



## POLICY BRIEF

Integrating a Food Systems Approach into Urban and Peri-Urban Agriculture Practices and Policies in Surakarta, Indonesia



## List of Acronyms

AOI	<i>Aliansi Organisi Indonesia</i> Indonesia Organic Alliance
Bappeda	<i>Badan Perencanaan Pembangunan Daerah</i> Regional Development Planning Agency
Bappenas	<i>Badan Perencanaan Pembangunan Nasional</i> National Development Planning Agency
BRIDA	<i>Badan Riset dan Inovasi Daerah</i> Regional Research and Innovation Agency
CSOs	Civil Society Organisations
FAO	Food and Agriculture Organisation of the United Nations
FOLU	Forest and Other Land Use
GAIN	Global Alliance for Improved Nutrition
JKPD	<i>Jejaring Keamanan Pangan Daerah</i> Regional Food Safety Network
Joglosemar	Jogjakarta, Surakarta (Solo), and Semarang City
Kadin	<i>Kamar Dagang dan Industri</i> Indonesian Chamber of Commerce and Industry
KRKP	<i>Koalisi Rakyat untuk Kedaulatan Pangan</i> People's Coalition for Food Sovereignty
KWT	<i>Kelompok Wanita Tani</i> Women Farmers Group
MUFPP	Milan Urban Food Policy Pact
Musrenbangda	<i>Musyawah Perencanaan Pembangunan Daerah</i> Regional Development Planning Meetings
PHRI	<i>Perhimpunan Hotel dan Restoran Indonesia</i> Indonesia Hotel and Restaurant Association
PKK	<i>Pemberdayaan dan Kesejahteraan Keluarga</i> Family Empowerment and Welfare
RPJMN	<i>Rencana Pembangunan Jangka Menengah Nasional</i> National Medium-term Development Plan
SHIFT	Sustainable, Healthy and Inclusive Food Systems Transformation
Subosukawonosraten	Surakarta, Boyolali, Sukoharjo, Karanganyar, Wonogiri, Sragen, and Klaten District
TPID	<i>Tim Pengendalian Inflasi Daerah</i> The Regional Inflation Control Team
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UPA	Urban and Peri-urban Agriculture
YLKI	Indonesian Consumers Protection Foundation

## Introduction

The issue of food security is a growing concern on a global scale, particularly in relation to urban food systems. By 2050, it is estimated that around 70% of the world's population, 9.7 billion people, will reside in urban areas (FAO et al., 2022). In Indonesia, the rapid population growth and the high level of land conversion from agriculture to built-up areas have made urban residents vulnerable to food insecurity (Bappeda Surakarta City, 2022; Putri Hanifa et al., 2023). Urban and peri-urban agriculture (UPA) has emerged as a potential solution to address urban food security issues and increase access to fresh and nutritious food (FAO et al., 2022). Furthermore, UPA offers financial benefits, including additional income for urban and peri-urban farming communities, open employment opportunities, the promotion of diversified diets from local sources, and environmental benefits.

City and regional governments play a crucial role in promoting urban and peri-urban agriculture. In Indonesia, cities such as Semarang and Bandung have started to implement policies and programmes related to urban and peri-urban agriculture. Through the SHIFT project, UNEP supported the Regional Planning Agency of Semarang City (Bappeda) in preparing regional regulations on urban agriculture and strengthened multi-stakeholder cooperation at the local level on urban agriculture, circular economy and territorial governance. Semarang has now trained 384 trainees in regenerative gardening, established two demonstration sites (Situs Pangan Warga) with the regenerative agriculture approach in urban areas, and raised awareness of regenerative food systems and their benefits in Indonesia through social media campaigns (Sustainable Health Inclusive, Food System Transformation in Indonesia, UNEP, 2022). Bandung has established over 400 urban farming initiatives known as "Buruan Sae," a term derived from Sundanese. These projects utilise home gardens and idle land, implementing an integrated urban farming system.

Overall, the implementation of UPA initiatives in Indonesia could be improved by **developing a more integrated and systematic approach** where different policy areas (environment, food security and nutrition, climate adaptation and mitigation, and economic development) are integrated so that UPA can deliver results on multiple outcomes.

This policy brief aims to identify entry points for supporting enabling policies and governance for UPA development in Surakarta, including policy gaps, opportunities and relevant stakeholders in the city. The methodology used to prepare this policy brief includes a desk review of available literature and policies, as well as discussions with the Surakarta City Government and other stakeholders.

Surakarta is a medium-sized city in the province of Central Java known for its vibrant culture and textile products. It is a popular tourist destination with exceptional traditional food. The city has a population of 526,870 (Statistical Central Bureau of Surakarta City, 2024) and became a signatory of the Milan Urban Food Policy Pact (MUFPP) in 2020 and the Glasgow Food and Climate Declaration in 2021 where it pledged to implement integrated food policies and strategies to fight against climate change. The average Surakarta resident spends 39.8% of their total expenditure on food and 60.1% on non-food consumption (Statistical Central Bureau of Central Java Province, 2021).

The city's food consumption is dominated by rice. In 2019, the average consumption of rice in the city was 107.8 kg per capita per year (Department of Food Security and Agriculture of Surakarta City, 2023). This is higher than the national average consumption of 78.4 kg per capita per year (Ministry of Agriculture, 2023). Given the low level of agricultural production in the city, the city's food supply is largely dependent on imports from other districts. Only 8% of the total monthly food needs in Surakarta are met by the city region agricultural production (FAO et al., 2022). This proportion, although significant compared to cities such as Bandung, underscores the substantial reliance of Surakarta on external sources.





## Definition of Urban and Peri-Urban Agriculture (UPA)

Urban and peri-urban agriculture 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.

## Urban and peri-urban agriculture initiatives in Surakarta City

The districts surrounding Surakarta City, including Sukoharjo, Karanganyar, Wonogiri and Boyolali, have consistently provided food to the city (Department of Food Security and Fisheries of Surakarta City, 2021). However, detailed data on food flows and supply chains between these hinterland districts, which are part of Surakarta's peri-urban area, and Surakarta City are not currently available. Administratively, the districts and the city are at the same level of authority under the provincial government.

Since the enactment of Local Regulation (Perda) No. 1/2012 on the Regional Spatial Plan (RTRW) of Surakarta City 2011-2031, there has been a notable shift in land use from agricultural to urban development. This is further reinforced by the Local Regulation No. 4/2021 on the Surakarta City Spatial Plan 2021-2041, which has designated zero hectares of rice land within the city limits.

However, during the Covid-19 pandemic, the role of urban and peri-urban agriculture (UPA) in the city of Surakarta gained prominence as evidenced by the Covid-19 strategy of Surakarta's Department of Agriculture, Food Security and Fisheries to encourage citizens to do home gardening. ([Food Security and Vulnerability Atlas, 2020](#)). This programme was featured by the local government in their submission for the Milan Urban Food Policy Pact award ([Surakarta MUFPF award](#)).

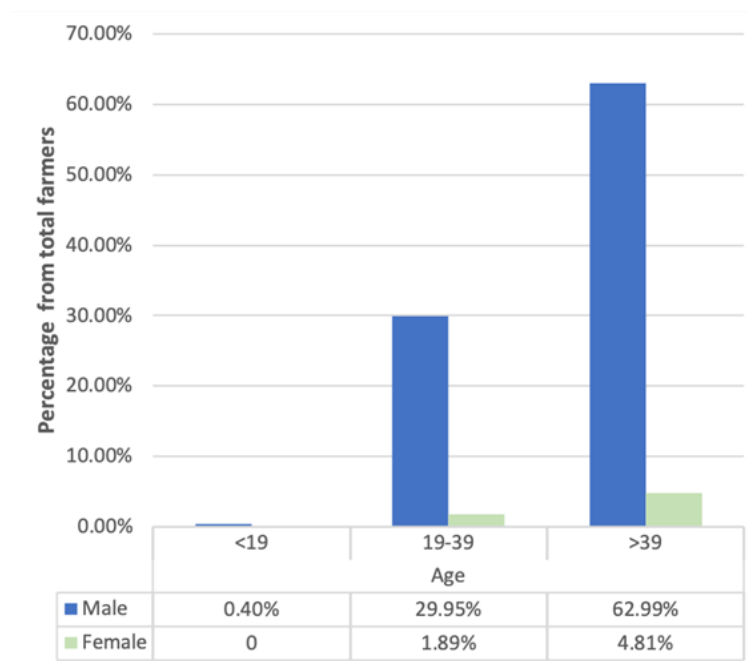
Urban agriculture has long been recognised as a strategy for meeting local food needs and developing short and efficient supply chains. In the city of Surakarta, urban agriculture is one of the leading strategies to strengthen food security and increase green open spaces at the urban village level. Urban agriculture initiatives are led by the city's Food Security and Agriculture Department. Urban agriculture in Surakarta has also been able to provide nutritious food and reduce food expenditure by 7.69% (Barokah et al., 2023).

Currently, the city has 1,162 agricultural holdings with 1,135 farmers, accounting for 0.22% of the city's total population (Statistical Central Bureau Surakarta City, 2023)<sup>1</sup>. According to the same report, about 93.4% of urban farmers in Surakarta are men, and 51.2% of them are aged between 19 and 39. In addition, 87.8% of urban farmers are using digital technology.

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<sup>1</sup> Based on the Statistical Central Bureau of Surakarta City (2023), agricultural holdings consist of individual agricultural holdings, agricultural corporations, and other agricultural holdings. Individual agricultural holdings are managed by one person with technical, juridical, and economic responsibility. Agricultural corporations are enterprises with agricultural activities, and the municipality protects the establishment. Other agricultural holdings are collective businesses established by collective interest aiming to increase productivity and well-being of the members.





**Figure 1: urban farming participation based on age and gender in Surakarta City (Statistical Central Bureau Surakarta City, 2023)**

The Surakarta City Government has implemented several programmes to support the agricultural sector. These include support for production facilities for farmer groups or farmer women groups, which are used for farming on limited land using a vertical system. There is also a mixed farming programme that combines fish, vegetables, and fruit through the Yumin-Bumina initiative. The Surakarta City Government also provides early education for school children through the Peci Mase (Small Farmers Enter School) programme and institutional farming programmes in offices and schools.

A number of civil society organisations have been engaged in the development of urban and peri-urban agriculture in Surakarta City. These

include Rikolto, Gita Pertiwi Foundation, and Aliansi Organik Indonesia (AOI). The collaboration between Rikolto, Gita Pertiwi, and AOI is designed to assist urban and peri-urban farmers such as the Ngudi Makmur Women Farmers Group in improving their agricultural practices and obtaining certification. Gita Pertiwi has teamed up with the government and Alila Hotel to tackle food waste. In this project, young entrepreneurs and urban farmers collect organic waste from Alila Hotel and bring it to the waste bank in Gajah Putih. There, the waste is turned into maggots, which are then processed into fertilizer. Alila Hotel uses this fertilizer in their garden.



### Ngudi Makmur Women Farmers Group

The Ngudi Makmur Women Farmers Group (KWT Ngudi Makmur) is an urban farming group in Banjarsari Subdistrict, Surakarta City. With 30 members and 400 m<sup>2</sup> of land, the group grows vegetables, fish, maggots for composting and fish food, eggs, and produces healthy snacks such as fish nuggets. In 2023, the group produced 118.7 kg of vegetables, which were sold to neighbours and Surakarta City Public High School 3. The group also actively introduces agriculture to young people (Gita Pertiwi, 2023) and has received support from many stakeholders, including the government, CSOs, and the local university.

**Table 1. List of UPA initiatives by CSOs and universities in Surakarta's city region**

No	Initiatives	Institution
1	Urban and peri-urban agriculture and Participatory Guarantee System development including UPA champions forum	Rikolto, Gita Pertiwi Foundation, AOI
2	Integrated food waste management and urban farming initiative	Rikolto, Gita Pertiwi Foundation
3	Integrated food donation platform and urban farming initiative	Carefood Solo, Rikolto, Gita Pertiwi Foundation
4	Research on the urban climate food-print of Indonesian cities including food production	Kota Kita Foundation
5	Urban and peri-urban agriculture assistance and learning activities	Sebelas Maret University, Gita Pertiwi Foundation
6	Research on the Food Sovereignty Index, with urban farming as a case study	Rikolto, Koalisi Rakyat untuk Keadaulatan Pangan
7	Multi-stakeholder partnership on sustainable rice involving farmers in Boyolali District in Surakarta's peri-urban area	Rikolto, Koalisi Rakyat untuk Keadaulatan Pangan
8	Research on urban farming management	Tunas Pembangunan University
9	Research and CSR on urban farming practices	Sebelas Maret University
10	Food Smart City Roadmap coordination	Slamet Riyadi University, Gita Pertiwi Foundation

## Existing urban and peri-urban policies and programmes in Surakarta

Presidential Decree No. 18/2020 on the Mid-term Development Plan 2020 to 2024 highlights Indonesia's dedication to enhancing its national food system governance. Inspired by the UN Food Systems Summit's systemic approach, this effort is spearheaded by the Ministry of National Development Planning (Bappenas). The goal is to create a transformative **National Pathway for Food System Transformation** that respects and integrates Indonesia's rich regional diversity. In addition, the launch of the **National Action Plan for Food and Nutrition** in 2021 reiterated the government's commitment to transform the food system. Bappenas is now developing a strategy to bring the national pathway to life at the local level.

In alignment with the national vision, the Surakarta City Government has incorporated this strategic direction into its local policy initiatives and frameworks. These include the **Regional Action Plan for Food and Nutrition**, the Food Security and Vulnerability Atlas (FSVA), and the Food-Smart City Roadmap. The Regional Action Plan for Food and Nutrition is a national action plan of the same name

that includes a provincial and a city/district action plan. In 2022, the City of Surakarta developed the Regional Action Plan for Food and Nutrition at the city level. The Regional Action Plan for Food and Nutrition of Surakarta City was developed in 2022, as mandated by the national action plan with the same title.

These documents demonstrate Surakarta's commitment to improving food systems at the local level, through initiatives such as urban and peri-urban agriculture (UPA). In its **Food-Smart City Roadmap**, the city combines inspiration from the Milan Urban Food Policy Pact (MUFPP) and the National Action Plan for Food and Nutrition to outline a more holistic approach to food security and sustainability. The roadmap includes several food security strategies such as strengthening urban agriculture, improving food supply and market operations, managing food prices, conducting healthy eating campaigns, providing healthy school meals, managing food waste, monitoring food safety, developing inter-regional food supply partnerships and more.

Surakarta's food policy priorities are closely linked to the overarching goals set by the regional administration and focus on three main areas: 1) promoting a culture of diverse, nutritious, balanced, and safe food consumption; 2) managing food reserves, price stability, availability, quality, and safety; and 3) using information technology to increase the commercial value of urban agriculture and food processing. These strategies are part of the Surakarta City Food Security and Agriculture Office's broader plan to promote inter-regional cooperation for sustainable food availability.

**Table 2. Overview of policies influencing UPA in Surakarta City**

Authority	Policy	Influence on UPA	Policy gap
<b>National level</b>			
President of the Republic of Indonesia	Law No. 18/2012 on Food	National and local governments have a duty to protect and empower farmers, fishermen, fish farmers and food business operators as food producers. Local and national governments must regulate, develop and allocate agricultural land and water resources in order to meet food needs.	No specific mandate related to urban or peri-urban agriculture.
President of the Republic of Indonesia	Presidential Regulation on the Implementation of Government Food Reserves 2022	Aims to ensure a stable food supply in each region with eleven priority commodities for food reserves, which include: rice, maize, soybeans, onions, chilli, eggs, meat, sugar, cooking oil and fish.	Does not mention urban and peri-urban agriculture.
Ministry of National Development Planning/ Bappenas	National Medium-term Development Plan (RPJMN) 2020-2024	Recognises urban food systems as part of the national strategy for the management of economic resources. It stresses the need to strengthen links between production centres and cities, and the development of farmers' associations.	The focus is mainly on general agricultural policy, with limited attention given to urban and especially peri-urban agriculture.
Ministry of National Development Planning/ Bappenas	National Action Plan for Food and Nutrition 2021-2024	Mentions strategies to improve community nutrition through agriculture, such as home gardens, and their connections to other sectors. However, the national action plan has not yet been integrated into the broader national pathway.	Does not include strategies for peri-urban agriculture.



Ministry of Environment and Forestry	FOLU Net Sink: Indonesia's Climate Actions Towards 2030	Mentions the replication of ecosystems, creation of urban green spaces, and development of eco-riparian areas among the 15 FOLU mitigation actions. Processing organic waste is encouraged for its role in reducing carbon emissions. The strategy also includes implementing the Climate Village Programme (ProKlim).	Overlooks the contribution of UPA in converting organic waste into fertilizer and other valuable products.
Ministry of National Development Planning/ Bappenas	Indonesian Biodiversity Strategy and Action Plan 2015-2020 (draft 2025 – 2029)	Includes urban green and blue spaces as one of the action plan indicators (TN 12) and includes a policy on sustainable consumption and food waste reduction (TN 18).	Doesn't explicitly refer to UPA in relation to green spaces.
<b>Sub-national level</b>			
Mayor's Office of Surakarta City	Regional Regulation No. 4/2021 concerning Surakarta City's Spatial Plan 2021-2041	Refers to the partnership between the city and its hinterland (Subosukawonosraten area) with a focus on housing and infrastructure - (Surakarta, Boyolali, Sukoharjo, Karanganyar, Wonogiri, Sragen, and Klaten District).	No land allocation for urban agriculture and no mention of coordination mechanisms between regions.
Regional Secretary, Surakarta City - Partnerships Unit	Cooperation Agreement with the Regional Cooperation Agency of Subosukawonosraten Area (2017)	Refers to regional cooperation on agriculture, trade, economic development, and food security.	No detailed provisions related to regional cooperation on food supply and the development of peri-urban agriculture besides information sharing.
Regional Planning and Development Agency / Bappeda, City of Surakarta	Surakarta City Long Term Development Plan 2005-2025	Recognises challenges that are relevant to UPA such as limited land availability, pressure to convert land for other uses, and a decrease in agricultural production, resulting in a reliance on other regions to ensure a steady food supply. States the impossibility to allocate agricultural land in the city because of limited land availability. As a result, no land is officially dedicated to agriculture.	No strategies related to agricultural linkages between urban and peri-urban areas, food reserves, and price stability.

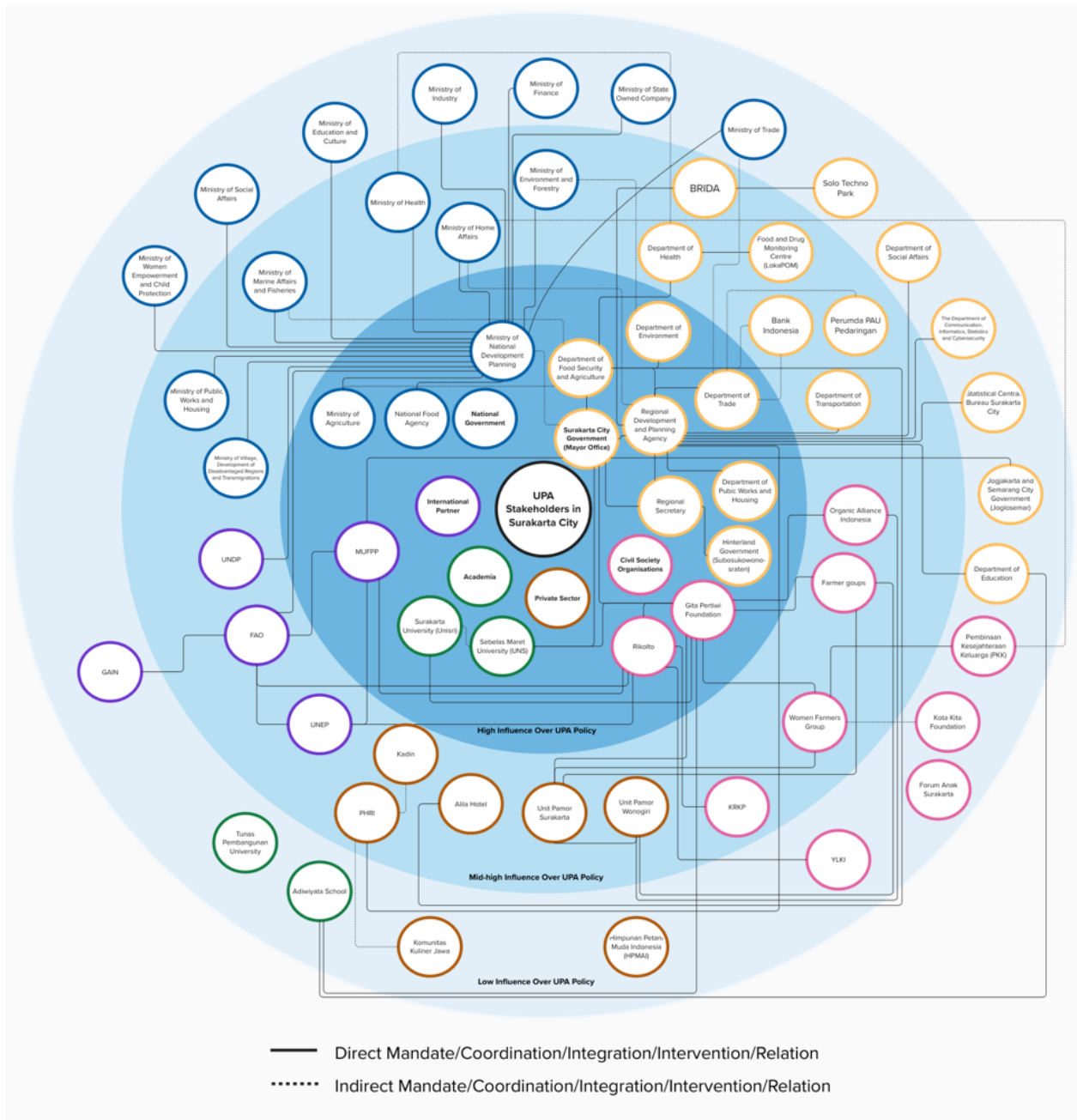
Regional Planning and Development Agency / Bappeda, City of Surakarta	Regional Regulation No. 6/2021 on the Regional Medium-Term Development Plan for 2021-2026	Outlines a strategy for regional connectivity, including agricultural products, and the protection of food production areas in the hinterland (Subosukawonosraten). It also addresses issues related to UPA, such as the reduction of productive land, low production volumes, and limited land availability.	Doesn't adopt a food systems approach. Food interventions are siloed. Urban agriculture and food supply from peri-urban or rural areas are managed by different disconnected departments.
Regional Planning and Development Agency / Bappeda, City of Surakarta	Regional Action Plan for Food and Nutrition of Surakarta City 2022-2026	Aims to achieve food security and food diversification from local sources at household level and supports the uptake of sustainable home gardens. Several strategies outlined in the action plan address environmental issues such as water quality.	Limited attention to peri-urban agriculture and regional partnerships.
Regional Planning and Development Agency / Bappeda, City of Surakarta	Food-Smart City Roadmap for Surakarta City (2022)	It acknowledges the challenge of maintaining sustainable food supply and production amid rapid urban population growth. Emphasises urban agriculture and sustainable food gardens as solutions. Focuses on both urban food security and food waste management to reduce methane gas emissions.	Acknowledges the importance of forming partnerships with hinterland areas but does not specify how these partnerships will be developed or structured.
Department of Food Security and Agriculture, City of Surakarta	Revised Strategic Plan of the Regional Apparatus 2021-2026	Identifies food supply and productivity issues such as unequal access to food, climate change, poor nutrition, and dependence on imported food. Includes urban agriculture and inter-regional cooperation as part of the city's strategy and policy direction.	Not yet translated into regulations or formal agreements to improve coordination and policy synchronisation with other districts.

A number of the policy documents examined explicitly encourage urban agriculture activities. However, they often refer to urban agriculture in isolation, without considering how it may contribute to other policy objectives. These include diverse, nutritious, safe, and balanced diets; the livelihoods of local communities; better organic waste management; and adaptation to climate change, to name just a few. Given that the spatial plan for Surakarta City does not allocate any land for urban agriculture, it is crucial to establish food supply links with the hinterland. While the need to strengthen these links is recognised in recent policy documents such as the Food Smart

City Roadmap, and there is a regional cooperation agreement covering food security and agricultural development in the Subosukawonosraten area, there are currently no clear policies and actions to formalise this cooperation. The urban agriculture programme promoted by the city's Department of Food Security and Agriculture is a positive step forward for individual households and communities. However, in the absence of strategic formal supply links with Surakarta's broader city region food system and peri-urban areas, the impact on food and nutrition security is likely to remain limited for the majority of Surakarta's residents.

# Stakeholder Mapping in Surakarta City

In order to optimise the development of a more integrated approach to urban and peri-urban agriculture in Surakarta City, it is crucial that all stakeholders work together in a collaborative manner. These stakeholders include the government, civil society organisations, universities, 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 Surakarta City, while Figure 2 provides an insight into the potential involvement of each stakeholder. For a clearer view of the figures, [click here](#).



**Figure 2. Mapping stakeholders for UPA development in Surakarta City based on their influence.**



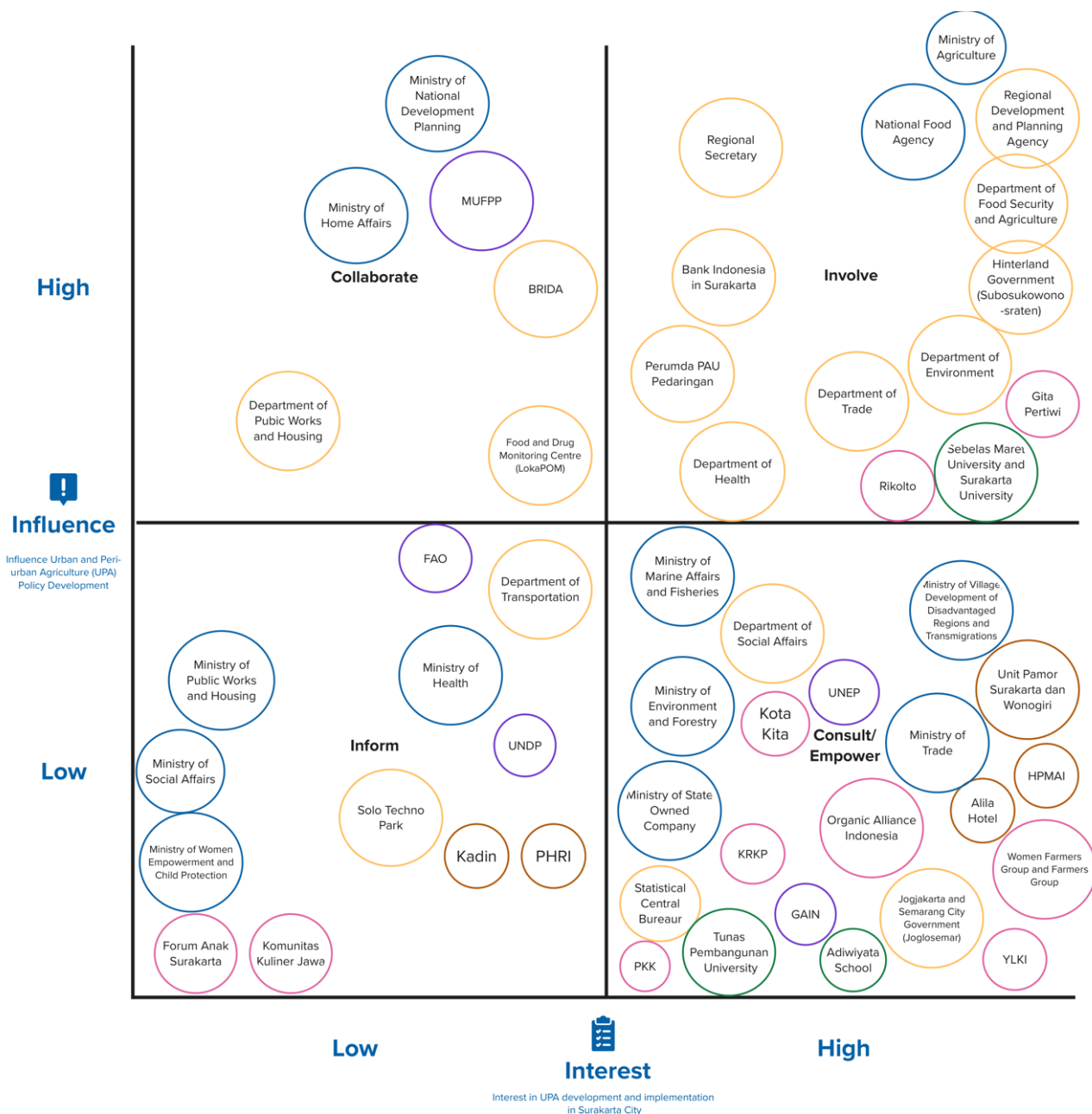


Figure 3. Mapping stakeholders' potential role in UPA development.

In Surakarta, UPA development is influenced by the multi-stakeholder **Penta Helix approach** adopted by the local government. This approach fosters collaboration among government entities, the private sector, academia, communities, and media to improve decision-making and programme execution. Key objectives include empowering communities through urban farming programmes, such as those implemented during the COVID-19 pandemic, addressing stunting, and supporting economic growth. Stakeholder engagement occurs through formal and informal channels, such as working groups and regional development meetings led by Bappeda. Groups such as the Food

Smart City Committee and the Regional Inflation Control Team coordinate and monitor the Food Smart City roadmap developed through multi-stakeholder collaboration.



## Policy recommendations

A first set of recommendations was developed through a process that included policy analysis, stakeholder analysis, mapping of existing initiatives, and bilateral discussions with key stakeholders. These recommendations were then reviewed and discussed during a multi-stakeholder workshop, which involved 60 participants from various sectors. The participants included representatives from the national government, local government authorities from Surakarta and surrounding areas such as Wonogiri, Sukoharjo, Karanganyar, Klaten, Boyolali, and Sragen districts, civil society organisations, UPA farmers, private companies, a financial institution, local universities, local community members, producers, and HoReCa associations.

### National Level - Ministry of National Development Planning/Bappenas

- Strengthen the integration of UPA in the development of the **national pathway for food system transformation** and develop **guidance** on how cities can include UPA in their local development plans.
- Include UPA in planning and related documents, such as the **National Planning Document** and the **National Action Plan for Food and Nutrition** to raise awareness of UPA development at national and sub-national levels and ensure budget allocation for the implementation of the UPA component.
- Strengthen the newly launched **Indonesian Food System Dashboard** by involving stakeholders from different levels of government to promote inter-regional cooperation. Actively promoting the dashboard will provide deeper insights into

the city-region food system while addressing data and information gaps, including those related to UPA. Improved data and information on UPA will raise awareness and lead to better decision-making processes.

- Develop a **National Action Plan for Food and Nutrition** beyond 2024 that promotes an integrated approach for the development of UPA, taking into account its multiple benefits.

### Sub-national Level - Regional Planning and Development Agency/Bappeda of Surakarta City

- Develop a **multisectoral vision for the development of urban and peri-urban agriculture in Surakarta**, taking into account its multiple benefits and linkages with peri-urban areas in the Boyolali, Sukoharjo, Karanganyar, Wonogiri, Sragen and Klaten regencies. The multisectoral vision will support the implementation of the Food Smart City Roadmap and Food Smart City Committee that has been spearheaded by Bappeda since 2022 and will support its legalisation process.
- Organise **trainings** on urban food systems management, including UPA, and the food systems approach to increase the knowledge and capacities of key staff within city departments and the city council.
- Incorporate an integrated approach to UPA into Surakarta's **Long- and Medium-term Planning Documents** that will be revised in 2025.
- Allocate land for urban agriculture in the next iteration of the **city's spatial plan 2021-2041** which will be revised in 2025 based on the Long- and Medium-term Planning Documents

- Develop a **UPA database** to better assess current and future food needs based on a participatory assessment of Surakarta's city region food system.
- Develop an **inter-regional food supply strategy** focusing on the Surakarta, Boyolali, Sukoharjo, Karanganyar, Wonogiri, Sragen and Klaten regencies and integrate it with the city's planning and policy document. This strategy could include the development of an inter-regional Memorandum of Understanding to secure a stable food supply for Surakarta and an **inter-regional food policy forum** to coordinate strategic food-related issues.
- Fund the development of a **participatory guarantee system** for UPA products to enhance their acceptance in supermarkets.
- Allocate a **UPA budget** to invest in **research** on crop production in Surakarta's urban and peri-urban areas (fertiliser, pest control, supply-demand, etc.) and **technologies** such as censoring, mechanisation, greenhouses, and cold storage, to stimulate the uptake of locally adapted production practices and strengthen **logistical linkages** between urban and peri-urban producers and consumers.

## Conclusion

The City of Surakarta has several programmes and initiatives related to UPA, which it has recognised as a policy priority. The design and implementation of interventions focus mostly on the urban production component of UPA, sometimes overlooking other benefits of UPA, such as potential employment gains, economic development, residents' well-being and the creation of green spaces, which are increasingly relevant in the context of climate change. On the other hand, the development of peri-urban agriculture has not been sufficiently translated into specific strategies, nor integrated in national policy frameworks, such as Indonesia's National Food System Pathway or National Development Plans. Given that many of the peri-urban areas around Surakarta with high agricultural potential are located outside Surakarta's municipal boundaries, there is a need to promote cooperation with neighbouring districts to develop peri-urban agriculture and ensure a steady supply of nutritious food. There is also a need for further capacity building on UPA-related knowledge and the development of UPA definitions based on the local context of Surakarta as well as to build an affordable safety assurance system.

It is crucial to adopt an integrated and multi-stakeholder approach to UPA that acknowledges the interconnections and potential trade-offs between the nutrition, socio-economic, resilience and environmental sustainability outcomes of UPA as part of a wider systems approach to food policy development, both at national and subnational levels. 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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