

DEVELOPMENT PATTERN OF KAMPUNG AGRO INNOVATION SYSTEM IN BANJAR CITY

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ABSTRACT

The agribusiness sector which collaborates with the tourism sector is one of the solutions in the improvement effort of Indonesia's economy. There are various ways to unite the agribusiness and tourism sectors, one of which is the development of tourism villages. Kampung Agro is a tourist village in Banjar City that allows visitors to learn to choose and pick their ready-to-harvest honey star fruit which then can be consumed directly. However, various problems still hinder the development of Kampung Agro. The management of Agro Village still relies on traditional methods without involving any innovation or technology, mainly due to the lack of coordination with farmers and minimal involvement of various stakeholders. The development of Agro Village should be carried out through a collective effort involving various stakeholders who are involved in it. This study aims to construct the development pattern of the Kampung Agro innovation system in Banjar City. The research method used is a case study with a qualitative approach data obtained from primary and secondary sources. This study used the Soft System Methodology (SSM) analytical tool approach. The results showed that in the development of Kampung Agro it is necessary to apply a pattern that involves various parties, including managers, Banjar City Government, academics, business actors and the media to make various efforts through their duties and functions. The parties involved need to collaborate in the management of Agro Village through collective efforts by implementing various actions in accordance with recommended improvement measures. There is a need for support and involvement from the Banjar City Government, in the form of education, assistance policies, as well as mentoring and supervision.

Keywords: *carambolla honey, agro-tourism, kampung agro*

BACKGROUND

Horticulture is one of the rapidly growing sectors of Indonesian agriculture. One type of horticultural commodity cultivated in Indonesia is star fruit. Cahyono (2010) stated that the prospects for star fruit cultivation are excellent because people's preference for star fruit is increasing along with the increasing public awareness of the importance of meeting nutritional and nutritional needs sourced from fruits and the development of the fruit processing industry.

One area that has the potential for agribusiness development in West Java is Banjar City. Banjar City, a city at the eastern end of West Java Province, is directly adjacent to Cilacap Regency in Central Java Province. Access to Banjar City, which people from the two provinces can reach, gives Banjar City the potential for economic development, especially in the agribusiness sector. One

of the commodities widely cultivated in Banjar City is fruit commodities. Banjar City is famous for producing fruits such as California Papaya, Rambutan Sibatulawang, and honey star fruit.

Honey star fruit is one of the commodities planned to be superior in Banjar City. Star fruit began to focus on being developed by the Banjar City government. This is indicated by the Kampung Agro Program, which obliges the people of Banjar City, especially in Langensari Subdistrict, to plant at least one-star fruit tree in their yard (Banjar City Public Relations, 2018). Langensari Subdistrict became the center of star fruit commodities in Banjar City, shown by the high production amount compared to other products. Based on data from the Food Security, Agriculture, and Fisheries Office of Banjar City (2019), in 2018, star fruit production in Banjar City reached 338 quintals. It continued to increase until 2021, to which Langensari District predominantly contributed. This contribution places West Java in third place as a national star fruit-producing province in 2021.

Efforts to boost the growth of agribusiness quickly and dynamically in its development must prioritize more efficiency, productivity, and added value that has market competitiveness and continue to grow as much as possible community participation in integrally agribusiness activities (Maarif, 1996). The agribusiness system development strategy based on the utilization of resource diversity in each region (domestic resources based), accommodative to the diversity of human resource quality, accordingly, the agribusiness system development strategy will move towards the development of agribusiness driven by capital goods and more skilled human resources (capital driven), which will be able to shift to the agribusiness development process that is driven by science, technology, and skilled human resources (innovation-driven) so that it is believed to be able to deliver the Indonesian economy to have high competitiveness. According to Suprpto (2010), one of the agribusiness development strategies is utilizing appropriate environmentally sound innovation technology. This is in accordance with the goal of Sustainable Development Goals (SDGs) number nine-encouraging the growth of infrastructure, industry, and innovation. The agribusiness sector, which collaborates with the tourism sector, is one of the solutions in the improvement effort of Indonesia's economy. There are various ways to unite the agribusiness and tourism sectors, one of which is the development of tourism villages.

The innovation of the Kampung Agro Program, which has been on the run since 2019, has given a new color to star fruit agribusiness in Banjar City. Farmers and the people of Langensari Subdistrict, who have only earned income from the agricultural production sector, are now receiving additional income from the tourism sector. The attraction offered by Agro Village in Langensari Subdistrict is that visitors can learn to choose and pick ready-to-harvest honey star fruit which can be consumed directly on-site.

Kampung Agro innovation is something new; farmers' understanding of technological innovation certainly requires mental readiness until the decision-making process, which by then implemented through the perception process. The reality of the management and implementation of the Kampung Agro Program still has various problems and shortcomings. One of the emerging trends is the need for more community involvement in the management of Kampung Agro; so far, Kampung Agro has been managed by the Village Government through Village-Owned Enterprises (BUMDES). Furthermore, the lack of innovative approaches has slowed down the development of Agro Village. The collaboration between policymakers and the community is still not well-established, despite the fact that collaboration is the key to the success of an integrated system. Collaboration between policymakers and the community needs to be improved in efforts to develop Kampung Agro. In line with the statement of Mulyawan (2016), which states that community empowerment is a human

development approach that provides more significant space and opportunities for the community as subjects and beneficiaries of development outcomes following the problems, needs, and potentials of the local environment. To achieve this goal, various development efforts in the management of Kampung Agro must be made. What kind of development pattern is best applied to Agro Village? Who are the actors involved, and how can improvement efforts be made?. According to Swastika et al., (2017); Saputra et al., (2018); (Kurniasanti, 2019) agreed to state that in the development of agrotourism, it is necessary to improve the quality of human resources by involving the government and business actors as partners. Therefore, this study aims to construct the development pattern of the Kampung Agro innovation system in Banjar City.

RESEARCH METHODS

The research location was determined purposively in Kampung Agro, Waringinsari Village, Langensari Subdistrict, Banjar City, West Java. Implemented from September to December 2022. The selection of the research location was determined based on the consideration that the Kampung Agro in Waringinsari Village is the first tourist village in Banjar City. This study uses a qualitative approach. The qualitative approach is to explore and understand the meaning behind an individual or group in the occurring problem and to understand a phenomenon comprehended from the subject of the study (Creswell, 2019 and Moleong, 2016). The research method used is a case study. Case study is a method that analyzes and describes the object of research in the form of a phenomenon or an event in detail (Sugandi, 2008).

The data used in this study are primary data and secondary data. Primary data was collected through field observations and in-depth interviews with informants. The secondary data collected is in the form of information that supports and strengthens the primary data found in the field. Information was collected from 6 informants: star fruit farmers, star fruit processing traders, the Head of BUMDES Waringinsari, the Head of Waringinsari Village, the Field Agricultural Extension Officer (PPL) Langensari Subdistrict, the Head of Horticulture Division of Banjar City. The determination of informants was carried out purposively by the snowball sampling method. Snowball sampling is an informant determination technique where the number of informants will increase along with the information obtained (Sugiyono, 2019).

The data analysis used in this study is a Soft System Methodology (SSM) analysis. Soft system methodology is a systematic method of information system development using a structured approach to understand a problem, using conceptual methods, obtaining feasibility and desired changes, and implementing them (Sumadyo, 2016; Firdaus & Maarif, 2015). According to Checkland (2000), SSM (Soft Systems Methodology) consists of 7 steps, including: 1) Describing the problem based on the situation; 2) Depicting the problem based on the situation through a rich picture; 3) Defining the main relevant system (root definition) according to the CATWOE elements; 4) Building a conceptual system model described in the initial definition; 5) Comparing the conceptual model with the actual situation (real world); 6) Determining the changes to be implemented; 7) Identifying actions to improve the problem.

RESULT AND DISCUSSION

Profile of Kampung Agro Waringinsari Village

Kampung Agro is an agro-tourism village that focuses on honey star fruit cultivation business located in RT 06 and RT 07 Sukanagara Hamlet, Waringinsari Village, Langensari Subdistrict, Banjar City. Kampung Agro has an area of 1.65 km² and is located at an altitude of 25 meters above sea level. Waringinsari Village had a population of 9,681 in 2022, including 4,932 men and 4,749 women. Kampung Agro is directly bordered by Cilacap Regency to the north, Ciamis Regency to the south, Langensari Village and Muktisari Village to the west, and directly adjacent to Cilacap Regency to the east. The Banjar City Government initiated Kampung Agro in 2018, marked by the planting of 100 honey star fruit trees by the Mayor of Banjar. Then, in 2019, it was designated as an agro-tourism managed by the Waringinsari Village Government through the Waringinsari Village-Owned Enterprise (BUMDES). Along the way, the Waringinsari Village Government designated 20 hectares of land owned by farmers who are members of the Tunggak Semi Farmer Group into agro-tourism land managed together with BUMDES. However, in reality, the involvement of the community and honey star fruit farmers in Agro Village's development is minimal, so the community is only a complementary object in the Kampung Agro management system. These problems caused delays in the development process of Kampung Agro, so it is necessary to construct the development pattern of Kampung Agro in Banjar City.

Development Pattern of Kampung Agro Innovation System in Banjar City

According to Checkland (2000), the initial step to determine the formulation of a pattern can use a soft system methodology by creating a concept consisting of 7 steps, including 1) Describing the problem based on the situation; 2) Depiction of the problem based on the situation through a rich picture; 3) Main definition of the relevant system (root definition) according to CATWOE elements; 4) Building a system conceptual model described in the initial definition; 5) Comparing the conceptual model with the actual situation (real world); 6) Determining the changes to be implemented; 7) Determining the action in fixing the problem. Then these steps will facilitate mapping out what problems occur in Kampung Agro Kota Banjar, making it easier to construct the pattern for the development of Kampung Agro in Banjar City.

Describing the Problem Based on the Situation

Based on the study results, several problems occurred in Kampung Agro, Banjar City. The lack of communication and coordination between BUMDES as managers with farmers and the community is a thorny problem that hinders the development of Kampung Agro in Banjar City. In addition, ineffective communication has implications for the lack of involvement of farmers and communities in determining the policy direction for the development and management of Kampung Agro. Farmers and the community feel they are only objects of the development of Kampung Agro, not subjects who can participate and provide their ideas. As a result, farmers and the community of Kampung Agro still depend on government assistance to run their businesses.

The lack of involvement of academics and business actors also exacerbated the condition of Kampung Agro in Banjar City. There still needs to be more studies and research that can provide recommendations for the development of star fruit farming. The lack of involvement of business actors results in the minimum diversification of processed honey star fruit which can increase the

added value of star fruit. Efforts to increase visitor interest in visiting Kampung Agro require massive and systematic promotion. So far, the promotion of Kampung Agro still uses traditional methods and is only known by the people around Langensari Subdistrict. The absence of utilization of digital media in promotional activities has resulted in less than the optimal intensity of visitors who come to Kampung Agro, which has resulted in the inadequate marketing of honey star fruit, which is only marketed through middlemen when no visitors come to Kampung Agro.

Depiction of Problems Based on Current Situations (Rich Picture)

Various views of the problem situation must be captured by developing ideas according to the worldview perception (World View). Agro Village still faces various issues regarding the relationship between farmers, the community, and various actors within each subsystem of the honey starfruit agribusiness. Understanding complex situations can be captured adequately by diagrams or drawings that are much more effective at gathering information density. Constructing a rich picture of a problem situation is an inspiration for modeling assimilation, relationships, and problems that help identify systems relevant to the real world. Based on the unstructure problematic of the development of Kampung Agro in Banjar City, the following problem structure was obtained:

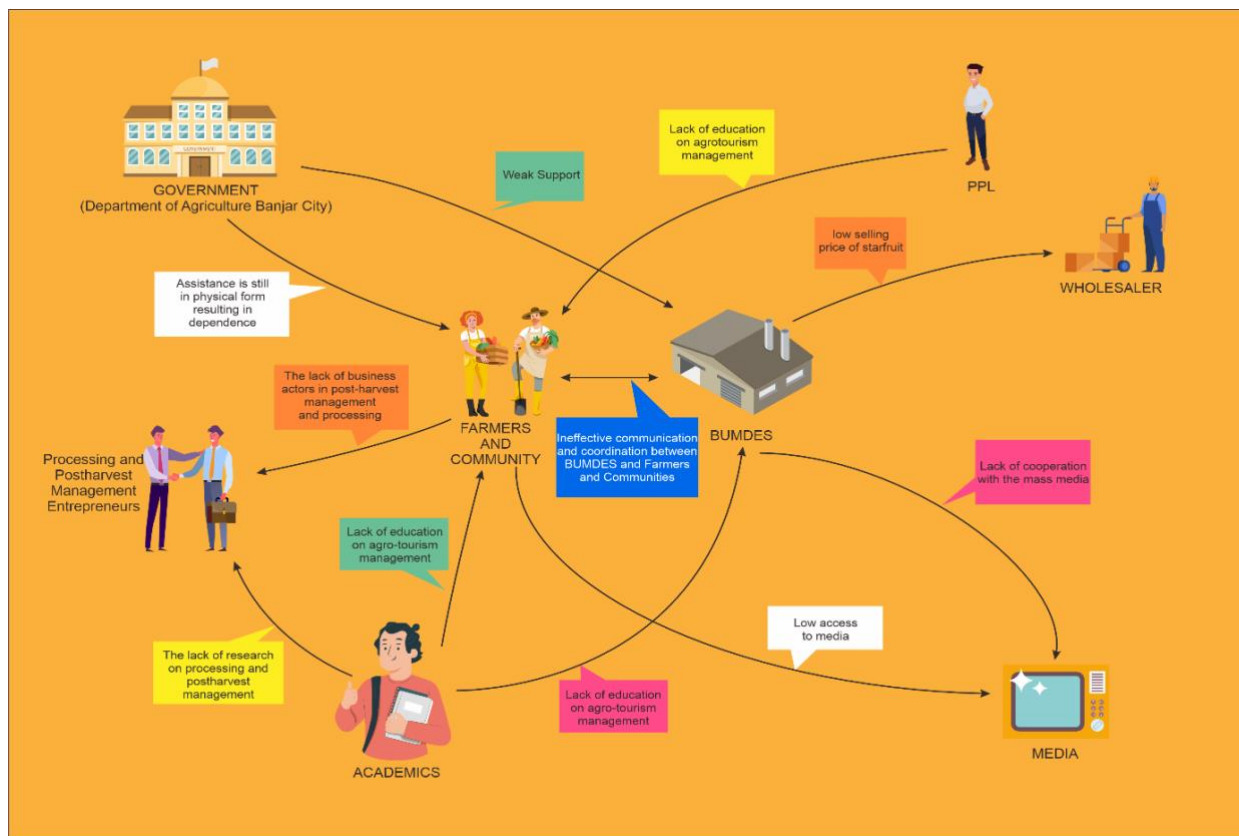


Figure 1. Rich Picture of Kampung Agro Problems in Banjar City

Root Definition According to CATWOE Element

Root definitions are expressions of the transformation of real-world problematic situations into the essence perspective from a relevant situation in a system. It is a keyword that becomes a critical point for a situation that leads to change. Root definitions are important because they are used to deduce what to do. By logical way of thinking, root definitions are oriented towards fulfilling the

CATWOE element's function as controls on the relevant system to take the correct transformation steps.

Table 1. Root Definitions According to CATWOE Elements in the Development of Kampung Agro in Banjar City

No	CATWOE	Definition	Result
1.	Customerst (C)	The party that benefits the most from the transformation carried out	Honey star fruit farmers, Community and BUMDES Waringinsari, Business Actors
2.	Actors (A)	Parties who can do transformation when the system is implemented into actual real-world action	Academics, Media
3.	Transformation (T)	Changes that occur or conversion from input to output	The creation of development pattern of Kampung Agro Banjar City
4.	World View (W)	Perspective or point of view that makes transformation meaningful	The creation of the desire to develop from honey star fruit farmers, the community and BUMDES Waringinsari
5.	Owners (O)	Responsible parties or groups that can stop the transformation	Banjar City Government, Banjar City Agriculture Office
6.	Environment (E)	The main constraints of the overall definition of the system that are beyond what should occur	Absence of inter-institutional commitment and ABGM favor (Academics, Businessman, Government, Media)

Next is to find the purpose of transformation (T), which is to develop Kampung Agro in Banjar City, so various actions are needed to improve the development by considering indicators of increasing development. According to Checkland (2000) and Tanaya (2006), efficacy, efficiency, and effectiveness are essential logics to determine the transformation process. The determination of a logical transformation is inseparable from the consideration of the involvement of the parties who will carry it out; therefore the criteria for efficacy, efficiency, and effectiveness must incorporate the perspective of the role of stakeholders in the CATWOE element's which is described in the following table 2.

Table 2. Determination of the Kampung Agro Development Transformation System in Banjar City

Efficacy	Efficiency	Effectiveness	Transformation
Improvement of communication and collaboration skills between honey star fruit farmers, the community, and BUMDES Waringinsari	Determination of the pattern of cooperation between honey star fruit farmers, the community, and BUMDES Waringinsari	Implementation of a pattern of cooperation and a clear division of roles between honey star fruit farmers, the community, and BUMDES Waringinsari	Affordability: Farmers, The Community, and BUMDES Waringinsari contribute to the efforts to develop Kampung Agro in Banjar City
Improvement of resource utilization	Implementation of applicative research	Implementation of education and empowerment of Kampung Agro development	Acceptability: Academics assigns roles according to their assignment based on the problem situation of Kampung Agro development
Prospecting business opportunities for managing and processing post-harvest of honey star fruit	Setting business objectives for managing and processing post-harvest of honey star fruit that considers opportunities, advantages, and roles in the development of Kampung Agro	Business development by producing processed honey star fruit	Availability: Availability of honey star fruit postharvest management and processing industry
Increasing access of Kampung Agro management to promotional media	Training on social media management and collaborating with mass media	Increasing the number of visitors to Kampung Agro	Accessibility: Kampung Agro management is connected to the outside world and the digital world

Building a System Conceptual Model

Transformations that meet the criteria are then used to understand essential factors according to the perspective of the role of stakeholders in the CATWOE element's which refers to the framework of problem situations built into a conceptual model. All related parties can carry out transformations following a cycle if the system's conceptual model is built according to the perception of the existence of benefits obtained. Hence, the model needs to consider the goals and needs. Thus building a conceptual model as a construct of thinking from a problem situation is "defensible logic" and not modeling real-world systems but the resources needed to convey transformation activities in the root definitions of Kampung Agro development in Banjar City.

Building a conceptual model as a thinking construct of the problem situation is a "defensible logic" and does not aim to model the real-world system but rather the resources needed to convey the transformative activities in the root definitions of Agro Village development in Banjar City. Various

efforts that can be undertaken include enhancing collaboration among the various stakeholders involved in Agro Village with farmers and the community to ensure effective integration for the formation of a systemic concept. This collaboration is reflected in the following root definition:

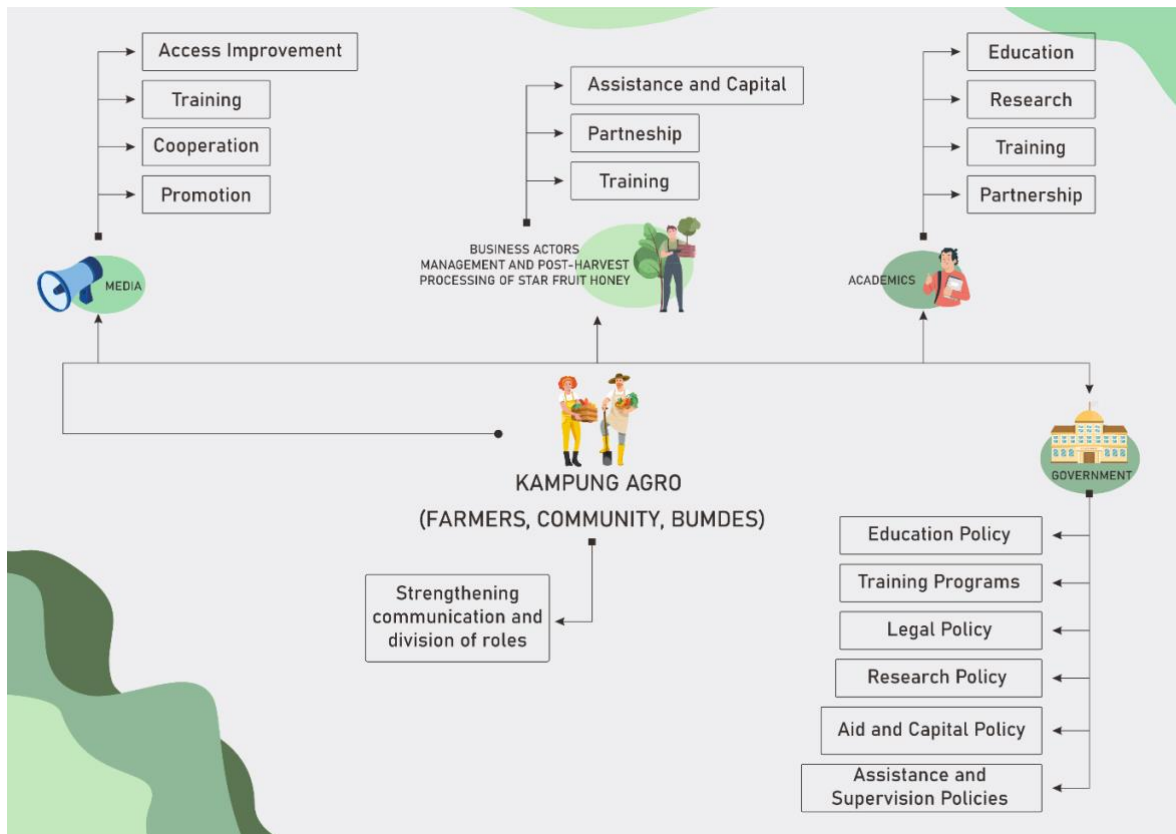


Figure 2. Root Definition of Kampung Agro Development in Banjar City

Comparing Conceptual Models with Actual Situations

This approach uses comparison to provide a means of understanding different views of reality with conceptual models that have been defined through system reconstruction. This is to illustrate the possibility of transformation from reality so that the development of Kampung Agro in Banjar City can occur according to the conceptual model that has been designed.

Table 3. Comparison of Situation Between Reality (Real World) and Actuality (Conceptual Model) of Kampung Agro Development in Banjar City

Problem Indicators	Reality	Actuality
Communication	Inneffective communication, coordination, and division of roles between honey star fruit farmers, the community, and BUMDES Waringinsari	Communication, coordination and division of roles between honey star fruit farmers, the community, and BUMDES Waringinsari can be improved by aligning the vision, coaching, and training from various stakeholder
Academic Studies	Lack of involvement of academics in the form of providing training, empowerment, and research	The involvement of academics can be increased by collaborating with various educational institutions so academics can play more role in the Kampung Agro development by conducting studies, training, and empowerment in Kampung Agro, Banjar City
The existence of postharvest industry	The lack of existence of the star fruit postharvest management and processing industry results in the low added value of honey star fruit and no diversification of processed honey star fruit products offered in Kampung Agro Banjar City	Post-harvest agro-industry can be grown by various cooperative efforts with both the private sector and the government by conducting training and empowerment.
Promotion	Weak promotion results in a lack of outgoing information, which has an impact on the instability of the number of visitors to Kampung Agro Banjar City	Promotional attempts can be increased by collaborating with mass media and by increasing access of honey star fruit farmers, the community, and BUMDES Waringinsari to social media.

Determining the Changes to be Implemented

This stage aims to identify and seek the desired changes systemically. These changes may occur in the structure, procedures, or attitudes of the parties involved in the development of Kampung Agro in Banjar City. Procedure changes cover all activities carried out in the development of Kampung Agro in Banjar City, such as operational actions in the root definition. The next step is to map out what already exists or needs. The determination of changes is formulated by collaborating tacit knowledge acquired from experience and explicit knowledge obtained from various literature sources (Berger, 1966 as cited in Setiawan, 2012).

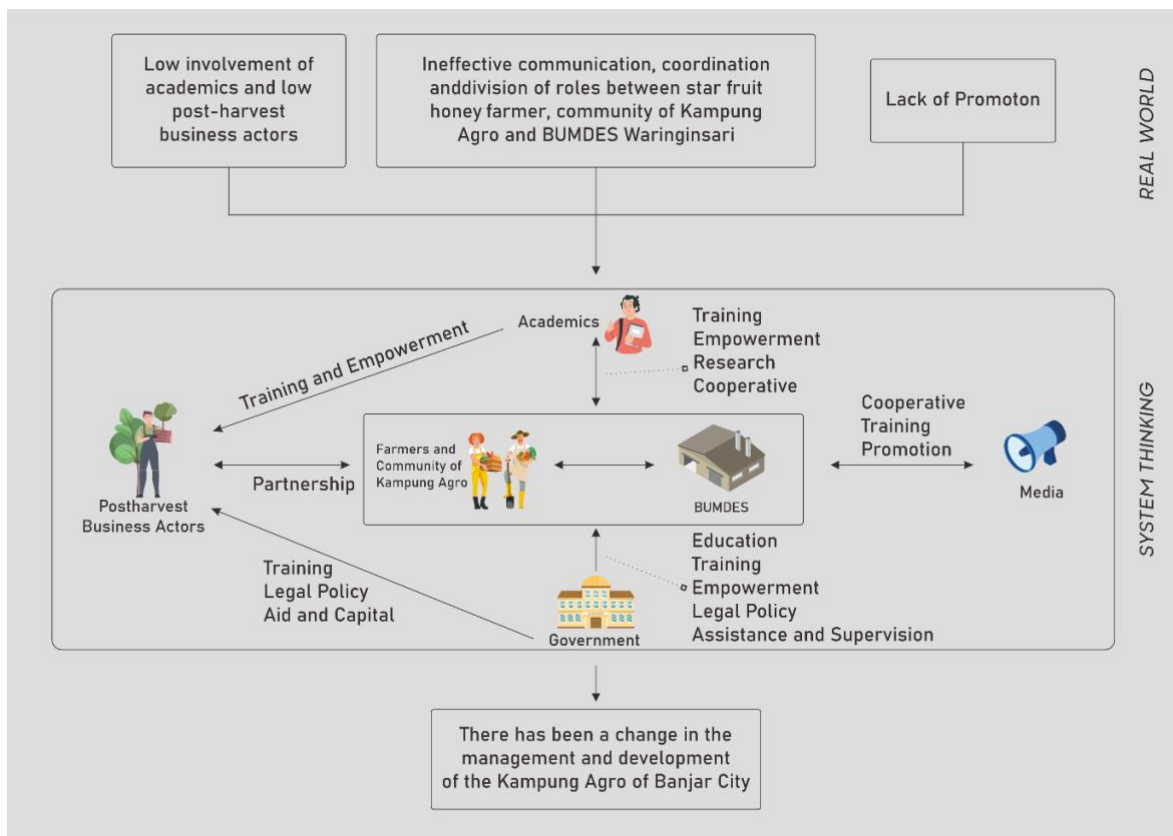


Figure 3. Conceptual Model of Agro Village Development System Pattern in Banjar City

Actions in Fixing Problems

Corrective actions include category steps involving actors and resources of concern in problem situations. Some parties are not always motivated to implement change especially if it is based on the logic of a conceptual model. Creative efforts to support transformation must be carried out holistically across all subsystems of honey starfruit agribusiness innovation through the collective roles of each stakeholder involved (Setiawan, 2012). Therefore, the specific actions must follow the qualifications of the functions and interests of the actors involved. In the collaborative innovation system of Agro Village development.

Table 4. Recommendations for Kampung Agro Development Actions in Banjar City

Actors	Action
Honey Star fruit Farmers, the community and Waringinsari BUMDES	<ol style="list-style-type: none"> 1. Improving relationships by improving communication and coordination 2. Distributing roles by their duties and functions so that honey star fruit farmers and the community are not only objects in the Kampung Agro innovation program in Banjar City 3. Establish cooperation with agro-industry management and postharvest processing of honey star fruit 4. Collaborating with academics 5. Establish cooperation with mass media for promotional and advertising activities 6. Increase access to technology and innovation in social media and capital assistance agencies
Government	<ol style="list-style-type: none"> 1. Providing education related to the management of Agro Villages by providing training and empowerment activities 2. Providing education and stimulus to grow entrepreneurs and agro-industry in the management and processing of honey star fruit derivative products 3. Create policies related to capital assistance and connect with capital assistance service providers and academics 4. Conducting studies and research on the development of Kampung Agro 5. Assisting and supervising the development of Kampung Agro
Academics	<ol style="list-style-type: none"> 1. Establishing cooperation and involvement in the development of Kampung Agro by providing education in the form of training and empowerment 2. Conducting research and providing recommendations related to the development of Kampung Agro
Business Actors	<ol style="list-style-type: none"> 1. Establishing cooperation by accommodating products produced from Kampung Agro, both fresh star fruit and derivative products 2. Providing entrepreneurship training to the community of Kampung Agro 3. Providing business assistance to the community of Kampung Agro as a business partner
Media	<ol style="list-style-type: none"> 1. Establishing cooperation to promote Kampung Agro 2. Providing training and empowerment related to increasing access to social media and advertising media

CONCLUSION AND SUGGESTION

Based on the analysis of the soft system methodology (SSM), the relevant pattern for developing the Kampung Agro innovation system in Banjar City is by making improvements in several aspects, such as communication between honey star fruit farmers, the community of Kampung Agro and BUMDES Waringinsari as the manager of Kampung Agro. In addition, the favorability and

involvement of the Banjar City Government are also needed in the form of education, assistance policy, as well as general assistance and supervision. Academics need to be involved through collaboration in providing education and conducting research related to the development of Kampung Agro. Other parties that need to be involved are business actors (honey star fruit postharvest management and processing business), both as business partners who process fresh products and as business education partners. In addition, the media needs to be included in the collaboration to assist the efforts to develop Kampung Agro in Banjar City through promotional and educational activities to increase manager access to social media and advertising media.

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