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The Evaluation of Agropolitan Program in Central Java, Indonesia

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Abstract: Agropolitan has been considered a solution for minimizing urbanization and creating equitable development between rural and urban areas. It has been one of the programs mentioned in the spatial planning agendas of the Government of Central Java. In Central Java, agropolitan has been started in 2002 and has left many problems related to the implementation. The objective of this study is to evaluate the implementation of agropolitan in Central Java. The research was conducted from April to October 2019. This study uses purposive sampling in determining the sample of the performance of the agribusiness sub-terminal at that location. The research started by completing pre-surveys to gain a brief description of the study areas and agropolitan program. The research collected in-depth information about the agropolitan program through focus group discussions and in-depth interviews with farmer respondents, traders, and officers involved in agropolitan activities. Data were analyzed using scoring factors and descriptive qualitative. The results showed that in terms of projects, the implementation of agropolitan activities was in a GOOD category, but it was in the MEDIUM category in terms of sustainability. Furthermore, lack of community involvement, support from local government, the unavailability of an exit strategy, and the inflexibility of STAs to sell different commodities were some problems encountered in the implementation and sustainability of the program. As agropolitan is still one of the priorities of the Central Java Government, it is recommended to involve all stakeholders in the whole stages of the program from planning to evaluation, optimize or reactivate the Agropolitan working group, develop an institution that could sustainably implement the programs and the facilities, as well as increase human resource capacity.

Keywords: agropolitan program; evaluation; Central Java

1. Introduction

The 1945 Indonesian Constitution, especially Article 28, asserts that every Indonesian citizen has the right to live in physical and spiritual prosperity, have a place to live, and get a good and healthy life. It clearly emphasizes that every Indonesian citizen living in rural and urban areas should have equal opportunities for development and welfare. However, in reality, development between rural and urban areas has appeared to be uneven.

In the spatial concept, development in urban areas begins with the first location theory about the formation of city systems. The theory was introduced by Christaller and Losch and further developed by Brian Berry as Central Place Theory (Badrudin, 1999). This theory states that cities are ideally formed as productive regional centers and can provide various notable services for the land or the surrounding environment. Christaller and Losch assume that: (1) there are only two activities, namely rural and urban activities; (2) actions in rural areas include extensive use of land for agriculture in the absence of an agglomeration economy; (3) vigours in urban areas are land use intensively and directed to agglomeration economies; (4) each activity actor needs the results of their respective activities; (5) soil quality equals transfer costs proportional to the distance; and (6) village activities and demand for urban produce are equally distributed (Badrudin, 1999). Based on this theory, the region is divided hierarchically or polarized into two, either the growth center or core growth point in the area. It determines the economic growth of the surrounding area.

The concept was then further developed into the "Growth Poles" theory which was first introduced by Francois Perroux and Boudeville (Alonso, 1989, p. 334 in Badrudin, 1999, p. 175). A growth pole is a group of industries that are usually centered on big cities, supported by a sturdy hinterland due to economic agglomeration. It is driven a country's economic growth due to forward and backward linkages with a leading industry (Badrudin, 1999, p. 175). This theory can examine the reciprocal relationship between villages and cities. Based on this theory, if the industrial sector in urban areas develops, it is expected that the development of the industrial sector will have a good impact on the surrounding rural areas (trickle-down effect) and spread (spread effect).

However, the development in urban areas does not always or immediately improve livelihood in rural areas. Rapid growth in urban areas has made these urban areas the center of economic, social, and cultural development, leaving rural areas with their simplicity and limitations (Kementerian Pekerjaan Umum Direktorat Jenderal Cipta Karya, 2012). On the contrary, economic disparities between rural and urban cause urbanization that negatively affected it (Myrdal in Adam, 2010). It causes a backwash effect or depletion of resources in rural areas. One example of this is the shift or increase in urbanization of young workers from villages to cities, which results in a reduced productive workforce that can build villages. This concern is the background of the agropolitan concept.

The agropolitan concept was first introduced by Friedmann & Douglass (1975). The agropolitan area approach emphasizes the existence of urban services in rural areas. Farmers or rural communities do not need to go to the city to access production, marketing, and related socio-economy cultural needs (Friedmann & Douglass, 1975). Agropolitan is defined as an agricultural city that grows and can spur the development of agribusiness systems. It can serve, encourage, attract, and promote agricultural development in the surrounding areas (Mahi, 2014).

According to Fatkhiati et al. (2015), a well-implemented agropolitan program reduced environmental damage also increased both production and added value in the agricultural area (Laode et al., 2019) and poverty (Rahmawati et al., 2019). Furthermore, Rusastra et al. (2005) evaluated several agropolitan programs in Cianjur, Agam, and Barru Regencies. The study showed that these programs had increased farmers' income, even though it was not quite significant, this condition because of both limited human resources and poor institutional management.

On the other side, the agropolitan programs in various regions had several problems (Farhanah, 2015; Hariyadi et al., 2012; Nugraha, 2012; Pranoto et al., 2006; Rosdiana et al., 2014; Suroyo & Handayani, 2014; Wantu & Moonti, 2016). The various studies stated that limited human resources, inadequate infrastructure, and bad institutional management became crucial problems. Rosdiana et al. (2014) emphasize that the lack of government attention to the development of agropolitan areas was rooted in a lack of coordination between central and regional government agencies, a lack of fiscal policy support. Consequently, it seems that agropolitan programs had been only the responsibility of the implementing regions.

Other constraints affecting agropolitan development include the lack of synergy in rural-urban development. The progress of cities as centers of growth has not provided a trickle-down effect but instead has a backwash effect from the surrounding areas due to the free access to rural areas. The urban elites with their big companies are motivated to exploit the existing resources in the village. The village community itself is helpless due to weak human and institutional resources, so that the exploiters have a higher bargaining position either politically or economically. This condition eventually led to the backwash effect (Hariyadi et al., 2012).

The development of an agropolitan area in Indonesia is urgent when viewed from its competitive advantage, which is indicated by the availability of agricultural land and cheap labor, the formation of skills and knowledge in most farmers, the existing upstream and downstream networks, and the readiness of institutions (Djakapermana, 2003). Besides, the agropolitan concept puts forward the use of the local potential. There also supports the protection and development of local social culture (Djakapermana, 2003).

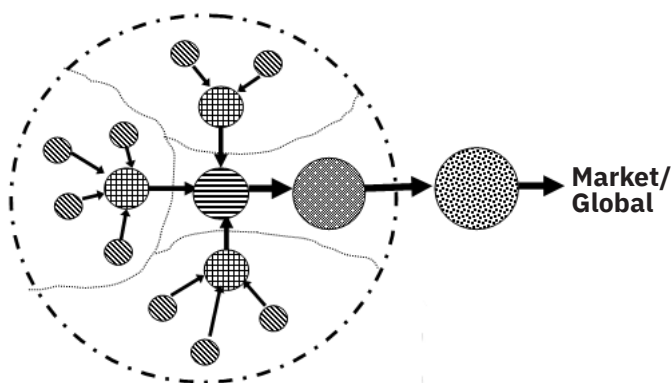


Figure 1. Agropolitan Area Development Model in Indonesia

Source: Djakapermana (2003)

Central Java is one of the provinces which is the location for the development of an agropolitan area. It is regulated in Regional Regulation No. 6/2010 concerning the Central Java Provincial Spatial Plan (RTRWP), namely the development of the strategic space from the point of view of economic growth and is one of the priorities in the Central Java Province Regional Long-Term Development Plan (RPJPD) 2005-2025. The development of agropolitan areas at the same time supports the development of integrated agricultural areas by the Governor's flagship program and the direction of the Central Java development policy set out in the 2018-2023 Regional Medium-Term Development Plan (RPJMD).

The agropolitan development program, was proposed by the Ministry of Public Works and Housing in 2002, collaborates with other ministries such as the Ministry of Agriculture and the Ministry of Rural Affairs, Provincial and Local Governments. The Ministry of Public Works and Housing (2012) states that the agropolitan area development mechanism consists of:

- (1) The Provincial Government proposes an area to be made an agropolitan area. The proposal must come from the Regency Government and have gone through identifying potentials and problems first and determined by the Regent/Mayor. Identification is intended to determine local conditions and potential (superior commodities).
- (2) The Central Government assesses the readiness of the location to be developed as an Agropolitan Area. The assessment is carried out based on the completeness of the administrative requirements and the potential location of the proposed area. Administrative requirements are in the form of planning documents consisting of a Location Decree, Working Group Decree, Masterplan, The Regional Medium-Term Development Plan (RPJM), and Detailed Engineering Design (DED).
- (3) Development of the proposed Agropolitan Area can be fulfilled if it meets the following conditions: (i) If the administrative completeness and potential of the proposed area have met the requirements in point; (ii). If all administrative completeness has not been fulfilled, but the proposed area has good potential, seen from the area's profile, this area will be allowed to complete it. If the period of 1 year has not been completed, development assistance funds for the following year will be temporarily suspended.

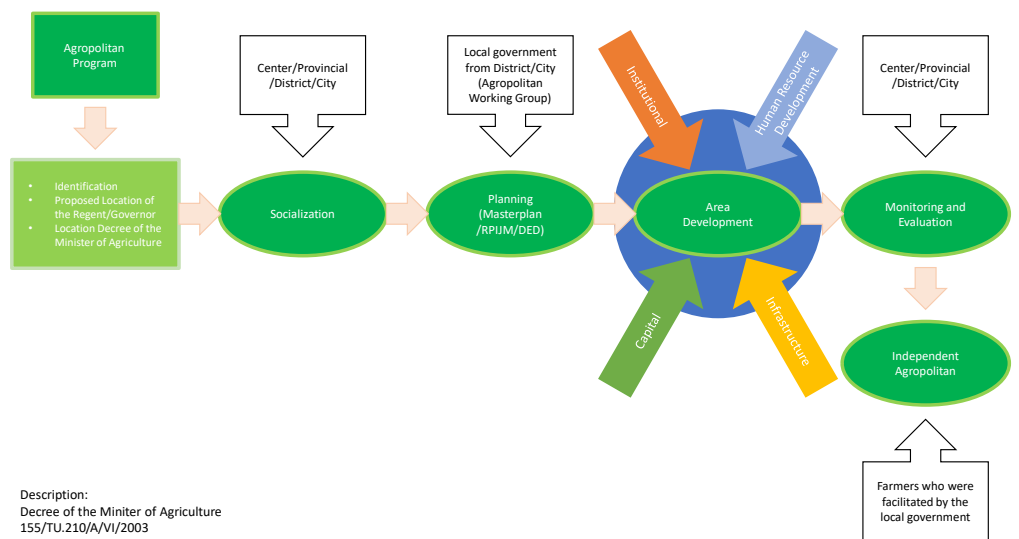


Figure 2. Agropolitan Organizing Mechanism

Source: The Ministry of Public Works and Housing

There have been at least 20 agropolitan areas in Central Java since the first implementation. In line with the decentralization policy, the program becomes the authority of the local government. The initial report from the regional development infrastructure department of Bappeda Province Central Java shows that not all agropolitan areas have had agribusiness sub-terminals. On another side, several agribusiness sub terminals have not been working correctly due to several obstacles.

Therefore, this study aims to evaluate the implementation of agropolitan in five regencies in Central Java Indonesia, namely Regency of Semarang, Brebes, Pemasang, Magelang, and Karanganyar. The locations represent the directions of agropolitan area development, following the Central Java Medium-term Development Plan (RPJMD) 2018-2023.

There were some obstacles because the agropolitan program had been implemented for more than 15 years, such as lack of supporting documents, key informants, and unclear asset management. Therefore, we divided evaluation into three variables, namely: planning, implementation, and program sustainability. Each

variable has several indicators to make it easier to evaluate. The planning variable indicated whether the planning process was carried out properly, starting from socialization, problem identification, availability of administrative documents, and budget, consisting of 6 indicators. Furthermore, the implementation variable assessed whether the available infrastructure worked as planned or not, consisting of 9 indicators. The last stage was sustainability to examine to what extent the programs continuously were seen from whether the infrastructure used was still both well managed and utilized by the community or not, consisting of 6 indicators.

2. Methods

The research was conducted from April to October 2019 in five regencies in Central Java, Indonesia, namely: Brebes, Semarang, Pemalang, Magelang, and Karanganyar. The sampling locations were selected purposively by considering: (i) regional development priorities on the Regional Medium-Term Development Plan, (ii) Agropolitan activities represented by the Agribusiness Sub-Terminal (STA) performance from developing (Pemalang, Magelang) and sufficiently developed (Karanganyar, Brebes) to undeveloped (Semarang); (iii) the availability of commodities that are specifically located and different from another region; (iv) the availability of complete of data and information, as well as key informants and secondary data.

The study used a mixed-method (qualitative and quantitative data), either primary or secondary data. Primary data collection was carried out in several stages: pre-survey (preliminary survey), Focus Group Discussion (FGD), and in-depth interviews. The pre-survey was carried out to obtain an overview of agropolitan implementation, to identify problems or constraints in agropolitan application in an area. FGD was carried out by involving various stakeholders related to agropolitan activities in the research location. In the third stage, data collection was carried out using a survey method. In-depth interviews were also conducted to examine the results of the previous FGDs further.

Secondary data, in the form of statistical data and reports on the implementation of agropolitan development, were obtained from various related agencies such as: Provincial and Regency Regional Planning and R & D Agency, District Agriculture Service, Agribusiness Terminal Station (STA) Management/Management in the observed Agropolitan area. Besides, various references to journals or previous research papers related to agropolitan activities.

Data were analyzed using scoring factors and described quantitatively and qualitatively. The scoring factor is the weighting of each variable and indicator used to evaluate the implementation of activities. The method of scoring (scoring factor) is a technique used to analyze data by measuring each indicator using a Likert scale. Agropolitan activities evaluated include three variables: planning, implementation, and sustainability. Each variable has several indicators that are analyzed using a Likert scale, with a value between 0 and 1. If these exist (implemented), it means 1; if it had been implemented but not optimal, it means 0.5; and if the indicator variable has never achieved, it scores 0. The assessment of the number of indicator values, indicator ratings, and variable weight values presented in Table 1. To calculate the indicator value, the total indicator value, and the indicator's assessment using the following formula:

$$\text{Indicator value} = \frac{\text{Assessment of indicators} \times \text{variable weights}}{100}$$

$$\text{Total of Indicator value} = \text{weight} \times \text{indicator value}$$

$$\text{Indicator assessment} = \frac{\text{Total Indicator Value}}{\text{Maximum number of Indicator Values}} \times 100$$

Table 1. Indicators for Evaluating the Implementation of Agropolitan Activities

Indicators	exist=1; exist but not optimal=0, 5; none=0	Weight per sub-indicator (%)	Weight per variable (%)	Total Weight (%) (if all indicators exist)
1. Planning			30	
2. Agropolitan Activities Socialization		10		$(10 \times 40) / 100 = 4$
3. FGD to identify problems		20		$(20 \times 40) / 100 = 8$
4. Decree on the establishment of an Agropolitan Working Group		20		$(15 \times 40) / 100 = 6$
5. An Agropolitan Area Master Plan		15		$(15 \times 40) / 100 = 6$
6. Agropolitan Mid-Term Development Plan		15		$(20 \times 40) / 100 = 8$
7. Budget Support		20		$(20 \times 40) / 100 = 8$
Total Weight I		100		40
Implementation			30	
1. Determination of the City of Farmers		15		$(15 \times 30) / 100 = 4,5$
2. Agribusiness Sub Terminal (STA) Development		15		$(15 \times 30) / 100 = 4,5$
3. STA management formation		15		$(15 \times 30) / 100 = 4,5$
4. Village road construction		15		$(15 \times 30) / 100 = 4,5$
5. Construction of supporting facilities for STA		10		$(10 \times 30) / 100 = 3$
6. Providing technology assistance		15		$(15 \times 30) / 100 = 4,5$
7. Evaluation and Monitoring		15		$(15 \times 30) / 100 = 4,5$
Total Weight II		100		30
Sustainability			40	
1. Determination of the City of Farmers		10		$(10 \times 30) / 100 = 3$
2. Agribusiness Sub Terminal (STA) Development		15		$(15 \times 30) / 100 = 4,5$
3. STA management formation		10		$(15 \times 30) / 100 = 4,5$
4. Village road construction		10		$(10 \times 30) / 100 = 3$
5. Construction of supporting facilities for STA		10		$(10 \times 30) / 100 = 3$
6. Providing technology assistance		15		$(15 \times 30) / 100 = 4,5$
7. There is still a budget for activities		10		$(15 \times 30) / 100 = 4,5$
8. monitoring & reporting		10		$(10 \times 30) / 100 = 3$
9. The increasing development of community agribusiness activities in agropolitan areas		10		
Total Weight III		100		30
Total Bobot			100	100

Assessment indicators are used to evaluate the extent of agropolitan implementation in the research area with the following assessment categories:

1. Planning and implementation variables, categorized as: a) Less: $0 \leq x \leq 10$; b) Medium: $10 < x \leq 20$; and c) Good: > 20 ;

2. The sustainability variables are categorized as: a) Less: $0 \leq x \leq 15$; b) Medium: $15 < x \leq 30$; and c) High: $x > 30$;
3. Overall evaluation results are categorized as: a) Less: $0 \leq x \leq 35$; b) Medium: $35 < x \leq 70$; and c) Good: $x > 70$.

3. Results and Discussion

3.1. Agropolitan Condition in Study Areas

Agropolitan areas had been developed together with minapolitan areas. While agropolitan areas focused on agricultural commodities, the minapolitan area focused on fishery commodities. The agropolitan and minapolitan program had been conducted from 2003 to 2013. There are at least 20 agropolitan and minapolitan areas developed in Central Java. However, this study focuses only on agropolitan programs, specifically in five agropolitan areas: Brebes, Pemalang, Semarang, Karanganyar, and Magelang. The agropolitan implementation in every area is as follows:

1) Brebes

The initial initiative for Agropolitan development in Brebes District was started in 2005. The initiative came from the Central Government through The Settlement and Spatial Planning Office of Central Java Province. The Central Government has provided the funding to build infrastructures such as roads, sub-terminal agribusiness, and other supporting activities. The construction of infrastructure was carried out from 2007 to 2010.

The Government of Brebes Regency has developed the agropolitan area in two stages. The first stage is the development of the Jalabaritangkas Agropolitan Areas. The Jalabaritangkas areas was started to develop in 2007 covering Jatibarang, Larangan, Bulakamba, Wanasari, Ketanggungan, Bantarkawung and Songgom Districts. These sub-district areas are KSP (Production Center Areas) and KTU (Main Farm City) in Larangan District. The Pasir Buto Agropolitan Areas were developed in 2011 covering the Pasirbuto District (Paguyangan, Sirampog, Bumiayu, and Tonjong).

The regional Government supported the development of agropolitan areas through the Regional Regulation of Brebes Regency No. 2 of 2011 concerning the Spatial Plans of Brebes Regency for 2010-2030. Aside from developing the Jalabaritangkas and Pasir Buto Agropolitan Areas, the Government started to develop the processing industry of agricultural products. This paper evaluates mainly Jalabaritangkas Agropolitan Areas.

Align with infrastructure construction, and the Government took the first step to strengthen the farmer institutions. The farmer institutions were strengthened by forming Jalabaritangkas Agropolitan Farmer Association (PPAJ). PPAJ is in Main Farm City (Larangan Village, Larangan District). This association consists of farmers, farmer groups and associations of farmer groups (Gapoktan) in Jatibarang, Larangan Bulakamba, Wanasari, Ketanggungan, Bantarkawung and Songgom sub-districts. The formation of this association was expected to foster an active role of the community in developing Brebes Regency. Additionally, by having a group, the farmers could sell their products together and improve their bargaining position as price takers.

To facilitate farmers in marketing their products, the program also developed an agribusiness sub-terminal (STA). In 2009, PPAJ was given the authority to manage STA Jalabaritangkas. PPAJ subsequently formed organizational units, namely the STA Traders Union and the STA Workers Union. This association periodically builds communication, recording the circulation of goods from and to the STA, including the origin, tonnage, and marketing purpose. The STA manager does not carry out agribusiness activities but is carried out by the association.

The Agropolitan Working Groups (Pokja Agropolitan) in the Provincial Level and the Directorate General for Processing and Marketing of Agricultural Products, Ministry of

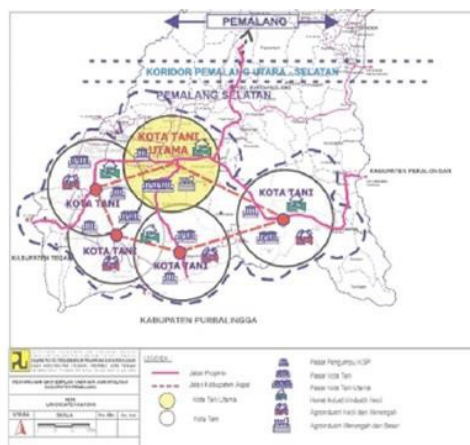


Figure 3. The Master Plan of Agropolitan Program in Pemalang District

Agriculture started to open networks between different STAs. However, this activity was not successful. Another activity was carried out to wider the marketing of the products in the STAs by opening market networks with traditional markets around the STA and industrial importers, such as PT Comeksindo, PT Alamanda, PASKOMNAS, and PT. Tonto.

Through the Office for Agriculture and Food Security of Brebes District, the local government has also given their effort to improve the capacity of the human resources of farmers. The improving capacity was conducted through some training from cultivation, post-harvest, processing of food until marketing. The training was also included:

1. Internship at STA Sewukan, Magelang Regency
2. Apprenticeship at the Kramatjati Main Market
3. Supply Chain Management (SCM) training for farmers

Until this study began, the agropolitan program was still implemented either implicitly or explicitly since it was still stated in the Mid-Term and Long-Term Planning Development Program of Brebes District (RPJMD 2012-2017 and RPJMD 2017-2022). However, the agropolitan program implemented was not as expected.

Different agencies in Brebes District did not work together in developing agropolitan areas since the Agropolitan Working Group was not working anymore. The STA was handled by the Office for Agricultural and Food Security of Brebes District. Meanwhile, the Office for Cooperatives, Micro Business and Trade has opened another market that almost like STA. According to one of the Cooperative, Micro Business, and Trade Office officers, the STA location was not strategically located. Thus, it wasn't easy to promote the products, and not many traders and consumers came to the STA. Fortunately, PPAJ was still handling the STA management with assistance from the Agricultural Office of Brebes Regency and the local extension workers. The STA still has the facilities such as offices, warehouses, booths, prayer rooms, toilet facilities, and drying floors. Until now, STA has still facilitated the members of PPAJ for selling onions and using the drying floor, as well as the traders to buy or sell onions. The STA has still operated and produced some income for local government. However, the role of STA still needs to be optimized through improving infrastructure such as storage and increasing the capacity of management, and opening networks with big traders or wholesalers.

2) Pemalang

The development of Agropolitan Areas in the Pemalang Regency was started in 2003. Pemalang Regency had been designated as the implementer or the pilot program according to the Decree of the Minister of Agriculture Number: 321/PU/210/A/10/2002 dated October 15, 2002. The agropolitan areas in Pemalang was known as Waliksarimadu Agropolitan Areas (KAW). Development of KAW was aimed to (1)

develop the agribusiness of food crops, plantations, forestry, animal husbandry, fisheries as well as to increase added value and product competitiveness; (2) utilize agribusiness resources and opportunities; (3) improve the capacity of human resources; (4) increase the contribution of KAW to local government's income (PAD) and reallocate their position in the market either in national or global markets.

The priority activities carried out were to develop KAW agribusiness. The development of KAW agribusiness started from determining the main commodities produced in Production Center Areas (KSP), facilitating cooperatives for agricultural inputs, developing agricultural processing industries accompanied by counseling, providing credit to improve technology, developing business partnerships between farmers, managing input production, and agro-industry. Other facilities built were information centers, R & D institutes for agriculture, agribusiness high schools, agricultural commodity cooperatives, insemination centers, seed centers, banking to facilitate the community at KAW in developing their agribusiness activities.

KAW is in the southern part of the Pemalang Regency or on the slopes of Slamet Mountain. Since it is in the highlands, the agro-ecosystem and agro-climate of the agropolitan areas are suitable for developing various agricultural commodities, including food crops, vegetables, fruit, livestock, and fisheries. The main agricultural products of Waliksarimadu Agropolitan Areas were chilies and beef cattle.

KAW consists of six districts namely: Watukumpul, Warungpring, Belik, Pulosari, Moga and Randudongkal districts. These sub-districts are the farming cities, while Randudongkal District is the main farming city. Each sub-district has an agricultural center area (KSP) and will be centered in the sub-district capital as the center of a farming city. The products from the farmer city or the satellite areas will be gathered in the sub-district capital or the main farming city (Randudongkal District). Figure 4.9. presenting the Waliksarimadu Masterplan for the agropolitan area of Pemalang Regency.

KAW Pilot Project has been started from 2003 to 2010. Overall, the largest funding comes from local government/APBD II (44.62%), central government/APBN at 38.14%, and provincial government /APBD I at 17.23%. KAW was funded by de-concentration funding since 2007. Every institution at the provincial and district level implemented their tasks according to their roles and shares of funding.

During the implementation of the program, several infrastructure facilities have been built from 2003 to 2010. The facilities built were Office for Agricultural Extension (BPP), seed garden in Cibelok, Taman, Randudongkal, Sirandu; Green Houses for nursery in Banyumudal Village and Gombong Village; water reservoirs; Agribusiness Sub Terminal (STA), Horticulture Shelter, and two warehouses; Slaughterhouses (RPH) in Randudongkal and Moga Districts.

The program has improved the quality of human resources and farmer institutions through training, developing farmer groups or associations for cloves, coffee, and horticulture. Developing a network for marketing was the outcome of the program. The agropolitan has opened market opportunities to sell the products to CV. Corona, ABC (chilies), Indofood (potatoes), supermarkets in Yogyakarta and Bandung (tomatoes, chilies, and peppers), and other traditional markets in the region and Jakarta.

STA is one of the marketing instruments built in the farmer city area. KAW has an STA located in Gombong Village, Belik District. Until this research was conducted, all facilities in the STA were still used by farmers in Sodong Village. Other farmers in the surrounding villages have not been used the STA since it was built. According to one of the respondents in the Horticultural Farmers Association (APPH), since the beginning of the establishment, the STA was handled by APPH. The APPH has cooperated with Indofood and PT. ABC to store their chilly production to the company. The prices of the chilly have been set up with a certain grade. This was one of the reasons for farmers not selling their agricultural products in STA. Meanwhile, farmers also produce not only chili but also other agricultural commodities.

Other problems were related to farmers' tradition to sell their product on the on-farm or in their land plantation and other markets around the STA. Farmers were

hesitant to sell their products to the STA since they must spend additional costs for transportation. If they must sell their products in the STA, they prefer to sell it to the nearest market in Gombong Market and Kutabawa STA in Pratin, Purbalingga Regency. In these markets, farmers could sell many agricultural products, and they could get better prices compared to the prices set up by the STA. Additionally, several conflicts happened among members that made the traders reluctant to come to the STA.

Other facilities such as greenhouses have been neglected. Initially, the greenhouses have been predicted to be successful, and it has even had a collaboration with Owabong and Goa Lawa tourism. Commodities planted in the greenhouses were strawberries, peppers, and tomatoes. However, since the constructions were not adjusted to the local conditions, the greenhouses were destroyed because of the winds and they could not be used again. In the mid of 2019, the Guyub Lestari farmer group took the initiative to develop the greenhouses again and plant them with cabbage, tomatoes, and strawberries.

3) Semarang

The agropolitan area in Semarang Regency is the first agropolitan area established in Central Java Province. The agropolitan area in Semarang Regency was developed in Candigarón according to the Decree of the Minister of Agriculture Number 321/TU.210/A/X/2002 on October 15, 2002. The agropolitan area in Semarang Regency consists of Candigarón Village and its 7 (seven) hinterland villages (Kebon Agung, Ngadikerso, Lanjan, Kemitir, Pledokan, Duren and Trayu). The development of agropolitan areas was also supported by local government through the Decree of Central Java Governor Number 520/12/2004 on April 4, 2004, and the Decree of Semarang Regency Number 050/0007/2003 on January 29, 2003. According to the regulation, the government at the provincial level constructed the facilities and infrastructure to support Agropolitan areas from 2003 to 2009.



Figure 4. The Master Plan of Agropolitan Program in Semarang District

On the other hand, the Semarang Regency Government also took the initiative to develop an agropolitan area with broader coverage. According to the Semarang Regency Regional Development Policy in 2003, agropolitan areas were developed at KAPET (Integrated Economic Development Zone) Bandungan to support INTANPARI development (Industry, Agriculture, Tourism), and Candigarón was included in the zone. Other areas in the Kapet Bandungan Agropolitan Areas are Sumowono, Bandungan, and Jimbaran. The areas were selected since those areas have their potential products. Candigarón was well known for its coffee, while Sumowono produced vegetables. Bandungan and Jimbaran have potential in the agro-industry and tourism.

Although the Government of Semarang Regency has developed its agropolitan areas, the government at the provincial level and the central government only recognized Candigarón Agropolitan Areas and focused their funding and assistance in the areas.

The difference in orientation between Central and Provincial Governments and the Semarang Regency Government have led to problems in the development of

Candigaron. According to the observation during the research, the agropolitan program in Candigaron did not leave any evidence except the neglected building of STA Candigaron. The STA was initially a market for coffee and its products. Farmers from the surrounding could sell their coffee in the STA, and the buyer would buy the coffee in the STA. However, since the farmers produced it only once a year, the STA could not operate daily. Meanwhile, Candigaron and the hinterland still have other potential resources: biopharma (ginger), cinnamon, palm sugar, bananas, maize, cassava, and vegetables could not sell in the STA.

Other problems with the development of Agropolitan in Candigaron were the lack of support from the district and local government. The local government was never involved in the planning stage of the agropolitan program and STA. Some conflicts between the head of the STA, the local government, and the community, as well as lack of support from the district government, have made the STA and agropolitan development in Candigaron seemed never to exist.

4) Karanganyar

The Agropolitan program in Karanganyar Regency was initiated in 2004. Karanganyar Regency was selected in the agropolitan program based on the meeting held at the provincial level on July 7, 2004. Afterward, the District Government started to identify the location in August 2004.

The agropolitan areas were then stated in the Regulation of the Karanganyar Regent Number 521/433, December 2, 2005. By considering the potential of the area in agricultural and tourism, there were five sub-districts selected, namely: Ngargoyoso, Jenawi, Tawangmangu, Karangpandan, and Matesih. Those areas were then known as SUTHOMADANSIH (Sukuh, Cetho, Tawangmangu, Karangpandan, and Matesih). The agropolitan areas covered 25,183.1 hectares and consisted of main agricultural cities surrounded by the hinterlands. According to the regulation, carrots has been selected as the main agricultural commodity produced, while farmers in the areas also produced other commodities such as biopharmaca (medicinal plants), vegetables, duku, salak, lawu, durian, bananas, strawberries, ornamental plants, yams, fish, and tomatoes.

To support and accelerate the development of agropolitan areas, there were some supporting facilities built, namely: road facilities to connect the main agricultural city to the capital city, market institutions (STA), offices, telecommunications, electricity, and clean water facilities.

The development of agropolitan areas in the Karanganyar Regency had been implemented from 2004 to 2010. After 2010, the agropolitan program was never heard again align with the changes of government and the focus of policies at the central level. Although the program has already stopped, some facilities built such as roads are still used, and farmers are still received agricultural assistance (cultivation technology, post-harvest handling).



Figure 5. The Carrot Washing Machine and the sub-STA building in Berjo, Ngargoyoso

The sub-STA in Berjo, Ngargoyoso Subdistrict and Jumog, Gumeng Village, Jenawi Subdistrict, and Watusambang, Karangpandan Subdistrict was still used although only by one or two traders. The carrot washing machine has still functioned, but it needed some services.

The STA in the main agricultural city is in Karangpandan District. The building is strategically located along with the highway and tourist places. However, all facilities built except for the carrot washing machine are no longer used. Eight flower stalls have now been damaged and used for food traders. Although the condition was not good, The STA still contributes to the local government's income, and the STA could survive paying the electricity and other costs from the food traders' monthly rent.

5) *Magelang*

There are three agropolitan areas in Magelang Regency, namely: Merapi-Merbabu Agropolitan Areas, Borobudur Agropolitan Areas and Sumbing Agropolitan Areas. Merapi Merbabu Agropolitan was developed from 2003 to 2008. The Merapi-Merbabu Agropolitan Areas cover seven districts, namely Pakis, Candimulyo, Sawangan, Ngablak, Tegalrejo, Dukun and Grabag Districts. These areas are part of the 2010-2030 Regional Spatial Plan for the Magelang Regency. Ngablak Subdistrict was selected as the central Farmer City, while Sawangan sub-village and Tegalrejo Districts as Farmers City; Pakis, Grabag, and Candimulyo Districts as the hinterland region. Although there were three agropolitan areas, Merapi-Merbabu Agropolitan areas are the most successful STA compared to others.

Merapi-Merbabu Agropolitan Areas were developed from the sharing funds between central, provincial, and district governments. The development of Merapi-Merbabu agropolitan areas was started in 2004. The funding from the district government was used to finance many agricultural activities, such as the establishment of agribusiness associations and agribusiness development for beef cattle, grabag, and potato nursery.

In 2005, the agribusiness development in the Merapi-Merbabu areas was supported by funding from the central and district government. By using the financing, the STA and some other agricultural facilities could be developed. In 2006, another funding came and was then used for developing road infrastructure in the village, constructing the STA in Ngablak, improving farming roads, and providing composting tools.

When the research was conducted, many people interviewed did not understand the concept of agropolitan. However, when it came to the STA, they realized that the STA was part of the agropolitan program. One of the STAs built in Magelang is Sewukan STA. The STA was built in the location of Sewukan Village Market. The village market was developed according to Mr. H. Riswanto Sudiyono, as the head of the village at that period. The establishment of STA in the Sewukan village market was approved by the community in 2003. The Sewukan Village Market was built with 48 stalls and 56 market stalls.

The STA in Sewukan is different from other STAs. In Sewukan, many vegetable commodities are offered. Meanwhile, in other districts, the STA usually offered the main commodity produced by farmers in the areas. Since the STA offered different kinds of vegetables, the STA could still operate until now. Many facilities of the STA have been constructed, such as the loading and unloading area, an entrance and parking area, a prayer room, an entrance to the east of the main gate, an organic waste processing building, and others.

The Sewukan STA was supported by the Sewukan Village Government, and it is still supervised and assisted by the District Government. The Sewukan STA is managed by a Chair appointed by the Sewukan Village Government and accompanied by a treasurer, secretary, and several field workers. STA Sewukan contributes to the Revenue (PAD) of Magelang Regency by 20% of gross income.

STA Sewukan is now developing into a marketplace to sell agricultural products produced by farmers from the surroundings of the STA and other places such as the

Wonosobo Regency (Dieng), Magelang Regency (Tawangmangu), Semarang Regency (Bandungan, Jimbaran, Sumowono), Salatiga City (Kopeng). The consumers of the STA are traders that come from Magetan, Solo, Klaten, Special Region of Yogyakarta, Boyolali, Semarang, Bogor, Jakarta and Purwokerto. Initially, only eight types of vegetables were traded, and now they have grown to 33 classes.

3.2. Evaluation of Agropolitan Program

Evaluation of agropolitan implementation would be seen from planning, implementation, and sustainability aspects in every district. The evaluation is described in Table 2, Table 3, and Table 4, respectively.

Table 2. Agropolitan Planning Evaluation

Indicators	Regencies				
	Brb	Pmlg	Smerg	Kry	Mgl
1. Agropolitan Activities Socialization	3	3	1.5	0	1.5
2. FGD to identify problems	6	6	3	3	6
3. Decree on the establishment of an Agropolitan Working Group	6	6	6	6	6
4. Master Plan on Agropolitan Area	2.25	4.5	2.25	4.5	4.5
5. Agropolitan Mid-Term Development Plan	4.5	4.5	4.5	4.5	4.5
6. Budget Support	3	6	6	6	6
Total	27	30	23.25	24	30

Source: Primary data, 2019

Table 2 illustrates the agropolitan evaluation in the planning aspect. The planning aspect is important in the success of a program. Hutagalung and Hermawan (2018) showed that a well-designed program would determine the program's success, including the program's sustainability in the future. Therefore, planning documents such as the master plan and the mid-term development program have become two indicators evaluated in this paper.

In the planning aspect, six indicators are assessed, including program socialization, problem identification, document availability, and budget availability. Overall, both Pemalang and Magelang Regencies had the highest score (30), while Karanganyar Regency had the lowest score (23.25). Almost all districts were conducted socialization activities, although some were not optimal, for example, in Semarang and Magelang Districts. There was no socialization conducted in Karanganyar District.

According to Table 2, the Decree on the Establishment of an Agropolitan Working Group was available in all locations. The compilation of the Master Plan for Agropolitan Areas in Pemalang, Karanganyar, and Magelang Districts was still well documented. In Brebes and Semarang Districts, there were no documents related to agropolitan. In all locations, the agropolitan area development had been stated in the planning document during that period. The agropolitan program has still being funded by the regional government except in Brebes Regency.

The second stage (Table 3) of the evaluation of the agropolitan program was focused on the implementation of activities. The indicators to assess the implementation phase are the construction of various facilities or infrastructure that support the agropolitan area, as mentioned in the Master Plan of the program or the report. Overall, both Karanganyar and Magelang Regencies had the highest score (30), followed by Pemalang and Semarang Regencies (27.75), and the lowest was Brebes Regency (21.75).

Table 3. The Evaluation of Agropolitan Implementation

Indicators	Regencies				
	Brb	Pmlg	Smrg	Kry	Mgl
1. The Selection of the City of Farmers	4.5	4.5	4.5	4.5	4.5
2. Agribusiness Sub Terminal (STA) Development	4.5	2.25	4.5	4.5	4.5
3. STA management formation	4.5	4.5	2.25	4.5	4.5
4. Village road construction	2.25	4.5	4.5	4.5	4.5
5. Construction of supporting facilities for STA	1.5	3	3	3	3
6. Providing technology assistance	2.25	4.5	4.5	4.5	4.5
7. Evaluation and Monitoring	2.25	4.5	4.5	4.5	4.5
Total	21.75	27.75	27.75	30	30

Source: Primary data, 2019

The third indicator (Table 4) measured was sustainability. Sustainability in the project or program was defined as the continuation of the project or program activities after the project or the program stopped (Savaya & Spiro, 2011; Scheirer & Dearing, 2011; Stirman et al., 2012). In the aspect of program sustainability, Magelang Regency has the highest score (36), followed by Pemalang (29), Semarang (22), Karanganyar (21), and Brebes Regencies (20). The function of the farm cities was still running optimally in Semarang and Karanganyar. STA in Magelang Regency has grown rapidly and has become the center of the vegetable market at the national level. While the STA in Pemalang, Brebes, and Karanganyar Regencies was still operated, but the operation was not optimal, and STA in Semarang Regency was no longer operated. Most infrastructure facilities built, such as farm roads, were still functioning except in Karanganyar Regency. Some farm roads built in Karanganyar that were connecting some villages, severely damaged. On the other hand, the local government did not have any concern to repair them.

Table 4. Evaluation of Agropolitan Sustainability

Indicators	Regencies				
	Brb	Pmlg	Smrg	Kry	Mgl
1. Determination of the City of Farmers	4.5	4.5	4.5	4.5	4.5
2. STA's Development	4.5	2.25	4.5	4.5	4.5
3. STA management formation	4.5	4.5	2.25	4.5	4.5
4. Village road construction	2.25	4.5	4.5	4.5	4.5
5. Construction of supporting facilities for STA	1.5	3	3	3	3
6. The provision of technology assistance	2.25	4.5	4.5	4.5	4.5
7. Available budget for activities	3	4	4	0	6
8. monitoring & documents	2	2	2	0	4
9. The increasing development of community agribusiness activities in agropolitan areas	0	4	4	4	0
Total	20	29	22	21	36

Source: Primary data, 2019

Table 5. Summary of Evaluation of the Implementation of the Agropolitan Program

Indicators	Regencies				
	Brb	Pmlg	Smrg	Kry	Mgl
1. Planning	30	27	30	23.25	24
2. Implementation	30	21.5	27.75	27.75	30
3. Sustainability	40	20	29	22	21
Total	100	68.50	86.75	73	75

Note: evaluation category: $0 \leq x \leq 35$ = less; $35 < x \leq 70$ = moderate; > 70 = good

Source: Primary data, 2019

Technological assistances, in general, have continually been used, although not all of them are used optimally. Most facilities and infrastructure for agropolitan development have not been running optimally in all locations. The monitoring and reporting have worked, although these were not optimal. Furthermore, the agropolitan program has been constantly contained in planning documents in four districts except for Karanganyar.

The study results indicate that, in general, the implementation of agropolitan activities is in a GOOD category. This is indicated by the value of planning and implementation indicators for agropolitan activities in the GOOD category or above 20. However, when evaluated for the level of sustainability, most agropolitan areas are in the MEDIUM category ($15 < x \leq 30$), except for Magelang, which is in the GOOD category (> 30).

The idea of the agropolitan program is to minimize the gap between the city and countryside and thus, could bring welfare to people in the rural areas. Therefore, the countryside should follow the way the city developed their areas. The countryside should have the central city as the center for every activity especially agricultural activity. The main city would be supported by hinterlands surrounding the main city. These hinterlands would provide agricultural products to sell in the main city of the countryside. To accelerate the development of the agropolitan areas, massive construction facilities were built.

However, this idea of the agropolitan program was not easy to achieve. The facilities constructed could not change the countryside to be a city as previously targeted instantly. There are some reasons why the idea could not be achieved. First, the agropolitan program in Central Java seemed to be a top-down program. The central government designed the program and the location/district was determined by the government at the provincial level. Therefore, the initiative was not from the aspirations of the district. This was supported by the information that came from one of the official report documents of Bappeda Karanganyar. The document explained that the agropolitan program in Karangnyar was implemented according to the initiative from the Regional Development Planning, Research and Development Agency (Bappeda) of Central Java.

Since the program was a top-down program, it affects the program's sustainability, while there is a program that has been implemented through a bottom-up approach (Saleh et al., 2017). A top-down program is usually implemented without considering the needs of the community. Meanwhile, the construction of public goods without considering the community's needs usually leads to market failure or the neglected facilities by the community (Wicaksono, 2012a). Although there was socialization, and the facilities were neglected without any maintenance. Therefore, it is important to consider the involvement of the local government and the community in the whole stage of the program, from planning to evaluation. According to Savaya & Spiro (2011), there was a significantly different performance of community involvement and perceived to the community involvement in the continued and non-continued

program. The continued project has a higher community involvement compared to one of the non-continued projects.

Second, the unsuccessful program was caused by a lack of supports and assistance from the government, specifically the local government. Similar results came from [Vitriana \(2019\)](#) that mentioned the difficulties or the failure of handling the housing infrastructure, facility, and utility in Greater Bandung Area were mainly caused by the inadequacy of the local government in planning, implementing, and supervising the housing PSU.

Although there were Agropolitan Working Group formed, this working group did not run as planned. Every institution involved worked independently, without any cooperation. As a result, the agribusiness system could not be developed in the areas. [Rosidawati \(2015\)](#) studied the agropolitan area development strategy in Bandung which was well known as Bandung Integrated Economic Development Area (KAPET) in Semarang Regency. [Rosidawati \(2015\)](#) explained that the development of the KAPET Agropolitan areas was stagnant or could not develop further since the agribusiness sub-systems were not running according to their function.

Therefore, a working group consisted of different sectors of government to assist the development of the program is important. Every sector should cooperate and put aside its sectoral ego. Therefore, the assistance delivered to the implementer of the program would be integrated and could reach wider beneficiaries. The assistance needed sometimes does not have to be in the form of funding. Sometimes the beneficiaries only required the attention and intensive mentoring to support or motivate them in maintaining the implementation of the program or the facilities.

Third, to maintain the sustainability of the program, there should be an exit strategy. This exit strategy could be developing an institution that could maintain the operation of the facilities constructed. According to [Savaya & Spiro \(2011\)](#), financial and human factors are necessary for the sustainability of the programs. The diversity of funding sources and the involvement of the organization's management and the main initial funder are important in maintaining the program's sustainability. [Adhayanto et al. \(2019\)](#), through their study on utilizing the 2018 Village Funds in Bintan District and Lingga District, highlighted the importance of developing human resources to maintaining and managing the village funds after the program stopped. Most development projects or programs sometimes gave or constructed many physical facilities without developing the human resources to operate the facilities and left the physical facilities neglected. Therefore, developing human resources could be one of the exit strategies to maintain the program's sustainability.

In the Agropolitan development program, the government seemed to be missed in developing this exit strategy. Therefore, the facilities constructed were not optimally used anymore. Agribusiness sub-terminal facilities built mostly neglected except in Magelang and Brebes. STA in Magelang was fortunate since the STA was built in the village market location. The STA has been operated according to the needs of surrounding communities and has already had an institution to operate the STA.

The program's unsustainability was also caused by inconsistencies between central and regional government policies. For example, in Semarang Regency, the agropolitan area developed by the district was not supported by the central and provincial institutions. Meanwhile, the priority agropolitan area of the Central and Provincial Governments, namely Candigaron, had become unclear both institutional and asset management after the delegation of authority. According to [Simanjutak \(2015\)](#), Weak supervision and lack of enforcement are crucial in the relationship between decentralization and regional autonomy actors. Changes in the institutions of decentralization and regional autonomy have resulted in unclear who is the principal and who is given authority or represents (agent). Because institutional disharmony often occurs and creates bottlenecks for the implementation of good governance.

Moreover, decentralization has caused several problems ([Wicaksono, 2012b](#)). Hence, agropolitan policy synergy and development of the local economy are very important ([Basuki, 2012](#); [Iqbal & Anugrah, 2009](#)). Agricultural development policies

in the form of agropolitan programs can have an impact on the economic and social conditions of the community (Sakir et al., 2017).

Forth, one of the facilities was built as a terminal to sell the main commodities produced by surrounding communities. The objective of the STA was to shorten the marketing channel between producers (farmers) and consumers (wholesalers, retailers, and end consumers). However, in the implementation, commodities produced by the surrounding communities have changed gradually. Some farmers still produced the commodity, but there was not much. Moreover, the main commodity could only be produced according to the planting season. Therefore, the main commodity could not be available all the time, and STA could not be operated for the whole year.

STAs in Brebes and Pemalang are examples. Those two STAs only sold specific commodities such as shallots in Brebes and chili in Pemalang. Since the commodities are seasonal, the STA could not be operated for the whole year. Therefore, the STA seemed to be neglected in the off-season. Those two STAs are different from the STA in Magelang. The STA in Magelang could sell a different kind of vegetables, and thus, the STA could operate for the whole year. The flexibility of STA to adjust to gradual community changes needs to be assisted by the government, especially local government. Therefore, the involvement of the local government as a facilitator is important if the program would likely to sustainable.

Although the objective of the agropolitan seemed to be unsuccessful in achieving, there are still some benefits received by the communities in the agropolitan areas. First, the agropolitan program has given opportunities for the communities to be exposed at the national and provincial levels. Some facilities are given, such as roads to connect between areas, have opened the access of farmers to a wider market. Second, the communities in the agropolitan areas have received many agricultural technologies either in the form of physical technologies or cultivation technologies. These kinds of assistance have been lasting up to now.

Finally, the indicators of sustainability mentioned in the results section showed that the sustainability of the agropolitan program is in the medium category. There are still opportunities to sustain the benefits of the agropolitan program in certain areas. Agropolitan development requires a commitment on the part of national elites (Friedmann, 1985). Moreover, the provincial government still prioritizes the agropolitan program as one of the development agendas. The idea of the agropolitan program could be achieved by starting to involve all stakeholders from the government (local to the provincial level) to farmers in the planning, implementation, and evaluation of the program. Reactivating the Agropolitan Working Group and developing an institution to assist in sustaining the agropolitan facilities and programs are also another way of improving the implementation and the sustainability of agropolitan programs in the future.

4. Conclusion

The results of the study showed that in terms of projects, the implementation of agropolitan activities was in a GOOD category. Still, in terms of sustainability, it was in the MEDIUM category. This is due to (a) the characteristic of the program, which was a top-down program; (b) lack of supports and assistance from the government, specifically local government; (c) unavailable exit strategy developed; and (d) the inflexibility of STA to sell different commodities than the main commodity. Although the agropolitan seemed to be unsuccessful, the communities in the agropolitan areas have received benefits such as the improvement in facilities and technological innovation introduced, especially in the agricultural sector. As Agropolitan is still one of the priorities of the Central Java Government, it is recommended to involve all stakeholders in the whole stage of programs from planning to evaluation, optimize or reactivate the Agropolitan working group, develop an institution that could sustainably implement the programs and the facilities, as well as increase human resource capacity.

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