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COLLABORATIVE GOVERNANCE AND URBAN FARMING: PILLARS OF LOCAL FOOD SECURITY IN THE MODERN ERA METRO CITY, LAMPUNG PROVINCE

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Abstract

Urban farming has emerged as a strategy to address food security challenges in Metro City, Lampung Province. While it has the potential to enhance food availability, empower communities, and support environmental sustainability, previous research has predominantly focused on technical aspects, with limited attention to collaborative governance. This study explores the role of collaborative governance in supporting urban farming to strengthen local food security in small cities. Using a qualitative descriptive approach, data were collected through interviews, observations, and document studies involving key actors such as the Food Security, Agriculture, and Fisheries Agency of Metro City, urban farming communities, and the private sector. The analysis applied the Collaborative Governance framework by Ansell and Gash, focusing on starting conditions, institutional design, facilitative leadership, collaborative processes, and intermediate outcomes. The findings indicate that urban farming in Metro City has received regulatory support, community participation, and contributions from the private sector. However, facilitative leadership emerged as the strongest indicator, with effective conflict mediation mechanisms and strong community involvement. At the same time, institutional design was identified as the weakest, with gaps in product certification and coordination. This study contributes to the theory of Collaborative Governance by demonstrating that, while collaboration among actors in Metro City has resulted in positive social and economic outcomes, long-term sustainability still depends on improving institutional capacity and refining more inclusive institutional designs. This study emphasizes the need to strengthen cross-actor collaboration, facilitate product certification, and provide ongoing support to ensure that urban farming becomes a sustainable pillar of local food security.

Keywords: *Collaborative Governance, Urban Farming, Local Food Security, Community Empowerment*

INTRODUCTION

The increasing intensity of urbanization in various Indonesian cities has created new challenges for local food security. Metro City, in Lampung Province, is one of the

cities facing limited productive agricultural land due to land-use conversion. Data from the Metro City Food Security, Agriculture, and Fisheries Agency indicate a decline in the area of paddy fields from 2,988 hectares in 2019 to 2,588 hectares in 2024, alongside a population increase from 168,680 in 2020 to 175,710 in 2024. This situation reflects the growing pressure on local food supply, particularly in urban areas that can no longer rely on rural agricultural production. According to Law Number 18 of 2012, food security is defined as a condition in which sufficient, safe, high-quality, nutritious, equitable, and affordable food is available for every citizen, enabling them to live a healthy and productive life sustainably. Therefore, food security is not only understood as a matter of production but also involves access, distribution, self-sufficiency, and the sustainability of the food system.

Urban farming has emerged as an alternative strategy to address these challenges. This practice not only utilizes limited urban space but also contributes to strengthening food self-sufficiency, improving residents' welfare, and enhancing environmental quality. Various studies highlight the potential of urban farming in community empowerment and the management of public resources (Muttaqin et al., 2022), fostering positive behaviors toward sustainable agriculture (Haris et al., 2022), increasing household welfare through home gardens (Wulandari et al., 2023), and supporting urban green space adaptation and recreational areas (Setiawan & Pratama, 2024). Urban farming is also considered capable of addressing food insecurity by promoting community food self-reliance (Adetya, 2024).

According to the 2023 data from the Metro City Central Bureau of Statistics, urban farming programs have expanded in four out of five districts, with 21 Urban Farming Households and 21 Urban Farming Units. Metro Central has the highest level of implementation (7 Urban Farming Households and 7 Units), followed by Metro West (6), Metro East (5), and Metro North (3), while Metro South currently has no active units. These data indicate both the potential and the disparity in the development of urban farming practices across the different districts.

This study employs the collaborative governance framework developed by Ansell and Gash (2008) as a basis for understanding the dynamics of actor collaboration in the context of urban farming in Metro City. Collaborative governance emphasizes the importance of cooperation between public and non-public actors in addressing complex problems that cannot be resolved by a single party alone. In the context of urban farming, collaborative governance enables the Government, community, and private sector to work together, share information, and create inclusive and sustainable policies. This framework is particularly relevant as it explains how urban farming policies and initiatives can succeed with the support of multiple actors collaborating effectively, despite challenges related to limited resources and capacity in a small city. Furthermore, this theory provides an opportunity to explore the role of facilitative leadership in mediating conflicts and fostering shared commitment, which is a critical aspect of the success of urban farming programs in Metro City.

However, various studies indicate that the success of urban farming is determined not only by technical or agronomic factors but also by collaborative governance involving

the government, communities, and the private sector (Pradana & Nurharjadmo, 2021). In this context, the concept of collaborative governance becomes highly relevant. Ansell and Gash (2008) define collaborative governance as a public decision-making process that engages both state and non-state actors in a deliberative forum oriented toward consensus. This governance model is important because it can foster a sense of ownership, strengthen trust among actors, increase participation, and encourage policy innovation.

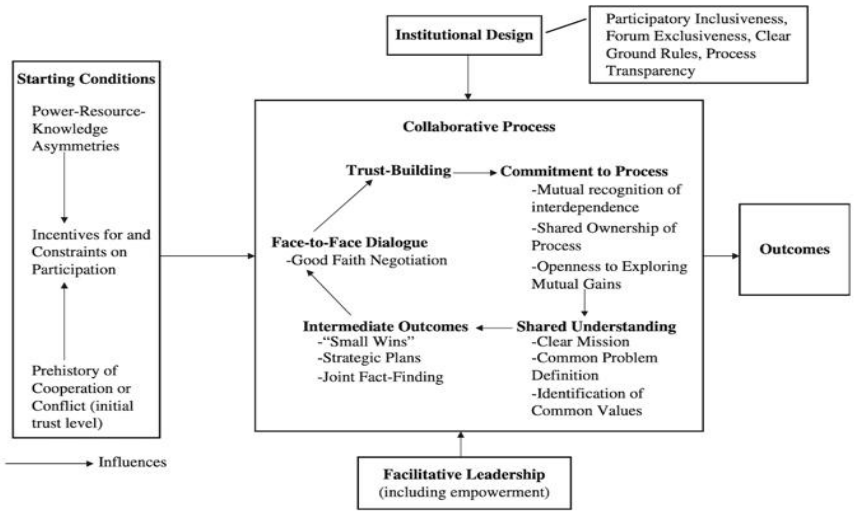

Figure 1.
Framework Model of the Collaborative Governance Process
(Ansell & Gash, 2008)

The collaborative governance process framework developed by Ansell & Gash (2008) emphasizes five interrelated key indicators: starting conditions, institutional design, facilitative leadership, collaborative process, and intermediate outcomes. In contemporary discourse on collaborative governance, this model plays an important role in illustrating how public and non-public actors can work together to address complex problems. However, in the context of small cities in Indonesia, such as Metro City, this model requires deeper analysis to assess its relevance and identify existing limitations.

On one hand, this model remains relevant because it provides a clear framework for understanding how cross-sector collaboration can be implemented, particularly on food security issues that involve multiple stakeholders such as government, communities, and the private sector. On the other hand, the model also has limitations in small cities, which often face constraints in resources, institutional capacity, and more complex social dynamics. To operationalize the indicators within this model as an analytical guide, they can be detailed as follows:

1. Starting Condition

   It highlights the disparities in resources and motivation among stakeholders. In cases of power imbalance, there is a need for commitment to support the weaker actors, provide participation incentives, and build trust from the outset to prevent conflict.

2. Facilitative Leadership
   The indicators include conflict mediation mechanisms, multi-actor communication patterns, and the sustainability of coordination forums. Strong facilitative leadership must be able to maintain stability in interactions among actors and manage the dynamics of conflicts that arise during the collaborative process.
3. Institutional Design
   The indicators include clarity of rules and procedures, transparency in decision-making, and inclusiveness in planning and implementation. In the context of a small city, an inclusive institutional design is key to ensuring that all actors feel involved and valued.
4. Collaborative Process
   The indicators include face-to-face dialogue, shared commitment, knowledge exchange, and collective problem-solving. The collaboration process should take place through open and transparent forums to foster trust and mutual understanding among the involved actors.
5. Intermediate Outcomes
   The indicators include measurable short-term impacts, program sustainability, and the enhancement of community capacity. These indicators assess whether the collaboration produces tangible benefits, such as increased food self-sufficiency or strengthened social networks.

Rhodes (1997) proposed that network governance is a form of governance in which the Government operates within a network of non-governmental actors to achieve shared goals. In the context of urban farming, this approach is important because it allows flexibility in collaboration that can adapt to more complex local dynamics, especially in small cities with limited resources. Adaptive co-management can also serve as an additional perspective, as this model encourages continuous adaptation in collaborative management based on feedback and learning from field experiences. Armitage et al. (2009) describe adaptive co-management as an approach that combines collaborative governance with continuous learning and adaptation to social and environmental changes. This approach is highly relevant to your research, which emphasizes the importance of sustainability in urban farming and how collaboration must remain flexible in addressing challenges that arise over time. Both perspectives help explain how collaborative governance can adapt to challenges in small cities while ensuring that the policies and strategies implemented remain relevant and responsive to community needs and evolving circumstances.

The collaborative governance process framework by Ansell & Gash (2008) has become a key reference in public governance research involving multiple actors in decision-making. In the context of small cities in Indonesia, this model remains highly relevant, although it faces certain limitations related to resource capacity and institutional structure. The model emphasizes the importance of initial conditions, inclusive institutional design, facilitative leadership, collaborative processes, and sustainable intermediate

outcomes, which are crucial for fostering cross-sector collaboration and enhancing community participation. However, in small cities like Metro City, constraints in technical capacity and infrastructure can pose significant challenges to the operationalization of this model. Therefore, while the framework provides a strong foundational structure, certain elements, such as facilitative leadership and institutional design, need to be adapted to accommodate local resource limitations.

For the operationalization of the indicators in this model, each element can be transformed into concrete analytical guidelines. For example, the facilitative leadership indicator can be analyzed through conflict mediation mechanisms, multi-actor communication patterns, and the sustainability of coordination forums. In small cities, facilitative leadership must be able to manage differing interests among actors in a more inclusive and participatory manner, while maintaining open communication across all levels. Furthermore, institutional design should provide a clear and transparent organizational structure, with an evaluation system that is easily accessible to the public. Berkes (2009) also notes that adaptive co-management emphasizes experience-based learning and flexibility in joint management, which should be the approach in urban farming in small cities, where changing local conditions and emerging challenges often require continuous adaptation.

Although urban farming has been a widely studied topic over the past few decades, most research has focused on technical aspects such as farming methods, food production, and environmental impacts (Haris et al., 2022; Wulandari et al., 2023). However, few studies have examined in depth the governance mechanisms underlying the success of urban farming, particularly in the context of small cities in developing countries. Previous research that integrates the concept of collaborative governance with urban farming has largely been limited to large cities or developed countries, where governance structures and resources are more established (Ansell & Gash, 2008; Setiawan & Pratama, 2024). Therefore, a conceptual gap remains: no study has explored how collaborative governance functions as a pillar of urban farming sustainability in small cities with limited resources and institutional capacity, as is the case in many small cities in Indonesia.

In the collaborative governance literature, there is a consensus that the success of collaboration among actors (Government, community, and the private sector) is strongly influenced by inclusive institutional design, facilitative leadership, and transparent and fair collaborative processes (Ansell & Gash, 2008; Avoyan, 2023). However, most of these studies focus primarily on cases in large cities and developed countries, where infrastructure and collaborative capacity are more advanced (Randrup et al., 2023; Avoyan, 2023). A key gap in the literature is the limited research linking collaborative governance with urban farming, particularly in small cities in developing countries that face distinct social, economic, and institutional challenges.

For example, several studies in developing countries have highlighted the success of urban farming in strengthening local food security (Muttaqin et al., 2022), yet they have not explicitly examined the role of governance in this process. Research by Noor et al. (2019) and César Zambrano-Gutiérrez et al. (2023) emphasizes the importance of open and

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collaborative institutional design in achieving shared goals. However, these studies do not address the context of small cities in developing countries, which often face limited access to resources, low institutional capacity, and constraints in implementing effective policies.

This study focuses on the role of collaborative governance in supporting the sustainability of urban farming in Metro City, a small city in Lampung Province, Indonesia. It aims to fill a gap in the literature by examining how starting conditions, institutional design, and facilitative leadership within collaborative governance can be applied in contexts with limited resources and institutional capacity. Specifically, the study combines the theory of collaborative governance with urban farming practices to offer a new perspective on how inclusive and participatory governance can address local food security challenges in small cities of developing countries like Indonesia.

This study will make a significant contribution to the literature by integrating collaborative governance into urban farming practices in small towns and providing insights into how a collaborative governance framework can be adapted and implemented in resource-constrained local contexts. Therefore, this research not only enriches the theory of collaborative governance but also offers practical recommendations for food security policies in small towns in developing countries.

METHODS

This study employs a descriptive qualitative approach to explore the role of collaborative governance in supporting the sustainability of urban farming in Metro City. Data were collected through in-depth interviews, non-participant observations, and document analysis involving key actors from the Metro City Food Security, Agriculture, and Fisheries Office, urban farming communities, and the private sector. Snowball sampling was used to identify informants, where the first informant recommended other relevant participants. A total of eight informants were involved in this study, including two representatives from the Metro City Food Security, Agriculture, and Fisheries Office, two agricultural extension officers, two members of women farmer groups, one head of a farmers' market, and one facilitator from the Family Hope Program.

During the data collection process, the researcher ensured that data saturation was reached, meaning that the information obtained became repetitive and no longer provided new insights. To enhance the validity of the findings, triangulation was employed by comparing data collected from interviews, field observations, and policy document analysis. Through source and method triangulation, this study ensures that the data obtained is consistent and accurately reflects the reality in the field.

The researcher positions themselves as an objective and independent party, without direct involvement in the management or implementation of the urban farming program. The researcher acts as a collector, analyzer, and interpreter of data, ensuring that the research results are reliable and free from personal bias. By maintaining neutrality and objectivity, the researcher provides space for informants to express their views without external influence.

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RESULT AND DISCUSSION

A. Implementation of Collaborative Governance to Support Urban Farming in Metro City, Lampung Province

The research findings indicate that the implementation of urban farming in Kota Metro operates through collaborative governance aligned with the five indicators of Collaborative Governance proposed by Ansell & Gash (2008), namely starting conditions, institutional design, facilitative leadership, collaborative process, and outcomes.

1. Starting Conditions

The starting conditions for urban farming in Metro City arose from a combination of social, economic, and ecological factors that created the urgency for collaborative policy. The local Government faces pressure from food inflation, limited public access to horticultural commodities, and increasing land-use conversion. This situation is emphasized by Pipi Puspitasari (Head of Food Security Division at the Food Security, Agriculture, and Fisheries Office of Metro City), who stated that urban farming was initially aimed at "reducing food inflation and enhancing household food self-sufficiency through the Family Food Crop Movement." This is further reinforced by Ernawati, a staff member in the Food Security Division at the same office, who explained that land-use conversion in Metro requires strategies to utilize urban space productively while supporting local food availability.

Source: Photo taken by the Researcher

Figure 2. The Head of the Food Security, Agriculture, and Fisheries Office of Metro City is inspecting the implementation of the Metro Bahagia Farmers' Market activities in the office yard.

Based on the photo above, the Head of the Food Security, Agriculture, and Fisheries Department of Metro City is seen talking with community members who are purchasing urban farming products, specifically chili peppers. He regularly monitors the implementation of these activities. Currently, the Metro Bahagia

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Farmers' Market takes place twice a month: in the second week at the yard of the Food Security, Agriculture, and Fisheries Department office in Metro City, and in the fourth week, it rotates across different subdistricts within the city. Mr. Asrongi, the chairman of the Metro Bahagia Farmers' Market, also highlighted that the market was established in 2021 as an important starting condition to support urban farming. Holding this market regularly, it provides a dedicated platform for urban farmers to sell their agricultural products and processed goods. This not only helps shorten the distribution chain so that farmers receive fairer prices and consumers obtain cheaper products, but also encourages the community to utilize their home gardens more effectively, thereby enhancing household income to meet family needs.

The starting conditions for implementing urban farming in Kota Metro are heavily influenced by various social, economic, and ecological factors, which create an urgency for collaborative policy. For example, the local Government faces pressures from food inflation and limited public access to horticultural commodities due to land conversion. This situation is confirmed by Pipi Puspitasari, Head of the Food Security Division at the Food, Agriculture, and Fisheries Office of Kota Metro, who stated that urban farming in Kota Metro is aimed at "reducing food inflation and increasing household food self-sufficiency through the Family Food Crop Movement." In addition, Ernawati, a staff member in the Food Security Division, explained that the ongoing increase in land conversion in Metro demands strategies for utilizing urban space to remain productive and support local food availability.

However, when compared to Ansell & Gash's (2008) theory regarding starting conditions in the collaborative governance framework, several elements require deeper consideration. According to them, favorable starting conditions include the presence of urgency that motivates actors to engage, resource imbalances, and sufficient incentives for collaboration. In the context of Metro, these conditions do exist, but with certain unique characteristics. Ansell & Gash emphasize that strong initial conditions need to be accompanied by clear motivation and shared benefit expectations among participating actors. Meanwhile, in Metro City, although there is consensus on the urgency of urban farming, incentives for community participation, particularly among weaker actors (such as women farmers' groups), are not always sufficiently strong. This leads to an imbalance in collaborative motives, where economic needs and short-term food security primarily drive some actors. In contrast, others focus on policy strengthening and the sustainability of the food system.

In addition, the strong starting conditions in Metro City are also influenced by the development of urban farming as a national trend that is increasingly gaining attention from various stakeholders, including the community and the private sector. For example, the Metro Bahagia Farmers' Market, held twice a month, demonstrates a shared commitment to meeting local food needs while also creating

a space for dialogue among the involved actors. However, according to Ansell & Gash's theory, starting conditions not only involve the establishment of policies and initial commitments but also the readiness of actors to respond to collaborative challenges. In Metro, despite legitimacy from the Government and community participation, readiness for long-term collaboration still faces obstacles, such as limited agricultural literacy and restricted access to broader markets. This aligns with the findings of Muttaqin et al. (2022), which state that the success of urban farming depends not only on favorable initial conditions but also on the collaborative capacity to sustain efforts over time and respond to existing social and economic dynamics.

These findings align with the Collaborative Governance framework of Ansell & Gash (2008), which identifies starting conditions as determinants of actor commitment, resource distribution, and incentives to collaborate before the collaborative process begins. In the context of Metro, the Government possesses legitimacy, policy infrastructure, and technical resources, while the community holds food needs, backyard spaces, and production potential, creating policy interdependence. Furthermore, Metro's starting conditions are supported by the growth of urban farming as a national trend. Meanwhile, Muttaqin et al. (2022) emphasize that urban farming not only increases food production but also strengthens social networks and citizen participation, a finding that is particularly relevant since Metro has involved Family Welfare and Empowerment Groups, Women Farmer Groups, extension officers, and community members from the outset.

Thus, the starting conditions of urban farming in Metro City are not merely an agricultural issue but also a reflection of urban structural needs: price stabilization, food access, sustainable living spaces, and community empowerment. A strong initial condition serves as a foundation that facilitates policy formulation, institutional development, and collaborative processes in subsequent stages, as emphasized by Ansell & Gash's theory, which asserts that collaboration arises only when actors share urgency, motivation, and expectations of mutual benefit.

2. Institutional Design

Institutional design is one of the key indicators in the implementation of urban farming in Metro City. Based on field observations, the urban farming program in Metro City has a clearly defined and structured institutional design with strong political legitimacy. The program is integrated into the 2025–2030 Regional Medium-Term Development Plan and the Strategic Plan of the Metro City Food Security, Agriculture, and Fisheries Agency, and reinforced by Mayor Regulation No. 31 of 2023 on the utilization of vacant land and Mayor Circular No. 13 of 2024 on the use of household yards. All these policies provide technical and legal guidance that supports the sustainability of the urban farming program. Pipi Puspitasari, Head of Food Security at the Metro City Food Security, Agriculture,

and Fisheries Agency, explained that program evaluations are conducted routinely through seed distribution, activity reports, and monthly monitoring matrices. This model aligns with the view of Noor et al. (2019), who emphasized that a collaborative institutional design must facilitate interaction, accountability, and transparency among actors to reduce conflicts and enhance policy legitimacy.

However, if we refer to Ansell & Gash's (2008) theory on institutional design, which emphasizes the importance of formal structures that are inclusive, transparent, and capable of strengthening relationships among actors, the institutional design in Metro City still has some gaps. Although there is strong policy legitimacy, shortcomings remain in terms of accessibility and flexibility of the institutional structure. Murti Rahayu, an Extension Officer at the Metro City Food Security, Agriculture, and Fisheries Office, stated that the Prima Tiga certification required for urban farming products to enter modern markets is not yet available. This indicates that even though a clear institutional structure exists, access to broader markets is still hindered by gaps in certification and technical procedures.

Source: Photo taken by the Researcher

Figure 3.
Distribution of free chili seedlings by the Metro City Food Security, Agriculture, and Fisheries Office to the community

At every Metro Bahagia Farmer's Market event, the Department of Food Security, Agriculture, and Fisheries of Metro City regularly distributes free chili seedlings to the community for cultivation in their yards. This is one of the organizational designs aimed at encouraging the community to start planting crops, beginning with their home gardens. Program evaluations are also conducted regularly through seed distribution, activity reports, and field monitoring mechanisms. Mrs. Pipi mentioned that evaluations are always carried out by the

Department of Food Security, Agriculture, and Fisheries of Metro City, and a matrix is created every month. This shows that the institutional design is not only rule-based but also involves transparency and public accountability.

The institutional design of Metro also accommodates multi-actor support. Teguh Setiawan, a Functional Extension Officer from the Department of Food Security, Agriculture, and Fisheries of Metro City, mentioned that urban farming in Metro City has begun to serve as a model for other districts because its institutional structure facilitates the participation of the community, private sector, Family Welfare Empowerment Groups, and Women Farmers Groups in program planning. As suggested by Avoyan (2023), institutional design in the context of collaborative governance should be able to facilitate a fair division of roles, transparency, and accountability among actors. In Metro City, although there is an institutional framework that supports community participation, there are still difficulties in organizing a special urban farming team within the Department of Food Security, which leads to less effective cross-sector coordination. Ernawati, Staff from the Food Security Division, added that the institutional structure, which is not yet fully integrated into a single special team, also complicates program coordination. This aligns with the findings of César Zambrano-Gutiérrez et al. (2023), which show that unclear institutional design can lead to overlapping roles among actors and slow down policy implementation.

Based on field data, the institutional design of Metro shows three key characteristics:

1. Strong policy legitimacy, evidenced by its integration into the Regional Medium-Term Development Plan, Strategic Plan, Mayor's Regulations, and circular letters.
2. Operational accountability instruments, such as seed monitoring, reports from the Women's Farmer Groups, and monthly evaluations by the Metro City Department of Food Security, Agriculture, and Fisheries.
3. Participatory accessibility, through farmers' markets, social media of the Family Food Plant Movement, the Family Welfare Empowerment forum, and guidance from Agricultural Extension Workers.

Therefore, although the institutional design in Metro City has been quite supportive of urban farming implementation, limitations in terms of coordination among actors or network governance, as well as still limited technical procedures, indicate that the inclusive and responsive institutional design needs to be strengthened, especially in facing market challenges and the need for more adaptive institutional support.

3. Facilitative Leadership

The research results indicate that facilitative leadership in Metro City plays a crucial role in the successful implementation of urban farming. The leadership executed by the Food Security, Agriculture, and Fisheries Office of Metro City has

been proven to focus on a participatory approach, involving various stakeholders such as the community, farmer groups, extension workers, and the private sector. Teguh Setiawan, a functional extension worker, explained that the Government acts not only as a regulator but also as a facilitator that drives community participation through Women Farmers Groups and Family Welfare Empowerment Groups. This demonstrates that the Government not only provides stimulus but also involves the community in the decision-making and implementation processes.

However, does this facilitative leadership align with existing theories, particularly according to Ansell & Gash (2008)? In the theory of collaborative governance, facilitative leadership is expected to maintain the stability of interactions among actors, open spaces for dialogue, and ensure the sustainability of collaboration (Ansell & Gash, 2008). The researcher found that in Metro City, facilitative leadership indeed started with a top-down approach, as explained by Pipi Puspitasari, the Head of the Food Security Division. She mentioned that initially, this approach was more instructional, with clear policies regarding the 'Family Food Plant Movement.' This is in line with Ansell & Gash (2008), who stated that in the early stages of collaboration, leadership often begins with the Government facilitating the structure and infrastructure for collaboration.

Over time, this leadership has evolved into a more collaborative and participatory form, focusing on community empowerment, as exemplified by Ernawati, the Staff of the Food Security Sector. Ernawati's statement that leadership has shifted to a more participatory model after the community began to show trust in the program following the first harvest and the Farmers' Market activities highlights the dynamic change from a top-down leadership model to a bottom-up one. This reflects a transformation consistent with the theory of Ansell & Gash, where collaborative processes often start with government initiatives but then evolve into more inclusive collaborations.

In this context, there is a significant difference. The facilitative leadership implemented in Metro, although initially characterized by strong Government control, faces challenges in maintaining long-term community commitment. Murti Rahayu, an extension worker from the Food Security Agency, stated that while community participation was high at first, the level of commitment may decline if there is no continuous support. This finding aligns with the research by Poulsen et al. (2014), which emphasizes that community participation in programs like urban farming can only be sustained if there is fairness in the distribution of benefits and consistent technical support.

4. Collaborative Process

The collaboration process in urban farming in Metro City takes place through a combination of formal forums and informal interactions that facilitate routine communication, role coordination, and joint learning among stakeholders. For example, Ernawati, the staff member in the Food Security Division, explained

that the collaboration process begins at the planning stage, involving farmers and the Women's Farmer Group from the outset. The Metro Bahagia Farmers Market, held twice a month, serves as a regular coordination forum among stakeholders, which not only functions for economic transactions but also as a platform for knowledge sharing and harvest evaluation. From the perspective of Ansell & Gash (2008), the collaborative process model emphasizes the importance of face-to-face dialogue, which is a key element in building trust and transparency among actors. This aligns with what was found in the field, where the Farmers Market forum became an interaction space bringing together the community, Government, and the private sector to discuss issues arising in the urban farming process.

However, even though the collaboration process has been quite successful in the context of Metro City, the findings also highlight challenges related to the unpreparedness of products and low agricultural literacy at the community level. Murti Rahayu, an extension worker, pointed out that the lack of the Prima Tiga certification has caused urban farming products to struggle to enter the modern market. According to Randrup et al. (2023), this challenge often arises in collaborative processes, especially when there are unresolved technical and regulatory barriers, despite strong policy support. This indicates that even though there is open dialogue in forums like Pasar Tani, gaps in technical capacity and operational standards remain obstacles in achieving broader collaborative goals.

Source: Photo taken by the Researcher

Figure 4.
Routine Activities at Metro Bahagia Farmers' Market

Mr. Teguh added that the collaboration forum is not only in the form of technical meetings, but also realized through the Metro Bahagia Farmers' Market, which serves as a platform for interaction among various actors. In this forum, the community, Government, and private sector exchange experiences and even

conduct evaluations of the quality of harvests. He mentioned that Metro is now being used as a model city (co-pilot) for other districts, as evidenced by the study visits. This statement indicates that the collaborative process not only builds internal coordination but also creates a learning network between regions.

Next, Pipi Puspitasari, the Head of the Food Security Department, also explained that the collaborative forum is not limited to technical meetings, but also takes place through social media and WhatsApp groups, which allow for more flexible coordination and communication. Suharyono & Prayitno (2024), in their research on urban farming, stated that collaboration is not only confined to formal meetings but also includes informal social interactions at the community level. This reflects that in Metro City, despite the existence of formal forums, the power of informal communication through social media and daily interactions also plays a role in strengthening collaboration among actors.

From a theoretical perspective, Ansell & Gash (2008) emphasize that an effective collaborative process requires mechanisms that facilitate knowledge exchange and collective solutions based on dialogue. In this regard, the collaboration process in Metro City demonstrates a strong mutual commitment, as affirmed by Hanif Mutiara, the Family Hope Program Facilitator, who mentioned that collaboration among farmer groups, the Government, and the private sector leads to the achievement of a greater goal, namely food security. However, there remains an imbalance in access to modern markets and the equity of benefit distribution, which affects the consistency of community participation. This aligns with the findings of Poulsen et al. (2014), who emphasize that the sustainability of community participation greatly depends on the fairness of benefit distribution and adequate technical support.

Thus, although the collaborative process in Metro City reflects many elements consistent with the theory of Ansell & Gash (2008), there are some differences that need to be observed, particularly in terms of market access and technical assistance, which remain suboptimal. The collaboration is effective in terms of communication and joint learning, but limitations in product certification and agricultural literacy pose obstacles that need to be addressed to improve the sustainability and effectiveness of the collaborative process. Therefore, despite the intense dialogue and good coordination among actors, the challenges of strengthening technical capacity and market access remain the main focus to further strengthen this collaboration in the future.

5. Intermediate Outcomes

The research findings indicate that the implementation of urban farming in Metro City has produced several intermediate outcomes with positive impacts on local food security, including increased community capacity, the establishment of local markets, and the strengthening of social networks among actors. According to

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Ansell & Gash (2008), intermediate outcomes in the Collaborative Governance framework ideally involve measurable short-term results, such as enhanced trust among actors and consensus within the collaboration. In this context, the facilitative leadership demonstrated by the local Government and agricultural extension officers has successfully created space for open communication and conflict mediation among groups. However, despite improvements in social and economic capacity, institutional design has proven to be a weaker indicator. Several gaps were identified, such as ineffective product certification processes and a lack of coordination between Government actors and the private sector, which hinder the market potential of urban farming products. As noted by Avoyan (2023), an inclusive and transparent institutional design is key to achieving long-term success in cross-sector collaboration. In this regard, although progress has been made, collaboration in Metro City still requires improvements in institutional structures to enhance market access and program sustainability. This suggests that network governance can enrich this collaboration, as a more flexible, network-based approach allows better adaptation to local dynamics (Poulsen et al., 2014).

From the perspective of policy and governance, Pipi Puspitasari, Head of the Food Security Division, stated that "the most tangible achievements are the stabilization of chili prices, the establishment of Farmers' Markets, and increased community participation." This indicates that urban farming has contributed to local food security, particularly in addressing local food inflation. However, do these achievements align with the intermediate outcomes indicators according to Ansell & Gash, namely the enhancement of community capacity and trust among actors? The answer is not entirely consistent with the existing theory, as, despite increased participation, there remains uncertainty in the consistency of community engagement, which constitutes a major barrier to the sustainability of the collaboration.

According to Ansell & Gash (2008), intermediate outcomes are ideally achieved through a continuous and integrative process among the actors involved. In this context, although the Farmers' Market has become an effective forum for sharing agricultural products, Muhammad Asrongi, the Head of Metro Bahagia Farmers' Market, mentioned that the collaboration "is still limited to the transactional level" and has not yet fully become a deliberative forum for policy evaluation or product improvement. This raises the question of whether the collaboration primarily strengthens the local market or already encompasses a broader transformation in socio-economic aspects and long-term sustainability.

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Source: Photo taken by the Researcher

Figure 5.
Integrated Farming System at the Metro Utara Agricultural Extension Center

Mr. Asrongi explained that the Metro Bahagia Farmers' Market is able to offer fairer prices for farmers while also providing lower prices for consumers. He emphasized that the distribution chain has become shorter, so urban farming contributes to household food self-sufficiency. He also highlighted an innovation in the form of an Integrated Farming System at the North Metro Agricultural Extension Center (Figure 5), which combines fish, chickens, vegetables, and bio-pharmaceutical plants. This demonstrates that the outcomes are not limited to food fulfillment alone, but also extend to the development of a long-term oriented integrated farming model. At the North Metro Agricultural Extension Center, plant seeds are first trial-planted with various treatments to observe which crops grow well. Then the successful varieties are shared with Women Farmers' Groups and the community to be cultivated in gardens or yards.

As stated by Avoyan (2023), collaborative governance should produce outcomes that are not only visible in policy aspects but also in the form of deeper social capacity enhancement. Although farmers' markets provide direct economic benefits, many challenges remain in strengthening the community's technical capacity, particularly in navigating product certification procedures that hinder access to modern markets (Randrup et al., 2023). This indicates that, despite positive results in additional income and food distribution, the community's ability to adapt to broader policies and market mechanisms has not yet been fully achieved.

The enhancement of social capacity highlighted by Wulandari et al. (2023) in relation to urban farming reinforces the finding that this collaboration also strengthens social networks among residents. However, the greatest challenge remains the instability of long-term community commitment, which often declines over time. Ernawati, Food Security Staff, emphasized that although there is high enthusiasm at the beginning of the program, maintaining community commitment requires continuous guidance so that participants remain engaged and derive direct benefits from the program. This aligns with the findings of Poulsen et al. (2014),

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which state that community participation in urban farming can only be sustained if benefits are distributed fairly and technical support is continuously provided.

On the other hand, the social outcomes achieved, such as the strengthening of solidarity and community identity mentioned by Pipi Puspitasari, indicate the emergence of social innovations, such as the use of urban farming products as community souvenirs. This underscores the role of urban farming in creating food-based social innovations, which not only serve as an alternative source of income but also as a means to strengthen social bonds among residents.

In conclusion, although the initial or intermediate outcomes achieved indicate significant progress in several dimensions, there are still some aspects that do not fully align with Ansell & Gash's expectations regarding the success of collaborative governance. This is particularly evident in terms of strengthening long-term capacity and sustainable structural changes, which require further adjustments in institutional design and facilitative leadership.

B. Contribution of urban farming to local food security in Metro City, from social, economic, and environmental aspects

Urban farming makes a significant contribution to food security in Metro City through three main dimensions: social, economic, and environmental. From a social perspective, urban farming has proven to strengthen community cohesion, interaction spaces, and the city's collective identity. Pipi Puspitasari, Head of the Food Security Division at the Metro City Office of Food Security, Agriculture, and Fisheries, explained that from the beginning, the Government involved the Family Empowerment and Welfare Groups, Women Farmers Groups, and local communities in the Family Food Crop Movement, which was not only aimed at cultivation but also at fostering togetherness through forums such as farmers' markets, photo contests, and WhatsApp groups. This social contribution became increasingly evident as public enthusiasm grew when the Family Food Crop Movement evolved into a Women Farmers Group initiative, as emphasized by Teguh Setiawan, Functional Extension Officer, who noted that residents now take pride in being part of an official city program. These findings align with Wulandari, Abdoellah et al. (2023) and Supyandi et al. (2024), who affirm that urban farming strengthens participation, social networks, and community perceptions of food as a collective urban resilience effort.

The economic contribution of urban farming is reflected in food expenditure efficiency, increased income, and the formation of local supply chains. Mrs. Hanif Mutiara, a facilitator of the Family Hope Program, highlighted that some recipient families are now able to produce and package vegetables, opening up new market opportunities and community-based marketing creativity. Meanwhile, Mrs. Ernawati, a staff member in the Food Security Division, emphasized that the Metro Bahagia Farmers' Market, facilitated by the Government, is able to absorb residents' harvests and provide regular additional income. Theoretically, this condition aligns with Kusumaningrum et al. (2024) and Suharyono & Prayitno (2024), who stress that urban

farming can reduce dependence on external food sources, boost household economies, and create micro-enterprise opportunities based on home gardens. Thus, urban farming in Metro has transformed into a pillar of the community-based economy that supports local food stability.

In terms of the environmental aspect, urban farming contributes to urban greening, space efficiency, and the reduction of emissions from food distribution. Muhammad Asrongi, Chair of the Metro Bahagia Farmers' Market, explained that shortening the distribution chain through farmers' markets not only lowers prices but also reduces the carbon footprint from long-distance food transportation. Murti Rahayu, an Agricultural Extension Officer, added that collective planting activities increase yard vegetation and create a healthier environment for residents. Even at the household level, Jamilah and Linarsih, urban farming practitioners, stated that their yards have become greener, more productive, and help save daily expenses. These findings are supported by research from Armansyah et al. (2024) and Mahpudin et al. (2024), which show that urban farming enhances biodiversity, utilizes idle land, and reduces pollution through locally based food production.

From the perspective of Collaborative Governance, this contribution reflects the successful integration of social, economic, and environmental objectives within a single policy system. This aligns with Avoyan (2023), Randrup et al. (2023), and César Zambrano-Gutiérrez et al. (2023), who emphasize that the sustainability of urban farming can only be achieved through cross-actor collaboration, knowledge exchange, and adaptive institutional support. Thus, urban farming in Metro City is not merely a food production strategy but also an instrument for social transformation, local economic empowerment, and urban ecological restoration.

Overall, the contribution of urban farming to local food security in Metro can be summarized into three main impacts:

1. Social: increased solidarity, civic pride, social innovation, and the preservation of local food culture;
2. Economic: savings on consumption, additional income, and the development of an independent food market;
3. Environmental: urban greening, utilization of idle land, and reduced food distribution emissions.

These findings affirm that urban farming has become a strategic pillar of food security in Metro City, grounded in collaboration, sustainability, and community participation.

CONCLUSION

Based on the research findings, it can be concluded that the success of urban farming in Metro City is supported not only by cultivation activities but also by structured, long-term-oriented collaborative governance. The institutional design outlined in the Regional Medium-Term Development Plan, the Strategic Plan of the Metro City Food, Agriculture, and Fisheries Agency, mayoral regulations, and mayoral circulars provides legitimacy, policy direction, and regulatory certainty for the community. Facilitative

Government leadership, supported by extension officers, social facilitators, Family Empowerment and Welfare Groups, and Women Farmers' Groups, has successfully built trust, opened spaces for participation, and strengthened citizen commitment. The collaborative process operates through formal forums such as Discussion Group Forums and Farmers' Markets, as well as informal daily interactions, resulting in learning, innovation, and adaptive role distribution. These conditions produce intermediate outcomes, including increased community capacity, stabilization of food prices, establishment of local supply chains, consolidation of regional networks, and the development of food-based social identity.

Conceptually, this study affirms that Collaborative Governance can serve as an effective framework for addressing food security challenges in small cities, as exemplified by Metro City. The findings contribute to the development of Collaborative Governance theory, particularly regarding how this framework can be applied and adapted within the context of small cities in developing countries. As noted by Ansell & Gash (2008), collaboration involving both public and non-public actors heavily depends on inclusive institutional design and facilitative leadership that encourages active participation. This study demonstrates that although the starting conditions and institutional design in Metro City are relatively strong, the greatest challenges lie in sustainability and further capacity building, which need to be strengthened to ensure the program's continuity. Therefore, Collaborative Governance must be adapted to be more responsive to local resource limitations, emphasizing the importance of cross-sector collaboration and sustained institutional support.

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