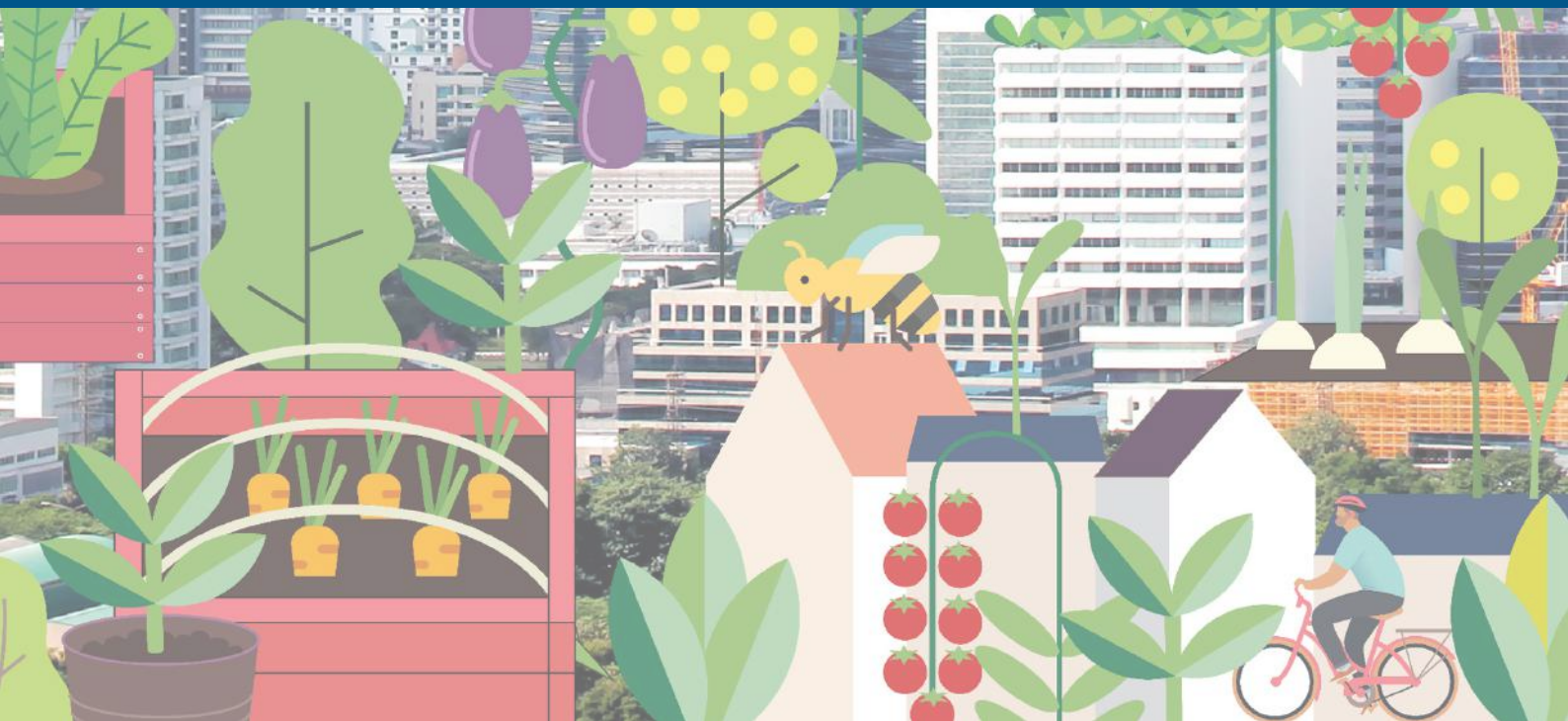




POLICY BRIEF

Integrating a Food Systems Approach into Urban and Peri-Urban Agriculture Practices and Policies in Arusha, Tanzania





List of Acronyms

ACC	Arusha City Council
ACAF	Arusha Conservation Agriculture Forum
ASDP II	Agricultural Sector Development Programme II
BSF	Black Soldier Fly
FAO	Food and Agriculture Organization
IRP	International Resource Panel
LGAs	Local Government Authorities
MNGAP	Network of Farmer and Pastoralist Groups in Arusha
MNAP	Multisectoral Nutrition Action Plan
MUVIKIHO	Muungano wa Vikundi vya Horticulture
NHSDP	National Housing Strategy and Development Programme
PO-RALG	President's Office, Regional Administration and Local Government
TAHA	Tanzania Horticulture Association
TARI	Tanzania Agricultural Research Institute
TFNC	Tanzania Food and Nutrition Centre
TBS	Tanzania Bureau of Standards
TPHPA	Tanzania Plant Health and Pesticide Authority
UPA	Urban and Peri-urban Agriculture
URT	United Republic of Tanzania
WVC	World Vegetable Centre
CoE	Centre of Excellence

1. Introduction

Arusha, a rapidly growing secondary city in Tanzania, currently has a population of 617,631 with an annual population growth rate of 4% (URT, 2022). Projections suggest that Arusha's population will reach 2 million by 2050 because of urban expansion and migration (Arusha City Council, 2016), putting further strain on the city's food security. Urbanisation has a direct impact on food systems by changing access to food and influencing consumer preferences. Currently, **Arusha's food system faces significant challenges**, including unsustainable farming practices such as excessive use of chemical fertilizer and pesticides leading to food safety concerns. These are exacerbated by poor food handling practices in the traditional markets, monotonous dietary patterns dominated by staples such as ugali, poor and uncoordinated (food) waste management and urban sprawl that encroaches on natural areas and impacts ecosystem services (FAO et al., 2023).

Urban and peri-urban agriculture (UPA) is gaining popularity as a viable way to improve food and nutrition security in cities. Although the quantities produced by UPA are typically insufficient to feed the local population, it can be useful in improving the accessibility and affordability of nutritious food by complementing what is already available in urban food markets (especially as UPA often involves the production of fruits and vegetables). It can also improve environmental conditions and make cities more resilient to environmental shocks,

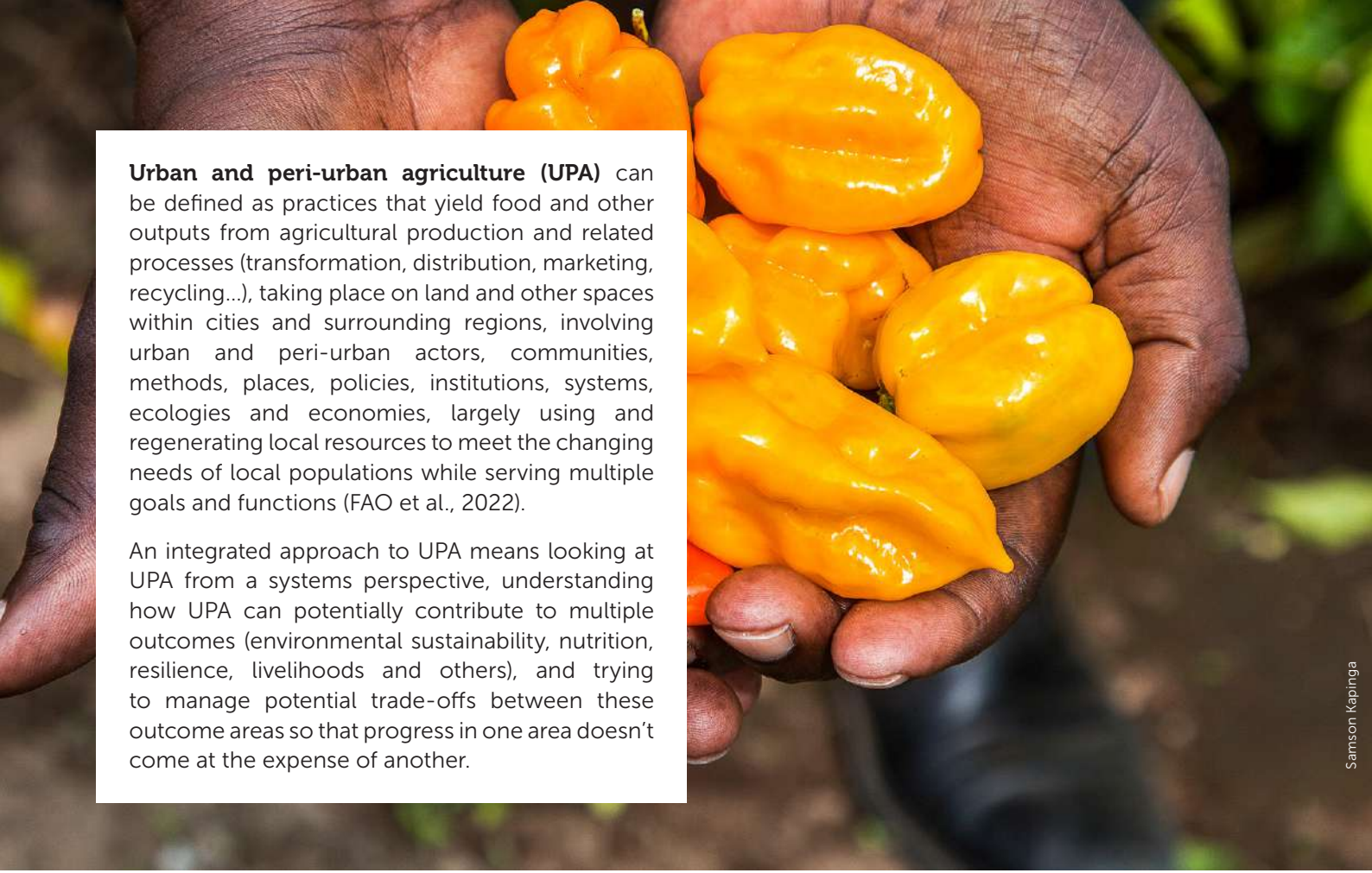
provide recreational activities for citizens, and support the livelihoods of urban and peri-urban farmers. To achieve these benefits, UPA needs to be part of an **integrated and multistakeholder approach to sustainable urban food systems**.

These multiple benefits position UPA as a key component in the pursuit of sustainable, resilient, and environmentally sound urban development strategies (Simon, 2023; Abramovay et al., 2023). As in many cities in sub-Saharan Africa, views on UPA in Arusha differ between urban land decision-makers, agricultural and environmental officials, and urban farmers (Thomas et al., 2021). While it is important to acknowledge that UPA alone cannot solve all challenges, it is critical for both the agricultural and urban planning sectors to **recognise the untapped potential of urban agriculture in advancing the Sustainable Development Goals** (IRP, 2021).

At the national level, Tanzania has adopted and implemented several policies with an influence on urban and peri-urban agriculture (UPA) such as the 2018 Agriculture Sector Development Programme Phase II or the 2013 National Agriculture Policy but specific provisions on UPA are often left out of these policies. Recent policy documents, such as Tanzania's 2021 National Food Pathway take a welcome food systems approach, but lack guidance on transforming urban food systems, including through UPA.



This policy brief aims to provide actionable recommendations and policy guidance to promote an approach to UPA that is integrated into the wider local food system in Arusha. It is based on a comprehensive mapping of existing UPA initiatives, stakeholders, and policies in the city, identifying gaps, opportunities and challenges, and aims to increase understanding and awareness of the central role of UPA in promoting sustainable food systems. It also advocates for increased investment in multi-stakeholder collaboration and fostering partnerships across sectors and levels of government to strengthen UPA initiatives in Arusha through a food systems approach.



Urban and peri-urban agriculture (UPA) can be defined as practices that yield food and other outputs from agricultural production and related processes (transformation, distribution, marketing, recycling...), taking place on land and other spaces within cities and surrounding regions, involving urban and peri-urban actors, communities, methods, places, policies, institutions, systems, ecologies and economies, largely using and regenerating local resources to meet the changing needs of local populations while serving multiple goals and functions (FAO et al., 2022).

An integrated approach to UPA means looking at UPA from a systems perspective, understanding how UPA can potentially contribute to multiple outcomes (environmental sustainability, nutrition, resilience, livelihoods and others), and trying to manage potential trade-offs between these outcome areas so that progress in one area doesn't come at the expense of another.

Samson Kapinga

2. UPA initiatives in Arusha

In Tanzanian cities such as Arusha, urban agriculture has historically played an important role, enabling urban dwellers to grow food, generate additional income, and make effective use of available land and labour (Jagganath, 2022). It is considered an integral part of the urban economy, with the cultivation of crops, particularly vegetables, being a widespread practice (Medici et al., 2021). Urban agriculture is particularly important for low-income households, especially those headed by women (Mntambo, 2012).

2.1 Initiatives led by Arusha City Council (ACC)

In collaboration with the farmers' network MVIWA Arusha (Mtandao wa Vikundi vya wakulima na wafugaji Arusha), private companies (RijkZwaan and Tanzania Horticulture Association - TAHA) and research and academic institutions (Tanzania Agriculture Research Institute - TARI - Tengeru), the Arusha City Council's Department of Agriculture, Fisheries and Livestock conducts trainings and demonstrations at the Nane Nane showgrounds during the **National Agriculture Week** held every August. The trainings and demonstrations promote good agricultural practices and technologies, including UPA practices such as aquaponics, vertical farming, container and sack gardening,

vermiculture, composting, solar-powered drip irrigation, and the establishment of demonstration plots with lead farmers on maize farming and horticulture. The Nane Nane site also hosts a number of agribusinesses, NGOs and other public institutions that demonstrate good agricultural practices to urban farmers outside of the Nane Nane Agricultural Show periods. In addition, the Arusha City Council demonstrates the production of compost from food waste at the landfill site.

The **Arusha Master Plan 2035** is being implemented by the Arusha City Council in collaboration with various partners, including non-governmental organisations that aim to improve urban sustainability. As part of this plan, a project called **Arusha Edible Gardens**, an ecological corridor that protects biodiversity along the Them River, was implemented in 2014 in collaboration with Oikos East Africa. The project aimed to promote urban agriculture and agro-biodiversity both as a means of domestic food supply and as a route to (self-)employment in urban horticulture. Therefore, the gardens provided a place for the community to learn how to grow indigenous plants and how to cook healthy plant-based food. The aim of these gardens was to provide a learning space for young people and vulnerable women



to learn about indigenous edible plants, how to grow them and how to cook healthy plant-based meals. Five gardens were established, including the Themi Edible Garden, which continues to this day. The garden promotes urban agriculture by providing training to various groups in the Arusha community, demonstrating different cooking recipes using indigenous vegetables, and selling local organic food in the local restaurant. The garden is run by a group of 20 women and has benefited nearly 200 women to date.

2.2 Initiatives led by the private sector

Rijkzwaan Afrisem's Centre of Excellence in Moshono Ward promotes UPA through extensive training and demonstrations. Focusing on good agricultural practices in the horticulture value chain, the centre equips participants with horticultural skills through greenhouse and hydroponic farming, enabling year-round cultivation in urban areas. In addition, Rijkzwaan offers farmer field days at its demonstration field in the Usa River area to showcase good agricultural practices for urban and peri-urban farmers.

Chanzi, a local company, provides a sustainable solution to Arusha's waste management problem by reusing and recycling food waste into an affordable animal protein and organic fertiliser for urban and peri-urban farmers. This is mainly done through the use of Black Soldier Flies (BSF), which recycle organic waste from traditional food markets and households in Arusha. The roasted and ground BSF are used as an alternative protein source for poultry, livestock and fish feed, and the BSF frass is used as a chemical-free fertiliser or soil conditioner for growing fruit, vegetables, flowers and grass.

2.3 Initiatives led by civil society

School garden initiatives in urban and peri-urban Arusha are being implemented by various stakeholders to support the diversification of school meals, improve pupils' nutrition, and pass on UPA knowledge to the next generation. Oikos East Africa pioneered the school gardens in 2014-2019, where 5 schools in Arusha (Sokoni 1 Primary School, Sinoni Primary School, Burka Primary School, Meru Primary School and Moivaro Primary School) were supported to establish school gardens. These schools continue to maintain the school gardens with the support of the Arusha City Council. The World Vegetable Centre has also supported school gardens (in Baraa Primary School and Singisi Primary School) by providing vegetable seed kits and training. Other stakeholders such as Slow Food Tanzania, Convoy of Hope, Unite Foundation Tanzania and Help Alliance are working on school gardens in Arusha.

Initiatives to promote **agroecology** in urban and peri-urban Arusha are being implemented by several actors. The Kilimo Endelevu Arusha and Kilimo Endelevu Arusha Plus programmes, coordinated by the NGO Iles de Paix, are being implemented in Arusha District Council, a peri-urban area near the city to promote school gardening and demonstrate UPA practices.

An urban garden will be established as a **dynamic educational hub** to facilitate learning opportunities for different demographic groups including youth, women, individuals, and groups from local and external communities. The urban garden will adopt the **One Acre Farm** concept, integrating different components such as crops, livestock, and trees within its ecosystem. Using organic production methods, the urban garden will take a holistic

approach to agriculture, promoting environmental stewardship and healthy living.

Echo East Africa supports urban and peri-urban farmers in the Ngaramtoni area of Arusha District Council by providing tailor-made training based on **permaculture** principles, which are essential in urban and peri-urban environments where space is often limited. Echo East Africa focuses on the production of perennial vegetables such as moringa, katuuk, chaya and cassava because of their high nutritional value, low maintenance requirements and ability to adapt to limited space and varying climatic conditions. Women and young people are the target group for these training programmes to enable them to start and manage home gardens. Echo also operates a **nursery** where it grows and sells seedlings of perennial vegetables, other vegetables, fruit and ornamental trees, providing urban and peri-urban farmers with high quality planting materials. Echo East Africa pioneered the Arusha Conservation Agriculture Forum (ACAF), which has evolved into the **Arusha Collaborators for Agroecology Forum** (ACAF), which facilitates dialogue on agroecology. The forum brings together stakeholders from Arusha City, Meru District, Arusha District and beyond to learn and share about conservation efforts, biodiversity and soil health, among others, that are critical to urban and peri-urban agriculture.

In the peri-urban area of Meru in Meru District Council, Rikolto works on **regenerative agriculture** by providing training and establishing demonstration farms on regenerative agriculture practices such as water use efficiency using technologies such as solar-powered irrigation, soil management such as composting, mulching and cover crops, and good agricultural practices. Rikolto works with peri-urban farmer business organisations including Muungano wa Vikundi vya Horticulture (MUVIKIHO) and Kwa Ugoro. Rikolto also facilitates linkages between farmers and business development services such as financial institutions and agricultural input services.

2.4 Initiatives led by research institutions

The World Vegetable Centre for Eastern and Southern Africa in Arusha supports UPA through its Centre of Excellence, which showcases various good agricultural practices for fruit and vegetables and **post-harvest technologies**. The Centre of Excellence organises farmer field days to disseminate knowledge and skills on fruit and vegetable production. The Centre also maintains Africa's largest **vegetable seed collection**, which is usually distributed to farmers in Arusha and beyond in collaboration with other stakeholders



David Minja

3. Regulations and policies that influence UPA

The review examines key policies that influence urban development and agriculture in Arusha, and analyses how they affect production factors and drivers of UPA, such as governance, land rights, resource management, support for MSMEs, and technological advancement. These policies shape the infrastructure of UPA, affecting producers, consumers and urban sustainability. Table 1 summarises the impact of these policies on UPA and provides an overview of some of the key policy gaps.



Table 1 - Overview of national policies influencing UPA in Arusha and their gaps

Policy	Agency in charge	Influence on UPA	Policy gap
Tanzania's National Food Pathway, 2021	Ministry of Agriculture	The pathway is central to transforming Tanzania's food system, focusing on local production and distribution to increase competitiveness. It aims to achieve equitable livelihoods, build resilience to shocks and stresses, promote biodiversity conservation, and transition to green growth through climate change mitigation and adaptation, with a focus on environmentally sustainable practices	The pathway has not yet been effectively translated at the local level or disseminated to local authorities, making implementation difficult. There is a lack of explicit guidance on transforming urban food systems, including through UPA.
Agriculture Sector Development Programme Phase II (ASDP II) 2018	Ministry of Agriculture	ASDP II aims to improve agricultural productivity, marketing and incomes of smallholder farmers throughout the country. It focuses primarily on increasing agricultural productivity and improving infrastructure, input supply and extension services at the national level and does not explicitly target UPA as a separate category. The strategies and objectives outlined in ASDP II indirectly benefit UPA through a spill-over effect, as ASDP II initiatives aimed at increasing the resilience and sustainability of agriculture can be applied to urban agriculture.	ASDP II targets rural agriculture, with limited strategies tailored to urban and peri-urban farming systems, taking into account space constraints, urban market dynamics and urban waste management. ASDP II is not strongly integrated with urban planning policies and does not integrate agricultural areas into urban development plans.

National Human Settlements Development Policy, 2000	Ministry of Lands, Housing and Human Settlements Development	The government commits to designating specific areas within urban planning zones for agricultural activities while preventing encroachment into areas designated for other purposes. It regulates UA practices to ensure consistency with urban development objectives and prevent conflicts with other urban activities. The government commits to reviewing existing laws to facilitate planned UA and remove any legal barriers that may hinder the development of UA. It also commits to building appropriate infrastructure in designated agricultural areas to prevent land degradation, water pollution, and health & safety hazards.	Lack of clarity on criteria for selecting and managing designated agricultural areas within urban planning zones. Ambiguity and uncertainty on land use and management. Challenges to coordinate across different government agencies for effective implementation and enforcement. Absence of explicit provisions for community engagement and participation in decision-making.
National Agriculture Policy, 2013	Ministry of Agriculture	The policy recognizes UPA as a vital contributor to food security and employment creation. It broadens the tax base through property tax for land developed for agriculture and beautification of cities and serves as a supplementary source of income for urban dwellers. It aims to develop a regulatory framework and support mechanisms for UPA and promote good UPA practices.	The policy does not set out specific strategies and interventions at the local government level to develop support mechanisms for UPA, nor does it outline a monitoring and evaluation framework for the implementation of UPA.
The Urban Planning Act 2018	Ministry of Lands, Housing and Human Settlements Development	The Act defines use groups and classes for land in urban areas and provides guidance on the categorisation and regulations of different land uses, including agriculture. It outlines functional space requirements for different land uses to ensure a well-designed urban environment and provides a mandate for local authorities to manage conflicts.	A lack of enforcement and awareness of the regulations hampers their implementation for UPA.
The Plant Health Act, 2021	Ministry of Agriculture	The Act led to the establishment of the Tanzania Plant Health and Pesticide Authority (TPHPA) and provides a legal framework that can positively influence UPA practices in Tanzania by promoting safe pesticide use, addressing phytosanitary concerns, and supporting sustainable agriculture in urban and peri-urban areas.	There are limited resources for the enforcement of food safety and environmentally-friendly regulations

The Food and Nutrition Policy of Tanzania, 1992	Ministry of Health	It aims to eliminate malnutrition, improve the nutritional status of the population, especially women and children, and ensure food security. It emphasises nutrition-sensitive agriculture and positively impacts UPA through a multi-sectoral approach focusing on crop production, preservation, processing, distribution, waste reduction, food safety and quality control to ensure food security, especially for vulnerable groups. It aims to increase domestic crop production through improved irrigation, financial support, technology and research.	This policy is outdated and may not adequately address current challenges, particularly access to safe and nutritious food for urban populations. It should be revised to integrate UPA.
National Health Policy, 2017	Ministry of Health	It aims to enhance healthcare services, prevent diseases, improve maternal and child health, promote healthy lifestyles, address malnutrition, and ensure environmental health. It encourages the production of nutritious foods to improve diet quality, disease prevention through access to fresh produce, friendlier urban environments through green spaces and waste management, economic opportunities for urban residents, and the integration of health education with agricultural practices.	The policy is comprehensive but does not include specific provisions for UPA and does not prioritize food safety in urban settings.
The Multisectoral Nutrition Action Plan (MNAP), 2021/2022	Prime Minister's Office	It aims to reduce malnutrition through coordinated efforts across sectors. It influences UPA by enhancing food security, promoting dietary diversity, supporting vulnerable groups, integrating nutrition education, and improving WASH practices.	While the MNAP aims to improve nutrition through a multisectoral approach, it lacks a specific focus on UPA, urban strategies, the integration with urban planning, economic incentives, and environmental considerations.

Policy	Agency in charge	Influence on UPA	Policy gap
Arusha City Environmental Protection and Sanitation Bylaws 2018	Arusha City Council	The bylaws specify areas where crops can and cannot be grown and where animals cannot graze. They ensure environmental protection, prevent land degradation and maintain public safety. Enforcement mechanisms are in place to ensure compliance.	The bylaws do not recognize UPA practices that use small areas of land.
Arusha Master Plan 2015-2035	Arusha city council	The Master Plan serves as a crucial framework for urban development, significantly influencing UPA through its directives on land use and zoning, infrastructure development, and environmental management including ecological corridors.	The Master Plan lacks economic incentives for UPA. It doesn't have robust monitoring and evaluation mechanisms to ensure UPA's integration into urban planning.
Arusha Food Policy Pathways, 2018	Arusha City Council	They provide a comprehensive policy framework to achieve a safe, nourishing, viable, and inclusive food system in response to Arusha's commitment to the Milan Urban Food Policy Pact. They aim to integrate UPA initiatives that address issues related to food safety, school feeding, awareness, food identity, nutrition, commercialization, food waste and governance.	Since their development in 2018, these policy pathways have not been formally enacted as an official Arusha food policy, resulting in inadequate implementation.

The Urban Planning Act of 2018, the Arusha City Environmental Protection and Sanitation Bylaws of 2018, and the Arusha Master Plan 2015-2035 are the key policies that govern UPA in Arusha. While these policies effectively support UPA by designating specific zones for agricultural use, they lack clear guidelines and criteria for the allocation and protection of UPA land. Furthermore, the lack of enforcement of regulations and policies limits the implementation and leads to non-compliance. There is a notable lack of detailed provisions for managing conflicts arising from competing land uses, which is crucial for maintaining the integrity of UPA areas amidst urban development pressures. Furthermore, these policies lack mechanisms

for actively incentivising the adoption of UPA practices within the city. The adoption of UPA practices is mainly spearheaded by NGOs and civil society initiatives that facilitate access to production resources for UPA farmers, including inputs, finance and skills. Local government extension services are available for farmers but are limited in scope.

In this context, UPA is widespread but predominantly supported through projects. Operating within a weak governance and regulatory environment, its sustainability is fragile, hindering the maximization of its potential benefits, including economic and environmental gains.

4. Stakeholder analysis

In order to optimise the development of a more integrated approach to urban and peri-urban agriculture in Arusha, it is crucial that all stakeholders work together in a collaborative manner.

These stakeholders include the government, civil society organisations, research institutions,

intergovernmental organisations and the private sector. Figure 1 provides a map of the key stakeholders based on their influence on the development of UPA policy in Arusha, while Figure 2 provides an insight into the potential involvement of each stakeholder. For a clearer view of the figures, [click here](#).

Figure 1 - Map of UPA stakeholders in Arusha

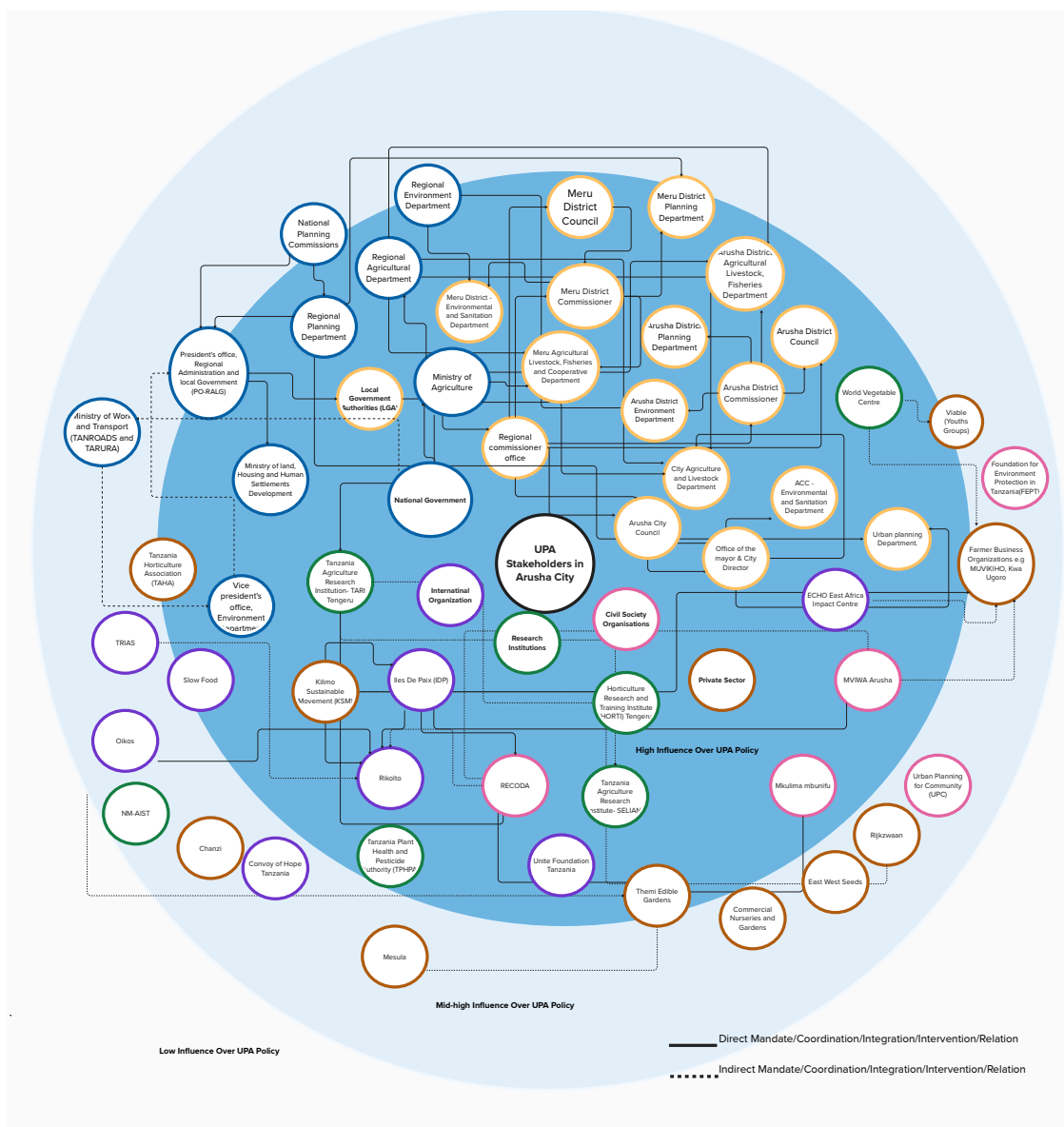
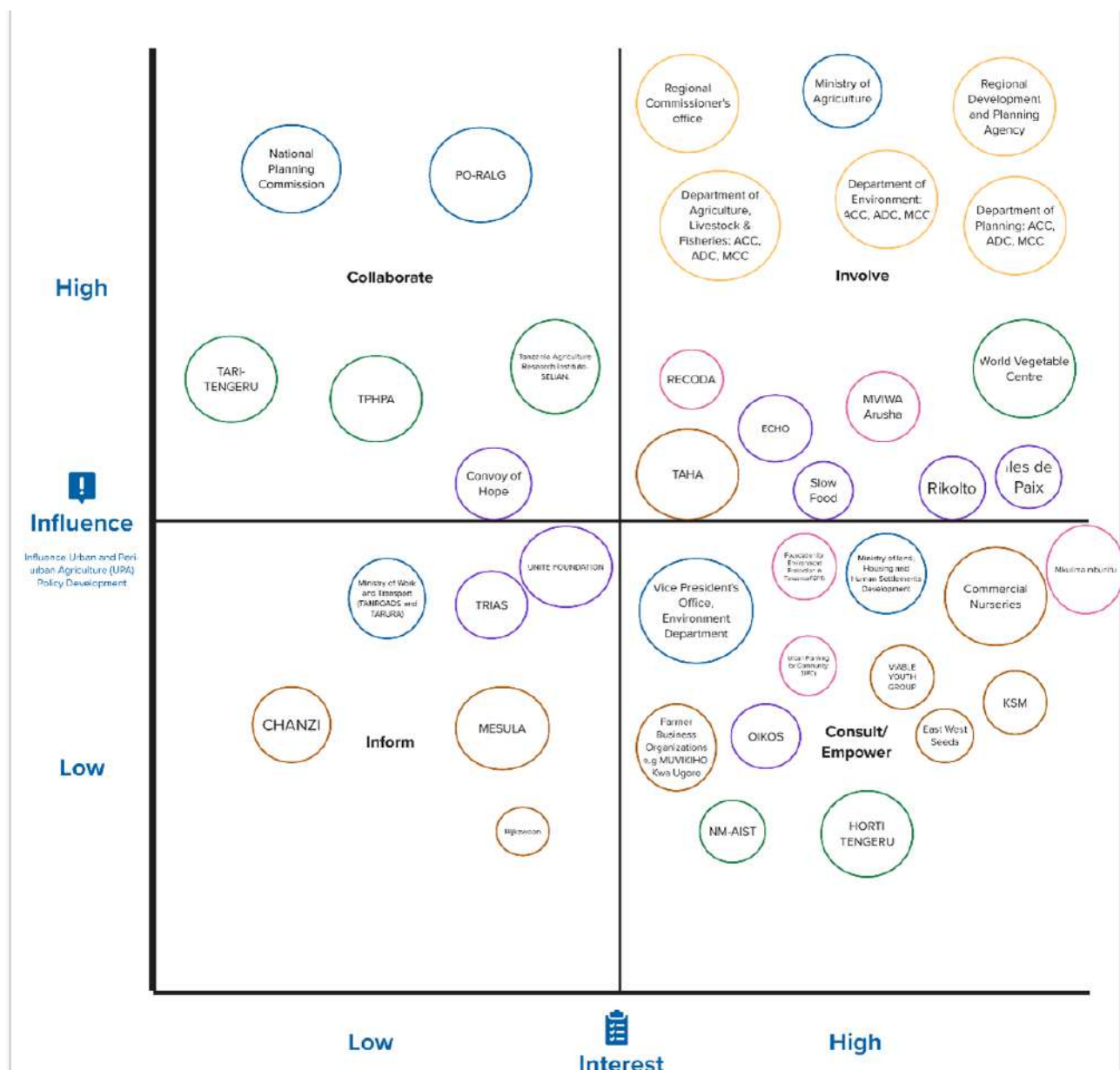


Figure 2 - Stakeholder analysis of UPA in Arusha

Some of these stakeholders are already active members of the Arusha Sustainable Food Systems Platform (ASFSP), a multi-stakeholder food council that brings together around 20 stakeholders in Arusha's food system. The ASFSP builds on the Arusha Food Safety Initiative, which was established in 2018, shortly after the city of Arusha signed the Milan Urban Food Policy Pact. In 2020, the platform expanded its scope to address broader food system issues related to production, youth

engagement, consumer awareness, food safety, urban planning, and food distribution logistics.

This mapping exercise paves the way for the potential establishment of a UPA working group under the ASFSP that would serve as a collaborative forum for facilitating knowledge exchange, resource sharing, and collective advancement of the urban and peri-urban agriculture agenda within the region.





5. Policy recommendations

Policies related to UPA need to be reviewed and updated to better support its development and ensure policy coherence. This includes providing necessary incentives, extension services, and ensuring secure access to land and water. Such measures will not only support existing UPA initiatives but also facilitate their scaling up and out, thereby enhancing food security, nutrition, environmental sustainability, and livelihoods. By adopting an **integrated** and multi-stakeholder approach to sustainable urban and peri-urban agriculture that looks at UPA from a **systems perspective**, it is possible to improve the coordination between actors and to unlock resources to improve regulations, strengthen institutional capacities, raise public awareness, and address infrastructure and technological constraints. In addition to addressing the challenges of UPA, this integrated approach can also contribute to improved food safety and public health, which are critical concerns for stakeholders in Arusha.

A first set of recommendations was developed based on the policy analysis, stakeholder analysis and mapping of existing initiatives, as well as bilateral discussions with key stakeholders. The recommendations were reviewed and discussed at a multi-stakeholder workshop that brought together 43 participants from national and local government, the private sector including urban farmers, civil society organisations and research institutions. The final recommendations presented here reflect the outcome of these discussions.

President's Office, Regional Administration and Local Government (PO-RALG)

- **Mandate local government** authorities to develop food strategies that include UPA through the review of the Local Government

Authority Act of 2002. This would support the development of local level action plans that outline steps to support urban agriculture, such as land allocation, water management, access to markets and financial services.

- Develop a robust **monitoring and evaluation framework** at the national level through PO-RALG and adapted by local authorities to monitor the impact of UPA on a range of outcomes. This framework should include specific indicators that capture information on UPA practices adopted, area under UPA, number of UPA farmers, socio-economic development, nutrition, and the impact of UPA on the environment, among others. It should also provide guidance for reporting and sensemaking processes to adjust policies and practices based on this data and on-the-ground realities.
- Organise, in collaboration with development agencies and NGOs, targeted **training and capacity building in systems thinking** and an integrated approach to UPA for local government officials and stakeholders involved in UPA to help them effectively implement UPA policies, manage resources and apply best practices in UPA.

Prime Minister's office

- Facilitate effective **cross-sectoral collaboration**, particularly between agriculture, health, and urban development, to support UPA and ensure its integration into broader nutrition and health strategies.
- Explicitly include UPA as a key implementation strategy within the Multisectoral Nutrition Action Plan (MNAP), in order to harness

its potential to improve food security and nutrition in urban areas. This can be done in collaboration with LGAs' health, nutrition, agriculture, and urban planning departments.

Ministry of Agriculture

- **Harmonise policies, regulations, and procedures** between different government agencies, such as PO-RALG, the Vice President's Office Environment Division, and the Ministry of Lands, Housing and Human Settlements to ensure coherence in the implementation of UPA initiatives.
- Facilitate **knowledge partnerships** between research institutions, universities and UPA practitioners to address knowledge gaps and develop context specific integrated UPA interventions.
- **Mainstream UPA within agricultural development strategies** outlined in ASDP II (currently focused on improving agricultural productivity, market access and food security in rural Tanzania), highlighting the importance of recognising urban agriculture as a significant contributor to food security, poverty reduction, and sustainable urban development.
- Promote **integrated rural-urban development approaches** that recognise the interdependence between urban and rural areas and use UPA to strengthen food value chains, improve market access for smallholder farmers and promote sustainable urbanisation.
- Include UPA in **Tanzania's National Food System Pathway**, recognising the importance of UPA in diversifying food sources and improving access to safe and healthy food.
- Support local government authorities to **integrate food systems into their strategic plans** through a collaboration with PO-RALG with the aim of developing municipal or city food strategies. In addition, support the establishment of a **dedicated food systems department** or appointment of a **dedicated officer** in LGAs to assist in the implementation of the national food systems pathway at LGA level.

Ministry of Lands, Housing and Human Settlements Development

- Establish clear **criteria** for the designation of land earmarked for urban agriculture in the next revision of the NHSDP or its amendments.

- In collaboration with PO-RALG and the National Planning Commission, provide **guidelines** for aligning UPA with urban planning objectives

Ministry of Health

- Integrate UPA in the revision of the **Food and Nutrition Policy** to enhance food security and improve nutritional outcomes for urban populations.
- Support the Tanzania Food and Nutrition Centre (TFNC), Tanzania Bureau of Standards (TBS) and Tanzania Plant Health and Pesticide Authority (TPHPA) to develop food **safety guidelines**, particularly for fruits and vegetables, in collaboration with PO-RALG and the Ministry of Agriculture.

Ministry of water and irrigation

- Implement tiered pricing structures or targeted subsidies for water used in UPA. By reducing tariffs specifically for UPA practitioners, the Ministry can alleviate high operational costs that currently deter UPA farmers.

Ministry of Education and Vocational Training

- Integrate UPA into school curricula to enhance awareness and skill-building among urban youth.
- Collaborate with schools to establish UPA gardens and initiatives that provide practical, hands-on learning experiences, while fostering environmental stewardship.

Arusha City Council

- Raise **awareness** among municipal officials, policy makers and the public about the benefits of UPA for food security, nutrition, poverty alleviation and environmental sustainability.
- Collaborate with other actors in implementing the food policy pathways established in 2018 and develop an **urban food policy** consistent with the National Food System Pathway to support the transformation of Arusha's food system into a more resilient and inclusive one.
- Integrate UPA into **local environmental regulations** and the **Arusha City Master Plan**. Current regulations should be updated to specifically allow and support urban agriculture.
- Through the Department of Agriculture, promote UPA practices through a **municipal-led capacity building programme** on

topics such as the use of organic waste for composting and biogas production, the installation of green roofs and vertical gardens on residential and commercial buildings, and the use of grey water and rainwater harvesting.

- Facilitate **access to resources** and support services for UPA practitioners, including water supply, quality agricultural inputs, extension services and market linkages.
- Encourage UPA by facilitating **access to under-utilised public and private land** for UPA and by simplifying the regulatory process for establishing and operating urban farms.
- Liaise with the urban planning department to facilitate **land tenure arrangement** for actors involved in UPA to ensure equitable and secure access to land as well as avoid conflicts between UPA activities and other development activities.
- Strengthen coordination among relevant departments to create a supportive environment for UPA in Arusha and provide clear guidelines for UPA practitioners to navigate regulatory frameworks.
- Promote multi-stakeholder partnerships on UPA through the establishment of a UPA working group in the **Arusha Sustainable Food Systems Platform**.
- Engage communities by involving them in participatory decision-making processes and conducting **public consultations**.
- Set up **monitoring and evaluation mechanisms** to assess the impact of UPA policies and interventions at the community level. Collect data on key indicators such as land use change, agricultural productivity, food security and socio-economic outcomes to inform policy adjustments.
- Train designated officers in UPA best practices and legal frameworks to ensure the effective and informed enforcement of environmental bylaws.
- Develop an **evaluation framework** with criteria to assess the effectiveness and impact of UPA in Arusha. This framework should assess UPA's effectiveness across economic, social, and environmental spheres.
- Stimulate **short supply chains** by promoting market access for UPA products through food procurements (e.g., school meals), street markets, producers' markets, and direct sales. These alternatives reduce transportation emissions, highlight local, seasonal, and sustainable products, and provide fresher produce at lower costs by reducing intermediaries, leading to less food loss and waste. Additionally, these spaces can serve as platforms for educational campaigns, fostering stronger consumer connections to food origins and promoting awareness of healthy diets.

In conclusion, the implementation of robust and supportive policies for urban and peri-urban agriculture is essential for promoting sustainable urban development in Arusha. As the city of Arusha continues to grow, the integration of UPA into urban planning and policy frameworks will become increasingly important. It is crucial to adopt an integrated approach to UPA that acknowledges the interconnections and potential trade-offs between the nutrition, socio-economic, resilience and environmental sustainability outcomes of UPA. Promoting such an integrated approach to UPA will help it deliver multiple benefits and constitutes an important step towards building a resilient, sustainable, and inclusive food system that can meet the challenges of the future.



Colophon

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