditions, unstable power supply and poor sanitation and hygiene in the built environment contribute to reduced access to healthcare (Pradeilles et al., 2021). In addition, this environment, including type, material and architecture of houses and exposure to urban agricultural fields, create vulnerability to malaria and other health challenges (Tay and Okansey, 2022).

2.5. Politics and governance of healthy diets in urban Africa

In many African countries, the mandate for food governance sits at a national or regional level, but local government can still act to mainstream the consideration of healthy diets into all policies (such as education), regulate the private sector, support informal trade and encourage local food production and multistakeholder collaboration (Trapani, 2021). Funding, capacity and political will may need to be enhanced to enable this (Smit, 2016). No single intervention or governance platform will be effective alone at addressing the upstream factors that enable healthy diets, and these challenges demand coordinated action across sectors (Hargreaves et al., 2022). This includes at the individual, community and broader structural levels (Bakibinga et al., 2022; WHO, 2017), considering food affordability and the availability of healthy diets, as well as information to empower decisionmaking for healthy choices (Al-Jawaldeh et

al., 2022). Multisectoral actions can address the underlying and indirect determinants of food insecurity and malnutrition, including poverty, infrastructure and broader governance. There is thus a need for a range of sectoral actions to foster enabling environments, and research that seeks to understand the impact of specific and combined policy action (Heidkamp et al., 2021).

Upstream interventions, such as fiscal policy are more effective at tackling health outcomes and narrowing inequalities than individual behaviour changes (Osei-Kwasi et al., 2021; Williams et al., 2008, WHO, 2016; Sassi et al., 2013). For example, government fiscal and policy action can restrict the availability of highly processed foods to enhance healthy and diverse adolescent diets (Hargreaves et al., 2022). However, if food pricing is targeted, this must be met with social protection schemes that reduce financial barriers to safe and healthy diets (Pradeilles et al., 2021). This includes social safety net planning, such as food assistance, social transfer programmes, cash transfers, for which there is evidence of improvement in extending schooling for adolescents and with wider educational and social goals (Hargreaves et al., 2022). Additionally, schools can provide healthy food environments and nutritionally sensitive social protection, particularly during times of crisis, including free school meals, and curricula that teach about sustainable production and healthy diets (Hargreaves et al., 2022; Al-Jawaldeh et al., 2022). Subsidised fruit and vegetables, including through school programmes, show widespread evidence of promoting healthy food consumption among vulnerable populations (Holdsworth et al., 2023). A large proportion of informal food vendors are women, for whom food vending is a relatively easy entry livelihood strategy that offers potential to alleviate poverty for themselves and their communities. However, food vending is associated with increased risk of accidental injury, violence and abuse (Pick et al., 2002, Kinyanjui, 2014) as well as respiratory diseases associated with exposure to cooking fuel (Sepadi and Nkosi, 2023). Crackdowns on informal vendors are also an increasing form of state violence in many cities, with gendered ramifications (Resnick, 2019). Further research on the interactions between such policing, livelihoods and food security are required.

There are also a range of civil society organisations and formal and informal enterprises involved in shaping access to healthy diets, through production and sharing networks, particularly with regards to low-income and vulnerable populations, and it is important that these groups are recognised and involved in formal policy processes (Warshawsky, 2016; Hemerijckx et al., 2022). However, the perspectives of groups such as informal traders and informal settlement communities (and marginalised groups within these) are often ignored in decision making (Smit, 2020). Where there are pre-existing community governance structures, opportunities for joint initiatives with local government and other public agencies increase (Satterthwaite et al., 2019). There is a key role for city leaders who have the requisite local knowledge and can bring together government, the private sector and communities, and this must be supported with evidence, monitoring and evaluation data, and financial capacity (Ellis et al., 2021). This data will need to be reflective of complex city dynamics, including urban

growth, migration and mobility, resource mobilisation and use, informal sectors and emphasise social, physical, environmental and economic security (Vearey et al., 2019).

2.6. Link to ongoing crises

Food systems in African cities are vulnerable to pandemics, owing to relatively labour-intensive farming systems, often located closer to cities (Moseley and Battersby, 2020). Urban food systems have thus been disrupted by the Covid-19 pandemic and by the measures to contain it, leading to greater food and nutrition insecurity, especially among the urban poor and those in informal settlements (ICLEI Africa, 2020; Nuwematsiko et al., 2022; Turok and Visagie, 2022). Covid restrictions pushed many families towards lower cost, less nutritious and non-perishable foods (Neufeld et al., 2022). For adolescents, food insecurity and poverty has been worsened by the Covid-19 pandemic (Neufeld et al., 2022; Amukwelele, 2022). There is high dependence on markets for food and limited, inflexible budgets, and there is some evidence that food riots and social instability can result from food shortages among low-income urban populations (Friel et al., 2011; Hossain and Hallock, 2022). Community-based organisations are well placed to apply learnings from previous crises and vulnerabilities to coordinated action and mobilisation (Frimpong et al., 2022), and there is a need for research that centres these experiences and brings these organisations together with policymakers.

Climate change and associated increased weather unpredictability intersect with other crises, such as pandemics (Lieber et al., 2021; Ellis et al., 2021). Informal settlements are disproportionately affected by climate change and related health risks, as a result of lack of basic infrastructure, access to healthcare and inadequate housing (Borg et al., 2021; Ndebele-Murisa et al., 2020; Sverdlik, 2011; Hambrecht et al., 2022). Research suggests that there is significant awareness and local understanding of these risks posed by climate change (Greibe Andersen et al., 2023; Melore and Nel, 2020; UN-Habitat, nd). Ignoring these realities deepens existing poverty and the vulnerability of large numbers of urban residents (Corburn et al., 2020; Sverdlik and Walnycki, 2021). Urban food retailers are increasingly subject to more variable and extreme weather events associated with climate change (Blekking et al., 2022). Informal food retailers, in particular, are influenced by slow-onset hazards and sudden shocks such as heavy rainfall or extreme heat events, because of the precarity in the wider food system, and more frequent and intense droughts may disrupt food supply chains on wider spatial scales (Blekking et al., 2022). The provision of infrastructure such as water, sanitation and shelter for informal vendors is important for ensuring food safety (Smit, 2020) and collaborative mechanisms such as multistakeholder food policy councils have shown promise for developing plans for cities that include the upgrading of marketplaces alongside the transfer of decisionmaking power to communities (Obera and Onyango, 2015; Smit, 2020; Brown, 2023).

Inadequate responses to climate change may lead to declining productivity and increasing food demands and prices, to which low-income urban populations are among the most vulnerable. Differential vulnerability means that the impacts of such

challenges will be felt differently, based on social characteristics such as gender, age and migrant status (Adams and Nyantakyi-Frimpong, 2021). Such vulnerability, particularly in informal settlements, is multi-causal, with many of the structural inequity and poverty-associated challenges so far discussed here as barriers to healthy diets and risks to wellbeing also creating and shaping vulnerability in the context of environmental and climate change (Williams et al., 2019; Zerbo et al., 2020). Socioeconomic marginalisation and poor and unequal education opportunities have been found to lead to increased levels of urban violence and instability (Østby, 2016; Oualy, 2021). There is a need for research on the specific links between extreme weather events and access to healthy diets. Ongoing community-level organising facilitates adapting to such risks but must be met with governance that can transform the structural barriers (Satterthwaite et al., 2020). Policies and interventions that focus on increasing household access to the food environment during food system shocks are required to mitigate food insecurity, particularly in informal settlements (Merchant et al., 2022; Busse et al., 2023).

2.7. Policy priorities

The most common interventions used to address food choice in LMICs are social behavioural change communication interventions (Headey et al., 2023). However, evidence suggests that providing information on healthy diets alone is not enough to bring about increased household dietary diversity (Fongar et al., 2023). Policies that show most evidence of improving nutrition through food supply and environment include school food programmes, taxing unhealthy foods, regulating trade and foreign investment, subsidising healthy foods, controlling marketing, implementing dietary guidelines, and social protection measures, though most evidence is from high-income countries (Holdsworth et al., 2023). Evidence of the impact of cash transfers as social protection measures in Africa on consumption of healthy diets is inconsistent (Global Panel, 2020; Headey et al., 2023). Based on research in Ghana and Kenya, bundled interventions with coherent action across these policy areas have the most likelihood of positively influencing healthy diets (Booth et al., 2021).

The importance of engaging relevant local stakeholders in the development of policy solutions and intervention impact assessment is increasingly emphasised in the literature (Wadende et al., 2022), particularly around issues such as climate change, where experiential knowledge is deeply important for developing locally grounded and context-specific solutions (Cobbinah, 2023; Adusu et al., 2023). Granting trust and autonomy to such stakeholders can leverage locally nuanced understandings of grassroots issues and facilitate integrated food system policy approaches that account for the heterogeneity between and within cities (Hannah et al., 2022). There is increasing understanding that these participatory and citizen-led approaches can inform policy that aims for goals of health equity and climate justice (Corburn et al., 2022). Recognising and incorporating multiple forms of knowledge and evidence can contribute to addressing policy challenges in equitable ways (Loewenson et al., 2023). Barriers to the transfer of more decision-making power to communities include limited

resources, low capacity of municipal governance, and uncoordinated planning priorities (Brown et al., 2023).

Policy solutions that tackle food systems will need to be equitable and sensitive to complexity in order to provide solutions that are affordable and accessible to low-income populations (Soma et al., 2022), with the understanding that affordability is a major barrier for many to accessing healthy diets, and thus lower cost food is key (Headey et al., 2023; Headey and Alderman, 2019; Hirvonen et al., 2020). This includes recognising and supporting the role of informal food vending in livelihoods in poor urban communities as well as a response to demand from low-income groups. Approaches will also need to consider gender specific needs, such as the social norms affecting adolescent girls, the discrimination, violence, and abuse they are often subject to, their challenges in accessing education, and impact of pregnancy and parenthood on their nutrition (Al-Jawaldeh et al., 2022). Investments in women and young people have indicated potential for gains in social, economic and ecological equity (Loewenson et al., 2023).

It is important that climate-related risks are addressed in an inclusive and equitable manner (Møller-Jensen et al., 2023; Cobbinah, 2023). Research highlights the value of incorporating local perspectives on climate change into adaptation and policy responses such as community capacity building and possibly engaging community health volunteers and community health workers (Greibe Andersen et al., 2023). The value of implementation and research that go hand in hand is emphasised (Soma et al., 2022). Research supports the in situ upgrading of informal settlements as a bottom-up response to improving urban and environmental health (Wang, 2023; Cobbinah, 2023).

2.8. Summary of research gaps

Healthy diets and wellbeing sit at the intersection of a number of systems, with complex links and overlaps, including health systems, food systems and wider economic systems, transport networks, built infrastructure and urban planning, climate adaptation and disaster risk reduction, and the ways in which these are each governed. Historic and ongoing structural inequities and poverty are a source of the challenges common across all of these systems. Access and barriers to healthy diets are a manifestation of these systems and the way they intersect.

Research linking diet and health with cultural importance, food choice and practices is limited, and is often focused on the individual or household level, without full engagement with the broader urban food environment. Investigations of the equity dimensions of dietary choice and access rarely go beyond income and gender inequalities, and evidence of the impact of various policy approaches to address these issues in an urban African context, such as social protection measures, on consumption of healthy diets is inconsistent. Research is thus needed that embeds the study of access to healthy diets within the broader food environment, with particular focus on the informal food sector and on complex, intersectional understandings of

inequity in access to healthy diets. This must recognise that food is related to the construction of identity in urban areas, including in intersecting sociospatial, gendered and generational dimensions, culture and personal preference, such as the specific links between extreme weather events and access to healthy diets. There is a need for more research into the specific barriers that poor and marginalised urban communities face in accessing healthy diets. Further knowledge is needed on the direct and indirect ways in which urban planning and policy shape access to healthy diets in spatial and temporal ways, such as the interactions between policing of informal vendors, livelihoods and food security. Evidence is needed on the range of sectoral actions to foster enabling environments, and the impact of specific and combined policy action; research here needs to centre the experiences and insights of community-based organisations.

Focusing on the drivers of healthy diets can provide a lens through which to explore the systems that affect healthy diets at a city level. It can also be particularly revealing of their complex intersections, and the ways that interventions must target these. This research focuses on the factors that enable and limit the uptake of healthy diets, with a particular focus on the broader city systems that influence these, moving beyond a focus on nutrition at an individual and household level to understand the diverse and dynamic processes of the urban African food environment. In particular, we examine how policymakers, consumers and key actors in the food and health systems engage with the concept of “healthy diets”, and the ways in which local governments and urban planning are already shaping the structural issues affecting access to healthy diets, even where they are not setting out explicitly to do so. We seek to illustrate that the organising concept of “healthy diets” can enable research that gets to the heart of the intersecting sociospatial, gendered dimensions of these issues.

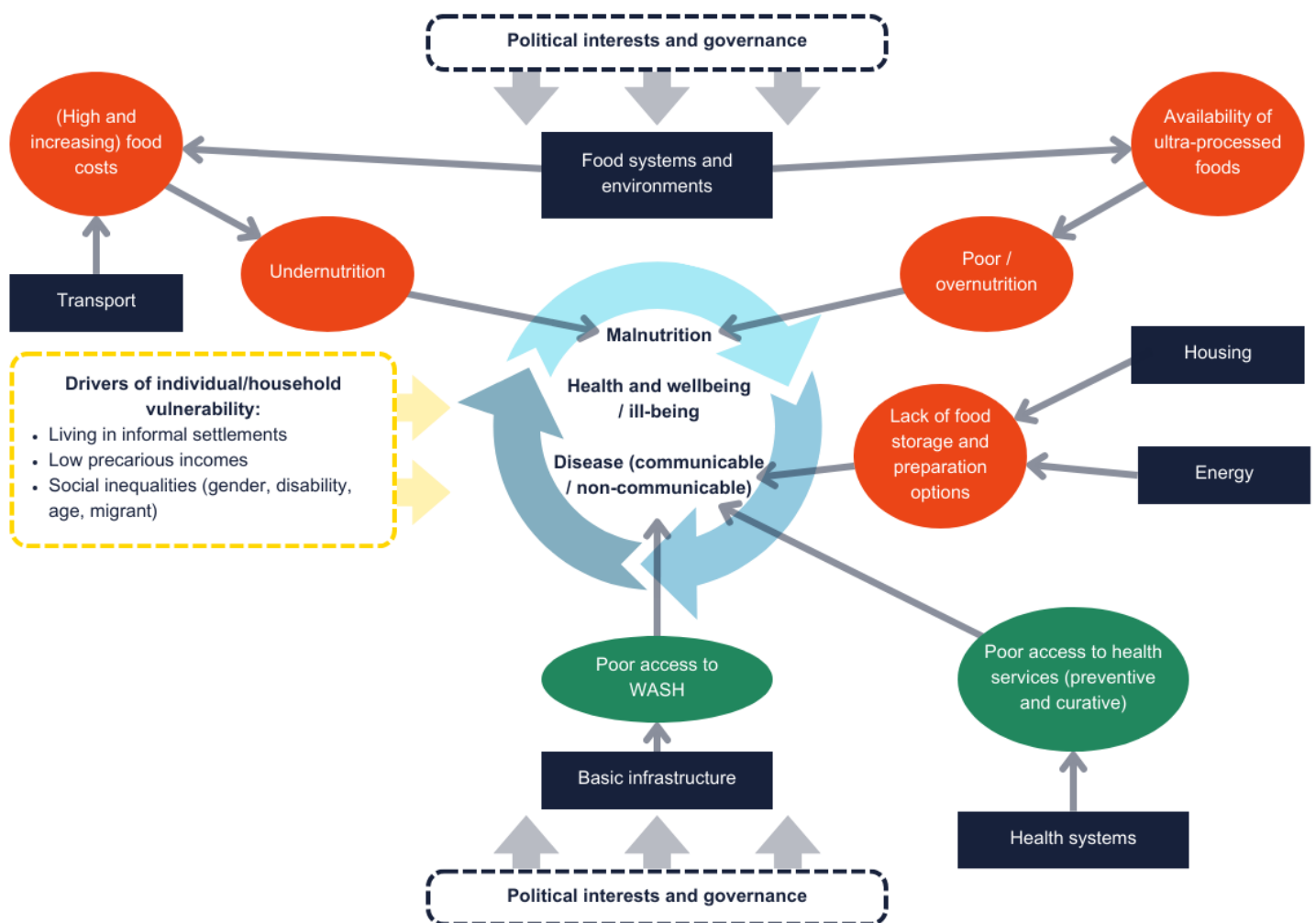
Many forms of governance, across different urban systems, influence access to, and affordability of, healthy food and thus already act to influence and improve food environments, especially for children and low-income groups. Therefore, while local governments may consider themselves under-capacitated to deal with the structural issues affecting access to healthy diets, there are many ways in which they are already doing so. This highlights the scope and potential role for city-level governance to act to improve access to healthy diets and therefore wellbeing in African cities, through locating responsibilities in existing spaces of urban governance. These processes should be recognised and further leveraged for their ongoing contribution to health, wellbeing and nutrition in African urban contexts. Healthy diets may, therefore, offer an organising concept for urban reform.

3. Methodology

This paper presents a synthesis of papers from Bukavu, Freetown, Kampala, Lilongwe and Nairobi, based on original research by city-level researchers focusing on the factors that enable and limit the uptake of healthy diets. The study was co-designed by domain- and city-level researchers; the overall focus and research questions were

agreed across all five cities, whilst each city research team inductively explored the issues arising in each context. The choice of “healthy diets” as the research focus was based on its importance at the apex of food and health systems and the relative lack of analyses that bring these two systems together in urban contexts. We recognised the potential accessibility of this term to research participants, as well as its potential for deep contextualising in each city. The choice was also based on an explicit desire to avoid a research approach that depended on a broad wellbeing, or food or health systems framework that would require varied and diffuse data, and result in a shallow analysis, as opposed to a deeper exploration. The conceptual framework which expresses this focus on healthy diets is shared below.

Figure 3: Conceptual framework



Conceptual framing – see Figure 3

Central problem – vicious cycle of malnutrition and poor health. For many people in cities, there is a vicious cycle of malnutrition and poor health, which can be characterised as “illbeing”. Key contributors to malnutrition are undernutrition (lack of

sufficient healthy food) and poor/overnutrition (owing to unhealthy/poor-quality food and overconsumption). Undernutrition is particularly strongly related to (both acute and chronic) infectious diseases, such as malaria, tuberculosis and lung disease and HIV/AIDS, whilst poor/overnutrition is particularly strongly related to non-communicable, often chronic diseases, such as diabetes and hypertension. Undernutrition is particularly driven by food insecurity, linked to high and increasing food costs relative to income, whilst poor/overnutrition is particularly driven by ease of access to unhealthy foods, such as ultra-processed food, which is driven by commercial promotion.

Drivers of this vicious cycle. Multiple local and national systems contribute towards this vicious cycle, sometimes in intersecting ways. Food systems shape the relative availability, promotion and pricing of different kinds of food and hence access for different population groups. Health systems shape access to health services, which may (nor may not) provide information and nutritional support, as well as treating and controlling both communicable and non-communicable diseases (and providing access to contraception, which supports child nutrition and health). Basic infrastructure, such as water, sanitation and waste management systems, shapes access to clean water, and cleanliness of the built and natural environment, which supports (or undermines) safe food preparation and prevents (or facilitates) infectious disease transmission. Urban planning, transportation, housing and energy systems further support (or undermine) food security, quality and safety by enabling food storage and presentation, allocating adequate space for safe retail, reducing food transport miles and food loss and, finally, shaping food preparation and cooking cultures.

Intersecting inequalities and vulnerabilities. Poor operation of the above systems contributes towards vicious cycles of malnutrition and ill-health, particularly for vulnerable communities disadvantaged by intersecting spatial, economic and social inequalities. People living in informal settlements are particularly vulnerable to disease and malnutrition, as a result of poor environmental and housing conditions. People with low and precarious incomes are vulnerable to food insecurity. Social inequalities, such as gender, age, disability and migrant/refugee status, intersect with these vulnerabilities, influencing residence, access to income, the distribution of food within households and the availability of time to prepare food.

Actors, politics and governance. There is a plurality of influential actors across all systems, including government, private sector, civil society and international actors. Political settlements and dynamics (including donor relations) shape the interests of actors and the opportunities for improving systems. Actors outside of the core systems may also be influential (for example, police harassment of vendors).

3.1. Data collection

Research teams in each city adopted a similar, predominantly qualitative approach to explore the challenges and opportunities shaping residents' dietary practices from the perspectives of key stakeholders, including city residents (with a focus on particularly

vulnerable groups, such as people living in informal settlements), national and city government actors, such as policymakers, and service managers, civil society actors and private actors. This qualitative data was placed in the context of a review of city-specific literature, including published and grey literature. Data was collected by researchers experienced in qualitative research. In two cities, emerging findings were discussed in stakeholder workshops for verification and deepening of analysis. Table 1 presents data collected in each city. This included:

- A review of the literature and secondary data, to map the domain, including understanding the policy landscape and key systems and actors, and to explore patterns of food security and related ill-health, with special attention to their relation to socioeconomic factors (such as income and education) and spatial dimensions (such as residence in underserved informal settlements).
- Key informant interviews (KIIs) with key stakeholders in government (local, central and other levels); with civil society actors like health and food-related non-governmental organisations (NGOs)/international non-governmental organisations (INGOs) and community-based organisations (CBOs); private and public food and health providers associations (including informal food vendors); health and nutrition advocates and researchers. Local leaders, including politicians, religious and cultural leaders, were also interviewed, as were service providers, for example at health facilities. Overall, the interviews were productive, although in Freetown the team noted that national officials/private sector respondents were hesitant to respond in detail to questions about political settlements.
- Focus group discussions: these were conducted mostly with community groups (women, youth, men, farmers and food vendors, among others) in informal settlements, with the explicit purpose of gathering insights into communities' views. In Lilongwe, focus group participants – as well as several key informants – explicitly highlighted the critical role of water and sanitation in undermining efforts to achieve healthy diets.
- Meetings and validation workshops were held with key stakeholders at different phases.
- Participant observation was conducted on operations in food markets and related WASH aspects, existing systems and infrastructure, dietary behaviour in different sites and general living conditions in informal settlements/workplaces.

Table 1: Types of data collected in each city

City	Key informant interviews	Focus group discussions	Meetings and workshops	Observation
Bukavu	27 (with government policy and programmatic actors, private providers, academics and consumers (especially informal settlements residents))	Eight groups with users/providers of food and health services (formal and informal, governmental and non-governmental), food vendors (formal and informal)		

Freetown	20 (national government, city council, CSOs, persons with disability, donors, private sector and academics)	Eight groups with young men (15-35), older men, young women, older women (40+), formal health providers, informal health providers, food vendors resident in informal settlements		
Kampala	19 (national and city government actors, CSOs, private and public health and food providers, researchers)	Seven groups in communities (women, youth, men, farmers and food vendors)	12 engagement sessions with key stakeholders at different phases and levels (village, division, city)	Food markets (WASH aspects, systems and infrastructure) dietary behaviour in different sites, and living conditions in informal settlements and workplaces
Lilongwe	Seven (civil servants at national government ministries and city council)	Four groups with committees on health, water, and WASH		
Nairobi	Four	FGDs were eight in total (eight to ten members); four in each settlement; with males, females, young mothers and a mixed male and female group.	Stakeholder consultation workshops	

3.2. Data analysis

City research teams analysed qualitative data and literature using a thematic analysis approach. Domain researchers conducted a thematic analysis of the five city reports and verified this analysis with city-level researchers. This synthesis aims to identify the key themes identified in the reports that speak to the existing literature presented above; it does not exhaustively cover the content of all reports. We present illustrative examples from specific cities and summarise the key barriers and enablers emerging from each city as well as the political context of each. More detailed citations for the data shared in the following sections can be found in these reports.

4. Findings

Key enablers and barriers for the uptake of healthy diets, as well as political considerations, for each city are described briefly in Table 2. The table is not intended to support or encourage direct comparison between cities, but rather to demonstrate which key themes and topics emerged most strongly in each city. Some of these themes are shared, and some themes may be present in a city, without the city-based research giving it direct focus. Some more detailed examples from each city context are included in text boxes within each theme.

Table 2: Enablers and barriers for uptake of healthy diets in each city, as well as contextual political considerations

City	Situation	Drivers / limiters of healthy diet uptake	Political considerations
Bukavu	<ul style="list-style-type: none"> Only 43% of the city's households are food secure. Due to the three-decade long conflicts in Eastern DRC, Bukavu has had to play a role of "host" city for displaced people running from neighbouring villages. While there is local production, this is supplemented with imports; beans, fish and meat particularly rely on importation. Location: people in informal settlements have much less access to healthy diet. 	<p>Most important drivers noted:</p> <ul style="list-style-type: none"> Knowledge: limited understanding of healthy foods and diets within the community. Income: many households cannot afford healthy food, access to reliable electricity and facilities for storage, or land for their own food production. Food shortages as a result of nearby conflict; supply is complicated by poor condition of agricultural feeder roads, high transport costs, high cost of fertilisers and other agricultural inputs, high cost of local food compared to imports, commercial, social, administrative and fiscal harassment, challenges marketing local agricultural products, and poor quality of certain local products. 	<ul style="list-style-type: none"> Decentralisation processes underway in DRC have improved autonomy of Bukavu. However, responsibility for nutrition and healthy food has not been decentralised and falls within the remit of provincial rather than the city's services. Costs of household staples of maize, cassava, beans, vegetables, fruit and meat are vulnerable to political turmoil. Health and nutrition is used by political elites to impact their legitimacy and chances in elections. For several decades, state authority has weakened and national treasury budget is limited. Public institutions often lack sufficient funding to fulfil their missions. Low budget allocated to nutrition and health is contrary to the supportive narratives offered in political speeches. Some state services responsible for ensuring food quality control focus mainly on collecting formal and informal taxes, rather than enforcing regulations. Several initiatives have been undertaken by the government and its partners to ensure access and affordability of healthier diets. However, most consumers remain unaware of these initiatives. Food price volatility results from the Congolese franc (CDF)'s depreciation, the aftermath of the Covid-19 pandemic, the precarious security situation, the resurgence of armed groups and the war in Ukraine.
Freetown	<ul style="list-style-type: none"> 60% of Sierra Leone's population is under 25. Sierra Leone has made "exemplary" progress to reduce prevalence of stunting from 40% in 2010 to 26% in 2021. Approximately 80% of foodstuffs consumed in Sierra Leone are imported; affordability of food in Freetown is undermined by limited local production and free food provided from food aid. The majority of low-income urban residents are dependent upon informal vendors for 	<p>Most important drivers noted:</p> <ul style="list-style-type: none"> Adolescent health and wellbeing (for youths and their children); Food safety (of major concern for those in informal settlements), particularly due to poor regulation and limited water and sanitation infrastructure; Affordability of healthier diets (school-aged children and those transitioning to Western diets). 	<ul style="list-style-type: none"> The high maternal mortality and high teenage pregnancy rates post-war triggered an active reform coalition with many experienced partners. Reducing the teenage pregnancy rate is a top priority for the government. In 2012 the government of Sierra Leone joined the Scaling Up Nutrition (SUN) movement housed in the Office of the Vice President to coordinate multisectoral interventions. It helped develop the National Food and Nutrition Security Implementation Plan (2012-2016), followed by the National Zero Hunger Strategic Review, and the Country Strategic Plan (2020-2024). However, the movement has failed to effectively engage the private sector. Loss of continuity and institutional knowledge through the "normal practice" of replacing senior ministry and department heads with party affiliates when there is a change of government. Rentseeking, harassment of vendors by police.

	<p>cooked meals – “cookri” – mostly based upon traditional diets.</p> <ul style="list-style-type: none"> • Awareness of the importance of reduced salt content has increased during a recent campaign and led to consumer demand for less salt in local recipes. • A gradual transition to Western diets is evident in Freetown. 		
Kampala	<ul style="list-style-type: none"> • 60% of Kampala’s urban population resides in informal settlements. • 50.9% of children in Kampala are anaemic (UBOS & ICF, 2018). • 88% of Ugandans are not consuming adequate amounts of vegetables and fruit (Republic of Uganda Ministry of Health, 2021), despite their abundance, physical availability and bulky supply in markets. • 97% of households have access to food through market purchase. • 92% of all healthcare facilities ownership is by private sector, with public health facilities reportedly serving approximately 2% of the city’s population. 	<p>Most important drivers noted:</p> <ul style="list-style-type: none"> • Limited knowledge and understanding of healthy diets; • Limited economic access and purchasing power for nutritious, healthy food; • An expanding private sector actively innovating and adopting a community-facing model for maximum sales, while also having an upper hand (over 75%) in the delivery of healthcare, with a fragile public health system. 	<ul style="list-style-type: none"> • Health, wellbeing and nutrition has historically been politically prioritised by Uganda. • “Competition” among government sectors over authority for food security and nutrition, particularly between the Ministry of Agriculture, Animal Industry and Fisheries, the Ministry of Health and the Office of the Prime Minister (OPM), has led to a proliferation of policies and laws, but delayed action or intervention. • Kampala City Council Authority (KCCA) Directorate of Public Health is responsible for planning and regulating the city’s health, nutrition and food security, waste management and sanitation. • KCCA interventions are aligned to the Uganda National Development Plan III and directed towards achieving the national Vision 2040 and the Greater Kampala Metropolitan Area (GKMA) Development Framework 2040. • Discord between KCCA’s political officers and technical officers (appointed by the president). • High taxes and costs for food vending: to operate their businesses, vendors must pay taxes (up to 30%) and obtain licences through a process which has been reported as exorbitant, unfair and corrupt on the government side – making it difficult for them to obtain affordable (and accessible) spaces to vend their food. • There is not a body responsible for nutrition quality because Uganda Bureau of Standards mainly looks at food safety.
Lilongwe	<ul style="list-style-type: none"> • 12% of children under age five are underweight and 3% are wasted (NSO and ICF, 2017). • References to food and health tend to be on primary health or focused on production and availability of food, with limited reference to the whole food value chain. 	<p>Most important drivers noted:</p> <ul style="list-style-type: none"> • Poor water and sanitation infrastructure, particularly in informal settlements; • Knowledge of healthy diets was present, but difficult to implement due to cost. <p>Additional issues noted:</p> <ul style="list-style-type: none"> • Poor market facilities and inconsistent electricity for food storage, leading to loss; 	<ul style="list-style-type: none"> • Clear fragmentation between the entities responsible for health and nutrition outcomes. • No mandate articulated at local level. • Health and nutrition are absent in the current Lilongwe Strategic Plan (2020-2024). • Most health and nutrition activities are left in the hands of the NGOs. • Reform coalitions in the food sector are not apparent, particularly at local level.

		<ul style="list-style-type: none"> Weak regulatory frameworks on standardisation, testing and low enforcement of byelaws have exacerbated the availability of unhealthy foods and drinks in supermarkets. 	
<p>Nairobi</p>	<ul style="list-style-type: none"> The prevalence of severe (26%) and moderate (69.5%) food insecurity has increased by 73% and 37%, respectively in the past few years (FAO et al., 2021). Incidences of household food insecurity are particularly high in urban informal settlements, especially among children. However, these proportions are heterogenous across settlements, related to income, household size, dependence ratio and more. The most common source of food is local street food vendors. 	<p>Most important drivers noted:</p> <ul style="list-style-type: none"> Household income and affordability of healthy diets; Access to water, sanitation and hygiene services; Type and cost of household cooking energy. <p>Additional drivers noted:</p> <ul style="list-style-type: none"> Awareness and knowledge on healthy diets; maternal and childcare practices (with links to underlying gender norms and division of labour); Food safety and hygiene measures associated with food sources and food environments; Marketing of fast foods and convenience of eating unhealthy foods; Number of household members; household member responsible for purchasing and preparation of food; Availability of cheap and affordable fast and highly processed foods; Cultural and religious perceptions; Excessive use of illicit alcohol and drugs; Access to state and non-state interventions; Access to school feeding programmes; Access to household's own food production. 	<ul style="list-style-type: none"> Complex converging and diverging political settlements and power relations among actors contributing to healthy diets. Many national policies referring to food security, nutrition, health for Kenyans. However, minimal reference to urban areas or informal settlements. Nairobi City County Food Systems Strategy was adopted in 2022 and shows some promise for bridging systems. Food underpins political settlement and is used in national party politics, with particular attention on the pricing of maize. While "healthy diets" may not directly have an impact on rents, they may contribute to the legitimacy of national leaders.

4.1. The situation: Increase in food insecurity but limited intra-urban disaggregated data

There has been an increase in the prevalence of severe and moderate food insecurity at the national level in all five countries, reflecting global trends but also country-specific contexts. In Kenya, in the past five years the prevalence of severe and moderate food insecurity has increased by 73% and 37%, respectively and is now 26% (severe) and 69.5% (moderate) (FAO et al., 2022). In Sierra Leone, food insecurity rose from 45% in 2010 to 57% in 2020 (WFP, 2022). In Malawi, it is estimated that 20% of the total population faces high levels of acute food insecurity and over 64% of Ugandans cannot afford three meals per day (IPC 2022; UBOS and ICF, 2018).

Overall, urban residents fare relatively better than rural residents, but a different picture emerges when data is disaggregated within cities. In Bukavu, only 43% of the city's households are food secure, and these reside mainly in the wealthier neighbourhoods (Vwima et al., 2022). Households living in informal settlements are more likely to be food insecure than the national average (85% in Nairobi (Kimani-Murage et al., 2014)) and to spend a significant proportion of their income on food purchase (40-70% in Nairobi [Corburn et al., 2018; Garenne et al., 2009]; over 60% in Lilongwe). In Nairobi, children aged six to 24 months living in informal settlements have been found to have a higher prevalence of stunting compared to children living outside of informal settlements (de Vita et al., 2019; USAID, 2018). In Freetown, rates of acute malnutrition among informal settlements residents are higher than the national rate and have increased since 2017, while at the same time dietary diversity is decreasing (MoHS, 2021). This is important, because in all five cities a large proportion, if not the majority, of urban residents live in informal settlements. Detailed data that disaggregates by residential status, income and other indicators of inequality and vulnerability, such as disability, age and gender, is limited. Existing evidence from Nairobi suggests that gender of household head (female-headed households) and household structure (ratio of dependents to earners) as well as age (elderly, children and adolescents), citizenship status (refugees) health status (chronic illness) and alcohol or drug dependence all negatively influence food security in informal settlements (Owuor et al., 2024).

With such a dramatic incidence of food insecurity, it may seem that access to adequate quantities of food, rather than adequate dietary quality, is a more pressing challenge. However, non-communicable diseases (NCDs), such as diabetes and hypertension, which are often diet-related, are on the rise in all five cities. In Nairobi, they account for more than half of total hospital admissions and total hospital deaths (Republic of Kenya, 2015); in Malawi, NCDs account for 32 % of total deaths (World Bank, 2018) and in Kampala they contribute 35% of mortality (UBOS and ICF, 2018; Spires et al., 2020). This puts additional pressure on often underfunded health systems and is recognised as a major challenge for public health in the region (WHO, 2019).

The rise in NCDs is linked to high levels of micronutrient deficiency, anaemia and the “double burden” of malnutrition, whereby overweight and obesity coexist with undernutrition. Children are especially vulnerable: just over half of Kampala’s children are anaemic, over 44% of the children of Bukavu’s low-income neighbourhoods are chronically malnourished and in Freetown unmarried teenage mothers and their children are especially at risk of malnutrition, as are orphans and the children of young mothers in Nairobi. This is of great concern, given that long-term developmental impacts of malnutrition affect both individuals and society at large. Stunting, for example, which is caused by inadequate first 1,000-day nutrition in mothers and infants’ poor early childhood nutrition, robs individuals of their full potential to lead quality lives and to contribute to the economy. This represents an urgent area of intervention, as it is not reversible. Birthweights of infants are lower in Nairobi informal settlements than elsewhere in the city, and mothers living in informal settlements breastfeed for shorter periods in both Nairobi and Freetown, as a result of their own poor nutritional status and constraints on their time. Unhealthy diets pose a greater risk of morbidity and mortality than unsafe sex, alcohol, drug and tobacco use combined (Willett et al., 2019).

4.2. Barriers and enablers to uptake of healthy diets in the five cities

4.2.1. *Cost of healthy food*

All cities share one main reason for the insufficient consumption of fruit and vegetables and a healthy diet – cost. This is not limited to the five cities: it is estimated that 3 billion people worldwide – one-third of the world’s population – cannot afford a healthy diet, which may cost three to seven times as much as an unhealthy one.² In all five cities, the cost of fruit is prohibitive and for low-income residents, reliance on daily wages does not allow for a basket of food items that make a healthy and balanced diet. That said, in Nairobi – where more detailed data is available – levels of food insecurity are high but with differences between informal settlements, a heterogeneity that points to the multiple drivers of food insecurity and ill-being.

At the household/individual level, low and irregular incomes are a key factor, especially in a context of rapidly rising food and energy prices. The impact of low incomes on access to healthy diets is not necessarily evenly distributed within households; for example, risks of stunting and wasting (under-weight) are higher amongst male than female children in Nairobi. Time poverty is another important barrier, as low incomes typically require very long working hours, reducing time available or inclination for food preparation, including by female household members usually responsible for household food. Adequate housing, with sufficient safe space to store and cook food and access to suitable sanitation facilities, is also essential.

² Three billion people cannot afford healthy diets. See <https://ourworldindata.org/diet-affordability>.

At the national and city level, dependency on international food markets increases vulnerability to price hikes. In Bukavu, insecurity caused by the presence of armed groups and repeated ethnic and land conflict, coupled to high transport costs as a result of the poor conditions of road infrastructure, severely affects local food production, making the city's food supply heavily dependent on cheaper and more readily available imports from neighbouring countries. In Sierra Leone, 80% of food consumed is imported (Thomas, 2017). Supplementary feeding programmes supported by UNICEF and WHO have long been based on imports rather than promoting local production and, as is the case in the Democratic Republic of the Congo, powerful large commercial importers play a key role in the country's food system. This makes the country especially vulnerable to international price fluctuations: prices of imported staples rose by 42-53% in the period April-June 2022,³ while fuel costs doubled in the period March-July 2022, affecting food prices and availability (Hossain and Hallock 2022). Distortion owing to donor influence plays a similar negative role in Uganda, where external donors influence local production, as a result of the complexity of programmes and the overall preference for easier resorting to imported foods and food supplements.

4.2.2. Knowledge and perceptions of healthy diets

Knowledge is often seen as an important determinant of diet but engagements in all five cities suggest there are substantial differences in residents' knowledge and awareness of what constitutes a healthy diet, even if it is seen in most cases as unaffordable. In Nairobi, focus group discussions showed that there is a good understanding of healthy diets and healthy living, including the need to exercise. For further detail, see Box 1. There is also awareness of diet-related NCDs, especially hypertension and diabetes among adults and malnutrition among children, as well as the links to communicable diseases, such as cholera, diarrhoea, and gastrointestinal infections. Voluntary community health workers play an important role in raising awareness but are hindered by the need to earn a living. In Lilongwe, there is similarly a good understanding of healthy diets and of how these relate to healthier lives and wellbeing. Residents indicated that they know what constitutes healthy diets, or a balanced plate of food, and can name varied food groups that are important to eat. Some of this stems from the long history of Malawi's nutritional programmes combined with adult literacy programmes. However, translating this knowledge into practice has proved a challenge, possibly because of the high costs of purchasing a balanced plate. Further, there was a suggestion that generational knowledge of healthy food was not being passed down, with reflections that youth were no longer appreciating traditional foods and preparation methods. In Freetown, campaigns to raise awareness about the long-term risks of diets high in salt have been successful in influencing demand for less salty foods, and awareness about excessive use of sugar is growing.

³ GIEWS Country Brief Sierra Leone, FAO, November 2022. [Available online](#) (accessed 27 February 2024).

In Kampala and in Bukavu, however, there is more mixed or limited knowledge and understanding of healthy diets, possibly due to the pervasiveness of advertising and availability of relatively affordable ultra-processed foods. In Kampala, there were varied responses to describe healthy diets, with most respondents able to clearly note what constituted poor diets, but mixed perceptions of healthy diets, including vegetables, fried chicken and buttered white bread. Notably, residents indicated several competing priorities over healthy food, including alcohol, parties, clothes, betting and more.

Education on healthy diets is therefore important, but in combination with other interventions that will enable the uptake.

Box 1: Nairobi: Interpretation of healthy diets

The focus group discussions (FDGs) in Nairobi translated healthy foods and diets as *lishe bora* or *chakula bora* in Swahili. However, most of the descriptions about healthy foods and diets revolved around the common notion of “a balanced diet of carbohydrates, proteins, vitamins and green vegetables” – that the community can easily access.

They described the benefits of healthy foods and diets as “makes the body strong, for good health, prevents diseases, helps to fight against diseases, boosts the body immunity, and contributes to long life”.

However, despite their understanding that both the quantity and quality of food matters, the participants in FDGs seemed to have little knowledge about the recommended quantities and qualities (combinations and types) of the food groups in a household’s diet. Some of the foods they considered healthy included milk, fish, nuts, red and white meat, maize, beans, rice, pumpkin seeds, *ugali*, *chapati*, *githeri*, cassava, sweet potatoes, green grams, arrow roots, bone soup, *omena*, green vegetables, traditional vegetables (*manangu*, *mchicha*, *saga*) and fruits (watermelon, bananas, mangoes, pawpaw, oranges). On the other hand, the foods considered unhealthy or less healthy were traditional alcohol (*chang’aa* and *busaa*), sweets, chocolates and pizza.

According to the FDGs, unhealthy diets largely constitute eating a predominantly starchy food on a daily basis. For example, frequently eating *ugali* and stew without green vegetables, consuming a combination of potatoes and cabbages, alternating maize flour porridge with potatoes, and cooking white rice with potatoes. Some households consistently feed their children on maize flour porridge all day long and this was considered unhealthy. They also considered it unhealthy to eat expired or spoiled food (from donations).

4.2.3. Water, sanitation and hygiene services as drivers of malnutrition

An important driver of malnutrition in all five cities’ informal settlements is inadequate access to water, sanitation and hygiene services, including solid waste management. This all too often translates into frequent water- and food-borne illnesses like malaria, cholera and diarrhoea. These have been shown to increase malnutrition by preventing

the full absorption of nutrients, especially among children. In Bukavu, more than 230 cases of cholera were recorded between January and May 2023. In Nairobi, Kampala and Lilongwe, private provision of water from vendors is expensive and often contaminated. Access to safe drinking water is a priority for residents of all five cities. In Freetown, lack of sewage results in defecation directly into the sea or in open gutters, as toilets do not exist or are too expensive, and access to clean water, soap and waste management for low-income urban residents is severely limited. Flooding is noted to be a key issue across cities, with incidences of flooding increasing as a result of climate change or poor drainage. There is an acute awareness among residents of informal settlements that unless these are addressed, the exposure to health risks, especially for children, is extremely high.

4.2.4. Availability and promotion of ultra-processed foods

A second and increasingly important driver of malnutrition in all its forms is the notable expansion of manufactured energy-dense but nutrient-poor ultra-processed foods, (such as packaged biscuits and cakes, fizzy drinks, sausages and burgers) with high levels of salt, sugar and fats. These are cheap and affordable, even by low-income residents, and especially attractive to children and youth. These products are typically controlled by large-scale commercial manufacturers, but high demand is starting to stimulate small-scale informal producers, a trend that raises additional questions on quality. The penetration of these products in low-income settlements in the five cities is pervasive. The preference for ultra-processed foods may be driven as much by their direct affordability, as by the indirect time and energy costs associated with cooking whole foods, making the access to appropriate and affordable basic services a key consideration. Corporate innovation has meant that these products are often packaged in smaller quantities (which, although they may appear more affordable, are usually significantly more expensive per unit than in larger packages) and have improved distribution options that, in the case of Kampala, includes home delivery in formal and informal settlements. For further detail, see Box 2.

Box 2: Kampala: Private sector agility is reinforcing ultra-processed or unhealthy food uptake

Beyond virtual and other advertising forms, the private sector has increasingly tapped into the previously latent market in informal settlements, riding on the information that informal settlement residents aspire to access what their urban wealthy counterparts have (the urban dream or urban “advantage”). The private sector has achieved this through improvising access/availability and affordability for several of its products, by introducing mini versions of the original packages (for example, for Royco, sugar, cooking oil, noodles, instant coffees and other powdered drinks, baking floors/powders, juice drinks, energy drinks, sodas, and so on). The private sector has “innovated” and enlarged its customer base by ensuring that a “poor-man’s version” of everything is available, accessible and affordable. Service providers selling food have also roadside and easy-to-access-and-afford options of fast fried foods like chips, sausages, chicken,

fish, and so on, which low-income earners cannot afford from desirable outlets like KFC and Café Javas.

In many instances, the actual cost per unit of these mini packaged items can be higher than when buying the larger units; however, limited attention is paid to this “poverty penalty” by consumers, the general public or their leaders and advocates. Neither is it highlighted by market analysts, regulators or government, or any attempt made to ensure consumer protection. There is also increasing informal small-scale production to supplement these industrially produced foods and vendors of cooked food in markets, workplaces and communities. In terms of food handling and preparation, most operate with limited regulation or supervision, and are driven by clients’ apparent preference for oily/fatty and sugary food. Some vendors of mini packaged, ready-to-eat fresh fruit are also beginning to emerge in these spaces; however, there are some concerns among consumers and the general public about hygiene and safety, so this business is yet to gain traction. These all contribute to the notion of affordability and easy access to food within the city and informal settlements, in particular.

4.2.5. Limited intergovernmental coordination and local and national regulation and enabling policies

Lack of regulation for food quality and food safety, as well as widespread reliance on informal trade, means that there is limited traceability of food, and that vendors and residents alike therefore may not know the ingredients, origins, recommended use-by dates or nutritional quality of value-added products. There is also variance in food transport, refrigeration, storage or handling practices, and exposure of food to dirt and pollutants, reducing food safety. While some communities have taken it upon themselves to try and resolve observed issues, there is a need for local governments to provide essential basic infrastructure and services, as well as to ensure food safety regulation, among other regulations. However, the fragmentation and silo-like approach of most policies and programmes does not allow for the identification of, and acting on the multiple interconnections between housing, access to basic infrastructure and services and better health, nutrition and wellbeing. Similarly, food and health are typically understood as national government priorities and, despite the multilayered responsibilities for improving food and health systems, there is typically limited coordination or leadership for food security or public health at local level. This is discussed in more detail in the next section.

4.2.6. Limited access to health services

The health and wellbeing impact of poor access to healthy diets is exacerbated by limited access to health services. In all cities, there is underinvestment in the public health system, resulting in insufficient supply of services to meet population health needs and often poor quality of services, including long waiting times, drug stock-outs, discriminatory staff attitudes and lack of equipment. In some cities (for example, Kampala and Nairobi) a large range of health services are offered by formal and informal private for-profit and non-profit institutions and individuals. These are often

preferred to government-run services, because of perceptions of higher quality and greater patient orientation, but higher-quality services tend to be financially inaccessible for most low-income urban residents, including those living in informal settlements. In Kampala, 92% of all health facilities are private and the remaining public facilities are only able to serve 2% of the population – this represents a huge deficit for those residents who cannot afford the cost of private healthcare (Ssemujju et al., 2022). Private health facilities also tend to be curatively oriented rather than providing preventive care, which does not generate income. That said, public health systems often also prioritise curative over preventive services: in 2019, the Congolese government allocated 18.3% of its health budget to preventive care, compared to 59.7% to curative care.

Poor provision of and access to public health facilities both contribute to and exacerbate the health and wellbeing consequences of poor nutrition in a range of ways. First, low coverage by preventive health services limits the provision of information for low-income residents on what constitutes a healthy diet or of the medium- and long-term benefits of eating a healthy diet. It also means that infants and young children may not receive growth monitoring and subsequent nutritional support where needed and breastfeeding promotion and support is limited. Second, low access to effective primary care services reduces diagnosis and effective treatment for common communicable diseases, such as malaria or diarrhoeal disease, which can exacerbate malnutrition. Similarly, lack of routine screening for early signs of common diet-related non-communicable diseases, such as diabetes and hypertension, represents lost opportunities to manage these diseases (MoHS, 2021; NSO and ICF, 2017; NSO and ICF Macro, 2011) and prevent them worsening, including through diet modification. Malnutrition also contributes to low drug adherence and effectiveness for tuberculosis and HIV treatment.

In Freetown and Lilongwe, there has been remarkable progress in reducing stunting, but malnutrition remains a challenge (MoHS, 2021; NSO and ICF Macro, 2011; NSO and ICF, 2017). Primary healthcare has played an important role in reducing under-five mortality rates in Freetown, through Vitamin A supplementation, nutritional counselling and improved access to contraception, which were found to have contributed to the reduction in mortality. In Nairobi, community health volunteers in informal settlements play important roles linking malnourished children to non-governmental provision of supplemental feeding, which has reduced childhood underweight rates. Whilst family planning is identified as a major concern of the Freetown research team, this issue was not explored as a driver of access to healthy diets in other cities. For further details in Freetown, see Box 3.

Box 3: Freetown: The importance of health services provision for family planning and nutritional support

Many stakeholders expressed the strong need and desire for family planning (FP) (modern contraception) to enable birth spacing, limiting family size, and avoiding unplanned pregnancies, especially for adolescents. Awareness of the importance of

confidential counselling on FP by trained health professionals and provision of commodities (free of charge or at minimal cost) has accelerated and expanded nationwide over the last decade. Low-income residents and adolescent girls in general are increasingly appreciative of modern contraception as a route out of poverty and as a means of completing their education and improving their prospects in life. Traditional/religious barriers to modern contraception are likewise declining significantly. In Sierra Leone, the Ministry of Health and Sanitation (MoHS) has made considerable efforts to link nutritional counselling, practical demonstrations with confidential, counselling on FP by specifically trained nurses of all cadres (from maternal and child health [MCH] aides to midwives) and improved supply chain management of commodities. The programme rolled out nationwide over four years but only reached Freetown in 2021, so unfortunately its impact was not discerned in the ACRC study. However, budgetary constraints have resulted in reduced access to mobile FP service provision in informal settlements by Marie Stopes-SL, and at least one traditional healer in an informal settlement who was interviewed still practises “herbal ties around the waist”, rather than referral to a nearby government health facility.

4.3. Actors, policies and the governance of food and health systems

Food, rather than nutrition and healthy diets, is central to national and city-level politics. The focus has largely been on the provision or subsidising of staple food crops. In Nairobi, the “unga⁴ crisis” has been used by all candidates campaigning in the general elections of 2012, 2017 and 2022, and is seen as adding to candidates’ legitimacy. The recently elected Nairobi City County governor has made a number of promises, including free lunches to all children enrolled in public schools, 20 new food markets and functioning universal healthcare. Of concern is the apparent conflict of interest with policymakers involved in the highly profitable food distribution sector. In Lilongwe, this includes land tenure issues that influence the location and operation of food markets. In Kampala, control and management of marketplaces and the issuing of licences for traders are a substantial income source for the city government but are widely seen as exorbitant and contributing to high food prices and corruption. Access to universal healthcare is important to electoral politics in Nairobi, featuring heavily in both presidential and mayoral manifestos in recent elections.

Well-connected large private sector actors are important players in the food environments of all five cities. In Freetown and in Bukavu, business elites have full control over the import and nationwide distribution of food, and through their links with national policymakers can disrupt or promote local food production through their delayed or timely delivery of unsuitable or suitable fertilisers. In Kampala, well connected private sector actors have disproportionate power and influence, leading to price distortions and unfair competition and acting like a cartel; for example, it is reported that large enterprises influence the licensing system and do not pay tax,

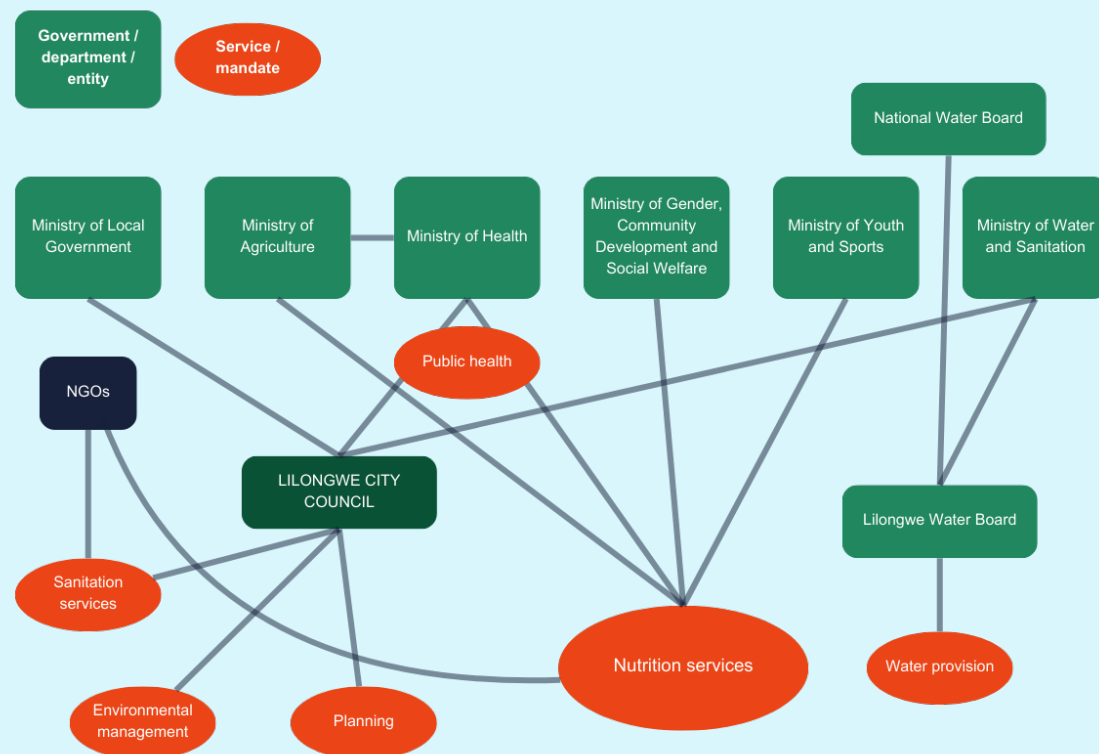
⁴ Unga is maize flour used for the preparation of ugali, a staple Kenyan food.

creating an unfair advantage over smaller-scale market vendors. In Malawi, focus on cash crops for export has reduced investment in production and processing of food for local consumption. To some extent, donor agencies have also provided fertile ground for this by privileging imported nutritional supplements over locally produced ones. In Sierra Leone, Malawi and Uganda, the role of donor agencies in shaping the food environment is far from negligible, as noted above. In Malawi, the many interventions to improve food security that have been led by donors and civil society instead of, or in spite of, government, have resulted in a piecemeal approach of discrete projects, rather than a programmatic approach that engages structural or systemic issues.

In all five cities, there is a plethora of programmes and initiatives, reflecting the centrality of health and nutrition in policymaking. In Kenya there are nine national policies related to health and nutrition, some of which address urban poverty, whereas most do not. In Malawi, national ministries of health and of agriculture are responsible for nutrition, with a National Multisector Nutrition Committee responsible for coordination, resource mobilisation and monitoring. In Sierra Leone there are six large education programmes, but no urban-specific policies, including for health. That said, the ambitious Transform Freetown Agenda included a salt awareness programme that has led to increased consumer demand for low-salt foodstuff. But overall, in all countries, policies and initiatives on food make little specific reference to urban areas and to informal settlements.

As always, good policies on paper do not necessarily translate into good practice and many are not implemented. In Freetown, the biggest challenge to effective governance is the “normal practice” of replacing senior ministry and department heads with party affiliates when there is a change of government, with detrimental impacts on institutional knowledge and expertise. When cities have a strong presence of opposition political parties, as is currently the case in Freetown and Kampala, this can become a major obstacle and contribute to the general lack of synergy between national and city-level operations and development strategies. As the capital of Malawi, Lilongwe's city council is filled by national MPs who have a direct say in local policy and in challenging the devolution of responsibilities. For further details, see Box 4. In all five cities, the health and food sectors are characterised by a proliferation of programmes and implementing agencies, leading to competition and fragmentation.

Box 4: Lilongwe: Finding the mandate for implementing “healthy diets”



This figure shows the interaction among different actors in relation to the delivery of specific services, including nutrition, water and sanitation. Two things are strikingly apparent:

- While the Ministry of Water and Sanitation provides policy guidance for the uptake of water and sanitation practices to Lilongwe City Council, the council is only empowered with the mandate for delivery of sanitation services, while the Lilongwe Water Board is the entity responsible for the provision of water. This would not necessarily represent a challenge, except that the council does not have oversight of the Lilongwe Water Board, and is not able to guide or compel certain actions or performance. This fragmentation between policy and implementation represents a key challenge, particularly as water and sanitation systems should be well integrated in their planning and delivery.
- Lilongwe City Council has no mandate for implementation of direct actions that could improve nutrition or health. Instead, the Ministry of Health similarly provides policy guidance to the council, but directly implements actions, within the council’s administrative area, through district governments. NGOs are also strong implementers of health, nutrition and sanitation interventions, but without oversight from Lilongwe City Council – the relationships with the NGOs can range from partnering to antagonistic to turning a blind eye to each other. What this broadly represents, however, is that Lilongwe City Council is separated from a political responsibility for nutrition, while having many of the implementation levers that can improve nutrition outcomes, such as water and sanitation, urban planning, public procurement standards and waste management. This further represents lock-in of political focus on primary healthcare, and on food production over food access and food quality.

Coordination between government departments and between actors is limited across all five cities. In Lilongwe, health and nutrition has not been listed as one of the priorities in the current 2020-2024 Lilongwe Strategic Plan, which means that there is no budget for it. Water and sanitation are prioritised; however, there is extreme fragmentation of responsibility: Lilongwe City Council has the mandate for water but implementation rests with the Lilongwe Water Board, which is overseen by the National Water Board. Lilongwe City Council retains responsibility for the implementation of sanitation. This clearly leads to inconsistencies and failures of planning, implementation and reporting.

In Bukavu, the DRC's 2008 Decentralisation Act increased the city's administrative and financial autonomy. However, Law no. 08/016 of 7 October 2008 limits the city's roles to sanitation, hygiene and drinking water, but not nutrition. Despite this, the city hall manages the sale of food along the roads and markets. This loophole in decentralisation means that nutrition and healthy food services (provincial health inspectorate and division, provincial inspectorate of agriculture, fisheries and livestock, and other quality control services) fall within the remit of provincial rather than the city's services. This presents the risk that all the focus may be oriented towards agricultural production in the province, rather than the other challenges preventing city residents to access sufficient and healthy food. Several laws and programmes have been put in place by the national government on nutrition and healthy diets, but these are typically totally unknown by consumers. For further detail, see Box 5.

Box 5: Bukavu: From fragmentation to coordination

Twenty years ago, Bukavu was controlled by an armed group and disconnected from the national government. This led to a focus on restoring peace and stability, rather than food security. There was a rise in internal and external refugees: In 1994, for example, more than 1 million Rwandan Hutu refugees entered the city. Some were repatriated, while others remained in the province. Their entry had an impact on food access and health, and this continues to be the case with the internally displaced people (IDPs) still present in Bukavu, driven to move because of ongoing conflicts.

Additionally, there is a lack of coordination between the many actors involved in food, health and nutrition in the city. This is because of a huge overlap in their objectives and scope, as well as a lack of activities to implement their objectives. This has led to a lack of progress in addressing malnutrition, which has been endemic in South Kivu since 1960, particularly in the informal settlements. Unfortunately, there is a focus on curative measures, such as providing medical treatment for malnourished children, rather than on prevention, such as improving access to clean water and sanitation. Consensus and coordination between these stakeholders were needed to develop an effective strategy for addressing malnutrition.

The provincial government has identified armed conflict, limited access to healthcare, difficult access to farmland, and inadequate uptake of nutritious foods as the main causes of malnutrition in South Kivu. These factors have created a vicious cycle of

malnutrition, poverty and disease. To break this cycle, the vice-governor set up a multisectoral committee in October 2021 to fight malnutrition, particularly through addressing the underlying causes of malnutrition. The committee's goal is to reduce stunting in children from 0 to 23 months by addressing the determinants, or causes, of undernutrition.

Civil society is in many cases deeply engaged in the health, wellbeing and nutrition domain. In Lilongwe, coalitions of civil society in the health and nutrition sector aim to influence national policies, strategies and budgets. For example, Civil Society Organisation Nutrition Alliance (CSONA) is a national coalition consisting of local and international NGOs, civil society organisations (CSOs) and CBOs, and academia, which aims to influence and support government efforts to ensure sustained improvements in nutrition in Malawi, with a particular focus on inclusiveness for disadvantaged populations. In Nairobi, these coalitions include several NGOs, CBOs and faith-based organisations as well as researchers and academic institutions. The latter have long provided detailed information on the health and nutrition status of the residents of informal settlements in the city, filling an important knowledge gap that persists in the other cities. In Kampala, two main umbrella organisations, the Uganda National Health Consumers Organisation (UNHCO) and the Uganda Healthcare Federation (UHF) are highly strategic reform coalitions that, especially in the case of the latter, have been shown to spearhead positive impacts and improvements. For example, UNHCO has lobbied and undertaken extensive advocacy work on several policy instruments – including the Food and Nutrition Security Bill. UHF has successfully implemented several projects funded by multiple development partners on health systems strengthening (HSS). However, it is worth noting that UHF stands for the interests of its members – the private sector, many of whose quality services remain out of reach for low-income residents of informal settlements. This contrasts with Freetown, where civil society representatives sit on several government-led national committees, including the national government-led “movement”, Scaling Up Nutrition, but the effectiveness of these initiatives is hampered by the lack of involvement of the private sector. This includes large-scale commercial importers, as noted above, but also the Fullah community, which is influential in the food and non-food informal trading across the Mano River Union⁵ and beyond, with a parallel system of traditional leadership, effective channels of communication, credit schemes and currency trading.

The privatisation of health services and the rapid expansion of the commercial production and distribution of ultra-processed foods are the two interconnected sides of a vicious cycle, whereby unhealthy diets have become a major driver of ill-health, which then requires medical treatment, for those who can afford it. This essentially profit-driven trend is becoming globally dominant, with pernicious consequences for people and the planet, and among the five cities is perhaps best exemplified by Kampala, where interests in private facilities by city elites also disincentivise investment

⁵ A free trade union, including several West African countries.

in public healthcare. In the process, the importance of healthy diets as a key aspect of prevention and public health is often neglected; where it is not – and it is important to note that several policies and programmes aim to promote healthy diets – the implications regarding the widespread availability of unhealthy ultra-processed foods are often overlooked. One example is the general lack of a regulatory system that covers food manufacturing, distribution and advertising, a gap that benefits large-scale commercial producers. The potential of educational campaigns to reverse this trend is shown by the success of the Transform Freetown Agenda in changing perceptions on salty food.

One essential actor category does not receive the support it deserves. Food vendors have an increasingly important role in providing all urban residents with healthy or indeed unhealthy diets. In all five cities, one significant consequence of the increases in the cost of food and energy is that for a very substantial number of low-income residents in informal settlements, the only meals come from informal vendors of cooked food – “cookri” in Freetown. Food vending is an important income-generating activity for poor urban residents, but strained relations with the police and regular harassment, including demands for money by corrupt officials and forced removal from vending areas, are a constant threat. In Kampala, women and youth play particularly important roles in food production and distribution but face barriers, including negative gender norms, limited access to land, lack of skills, and access to finance. Moreover, WASH facilities and waste management in most markets and food vendors on which the low-income urban residents depend are inadequate and affect both consumers and vendors. For further details in Nairobi, see Box 6.

Box 6: Nairobi: Role of street food vendors in healthy diets

Street food vendors play an important role in the provision of food to low-income communities, with an increasing number of households relying on this source of food. This is particularly because of improved convenience, affordability and access. However, lack of regulation in the informal food sector and multiple environmental hazards can mean compromised food safety.

The informal food economy is also characterised by cartels who command the various trading spaces (Racaud et al., 2018). The informal food vendors are normally subjected to financial extortions, bribes and illegal fees, not only from the Nairobi City County byelaws enforcement officers but also from the residential neighbourhood officials – yet some of them pay the daily legal market fees to the county government. Furthermore, a majority of those employed in the informal sector, including informal food vendors, are always sought after as a potential voting bloc.

Given the potential of formal and informal food vendors in making healthy diets more widely available to urban residents on low incomes, it is surprising that they are rarely included in policies and programmes. This is largely because of the negative perceptions from city governments, many of which have simplistic views about the contributions and activities of informal workers. This is propelled by a developmental

narrative of “formalisation”, in which informal actors are expected to comply with existing planning or regulatory frameworks that do make space for the adaptive or emergent ways in which they make livings. An additional reason for limited policy inclusion is that even organised food vendors feel vulnerable to discrimination and harassment, and this constitutes an important hesitancy around engaging with local authorities. In Freetown, the Sierra Leone Market Women Association was created during the civil war in 1996 to protect its members and is sufficiently influential to sit on several committees. At the same time, it is very careful to be seen as non-political, in a context where political parties are bitterly divided, and this somehow limits its potential role in promoting healthy diets.

The planning and management of marketplaces and of licensing to food vendors, both formal and informal, has an important impact on both availability and affordability. In Kampala, the high cost of licence fees is passed down to consumers. In all five cities, harassment of informal food vendors is constant, even though they provide the main source of food for most residents. A more supportive approach would contribute to improving the availability of healthy diets. Food safety is a growing concern among consumers and relates to exposure to pollutants in markets and other selling locations lacking solid waste management, adequate drainage and access to water and sanitation facilities, as well as to contamination during production, distribution and preparation, the latter in the case of cooked food. City authorities can also play an important role in controlling advertising of ultra-processed foods, although this is likely to overlap with national-level policies that are responsible for the regulatory system, which is inadequate if not inexistent in all five countries. Local governments can also take direct initiatives, among which school feeding programmes are an important avenue for the promotion of healthy diets.

Effective implementation of the above can be led by subnational governments and actors, but there is a need for effective and consistent resourcing of such interventions, given that many of the interventions require investment in enabling infrastructures for both health and food systems. To do this, there is a need for two things: there needs to be a clear recognition of a role for local governments and actors in the achievement of healthy diets; and clear coordination mechanisms are required to align efforts between government departments and actors, and to ensure coordinated implementation and monitoring approaches.

5. Implications

Relevance to the broader literature:

- Data-based evidence in the five cities shows that although at the national level the growing prevalence of severe and moderate hunger and malnutrition is lower in urban centres than in rural areas, there is some evidence that rates of food insecurity, and in some cases malnutrition, are higher among the residents of informal settlements as compared to national averages.

- This contributes to the growing body of research calling for the need for urgent attention to malnutrition in all its forms in urban contexts where the rapid emergence of the double burden of malnutrition has profound implications for the wellbeing of individuals and societies.
- The five case studies also contribute to the understanding of the multiple (income and non-income) dimensions of poor access to healthy diets among low-income urban residents and to the rich diversity of lived experiences as shaped by individual and household circumstances, neighbourhood characteristics and city context.
- The focus on healthy diets allows a move beyond food quantity to its quality, linking nutrition to health and wellbeing and highlighting low-income consumers' choices and what constrains them.
- Conceptually, this paper expands and refines the study of urban food and nutrition insecurity by explicitly linking them to a wide range of urban systems and planning, and to the city's political economy.

What we have learned by adopting a domain analysis:

- A more detailed understanding of how different systems interact and shape health, wellbeing and nutrition. In addition to health systems (curative and preventive, formal and informal) and to food systems (production, distribution, storage and utilisation), water and sanitation are central, as are access to adequate housing and basic infrastructure.
- Understanding the multiple actors that allocate benefits to different groups. National policies and programmes play an important role, and especially food security is a key issue at election times. Also at the national level, large-scale private commercial actors control supply chains and through advertising shape consumer preferences – often towards ultra-processed foodstuffs. Such actors are extremely influential on policies and programmes (for example, by pushing back on the formulation of stricter regulatory frameworks) and have close relationships with national politicians. Donor agencies have an unexpectedly strong influence by (mainly indirectly) influencing food production incentives.
- At the city level, local governments can run successful awareness campaigns and contribute to modifying consumers' preferences and behaviour. While it would seem that local governments cannot do much to rein in price hikes related to international conflicts and climate change events, they can act on distribution, for example by lowering business rates for food retailers. Local governments are also in charge of access to water and sanitation and basic infrastructure; however, this is often undermined by fragmentation of responsibilities (as in Lilongwe) and lack of financial capacity.
- Formal and especially informal food vendors are key actors in urban contexts. They ensure access to food, often cooked, to all residents and especially to the residents of informal settlements. But they have very limited voice, can rely on very limited essential WASH infrastructure and are often harassed by officials.
- Civil society is an active player in this domain in all five cities.

Some strategic and policy implications:

- The current emerging shift in global debates towards increased attention to the multiple forms of malnutrition and their links to urbanisation is an important driver of change, although its impact in the five cities varies.
- Primary healthcare services, including access to supplementary and therapeutic foods for malnourished children and access to family planning, remain important entry points for addressing and preventing malnutrition in low-income communities, with community health workers sometimes acting as a critical link to services. Universal healthcare, community health workers and emergent non-communicable disease strategies may continue to offer strategic points for multisectoral collaboration on improving healthy diets. Youth development and adolescent health policies and strategies are another point of potential policy and multisectoral convergence, since lack of resources and support for preventing adolescent pregnancy and supporting adolescent parents are important to break intergenerational cycles of poor nutrition and ill-health.
- In Nairobi, efforts to provide healthier diets to schoolchildren are largely the result of a wide coalition of actors, from the newly elected governor to community organisations, civil society and academic institutions.
- In the other cities, such wide reform coalitions are still missing or in their infancy. One category of actors that is in many instances not explicitly involved is the private sector. This is a very diverse category, including large-scale, powerful commercial actors, who have the ear of national politicians, and small-scale formal and informal food vendors, who despite their central role are more often than not harassed and dismissed. Given their role in feeding the majority, both large and small private actors should be included as clear partners in driving reform, or as targets for reform. Here, mitigating the power of large-scale retailers and making space for smaller actors has demonstrated challenges in building wide reform coalitions.
- Any strategy and policy to improve health, wellbeing and nutrition needs to address the multiple systems that underpin the domain. This in turn means collaboration between national and local actors (including governments). Party politics and competition in two cities show that this is not easily achieved but remains essential.

6. Conclusions

The findings from the five cities show that urban dynamics are not well considered in food and nutrition policy, which instead focus on food production and nutrition education, while overlooking infrastructure and food markets as key areas of intervention. They further reinforce two emerging urban food systems narratives: that health and nutrition outcomes are heavily dependent on deployment of appropriate supportive infrastructure; and that achievement of health and food outcomes at local level can be, and is already being led by local government or local actors without a clear mandate – and therefore that supporting the articulation of this mandate could be

valuable.⁶ Finally, given the identification of several enablers of healthy diets, the development of coordination mechanisms that can mitigate power differentials between businesses, government and residents, and that can resource the implementation and monitoring of interventions is vital.⁷

The five case studies also reiterate the importance of enabling infrastructures, most notably water and sanitation, both in homes and in markets or vending areas. Additionally, infrastructures that affect food transportation, food storage and energy access are noted to determine food costs and are areas for investment. However, these investments are often too large for local actors to contemplate, so investment in healthy diets tends to engage with social systems, such as community health workers or cooperatives of food vendors.

This lack of resources available to drive transformation reinforces the need for clear coordination among actors. All five countries have national commitments to devolve political responsibility to subnational level, yet have either not completed this process, or have devolved the political mandate, without resources to implement. Food and health have tended to remain national mandates, which leave clear gaps in local implementation. Ongoing advocacy has suggested that local government can embed the mandate for food and health within existing mandates of urban planning, waste management, environmental health, and water and sanitation. However, political vested interests in each city present barriers to consistent programmatic approaches to governing nutrition, health and the uptake of healthy diets.

The power imbalance between residents, informal actors, local government and corporate food producers and retailers is stark. Excepting a few examples, low-income consumers have minimal leverage to drive demand for healthy diets. Informal vendors are at the mercy of insufficient or discriminatory policies. Local governments are not resourced to intervene in health or food systems, as they have no, or only a partial, mandate to do so. Yet, large food producers and retailers have the resources to advertise and distribute their products, and do not see it as their role to drive uptake of healthy diets. Instead, they show a remarkable innovative ability to adapt to consumer affordability and location. The responsibility for regulating the advertising and quality of

⁶ This does not necessarily mean the creation of a “food” department or reporting line within public administration, but the development of a policy tool that draws effective links between existing mandates and positive outcomes for food, nutrition or health. For example, the articulation of a responsibility, and “flagship actions”, for food systems within city resilience strategies in Cape Town, Quito and Chennai have offered a political buy-in to, and legitimisation of, planning and implementation activities that improve food system outcomes.

⁷ Resourcing of intermediary organisations to support in convening and trust-building between different actors has shown improved governance outcomes and enabled leveraging of resources and information that would have otherwise remained undeployed (Haysom and Currie, 2022). Examples include the Kisumu Local Interaction Platform, which has supported multiactor engagements for improving Kisumu County, GreenCape, which has served to bridge government and industry needs and enable industry-to-industry resource exchanges, or Western Cape Economic Development Partnership, which deploys a methodology for active “partnering” and bridges civil society needs or perspectives with government systems.

ultra-processed foods rests with national government, while the ability to enforce such regulations would rest at local level and is underresourced.

There are existing reform coalitions working at global and regional level to draw attention to food systems and healthy diets needs at local level, which have achieved a level of success. For example, the Urban Food Systems Coalition is working to embed urban and local issues in global discourse; the UN Food Systems summit included an urban focus in its 2022 stocktake moment; and the FAO has convened a High-Level Panel of Experts specifically to develop guidance for urban and peri-urban food systems transformation. However, the greater emphasis on urban food systems has not yet translated into a national appreciation of urbanisation and urban dynamics, and their implications for healthy diets. Additionally, those working on urban development and sustainability have either not been aware of, or hesitant to engage with, the multilayered politics of food in cities, limiting the inclusion of food in urban plans or development agendas. However, this is slowly shifting through advocacy efforts mentioned above. This is the current reform frontier at city level, and the existence of coalitions to drive this reform is varied across cities.

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