



Development of Urban Farming as a Strategy to Support Food Security

* DIANA HERTATI,¹ LUKMAN ARIF,¹ BINTI AZIZATUN NAFI'AH

¹Universitas Pembangunan Nasional Veteran, Surabaya, Indonesia
Correspondance author: diana.adneg@upnjatim.ac.id*

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Abstract

Food security is a global strategic issue, affecting social and economic stability and even national security. Indonesia's population is increasing sharply, food security needs to be strengthened through urban farming. The source of food production in urban areas has decreased, due to the narrowing of agricultural land. The research method is descriptive and qualitative. Data collection was done using interview, observation and documentation techniques. The research analysis uses the model by Miles Huberman. The results of the study indicate that the community already understands and is familiar with urban farming with P2L, even groups of PKK women have participated in plant management in their yards; the inhibiting factors of the perpetrators are not understanding the technicalities of urban farming, lack of capital and the existence of extreme weather; The local government strongly supports the making of food security policies through urban farming by issuing several legal products of Regional Regulations.

Keywords: Food Security; Public Policy; Urban Farming

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Introduction

The issue of food insecurity as a global issue does not only occur in poor countries and developing countries, but also in developed countries (Hapsari & Rudiarto, 2017). So far, the efforts of the Government of Indonesia to achieve food security have not been optimal, although the efforts that have been made need to be appreciated. Referring to the presentation of the 2020 Global Food Security Index (Global Food Security Index 2020), Indonesia's position fell from 62 to 65, out of a total of 113 countries. Likewise, in several indicators, Indonesia's position is not very good on the affordability indicator at position 55, the availability category at 34th position and 89th position in the quality and safety category. Meanwhile, neighboring countries, namely Singapore, Malaysia, Thailand and Vietnam, positions 20, 43, 51 and 63. The decline in Indonesia's position in this index reflects the need for hard efforts to achieve food security (Nainggolan, 2011).

This urban farming program is considered capable of being one of the solutions to fix some of these problems by inviting the community to participate in the implementation of program activities created by the local government together with the relevant agencies (Junainah et al., 2016). Urban farming is one

of the new breakthroughs United States, which at that time was attempted to be able that intially started in the improve economic conditions against the high price of vegetables (Mima Kurniasih, 2015). The urban farming program is an implementation of the Government of Indonesia's policy that raises programs related to agriculture in the urban sector that involve expertise, innovation in food management for urban communities by utilizing vacant lands around the city to improve health, economy, and quality of family life and motivate families to be more productive in utilizing the land around them, which currently has a narrower area of agricultural land with the development of land alteration (Qowiyyum et al., 2020). This is in line with Zezza and Tasciotti's (2010) research on urban agriculture and food security in developing countries, that the role of urban agriculture in income and in agricultural production as a whole is limited, limiting its role for function-related poverty and alleviating food insecurity (Zezza & Tasciotti, 2010). In some countries, the push to implement urban farming, for example in São Paulo, Brazil, has resulted in a new paradigm of the urban food system. Mexico applies urban farming with vertical farming technology for sustainable food production in urban areas (Al-Kodmany, 2018). Society with a hydroponic system that significantly affects the economy, economy, and social (Sisodia et al., 2021).

Every year the area of agricultural land in Indonesia has decreased. This is a challenge in itself in promoting national food security. In the 1990s, the trend of conversion of agricultural land to around 30,000 hectares (Ha), the area increased further in 2011 to 110,000 Ha and in 2019 it increased again to 150,000 Ha (Gultom & Harianto, 2022). This land conversion has an impact on decreasing agricultural areas, which affects the availability and security of food, especially in urban areas (Sadali, 2018) Therefore, the government issued a policy through Law Number 18 of 2012 concerning food, followed up by the issuance of Government Regulation Number 17 of 2015 concerning food and nutrition security which states that food security is a condition for meeting food needs for households, which is reflected in the availability of sufficient food, both in terms of quantity and quality, safe, equitable, and affordable (Badan Ketahanan Pangan, 2019).

The low access to food in East Java Province can be seen from the high proportion of the population living below the urban poverty line, which is 8.30% higher than the national figure of 8.16% (Koestedjo, 2018). While in Madiun City in 2019 the number of poor people was 7,690 people with a percentage of 4.35 percent, in 2020, the number of poor people increased by 1,140 people, to 8,830 people with a percentage of 4.98 percent (Kustanto & Sholihah, 2020). The Government of Madiun City cooperates with the Department of Food Security and Agriculture to do urban farming to maintain food security on a family/household scale to the smallest scale (Septya et al., 2022).

The government believes that when food security on the smallest scale, such as households, is maintained and of good quality, regional or city food security will be able to be maintained from vulnerability. Urban farming is utilized for its function in beautifying urban spatial planning and reforesting the environment by involving skills, expertise and innovation in the cultivation of food management for the poor through the use of yards, vacant lands to increase the nutritional needs of families, improve the family economy and motivate poor families to form an agricultural group to build household self-reliance in urban areas (Supriyati, 2021).

On the other hand, there are still various obstacles in the implementation of the urban farming program, both technically related to the increasingly narrow agricultural land in urban areas due to the shifting of agricultural land into housing. Non-technical constraints are the lack of public interest, facilities, and infrastructure supported by the government and the lack of public knowledge about the application of urban farming (Parsudi, 2019). Motivation also influences community behavior (Aryanti et al., 2021). Shared behavior in a community needs to be standardized through group rules. The goal is to achieve a common goal (Rahmadani et al., 2021).

Based on the description above, it is very important to conduct research on food security policies and strategies in urban areas through urban farming, because this policy is used to alleviate poverty through food self-sufficiency. The purpose of the study was to determine, describe and analyze the existing conditions of public understanding of urban farming, the inhibiting factors in the application of urban farming and strategies to strengthen support in the form of food security policy making through the urban farming program.

Research Method

The research method used is a descriptive qualitative method, which describes and analyzes Urban Farming Development as a Strategy to Support Food Security. The location location method is done intentionally, meaning that the research location is done intentionally. The research locations are Sogaten Village, Manguharjo Subdistrict and Taman Subdistrict, Taman Subdistrict, Madiun City Government, with the consideration that the horticultural crops (urban farming) that have been managed have been running for quite a long time and are varied. The research analysis

unit of the Department of Food Security and Urban farming of Madiun City, Sub-district and Head of Head of Madiun City and urban communities.

The research focus is expected to produce findings: knowing the existing conditions of public understanding of urban farming, inhibiting factors in the application of urban farming and supporting strategies in the form of food security policy making through urban farming programs. Data collection techniques used were observations made directly to the research location, interviews with informants, and documentation in the form of secondary data related to urban farming. The data analysis technique based on the theory of Miles & Huberman suggests that the activity in qualitative data analysis is carried out interactively and continues until it is complete, so that the data is saturated. The steps of data analysis are data condensation, data display, and conclusion drawing/verification (Miles et al., 2014).

The stages of this research are (1) preparation stage. The preparation stage starts from pre-research when the researcher collects literature material to prepare a research proposal which is mainly to formulate problems. (2) Implementation stage. Researchers conducted field studies supported by literature studies. The data obtained from the literature study will be separated between relevant and irrelevant data. Relevant data will be analyzed to answer the problems in this study. When collecting data, interviews were also conducted as primary data. Researchers interviewed 8 informants consisting of the head of the Community Association, Head of the Neighborhood Association, Head of P2L, P2L Management, and PKK members. (3) Completion stage. After the data is collected, the researcher sorts the data based on the research category. Then the data analysis process. The results of the analysis are then compiled in a research report, where monitoring and evaluation will be carried out regularly with the aim of producing ideal research outcomes.

Results and Discussion

Identification of Existing Conditions Community Understanding of Urban Farming

Public knowledge of the types of Urban Farming programs can be seen from the results of interviews. There are two types of Urban Farming programs, namely the use of vacant land and production and processes. The knowledge that the people of Taman and Sogaten Villages know about Urban Farming refers to their understanding of the program. Knowledge is needed before doing an act or activity consciously, this is as visualized in the following graph:

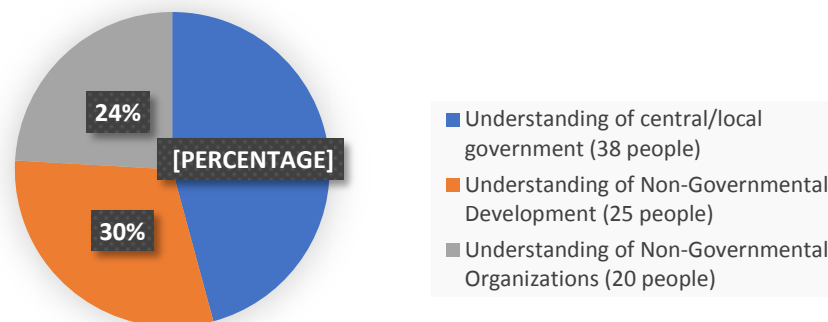


Figure 1. Respondens Knowledge of Program Resources Urban Farming
Source: Survey Data Processing (2021)

The community's understanding of the types of urban farming programs consists of: a) programs that utilize vacant/leftover land as educational spaces through gardening and generate benefits for the surrounding community, b) gardening programs that produce and process food ingredients to meet community needs (Resistance). Food) and c) donation program from the government. This is as conveyed by Mr. Sunarso, Village Head of Sogaten:

"The understanding of the community here is not urban farming but P2L (Field Agricultural Extension), which is a farmers' group for vegetables. There is also a rice farmers group. If the P2 L land is in the yard, this is indeed a program from the government, but the implementation is in the community, in the yard of the residents who meet the requirements. The most important requirement for urban farming is a fairly large yard" (Interview result dated 28 June 2022).

Furthermore, the Village Head of Sogaten also said :

"That the results of Urban Farming are not only for self-interest but also for sale through groups. Urban Farming has been around for about 3 years. This is a City government program from the Department of Agriculture. This program is mandatory for all kelurahan, meaning that all kelurahan must exist" (Interview results dated 28 June 2022).

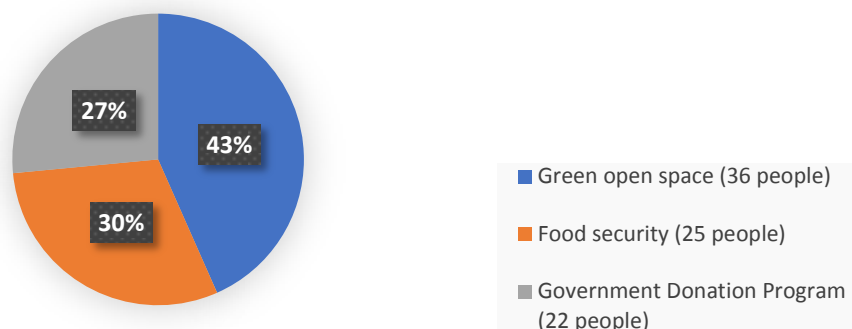


Figure 2. Respondents Knowledge of Types of Urban Farming Programs
Source: Survey Data Processing (2021)

Mrs. Sriyana, as Chair of P2L from Sogaten Village, said that:

"In principle, the community already understands the urban farming that we know as P2L and our action by forming a group of PKK women consisting of 30 people. The "Metil Bersama Poktan" sub-district bazaar event. For this P2L, every time there is a bazaar event, I have to display it, so it has been memorized by the Guardian. We don't dare to take part in the competition, but the challenge is....hahaha (laughs from the women of the group (P2L). We feel tired, you know...because we have participated in the competition, the requirements have been met, the administration is good, there are lots of plants but how come we don't get a number... Yes, that's what made the mothers donate. In the end, they did not participate in the following competitions" (interview on July 28, 2022).

Furthermore, Mrs. Pipit Kurnia, the head of P2L, from the Taman Village said that :

The public understands why this Urban Farming and its members are mostly women. There are only men, because the environment here is 65% of the people are classified as elderly and most of the women, if the father and father are elderly, they just stay at home while for this activity they are not participate. While at their productive age, they work. While those in P2L are women (interview results June 29, 2022),

Mrs Pipit also said that:

"As the chairman, I was encouraged because at that time, the kelurahan looking for a location was not available, while the time was short. Actually, there were 3 alternative locations at that time for the demonstration plot, but after a survey of the province, it turned out that the environment was not very supportive. Actually, on Jalan Salak, the land is much bigger/spacious, but the environment is a big house and it is covered with walls, so it is estimated that its sustainability will not last long, while the P2L program itself has a 5-year contract that has to run for 5 years and the land cannot be paid or the term there is no lease" (Results of the interview on 29 June 2022).

Mrs. Yuli said that :

"There was a problem several years before the P2L program, namely KRPL. After one year, the conflict land was only built for 2 years. It turned out that the land was willing to be sold. Well, it can't just be moved because the funds have become good. So we have signed the contract but the contract is not paid, so the contract is a license to use it without paying for 5 years, stamped with the DISPERTA Madiun. But the contract was handed over to the province as part of the P2L program. So, since then, I've been working on this plant in 2020" (Interview results on June 29, 2022).

In this urban farming activity there was participation from PKK women from Taman Kelurahan. This was conveyed by Ms. Pipit, the head of P2L Lestari, said:

"We have a decree for the Yard Plants group. In the end, I formed a group of up to 30 people, because I made a commitment from the beginning with Bu Lurah that it could be at my place, but because I also have many other jobs and the children are still small and the environment still has many houses, I just obeyed, even though I was alone. There is no background. Basically, I made a commitment at the beginning. Basically, if the members of the commitment group were at the beginning, but if you don't mind everything is that the management, then I apologize because this

is a shared property, something like that. So let me return to the group” (Interview results on June 29, 2022)

The understanding of the community, especially PKK women, is reflected in their participation in urban farming management activities, as conveyed by Yuli as follows:

“First, the group that joined P2L didn't even last a year. Secondly, they started to falter, because people have a saturation point, we ourselves have pickets. Secondly, second, because I saw that in the first year they were still having fun, diligently and diligently. The longer the person gets bored, I think if this continues like this, I will accept that I will finally have a monthly meeting with an arisan so that people don't forget about P2L. The artisan is here too. The purpose of the gathering here is so that fellow members don't forget about P2L and be responsible” (Interview results on June 29, 2022).

Based on the results of the interview observations above, it can be concluded that the community already understands and knows about urban farming where they are familiar with P2L, even the PKK group of women have participated in plant management in the designated yard. The implementation of urban farming in Kelurahan Taman is an example of community practice in urban agriculture. An understanding of expertise is thus a community of practice. A community of practice can be understood as a group of people who share a concern, a set of problems, or a passion about a subject matter, and deepen their knowledge and expertise by interacting on an ongoing basis (Mabon et al., 2022). P2L has a shared concern for urban farming. The form of mutual concern is shown by planting activities in the green house. Organizing a picket schedule to maintain plant quality.

Similar to an epistemic community, members of a community of practice share common characteristics. First is joint enterprise, which is a shared pool of knowledge that community members draw on to identify themes to be advanced by the community, and a shared vigor in learning about a particular endeavor such as gardening (Bendt et al., 2013). In the P2L community, they learn together in growing vegetables. The community, whose members are mostly women, is equipped with the knowledge of farming on limited land to support daily food.

Second is the presence of community—that is, cohesive relationships and interactions among members, where learning about a practice such as urban farming leads to increasing levels of participation (Tidball & Krasny, 2011). To increase the participation of its members, P2L organizes arisan activities. This arisan aims to maintain the continuity of togetherness in building green houses.

Third is shared practice, in other words routine activities, and common procedures or 'knowhow' (Mabon et al., 2022). Joint gardening practice activities become P2L routines. Picket activities and joint activities in learning to grow and care for plants are part of knowledge sharing. P2L formed a group from PKK mothers consisting of 30 people. P2L routinely participates in the district's big event "Metil Bersama Poktan". This event was held with the spirit of transmitting sustainable gardening habits in the household environment.

Inhibiting Factors in the Implementation of Urban Farming

In implementing urban farming in Madiun City, the actors also experience various kinds of obstacles, both internal and external constraints. Which in detail can be seen in table below:

Table 1
Constraints On Urban Farming in The City of Madiun in 2022

No.	Urban Farming Constraints	Number Of Perpetrators	Percentage (%)
1.	Lack of experience of urban farming	7	8,43
2.	Lack of capital to develop a business	26	31,33
3.	Infected by pests	29	34,94
4.	The weather is so extreme that it fails	21	25,30
	Total	83	100

Source: Interview with informants, 2022

Based on the table above, several dominant obstacles were identified. The first obstacle, such as the lack of experience in urban farming, is an obstacle recognized by the perpetrators. Urban communities in general do not have a knowledge base about agriculture, let alone experience. They are far from the lifestyle of farming communities. They never know how to cultivate the soil or growing media, to deal with plants when they are attacked by pests or diseases. When there was a

P2L program, they just started to learn how to grow crops, even though it was only limited to land area and certain types of plants. They began to learn farming, which they had never imagined before, even though the land/garden as a planting medium was in their own home/yard environment. It is acknowledged by the Village Head of Sogaten from the interview results on June 29, 2022, that these obstacles or obstacles to Urban Farming appeared during the initial process of forming P2L cadres. Community groups were temporarily appointed for this activity. They had to have basic agriculture. At first they did not want to because they felt they didn't want to have this knowledge and experience. In line with what the Head of Sogaten Village Head, Mrs. Sriyana, as the Chair of P2L, said about the obstacle in Urban Farming, the number of membership cadres has decreased. He said that "my members were originally 35 but there are only 10 members active". This decrease in the number of P2L cadre membership indicates that they are not happy, because they do not have an agricultural base, and then underestimate it.

Their reasons for being inactive are they say they don't have hobbies, underestimate "halah tuku lombok wae iso, why do you have to be tired of tomato tuko iso". If you hear it hurts your ears, if you are reprimanded, the answer is the same, Mr. RT is also negotiable, the answer is the same. I myself (said Mr. Bambang, Head of RT8 RW 3, Sogaten Sub-district) even though I have tasted lombok, tomatoes, vegetables I have never bought (said Mr. RT). Furthermore, the Head of P2L, Sogaten, said "if my motive is to develop this P2L, it's because I have an instinct to move into this agricultural sector". What Mrs. Sriyana said is also in line with what Mrs. Pipit said, as Chair of P2L Kelurahan Taman Kecamatan Taman, she said that "the vacant land for urban farming (P2L) around these residents is quite a lot, but the environment is not supportive, the people less responsive. So yes, it's the same even if they are given help. If there's no one to help, it's useless. Some primary data related to urban farming barriers indicate that the lack of knowledge and experience of urban farming managers is one of the causes that hinder the development of the urban farming program itself. Another obstacle to the findings of this research on the urban farming program in Madiun City is the capital development.

What was conveyed about the capital constraints for development was conveyed differently by Mrs. Pipit, the Head of P2L in the Taman Village, Taman District. The business development managed by P2L can be supported by the local government itself, in this case the Madiun City Food and Agriculture Security Service. It's just that the development assistance will be provided if, according to the results of monitoring and evaluation of the running program, it is considered successful. Regarding this, Mrs. Pipit, as Chair of P2L, Kelurahan Taman, explained the stages of the P2L program.

First, Growth Stage

The P2L program in Madiun City was established in 2020. The beginning of the P2L formation was the Growth Stage. At this stage, the P2L groups that have been formed received Rp. 50 million from the Department of Food Security and Agriculture of the City of Madiun. This money is received directly to the P2L Group through an account transfer on behalf of the group. Before utilizing this amount of funds, the group was given socialization for this P2L program and the use of assistance of Rp. 50 million at this stage of growth. In the socialization activity, it turns out that the RKA (Budget Activity Plan) guidelines have been prepared by the agency. With the guidelines for the use of these funds, it is recognized that the groups are more comfortable, because they have no difficulty in determining the allocation and the groups just follow the guidelines. The details of the use, for example, such as how much to prepare the green house, the percentage for the use of tools and materials as well as seeds, how much fertilizer; so those with the RKA guide just follow it. Each beneficiary group of P2L activities receives technical and administrative assistance from the Technical Team from the Food Security and Agriculture Office of Madiun City, both in the implementation of the cultivation of various types of plants, utilization of funds, packaging of plant products (fresh handling products), and marketing of products, as well as reporting.

Second, Development Stage

This development stage, according to an explanation from Mrs. Pipit, as Chair of P2L, Taman Sub-district, Taman Sub-district, will be given if, during the 1-year process, from the results of monitoring by the Food Security and Agriculture Office of East Java Province, there is potential to be developed, in the sense that the program activities are still intact, still exist and If it is good, then the Provincial Department of Agriculture and Food Security can be given a development fund of 15 million. This development must have another location, meaning additional area, but it should not be

far from the initial demonstration plot. This additional development for P2L Kelurahan Taman was obtained in 2021. The development location is not far from the initial demonstration plot, namely in front of the house near the poskaling and behind the house. The 15 million development fund is intended to develop planting equipment and media such as: polybags, pots, shelves, compost, fertilizers, and others.

Third, Monitoring Phase

This monitoring stage is the stage where the Department of Food Security and Agriculture of the City of Madiun and the Province conducts a direct review of the development of the P2L business. According to Ibu Pipit's experience, the monitoring carried out by the Madiun City Food and Agriculture Security Service is carried out 2 times in 1 year, while the province does it once a year. Meanwhile, the technical assistant from the City Office conducts a review once a month. If he/she doesn't have time to visit, we will send photos of the condition of the plants via WhatsApp. Even if we have problems, we can also coordinate through cellphones regarding, for example, why the chili leaves are curly, why do these vegetable plants rot.

Based on the information and explanation above, and related to capital constraints for business development, it is actually still possible to get capital from the Provincial Government but with a note. But if the capital is intended solely for the development of a business area by renting or buying, then this is indeed a difficult matter for the P2L group. But we can understand because the capital is not only in the form of money, but electricity, water, land and other infrastructure facilities, which are also the capital in the urban farming business, and as is well known at that time, it requires expensive costs in urban areas. However, this is still biased by the sales of vegetable production. It shows that the capital for the operationalization of the P2L program can still be helped from the sales of vegetable production. Another effort made by the manager so that the plant care process does not cost a lot is to make savings in the production process, both in the planting media provider and in the fertilization process.

Another obstacle that P2L feels in carrying out their activities is that their vegetable crops are attacked by diseases. This condition continues to be experienced by P2L administrators, especially during the rainy season, as stated by Mrs. Pipit below:

"Why did these vegetable plants rot? There was a time when our tomato plants were in abundance, but then Kenan the fruit fly finally rotted. We tried to set a trap, but it still got hit. Yes, it's called a pest, maybe because there is a warehouse. Besides this, there is a fruit plantation, so maybe the pests are from there too. The mustard that pests love the most is mustard greens because it's sweet, like cauliflower. It rained last night, the next morning and it's already dark. All that's left is a memory. The caterpillars are small and green in color, like the color of the existing vegetable plants, so the pests are attached to the leaves. If we check one by one, there are so many that it is difficult for us to recognize which leaf is which caterpillar because the caterpillar is green and is behind the leaf. If we spray it, then it definitely won't hit because the caterpillar is behind the leaf." (Interview on June 29, 2029).

Based on the primary data above, it shows that pests or plant diseases, even though they are located in urban areas, remain an obstacle to the growth of plants which have an impact on crop yields and can even fail to harvest. Pests and plant diseases are indeed perceived to be external constraint factors that are difficult to overcome, because most of the actors or program managers do not understand the techniques to overcome these obstacles because their base is not from farming communities. Coupled with the tendency of P2L members to experience a decline, this can reduce the enthusiasm and even despair of the management members so that it has an impact on the sustainability of this program. In urban areas, the climate or weather changes rapidly and unexpectedly. Most of the urban agricultural actors often experience crop failures due to extreme weather. For example, when heavy rains result in damaged vegetable crops, fallen trees in the wind and rain, and floods. This causes the fish that are kept to be lost in flood waters.

Strategy To Strengthen Support in The Form of Food Security Policy Making Through Urban Farming Program

Law Number 18 of 2012 concerning Food mandates that the government and regional governments are obliged to realize diversification of food consumption to meet the nutritional needs of the community in accordance with local potential and wisdom, in order to realize a healthy, active, and productive life. Furthermore, in Government Regulation Number 17 of 2015 concerning

Food Security and Nutrition, based on article 26 paragraph (1) point f), it is stated that food diversification can be done, one of which is land optimization, including yard land. Based on this government Regulation, the Food Security Agency (BKP), through the Center for Consumption Diversification and Food Safety, from 2010 to 2019, has implemented the Sustainable Food House Area (KRPL) program.

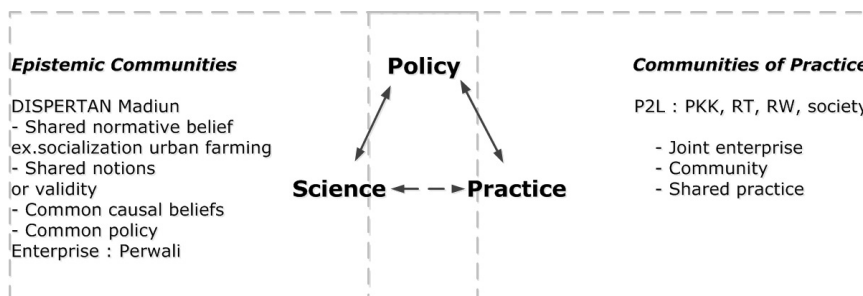


Figure 3. Implementation The Sustainable Food Garden Program (P2L)
 Source: (Mabon et al., 2022), Adopted

In implementing the P2L program, DISPERTAN Madiun as epistemic communities has been guided by Law Number 18 of 2012 concerning Food and Government Regulation Number 17 of 2015 concerning Food Security and Nutrition. DISPERTAN carries out the regulatory mandate as a source of knowledge for the P2L community. This is because DISPERTAN staff become P2L program extension workers. P2L activity assistance is routinely carried out. So that the epistemic community and communities of practice cannot be separated (Mabon et al., 2022). P2L requires guidance and financial assistance from DISPERTAN. Likewise, DISPERTAN provides resource assistance to the recipient, namely P2L.

The Sustainable Food Garden Program (P2L) is a program of activities carried out by community groups who jointly cultivate their home gardens as a sustainable food source to increase availability, accessibility, and utilization, as well as income. The purpose of this P2L activity is to support government programs for handling priority areas for stunting interventions and or handling priority areas for food insecurity or strengthening food security areas. This activity is carried out through the use of yards, unused land and unproductive vacant land, as food producers to meet household food and nutrition, as well as market orientation to increase household income. In Madiun City there are 6 P2L assisted groups consisting of Banjarrejo, Pandean, Taman, Madiun Lor, Patihan and Sogaten. Each of these groups has a Demonstration Plot (Demplot) covering an area of 150 m² which is used to grow vegetables.

Based on the above policy, it shows that activities to cultivate yards as a food source have been carried out by the Government of Madiun City since the existence of the Sustainable Food House Area Program. Since the KRPL program and then continued with the P2L program was rolled out, the Madiun City Government has continued to encourage its citizens to use their home gardens by farming, in order to increase food diversity in the family and support regional food security.

The City Government's encouragement to realize food diversity is carried out through intensive socialization from the village level to all school levels. The aim of this socialization is to hope that the people of Madiun City will use the vacant land at home to plant several types of vegetables, because Madiun City is not an area that produces vegetables or other foodstuffs. The activity of urban communities to use vacant land at home for farming is an activity known as Urban Farming.

There are several types of urban farming utilization, namely: (1) utilizing idle land and critical land; (2) utilizing green open space (both private and public); (3) optimizing the garden around the house; (4) using space (vertical culture) (Surabaya City Plantation Service, 2012).

Furthermore, there are various urban farming, namely: 1) land surface utilization (conventional method; 2) Vertical culture by utilizing vertical space as a place to grow crops, either in the form of hanging or vines or mounted on the wall; 3) planting in pots / polybags as a planting medium so that it is easy to move on narrow land, indoors or on the roof of the house; 4) Hydroponics using water or nutrients. Usually by using a pipe-shaped container that is arranged in layers or in a row with a water and nutrient regulation system. Hydroponic installations can be placed outdoors. Indoors or on the roof of the house; 5) Microgen is the cultivation of small vegetable crops such as trays or trays (Omondi et al., 2017).

Conclusions

The understanding of the people of Madiun City about urban farming is quite good, even though the terms they use are not familiar, but in practice they have made efforts to use land or yards by planting productive vegetables. The obstacles found in the implementation of the Urban Farming (P2L) program include: lack of understanding of knowledge and practice of P2L actors/members about urban farming. The reason is that they/P2L members do not have an agricultural base; lack of capital for business development; no control of pests and diseases that threaten vegetable crops; and 4) Extreme weather that causes business failure. The P2L business commodities in Madiun City are the same. Namely, they are engaged in vegetable commodities. This is because the policy does require P2L to cultivate these commodities so that it does not bring out the advantages of each existing P2L.

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