

Urban Resilience and Local Governance

**URBAN FOOD SYSTEMS AND
PLANNING:
GROWING SUSTAINABLE CITIES
FOR TOMORROW**

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Rikolto in East Africa







Urban Resilience and Local Governance in Tanzania

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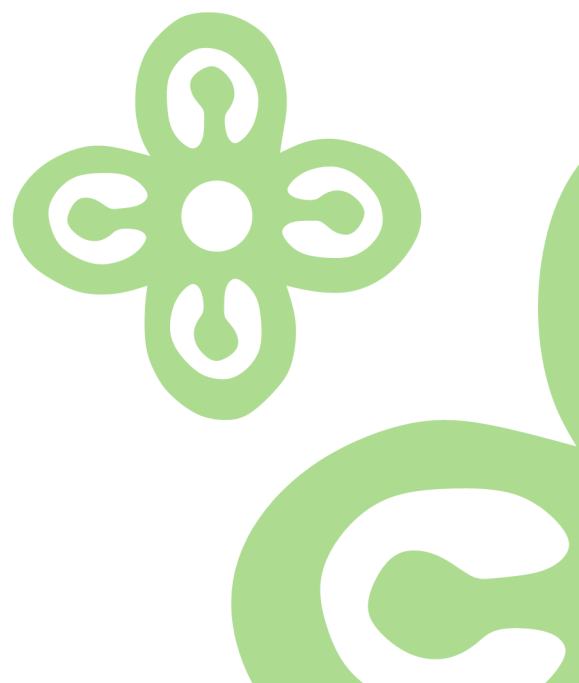




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1. Introduction

The urban food security challenge in Tanzania is both distinct and urgent (Wenban-Smith, 2016). It is estimated that Tanzania's urban population will increase by a further 125% (145% for Dar es Salaam) by 2030. According to UN data, the city of Dar es Salaam will have 8,161,000 inhabitants in 2024, having grown by 60% in the last decade; other cities that have experienced rapid growth include Mbeya with 680,000 inhabitants (53% growth), Arusha (25% growth) and Songea (79% growth) in the last 10 years. Urban food demand is therefore expected to increase by at least this amount.

The disparity in food expenditure between rich and poor households, particularly in urban areas, underlines the critical importance of integrating food considerations into urban planning. While affluent households in the Global North spend a smaller proportion of their income on food, the situation is dramatically different for poor households in the Global South. In developing countries such as Dar es Salaam, Bangkok and Kinshasa, a significant proportion of income - up to 85% - is spent on food for the poorest segments of the population.

This disparity in food expenditure highlights a challenge for urban planners: ensuring that food is not

only affordable for the majority of city dwellers, but also accessible to the poor and very poor. Recent research by organisations such as the Asian Coalition for Housing Rights (ACHR) highlights the disproportionate burden of food expenditure on the urban poor and very poor households. In countries such as Nepal, Thailand, Sri Lanka and the Philippines, households spend more than 40% of their monthly expenditure on food and drinking water, with the figures significantly higher for the very poor.

From an economic perspective, these findings challenge the conventional view that housing, basic services and neighbourhood improvement are the primary drivers of urban economic development. Instead, food emerges as a key economic driver, particularly in low-income neighbourhoods. For very poor urban households, expenditure on food far exceeds expenditure on housing.

Urban food planning must therefore prioritise affordability to ensure equitable access to nutritious food for all urban residents, especially the poor and very poor.



2. Food systems planning

In light of the challenges highlighted above, urban planning emerges as a potential solution, with both direct and indirect impacts on the food environment and access to nutritious food. Factors such as geographical proximity to nutritious food, land-use planning, zoning regulations, food infrastructure and regulations that promote efficiency in food logistics (especially the last mile) all contribute to shaping the food environment. Changing these factors can influence consumers' food choices and the overall quality of their diets.

In essence, urban planning interventions have the potential to address complex food security and nutrition issues by reshaping the physical and social landscapes that influence food access and consumption patterns.

In Tanzania, as in other developing countries in Africa, the concept of food systems and planning is not well translated into action for various reasons, including lack of funding. This is worrying considering that Tanzania is facing rapid urbanisation due to high fertility rates and sustained rural-urban migration (Kombe, 2001; Mkalawa and Haixiao, 2014; Wenban-Smith, 2015; Farrell, 2017; Nuhu, 2018). As a result, urban land use planning capacity has not kept pace with peri-urban growth, with current demand for urban planning outstripping the capacity of urban

authorities to deliver land services (UN-Habitat, 2016; Kasala and Burra, 2016; Makundi, 2017). To remedy the situation, the Tanzanian government enacted the Urban Planning Act of 2007, which encourages private sector participation in the delivery of land services, including planning and surveying.

However, the process of delivering serviced land often encounters challenges such as unregulated land markets, politicisation of land delivery, sporadic land use patterns especially in peri-urban areas and inappropriate standard procedures for land use planning and surveying (Kironde, 2009; Babere and Ramadhani, 2018). As a result, most private companies do not consider food system planning.

Kevin Morgan (2013) suggested that food planning should involve more than professional planners; in fact, it is a very diverse social movement in which planners are one group in a cocktail of organisations from the professions, civil society organisations and local government departments, all of which can claim to be part of the food planning movement.

Rositsa T. Ilieva (2016) emphasises that food systems planning is a 'social innovation' in which government planners, architects, researchers and activists step out of their daily routines

and the traditional remits of their professions to engage with food systems goals. Therefore, the concept of multi-scalar food systems planning plays a key role in ensuring systems thinking in food systems planning. According to the FAO (2018), multi-scalar food systems planning consists of three distinct and closely interrelated spheres, as follows: the first concerns the entire food cycle and includes the full range of activities involved in the production, processing, marketing, consumption and disposal of goods derived from agriculture, forestry or fisheries. The second involves all the actors involved in food: people of different ages, faiths or cultures (as producers and consumers), social economy enterprises and businesses, government institutions at local, regional and national levels, research centres and academics, and so on. Food systems planning is therefore a multi-stakeholder and community-based process that will progressively involve wider circles in a truly public exercise. The third sphere concerns the multiple spaces and scales at which institutions, people, businesses, etc. develop activities related to the food cycle, from the street to the community, neighbourhood, city, town or region. These different spatial scales and their multiple relationships justify the description 'cultivated areas and a rural hinterland'. This third component applies the principle of food subsidiarity, a concept at the heart of the decentralisation process that is gradually taking place worldwide.

In Tanzania, the concept of multi-scalar food systems has been partially initiated by different institutions, deliberately or by default, with the main entry points being safe food, nutrition and hunger. However, the approaches have not considered the engagement of key stakeholders. The FAO (2018) suggested that food systems planning lies at the intersection of these different domains and is primarily concerned with envisioning a future shared by multiple actors. It is also concerned with defining what activities should take place to achieve the goal of food security and good nutrition for all. Finally, it must define and guarantee where these activities should take place.

2.1. Entry points for integrating food into urban planning

The intersection of food systems and urban planning in Tanzania has historically been characterised by a lack of integration, leading to inefficiencies and challenges in ensuring food security in urban areas. This section explores the link between food systems and planning by looking at the principles of food systems planning and how they can be seamlessly integrated into urban planning processes.

Food systems planning involves a comprehensive understanding of the entire food supply chain, including production, distribution and access to food in urban areas. By considering food production and distribution



systems, urban planners can strategically identify areas suitable for agricultural production, promote urban agriculture initiatives, and develop infrastructure to facilitate the efficient transport and distribution of food throughout the city. Equally important is addressing inequalities in access to food among urban residents.

Several thematic entry points or challenges can trigger local authorities to engage in a more formal process to integrate food into their planning processes e.g. the need to safeguard land for urban agriculture or to protect and expand important market infrastructure for nutrition.

2.1.1 Urban food systems planning as a process

Urban agriculture is an industry located within or on the outskirts of a city or metropolitan area, which grows and rears, processes and markets a variety of food and non-food products, largely using human and material resources, products and services found in and around that urban area, and in turn largely supplying human and material resources, products and services to that urban area (Mougeot, 2005).

According to the FAO (2018), urban agriculture is a catalyst, at least in the early stages of a food planning process. Understanding this role helps to reconcile urban agriculture promoters and activists with rural or food security advocates who may underestimate the

role of urban agriculture as a catalyst for integrating food into wider urban planning processes.

In Tanzania, urban and peri-urban agriculture is practiced by workers and residents facing a high cost of living, which compels them to engage in urban agriculture for self-sufficiency by reducing food purchase costs. However, the lack of infrastructure hinders them from achieving the intended impact (Katera, 2021). Urban farming is fragmented and has not been taken seriously by local authorities as part of their commitment to the sustainable development of urban areas.

However, successful food planning processes in some cities have produced formal outputs (food charter, food strategy, land use plans, zoning ordinances, etc.) and involved planners, food actors and policy makers (FAO, 2018).

Therefore, in order to improve urban food systems planning as a process in Tanzania, all urban stakeholders are required to play their role in planning sustainable multi-scalar food systems.

2.1.2 Healthy food distribution

The food distribution component plays a key role in food system planning (Sonnino, 2014). Belo Horizonte in Brazil is an outstanding example from the Global South of a systemic approach to food distribution that includes a variety of initiatives aimed at improving

citizens' access to sufficient, affordable and nutritious food and linking food needs to other planning outcomes (FAO 2018).

In Tanzania, Rikolto is piloting a systemic approach to food distribution in Arusha and Mbeya called the Participatory Food Security Systems (PFSS) approach. This is a localised quality assurance and distribution system inspired by the organic movement's Participatory Guarantee Systems approach, which is cost and time efficient for value chain actors.

The objectives of PFSS include: to make safe food available, affordable and guaranteed for all; to build trust in food safety claims in the field and in markets; to create a common understanding of the need for and potential of a participatory food safety system based on concrete experiences; and to achieve the desired impacts in the city-region food systems in terms of food safety ensuring environmental sustainability, organisational strengthening and market access, institutional support and better livelihoods for farmers and market vendors.

In addition, this approach ensures efficient availability of safe and nutritious food to low-income consumers who purchase their products from local markets as opposed to supermarkets, as it creates direct linkages between producers, transporters and market food vendors. In addition, Rikolto (in collaboration

with other SMEs such as East African Fruits Limited, and Mesula) has designed a short-term food distribution model that is interested in logistics and distribution systems that guarantee good prices to the smallholder farmers who sell directly to the SME and also affordable and healthy food to consumers due to the efficiency of the distribution system.

2.1.3 Food retail distribution planning

Food retail distribution planning has an impact on access to nutritious food (FAO 2018). In Tanzania, common food distribution channels involve farmers and brokers. The brokers aggregate food products from smallholder farmers and distribute them to other food actors, including formal food vendors, informal food vendors and food processors, while farmers deliver their products directly to markets, where the products are sold to vendors through market brokers. The brokers receive a commission from the farmers based on the price of the produce sold. In urban areas, food vendors involved in the distribution of fresh produce include street vendors and market vendors. However, food markets and food vendors lack important hygiene facilities, leading to both chemical and microbial contamination.

In 2003, the Business Licensing Act abolished the peddling licence (Nguvukazi), hence making street-based trade illegal. Street traders still operate under unclear judicial procedures (Steiler and Nyirenda 2021). The



majority of street food vendors in Tanzania are informal: they do not have a business licence, are unregistered with municipal authorities, do not pay tax, and operate without social security such as health insurance coverage. They tend to sell food in temporary structures, under trees, in unfinished buildings, or in front of and behind construction sites, and some are mobile, using wheelbarrows. They are constrained by financial exclusion and generally limited business skills (Rumanyika et al. 2019). Despite the legal exclusion facing the sector, street food vending continues to employ millions of people in urban Tanzania, responsible for cooking, serving, cleaning, security, and other tasks.

Integrating informal food systems into urban planning should go beyond simple regulation, implementing scattered food safety interventions or assigning public spaces for production or trade. It requires understanding the roots of informality which often reflect a weak institutional environment that generates barriers such as complicated registration and licencing mechanisms and unaffordable taxation. Reversing the underinvestment of resources in informal food systems is a tremendous challenge. Collaborating with informal actors can be difficult due to their sometimes poor organization, busy lives, and distrust of authorities, leading them to prefer self-organisation. Seeking invisibility is a common strategy to avoid control and harassment (Vorley, 2023).

Rikolto, in collaboration with the Tanzania Horticultural Association (TAHA) and Trias, piloted the mobile street food vending kiosks and designed the quality market food vending kiosks in Arusha city. The main objectives of these initiatives were to demonstrate the access of consumers to fresh, safe and nutritious food in Arusha to underserved areas. A similar scenario was reported by the FAO (2018), who found that mobile street food vendor 'food carts' can be an additional innovative solution to increase access to fresh foods in underserved areas.

It is worth noting that most street food vendors and those selling their products outside markets are informal, meaning they do not pay rent or taxes. Informal vendors face challenges in terms of food safety as they often lack access to basic sanitation infrastructure and equipment. However, they play a crucial role in offering food at lower prices to consumers. The question remains how food systems planning can be designed to formalise these groups to ensure that they provide safe and nutritious food while maintaining low food prices to benefit consumers. The planning tools that address food insecurity therefore need to take into account the local context. The FAO (2018) proposed food system planning tools and instruments which have been designed, experimented with, and adapted to local realities. These tools and instruments clearly demonstrate that food actors and policy makers should be technically

equipped to address food security challenges in cities and to shift from limited scale to multi-scalar food systems planning.

2.1.4 Land regulations, land zoning and land use

Land regulations, land zoning and land use which takes into account land for production, retail and wholesale markets, mobile vendors or agro-industrial zones are important tools for urban planners and other food system stakeholders (FAO, 2018).

Tanzania's Urban Planning (Zoning of Land Use) Regulations, 2018 specify uses of land that are permitted and those that may be permitted under special circumstances by the planning authority in different zones. The land uses include: residential, commercial (retail and wholesale), industrial (light, medium, heavy and service), institutional, public utility, beach, open space and recreational, transportation, communication and microwave towers, agricultural, water bodies, conservation and economic development. Despite these regulations, implementation is minimal due to various reasons including lack of finances. As a result, most urban areas are informal and unplanned and lack food systems infrastructure.

However, in 2015 Arusha joined the Milan Urban Food Policy Pact which has been signed by 115 cities worldwide. The pact promotes city-to-city learning

on developing and implementing sustainable food policies and it is an important component for the integration of urban planning and food systems into a neo-realisation of the city (Rikolto, 2018; FAO, 2018).

2.2. Multi-stakeholder and community participatory planning

Multi-stakeholder policy formulation and action planning (MPAP) is one of the most widely employed method to integrate food into urban planning (Cabannes and Marocchino, 2018). The method draws from a vast array of pre-existing partial methods and was implemented by Resource Centers on Urban Agriculture and Forestry (RUAF) and its partners over a period of 10 years in 20 cities across 17 countries (Dubbeling et al., 2011).

With exception of the Arusha and Mbeya regions, in Tanzania multi-stakeholder policy formulation and action planning. In 2019 and 2020, in Arusha and Mbeya, respectively, Rikolto supported the establishment of multi-stakeholder platforms to coordinate actions towards a more sustainable food system in both cities. The main objective is to promote more sustainable and inclusive food production, distribution, and consumption in Arusha and Mbeya, and collectively address key challenges in their food system. The two platforms involve working groups of various stakeholders, including government agencies, NGOs, farmers, businesses,



and community groups, working collaboratively to achieve common goals related to food security, environmental sustainability, economic viability, and social equity. Figure 1 below summarises the structure of the Arusha Sustainable Food Systems platform.



Figure 1: Structure of a Sustainable Food System Stakeholders Platform

In Arusha the platform is coordinated by Rikolto and has four working groups: safe production, food safety and standards, consumer awareness, consumer sensitisation, and youth in agriculture. The Arusha Sustainable Food System Platform plays a key role in planning the food system in a multi-dimensional way. For example, in 2018, Rikolto, in collaboration with ICLEI, as part of supporting Arusha in fulfilling its commitment to the Milan Urban Food Policy Pact (MUFPP), supported the inter-city exchange between Arusha and Antananarivo to promote cross-learning between the two cities on how to address food system constraints in the two cities. This exchange culminated in the Arusha Food Policy Pathways. Through this initiative, the Arusha City Council established strong links with various stakeholders in the local food system in its efforts to develop a food policy to support transformation and sustainability in Arusha. The peer-to-peer exchange with the city of Antananarivo identified seven key areas for action to transform Arusha's urban food environment. These were: involving stakeholders and building partnerships; strengthening capacity, education and skills; vertical and horizontal coordination; developing infrastructure; ensuring effective governance; accessing timely information; and securing funding from internal and external sources. Part of this exchange was to reflect on existing food system policies and to think critically about possible improvements to these policies.

Investment in roads and their maintenance, improving storage facilities, modernising abattoirs and building and rehabilitating urban markets were consistently identified as top priorities in Arusha. However, translating these priorities into meaningful projects and implementation has been slow due to high investment costs and the complexity of planning, which often involves multiple departments at the local level and even across government levels and sectors. Nevertheless, the Arusha City Council has turned its attention to social interventions. These include increasing revenue collection to support market operations and providing support to vulnerable groups to enable their active participation in food system activities.

For more information in how to engage stakeholders in the planning and implementation of food systems initiatives using systems thinking approaches, access the toolkit through this link

<https://www.rikolto.org/downloads/msp-toolkit>.



3. Recommendations from best practices

In conclusion, the urbanisation trend in Tanzania presents significant challenges for ensuring food security and nutrition in its cities. With the urban population expected to double by 2030, addressing issues such as growing food insecurity, undernutrition, overnutrition, urban poverty, informal food sectors, climate change impacts, and access to secure urban land for food-related activities becomes imperative. To effectively tackle these challenges, urban food planners need to adopt a holistic approach that integrates urban planning with food system planning. This involves recognising the interconnectedness of various factors influencing food production, distribution, consumption, and waste within urban environments. Additionally, there is a crucial need for increased research, policy development, and community engagement to inform sustainable urban food planning initiatives.

Furthermore, fostering partnerships between government agencies, non-governmental organisations, academia, and local communities can facilitate the implementation of innovative strategies to enhance food security, promote nutrition, and create more resilient urban food systems. By prioritising inclusive and participatory planning processes, Tanzania can pave the way for more equitable, healthy, and

sustainable urban food environments for its growing population. The following subsections present the main recommendations emerging from the above discussions.

3.1 Integrate planning strategies to improve food access and nutrition outcomes

To address the complex challenges of urban food insecurity and malnutrition in Tanzania integrated urban planning strategies that specifically focus on improving food access and nutrition are needed. This entails developing comprehensive food policy frameworks: establishing and implementing policies that integrate food security and nutrition considerations into urban planning processes. This could include zoning regulations that prioritise the establishment of food markets, community gardens, and urban farms in strategic locations to ensure equitable access to fresh and nutritious foods for all residents.

3.2 Recognise the significant role of small and medium-sized urban centres

Recognising the significant role of small and medium-sized urban centres in shaping food demand and production dynamics, Tanzania stands to benefit from tailored food planning strategies that capitalise on the unique

advantages of these areas. In contrast to large cities, smaller urban centres boast distinct characteristics such as proximity to hinterlands, peri-urban areas, and available land, presenting opportunities to emerge as food security hubs and net food producers. A nuanced approach to food planning is essential, focusing on localised assessments of foodscapes, mapping out food flows, production sites, and challenges to inform targeted interventions. By promoting agro-economic diversification, strengthening local food value chains, and fostering capacity building and knowledge sharing, Tanzania can empower small and medium-sized urban centres to play a pivotal role in enhancing food security and resilience across the country.

Embracing tailored food planning strategies not only addresses the specific needs and potentials of small and medium-sized urban centres but also contributes to broader development objectives. By investing in infrastructure, market linkages, and agricultural extension services, Tanzania can support smallholder farmers in peri-urban and hinterland areas to access markets and increase their incomes, thereby fostering economic growth and poverty alleviation.

3.3 Prioritise food affordability in urban food planning initiatives

In countries like Tanzania where there's a significant gap in food expenditure

between affluent and impoverished households, prioritising affordability in urban food planning initiatives is paramount. A key recommendation is the implementation of targeted interventions and policies aimed at alleviating the financial burden of food expenditure on vulnerable populations, especially the poor and very poor. This can be achieved through subsidised food programmes that aim to improve the efficiency of food production and distribution, thereby making healthy and nutritious food more accessible and affordable for low-income households. Collaboration with smallholder farmers, local markets, food retailers and community organisations are important to expand the reach and potential impact of such programmes, also in other outcome areas (e.g. market access for local producers).

In addition, public support for community-led initiatives such as community gardens, urban farms and food cooperatives can provide residents, especially those in underserved neighbourhoods, affordable and locally sourced food options, but also build community resilience and social cohesion. In addition, the establishment of mechanisms to monitor food prices and regulate food markets to prevent price manipulation and ensure fair pricing, especially for staple and essential foods, is essential. This approach can help mitigate the negative impact of food inflation on low-income households and contributes to



improving overall food security. Finally, providing subsidies for public transport or improving transport infrastructure can significantly reduce transport costs, including post-harvest losses, associated with accessing food markets and shops, especially for residents of peri-urban and informal settlements.

3.4 Recognise street vending as a legitimate form of employment and trading

Based on the challenges and importance highlighted in the discussion of street vending and informal food systems in Tanzania, we recommend that street vending be recognised as a legitimate form of employment which contributes significantly to access to nutritious food. This includes reviewing and possibly amending laws and regulations to provide clear guidelines and pathways for street vendors to operate legally, including simplified registration processes and fair taxation mechanisms. Investment in training and capacity-building programmes for street vendors can improve their business skills, food safety practices and financial management thereby strengthening their role in delivering nutritious and safe food. This could involve partnerships with local NGOs, vocational training institutes and business development organisations. In Arusha, for example, Rikolto works with a vocational training institute to train food vendors in various aspects of food handling and recipes. This should be

combined with programmes to facilitate access to finance and micro-credit schemes tailored to the needs of street food vendors, enabling them to invest in equipment, improve infrastructure and expand their businesses. This could include enhancing collaboration between microfinance institutions and government agencies to develop inclusive financial products.

In addition, infrastructure needs to be improved in urban areas to provide safe and hygienic spaces for street vendors. This includes the provision of designated vending zones with basic amenities such as sanitation, waste disposal systems and access to clean water. Institutional support for street vendors needs to be improved by creating platforms for dialogue where vendors can engage with local authorities, share concerns and contribute to decision-making processes. This could include the creation of street vendor associations or cooperatives to collectively represent their interests. Finally, it is also important to advocate for the extension of social protection mechanisms, such as health insurance and pension schemes, to street vendors and their employees. This could involve working with government agencies and social welfare organisations to design inclusive social protection programmes. All of this is possible by integrating informal food systems into urban planning processes, recognising their importance in ensuring food security, employment and economic resilience.

This includes integrating informal food markets into spatial planning frameworks and promoting inclusive zoning policies that accommodate street food vending activities.

3.5 Integrate climate and environmental constraints into food systems planning

Considering the growing risks related to climate change and environmental degradation, planners should integrate climate and environmental risks into food systems planning. This includes incorporating climate change projections, such as increased temperatures, extreme precipitation, and drought/flood patterns, into urban development plans to better anticipate and mitigate their impacts on urban and peri-urban agriculture. Cities' climate action plans should include provisions to address food-related challenges exacerbated by climate change. This may include initiatives such as promoting resilient agricultural practices, strengthening food security measures and reducing the environmental footprint of food production, distribution and waste management. Urban planners should also prioritise better integration of urban agriculture into spatial planning processes. This includes identifying suitable areas for urban and peri-urban agriculture, promoting the establishment of nutritious food outlets and farmers' markets, and supporting community gardens and rooftop farming initiatives.

Promoting short supply chains can also help localise food production in and around cities, reducing the environmental impact of food transport and waste. This includes supporting small-scale farmers and producers, facilitating direct marketing channels between producers and consumers, and incentivising sustainable agricultural practices. Sustainable post-harvest logistics and efficient food distribution mechanisms are also essential to minimise food loss and ensure food security. Planners should work to improve infrastructure and transport systems to increase the efficiency and sustainability of food distribution networks. Embracing the circular economy model can help reduce food waste and promote resource efficiency in the food system. This includes initiatives such as composting organic waste, redistributing surplus food to those in need, and recovering valuable nutrients through innovative recycling methods. Urban planners should facilitate partnerships between local stakeholders and government agencies to jointly address food security and climate resilience challenges. This may include the establishment of food councils or similar mechanisms to involve different stakeholders, including communities, farmers, businesses, and civil society organisations, in decision-making and implementation.

3.6. Create an enabling environment to protect land for urban and peri-urban agriculture

Urban agriculture in Tanzania faces significant challenges, particularly in



terms of access to land and tenure security. To address this, urban planners and policy makers need to prioritise measures to secure land access and tenure rights for urban farmers. This includes conducting comprehensive land tenure assessments, regularising informal land use arrangements and establishing clear tenure rights for agricultural activities. In addition, backyard farming regulations need to be developed and enforced to ensure sustainable practices and equitable access to resources. Local authorities should implement bylaws on plot size, livestock ownership and environmental considerations to support the viability of backyard farming. Recognising the importance of urban agriculture in open spaces, especially for vulnerable populations without access to land, is crucial. Efforts should be made to identify suitable open spaces for agricultural use and to support informal urban farmers through training, access to resources and infrastructure development.

Conservation of peri-urban agricultural land is also essential, as it contributes significantly to the urban food system and household livelihoods. Urban planners should prioritise the conservation of peri-urban agricultural land through appropriate zoning regulations, land use planning and land acquisition strategies. A holistic approach to food system planning is also needed. This involves integrating food-related considerations into broader

urban development strategies, promoting diversified agricultural practices, and ensuring that residents have access to healthy, culturally appropriate and sustainably produced food. Strengthening cooperation and partnerships between government agencies, civil society organisations and other stakeholders is essential for effective urban agriculture planning. Continued investment in research and innovation is also critical to identifying sustainable practices and mitigating the impacts of climate change and urbanisation on food production. By implementing these recommendations, urban planners and policy makers can contribute to the development of resilient, equitable and sustainable urban food systems in Tanzania, ensuring food security and improving the well-being of urban residents and communities.

3.7 Build capacities to support multi-stakeholder policy formulation and action planning

In Tanzania, particularly in the Arusha and Mbeya regions where Rikolto has extensive experience in food system stakeholder engagement, the implementation of multi-stakeholder policy formulation and action planning (MPAP) methodologies has highlighted several challenges in translating priorities into concrete projects and effective implementation strategies. For example, in Arusha, in collaboration with ICLEI, extensive work was done to engage stakeholders to develop food

system pathways, but these pathways still need to be taken by stakeholders to implement the planned interventions. To overcome these hurdles, it is imperative to invest in capacity-building programmes for local stakeholders involved in food system platforms. Providing training on project formulation and management, stakeholder engagement and financial planning can significantly improve their ability to plan and implement food system initiatives efficiently.

In addition, streamlined coordination mechanisms are crucial to foster collaboration between different government departments, NGOs and stakeholders involved in food system planning. Establishing clear communication channels, holding regular meetings and implementing joint decision-making processes will ensure that priorities are aligned and resources are used effectively. Promoting public-private partnerships can further leverage resources and expertise from both sectors, especially in critical areas such as infrastructure development, which requires significant investment. Rikolto's Multi-Stakeholder ToolKit can be used to build the capacity of stakeholders or development partners to develop strong stakeholder engagement in the planning and implementation of the initiative.

Innovative financing models also have a key role to play in addressing the challenge of high investment costs associated with food system

transformation. Exploring opportunities for public-private financing partnerships, seeking grants from international organisations, and implementing community-based financing mechanisms can provide sustainable sources of funding for effective food system planning in Tanzanian municipalities. In addition, strengthening community engagement and advocating for supportive policies at local and national levels are essential steps towards building sustainable and resilient food systems in Tanzania. By implementing these recommendations, stakeholders can address the challenges identified and accelerate progress towards achieving food security and sustainability goals.



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References

- Amend, J., Jacobi, P. and Kiango, S. (2000). Urban agriculture in Dar es Salaam: providing for an indispensable part of the diet. In Bakker, N., Dubbeling, M., Guendel, S., Sabel Koschella, U. and de Zeeuw, H., eds. *Growing Cities, Growing Food, Urban Agriculture on the Policy Agenda*. Germany: Deutsche Stiftung für Internationale Entwicklung (DSE), pp 99–117.
- Cockx, L., Colen, L., and de Weerd, J. (2018). From corn to popcorn? Urbanization and dietary change: Evidence from rural-urban migrants in Tanzania. *World Development*, 110, pp. 140–159.
- Cohen, B. (2004). Urban Growth in Developing Countries: A Review of Current Trends and a Caution Regarding Existing Forecasts. *World development*, 32, 23-51.
- Convery, I., Howorth, C. and O’Keefe, P. (2001). Gardening to reduce hazard: urban agriculture in Tanzania. *Land Degradation & Development*, 12(3), pp 285–291.
- De Zeeuw, H., Dubbeling, M. and Van Veenhuizen, R. (2010). *Cities, Poverty and Food: Multi-stakeholder Policy and Planning in Urban Agriculture*. Warwickshire: Practical Action Publishing Ltd.
- Dubbeling et al. (2011). Dubbeling, M., de Zeeuw, H. and van Veenhuizen, R. 2011. *Cities, Poverty and Food: Multi-stakeholder Policy and Planning in Urban Agriculture*. London: Practical Action.
- Halloran, A. and Magid, J. (2013). Planning the unplanned: Incorporating agriculture as an urban land use into the Dar es Salaam master plan and beyond. *Environment & Urbanization*, 25(2), pp. 541–558.
- Farrell, K. (2017). The Rapid Urban Growth Triad: A New Conceptual Framework for Examining the Urban Transition in Developing Countries. *sustainability*, 9, 1407
- FAO. (2018). Integrating Food into Urban Planning. Food and Agriculture Organization of the United Nations. [Online]. Available at: <https://openknowledge.fao.org/server/api/core/bitstreams/0f7b5e22-5f9d-4087-a4ce-46fdffd79060/content>
- Grimm, N. B., Foster, D., Groffman, P., Grove, J. M., Hopkinson, C. S., Nadelhoffer, K. J., and Pataki, D. E. (2008). The changing landscape: ecosystem responses to urbanization and pollution across climatic and societal gradients. *Frontiers in Ecology and the Environment*, 6(5), pp. 264–272.
- Ilieva, R.T. (2016). *Urban Food Planning: Seeds of Transition in the Global North*. London: Routledge.
- Jedwab, R., Chistiaensen, L., and Gindelsky, M. (2018). *Demography, Urbanization and Development: Rural Push, Urban Pull and Urban Push? Policy Research Working Paper 7333*. World Bank, Washington DC.
- Kasala, S. and Burra, M. (2016). The Role of Private Partnerships in Planned and Serviced Land Delivery in Tanzania. *iBusiness*, 8, pp. 10-17.
- Lucas Katera, (2021). *Urban Farming in Tanzania: Opportunities and Challenges*
- Kironde, (2009). Kironde, J. L. (2009, March). Improving land sector governance in Africa: The case of Tanzania. In Workshop on “Land Governance in Support of the MDGs: Responding to New Challenges (pp. 1-29). Washington, DC: World Bank.
- Kombe, (2001). Kombe, W. J. 2001. “Institutionalising the Concept of Environmental Planning and Management (EPM): Successes and Challenges in Dar es Salaam.” *Development in Practice* 11 (2-3): 190–207. doi: 10.1080/09614520120056342
- Lee-Smith, D. (2010). Cities feeding people: an update on urban agriculture in equatorial Africa. *Environment and Urbanization*, 22 (2), pp. 483–499.
- Makundi, (2017) Makundi, D. I. 2017. *Assessment of Policies and Practices of Land Delivery by Private Sector: A Focus on Two Projects in Kigamboni Municipality in Dar es Salaam City (Master’s Thesis)*. Ardhi University, Dar es Salaam.
- Mkalawa, C. and Haixiao, P. (2014). Dar es Salaam city temporal growth and its influence on transportation. *Urban Planning and Transport Research*, 2(1), pp. 423-446.
- Mlozi, M.R.S., Lupala, A., Chenyambuga, S.W., Liwenga, E., and Msogoya, T. (2014). *Building Urban Resilience: Assessing Urban and Peri-urban Agriculture in Dar es Salaam, Tanzania*. Nairobi, Kenya: United Nations Environment Programme (UNEP).

- Morgan, Kevin. (2013). Morgan, K. 2013. 'The Rise of Urban Food Planning', *International Planning Studies* 18(1): 1–4.
- Mougeot, (2005). Mougeot, L. 2005. *Agropolis. The Social, Political and Environmental Dimensions of Urban Agriculture*. London: Earthscan
- Nuhu, (2018). Nuhu, S. 2018. "Peri-urban Land Governance in the Developing Countries. Understand the Role, Interaction and Power Relation among Actors in Tanzania." *Urban Forum* 29 (89): 1–16.
- Rikolto. (2018). *Pathway to an urban food policy – Arusha, Tanzania*
- Rosenzweig, C., Solecki, W., Hammer, S. A. and Mehrotra, S. (Eds). (2011). *Climate Change and Cities: First Assessment Report of the Urban Climate Change Research Network*. Cambridge, UK: Cambridge University Press.
- Sawio, C. (1998). *Urban agriculture and the sustainable Dar es Salaam project. Cities Feeding People (CFP) Series, Report No 10. Ottawa: IDRC.*
- Sonnino, (2014). Sonnino, R. 2014. 'The New Geography of Food Security: Exploring the Potential of Urban Food Strategies', *Geographical Journal* 182(2): 190–200
- Stevenson, C., Xavery, P. and Wendeline, A. (1996). *Market production of fruits and vegetables in the peri-urban area of Dar es Salaam. Dar es Salaam: Urban Vegetable Promotion Project.*
- The Urban Planning Act, (Cap.355), regulations (made under section 77(1)(D). (2018). [Online]. Available at: <https://tanzlii.org/akn/tz/act/gn/2018/91/eng@2018-03-09/source.pdf>
- UN-Habitat. (2016). UN-Habitat. 2016. *Urbanization and Development Emerging Futures. World Cities Report*. UK: Earthscan Publications.
- Vorley, B. (2023). *Working with informality: Constructive ways to transform food systems*. Working Paper. The Netherlands: IIED.
- Wenban-Smith, (2015). Wenban-Smith, H. 2015. *Population Growth, Internal Migration and Urbanisation in Tanzania, 1967–2012*. International Growth Center.
- Wenban-Smith, H. (2016) *Food insecurity in urban Tanzania*



