

Model of Agricultural Land Resource Management in Bhakti Alam Agrotourism Pasuruan Regency East Java Province Indonesia

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ABSTRACT

This study aims to analyze the model of agricultural land resource management in Bhakti Alam Agrotourism, Pasuruan Regency, East Java and increase the value of sustainable economic resources. This research was conducted in Pasuruan Regency, East Java. This study uses a qualitative descriptive approach to obtain data related to ecotourism development, agricultural land resource economic management, and community empowerment. The data collection procedure is done by conducting a field observation, interview with selected informants, and documentation of pictures and other supporting documents. The research finding shows that agricultural land resource management in Bhakti Alam Agrotourism, Pasuruan Regency is a form of attempt to empower the community, particularly in terms of economic aspect. Thus, the existence of Bhakti Alam Agrotourism (*Agrowisata Bhakti Alam* Indonesian version) can help improve the community's economic condition because they have opportunities to open new businesses, such as hotel, online transport service (called *ojek online*), and restaurant. Farmers take advantage of agricultural crops bought by tourist visitors.

Keywords: *agricultural land, resource economic management, community empowerment, welfare economics*

1. INTRODUCTION

Food is a basic need of human beings whose fulfillment is the part of basic human right for every Indonesian citizen. Its fulfillment is to meet the basic need of human being which is fairly, equally, and sustainably according to the principle of food sovereignty, self-sufficiency, and security. It means that in order to meet the food need of the citizen to the individual level, the country has a freedom to determine their food policy independently without any pressure from any parties. The East Java Province tourism is getting improved every year. According to East Java Province Central Bureau of Statistics, tourism will be the province priority in RPJM 2020 to 2024. In the five-year period of RPJMD 2020 to 2024, the tourism development will be gradually prioritized and achieve some targets (BPS.go.id, 2024). It is due to the fact that there are more tourism destinations in the East Java Province, so the province tourism industry becomes the main key to develop the economy through opening new job opportunities and improving the infrastructure and tourism investment. In addition, the tourism industry is not influenced by the global crisis. It is proven by the fact that the number of tourists visitors grows positively every year despite the global crisis.

According to the Head of Tourism Office East Java Province, tourism becomes a strategic sector and a program integration medium and inter-sectorial development activity. That is why it is a leading sector in development. It means that it can activate the province economy better than other sectors. The high number of tourist visits to East Java Province can significantly increase the regional income. It can be seen from the gradual acceleration of tourist numbers from year to year. It is caused by the abundant tourist destination places in East Java Province and improved tourism development. It includes the better facilities and infrastructures that make it easier for the tourist access their desired tourism destination places. Along with the East Java tourism development, the environment around the tourism destination places should also be preserved. The tourism destination places do not only have selling points, but also have natural beauty that should be maintained. Every development should not only exploit the nature, but it should also consider its effect to environment, ecosystem, and community. As a consequence, the ecotourism concept should be attached in the tourism development. According to (Ihsan, et al., 2015; Otte, et al. 2021; Douché & Willcox, 2023), ecotourism is a natural tourism activity in a particular place that is aware of the education elements and understand as well as support the natural resources conservation attempt and increase the community's income. Meanwhile, the definition of ecotourism development is ecotourism planning, utilization, and controlling activities. In general, the ecotourism

development should be able to improve the quality of human relationship, increase community's quality of life, and maintain the environmental quality (Larson, et al. 2023; Ihsan, et al. 2015). The ecotourism development and environmental economic management should be balance. According to (Effendi, 2016; Kpomasse, et al., 2023) the environmental economy is a science discussing about human activities in order to allocate the existing resources and utilize them to process and produce various goods and services to meet human's needs anytime while preserving the nature. Thus, environmental economic management is the ability to manage and allocate the existing resources to produce goods and services to fulfill their needs without damaging the environment. The natural resources-based economic development should be aware of the environmental aspects. Otherwise, the development will give negative effects to the environment as the natural resources and environment have limited supporting capacity (Razafindrafara, et al. 2021; Burhanudin, 2016).

One of the tourism destinations with natural beauty in Bhakti Alam Agrotourism (Agrowisata Bhakti Alam, Indonesian version) is located in Ngembal village, Tuter Sub-District, Pasuruan Regency, East Java. It is also known as "the land over the clouds". It belongs to Bromo Tengger Semeru National Park that becomes the leading tourism destination in Pasuruan regency. Its peak is 2900 meters above the sea level; higher than Bromo Mountain that only reaches 2329 meters above the sea level. From its peak, the tourists can see the view from above the mountain overlooking the clouds. Due to increasing visits, there is increasing demand to fulfill the tourists' needs, such as food, beverage, rest area, prayer room, and parking lot. Those facilities are very important to make them comfortable. With good facilities, more visitors will come to refresh their minds in the highland. Thus, it is very crucial to provide good facilities. It can be an opportunity for the local community to improve their economic condition by opening new businesses. As the time goes by, there is a new concept called community-based ecotourism. It is defined as a tourism destination that offers natural beauty, develops the natural conservation, and gives advantages for the local community in terms of local economic improvement. The local community becomes the main controller (Dhayita & Iwan, 2014; Graeber & Wengrow, 2021). The community-based ecotourism is closely related to the community empowerment. In order to empower one or community, the first step that should be done is to open access and create weather that makes it possible for the community's potential to develop. The empowered community pays higher taxes, so the regional income will increase as well (Rosnida, 2016; Rasmussen, et al. 2022; Gilbert, et al. 2024; Hodder, 2021). Finally, the ecotourism and environmental economic developments in *Bhakti Alam Agrotourism* is expected to be able to improve the farmer's community economic condition.

2. RESEARCH METHOD

This study employs descriptive qualitative method. It is descriptive method as it is a research method which attempts to describe the phenomenon or the relationship between phenomena systematically, factually, and accurately (Miles & Huberman, 1984; Francis, et al., 2015; Nasikh, 2017; Jones, et al. 2021). This study use the qualitative descriptive approach with a case study. The researcher becomes the observer and key person who directly contacts the informants. The research setting is in *Bhakti Alam Agrotourism* and Ngembal village, Tuter Sub-District, Pasuruan regency. He obtains some data related to the ecotourism and environmental economic management developments in *Bhakti Alam Agrotourism*. Meanwhile, he obtains data about the community empowerment in Ngembal village, Tuter Sub-District, Pasuruan regency.

The data source is primary data generated from the observation and interview to some informants, whereas the secondary data is from documentation, literature review, previous research, and official documents from the government office. The data collection is done by employing three techniques, namely observation, interview, and documentation. The informants are selected by purposive sampling technique. The technique is considered because the selected informants play significant roles and have some information about the research setting. The informants in the interview are Siswanto (*Bhakti Alam Agrotourism* manager), Indro Sasmito (Ngembal Village Head), and Sulaiman and Eni Wahyunu (business owners) and 5 farmers (namely: Udin, Juned, Angga, Duan and Salkha). The data is analyzed by interactive analysis model. It consists of data collection, data reduction, and conclusion drawing.

The research is carried out in three steps, namely preparation step (research planning, research permits, research setting observation and assessment, informant selection, and research tools preparation), implementation (data collection, data processing, data analysis, and conclusion drawing), and reporting stage in which the author writes the research finding in the form of undergraduate thesis entitled the model of agricultural land resource management.

3. RESEARCH FINDING

This is a picture *Bhakti Alam Agrotourism* Pasuruan Regency, East Java, Indonesia



Figure 1 *Bhakti Alam Agrotourism* Pasuruan Regency, East Java, Indonesia

In the context of human's life, food resources are definitely required. However, in the present days, the issue of food insecurity often happens in some parts of the country. Therefore, the regional government as mandated in the decentralization has to be able to establish farmer's empowerment program to achieve the food security. Based on the interview result with *Bhakti Alam Agrotourism* manager, the ecotourism development in *Bhakti Alam Agrotourism* has been running well because it has been in line with the principles of ecotourism development: suitable with tourism type and characteristic, conservation, education, economical, and able to satisfy the visitors and accommodate the local wisdom. However, in terms of education aspect, the manager said that it was insufficient due to the fact that the educational facilities in *Bhakti Alam Agrotourism* were very limited to maintain the environment and be friendly to the visitors. The educational aspect was not impressive and the visitors did not learn and get experiences through it. In addition, the environmental economic management has been carried out well. Ecotourism would be well-implemented with good environmental economic management. Its implementation in *Bhakti Alam Agrotourism* has been considered great. It was because *Bhakti Alam Agrotourism* has met the definition of environmental economic management, in which it utilized the environment, allocated resources, processed and produced goods and services, fulfilled the community's need, and preserved the nature. The majority of people living in Ngembal village were potato, carrot, cabbage, and chili farmers, thus, *Bhakti Alam Agrotourism* was also well-known for its agro tourism. When being on the peak, the visitors could see the agricultural land located in the hills and sides of the road. This is one of the natural views offered by *Bhakti Alam Agrotourism* manager (Siswanto), so he managed to maintain and utilize the agricultural land to attract the visitors.

In addition to the agricultural land utilization to attract the tourists, the government also conducted socialization and training for the local community to process their harvest into food they could sell out of the town. As a consequence, they did not only become farmers, but also managed to process their harvest, particularly potatoes, to potato chips. The potato chip was then sold in the food stalls around *Bhakti Alam Agrotourism* as the gifts from Ngembal village, and even distributed to Pasuruan regency and other places. Furthermore, the business owners, Sulaiman and Eni Wahyuni, explained that the government has actively involved providing facilities for restaurant owners and *ojek* drivers.

Based on the observation result, it was revealed that the community empowerment attempt in Ngembal village has been done well. This was seen from the community being able to see the opportunity since the opening of *Bhakti Alam Agrotourism*. First, they had the capability to see the potential from the tourists' needs. Since its opening, the community member had two jobs: farmers and business owner. They managed to meet the tourists' needs by renting their land for parking areas, opening restaurants and stores, providing *ojek* services, and renting villas and inns. This phenomenon was based on the interview result with Sulaiman and Eni Wahyuni who were *ojek* provider and restaurant owner. In addition, some people started their food stalls and stores in *Bhakti Alam Agrotourism* area to meet the visitors' needs of food and beverages. The capability to see the opportunities led the community to start their business activity. The government realized the agriculture potential, so they conducted socialization and training to process and produce potato chip for housewives. The activity was done in 2002. Other than that, the government through the Tourism Agency and cooperation micro-sized business agencies, managed to run the community empowerment activity. The farmer's and rural society's welfare is considered very prosperous. This is because the selling price of the harvest is higher with working capital (Vishwambhar, 2015; Duncan, *et al.*, 2014; Nasikh, 2013; Mostafa *et al.*, 2016; Gonzalez *et al.* 2023;).

The study by Sean *et al.* (2012) shows shows with the knowledge and skills of farmers. Seeing this phenomenon, as mandated in the regional autonomy, the regional government of Pasuruan Regency has its authority to develop its agriculture by empowering their farmers.

4. DISCUSSION

According to the Regulation of Minister of Internal Affairs number 44 in 2023, there were seven principles that the ecotourism, including *Bhakti Alam Agrotourism*, had to meet. *Bhakti Alam Agrotourism* was a mountain ecotourism with mountainous characteristic: bumpy road. *Bhakti Alam Agrotourism* manager managed to build and improve the access to the tourism destination area to decrease the risk of accident and motor damage due to the poor access. In addition, the manager also kept enforcing the regulation related to littering, illegal logging, and environmental maintenance. They had the signs put in some locations in *Bhakti Alam Agrotourism*. The signs were about prohibition to litter, do illegal logging in the wood area where the visitors or community made bonfire, and other prohibitions related to environment. Meanwhile, the managers has been doing reforestation in the sides of road to develop the access to *Bhakti Alam Agrotourism*. It has been done 50%, by planting trees in the sides of road to prevent the landslide when the rainy season came. The implementation of economic principle could be seen from the community's awareness of economic potential and advantage of *Bhakti Alam Agrotourism*. They opened various businesses, such as restaurants, *ojek* services, inns, and parking lots. These businesses could help increasing their income. In addition, the income from entrance tickets went to the village petty cash as *Bhakti Alam Agrotourism* was still self-managed. The petty cash was used to meet the community's need. The existence of *Bhakti Alam Agrotourism* as the tourism destination object brought many advantages to the community, particularly in the economic aspect because they could get higher income and the job opportunities could crease the unemployment rate. The simplest education principle for the visitors was their awareness of environmental preservation. They did not litter and damage the environment, so the place was kept clean and well-preserved. Besides, the community managed to be friendly and welcomed the visitors with wide smiles. They also greeted the visitors and offered hand to help the visitors in need. However, these educational activities could not attract the visitors much and they needed to be developed further. The education principle could be developed by offering industrial tourism experiences for the visitors. The community in Ngembal village who were eager to produce the potato chip could display their activities to the visitors, so they would have new experiences. Another experience that the community could offer was the Hinduism culture. There were a few Hinduism statues and inscriptions around *Bhakti Alam Agrotourism* area. Until now, none has known the function and meaning of those statues and inscriptions because there was no identity and explanation. They should have had one like the museums, so they could educate the visitors about history.

Bhakti Alam Agrotourism was a mountainous tourism that offered the natural scenery of mountain, cloud, and fields. The beauty of the place was supported by some adequate facilities, such as toilets, mosque, parking lot, restaurant, and rest area. Some parks are still in the development progress. With those facilities, the visitors would not need to be worried when they wanted to get something, let alone the help from the local community. Other facilities that should have been mentioned were some benches in the tourism area that the visitors could sit onto while enjoying the sunrise, mountainous or field.

The community in Ngembal village was closely related to the success of *Bhakti Alam Agrotourism* because they were actively involved in the tourism management. Their involvement gave great advantage, particularly in terms of economic aspect. Besides getting involved in the tourism management, they were allowed to build restaurants, gift stores, parking lots, and *ojek* services without any charges from the government. The government also provided special spaces for the restaurants and stores so that they would be orderly arranged and did not interrupt the view. In the future, *Bhakti Alam Agrotourism* would be a tourist village which not only offered mountain and natural view, but also offered local culture. The majority of people in Ngembal village were Hindu, so they could highlighted their Hinduism culture and statues in front of their houses. They could also exhibited cultural event in their special days to attract more visitors. Thus, it could be concluded that *Bhakti Alam Agrotourism* has been able to meet some of the seven ecotourism principles. The ecotourism principle that should have been developed further was the education principle. According to (Butler & Dodds, 2022; Rahmat, 2018; Arranz & Roe, 2023; Filipović, *et al.* 2023; Campos, *et al.* 2022; Eurostat, 2023) the education in the tourism context was the non-formal learning activities that were more flexible than the in-class learning activities. In its implementation, this concept was directed to the edutainment concept, where the learning process was incorporated in the fun activities.

The main purpose of educational tourism was to satisfy and provide new knowledge from the visitors. *Bhakti Alam Agrotourism* could develop its educational aspect by providing proper identity and information of the existing Hinduism statues and taking a good care of them. According to the researcher's observation, *Bhakti Alam Agrotourism* was lack of educational aspect. It was expected that more people came visiting *Bhakti Alam Agrotourism* and those who visited

could be more aware of the environmental preservation. It needed to highlight its cultural aspects, such as the Hinduism statues and inscriptions. *Bhakti Alam Agrotourism* has been developing its facilities in order to satisfy the visitors. After meeting some ecotourism principles, *Bhakti Alam Agrotourism* managed to implement the agricultural land resources management.

The management was considered successful if it was able to meet its own definition: environmental utilization, resources allocation, processing and production, needs fulfillment, and environmental preservation. Those five points should be on the checklist management so that the community could take advantages from the nature without damaging it. The management process should have been renewable, thus, the nature was preserved and sustained. The agricultural land resources economic management in *Bhakti Alam Agrotourism* area was carried out according to what was suitable for the highland. The community planted some special kinds of plants that could grow in the highland, such as cabbage, carrot, potato, and leek. Most of the farmers grew them in their field and they grew well. The harvest was sold in the traditional market, neighboring village, and main market in Pasuruan regency. Ngembal's agricultural harvest was well known for its quality and became the main supplier for cabbage, carrot, potato, and leek. In addition, *Bhakti Alam Agrotourism* manager also utilized the environment successfully by offering natural view of mountain and agricultural field. Especially for the agricultural field, the manager should have been able to manage its beauty to add more unique characteristics for the village. The manager also built some fences around the field to prevent it from the damage caused by the passing vehicles. When the harvest period came, the visitors would be able to see the harvest activity with its unique and interesting culture. However, the development of *Bhakti Alam Agrotourism* as the tourism destination was generally the form of environmental utilization.

The community and manager were aware of its natural beauty, so they initiated to utilize it as a tourism destination. The harvest was mainly sold in the traditional market and sent to the main market in Pasuruan regency. Especially for the potato, the community did not only sell them directly to the market, but also process it into potato chip and sold it as gift in *Bhakti Alam Agrotourism*. They also distributed it to other regions with the government's help. The potato resource allocation has been started in 2002 with some socialization activities initiated by the government. The community in Ngembal village, especially the housewives, established a community to share jobs of processing the potato into the potato chip. The processing and production was supported by the government through Cooperation and Micro-Sized Business Agency. It conducted socialization and training activities related to potato chip production, from the processing to packaging process. Until now, the community produced the potato chip as the special food sold in *Bhakti Alam Agrotourism*, Pasuruan regency, and other regions whose distribution was supported by the government and cooperation. The production and packaging processes were done in one of the members' house, whereas the processing activity was carried out in every member's house. Every member had their own job description. The income from potato chip could be help the community increase their income. Compared to the previous period before *Bhakti Alam Agrotourism* was well-known, the community nowadays became financially independent and they were able to see the opportunities, so they could make more income and afforded to live properly. In addition, the activity of utilizing the natural environment of *Bhakti Alam Agrotourism* did no harm to the nature because the community and visitors managed to preserve it and renew it when required. Besides, the entrance tickets charged to the visitors of *Bhakti Alam Agrotourism* went to the village petty cash. All kinds of facilities and infrastructure developments, such as prayer rooms and bridge, were fully funded by it. This gave advantage to the community in Ngembal village.

According to (Bakar, 2009; Allaby, *et al.* 2022a; Allaby, *et al.* 2022b; Arranz, *et al.* 2024; Charles, *et al.* 2021) there were two important points that should be considered when managing the natural resources: utilization and supervision. The natural resources utilization was intended to improve the community welfare, whereas the maximum supervision was able to avoid the natural damage that could give negative impacts to the community and the environment itself. If those two points were not implemented well, the negative impacts would occur, such as natural resources and environmental degradation. Based on the research finding, it could be concluded that the environmental economic management in *Bhakti Alam Agrotourism* has been well-implemented by the tourism manager and local community in Ngembal village.

The food consumption fulfillment has to prioritize the local production by utilizing the local resources and wisdom optimally (Nasikh, *et al.*, 2015; Bagheri, *et al.* 2023). To achieve it, there are three fundamental things to be paid attention to: (1) the food availability is based on the utilization of local resources optimally, (2) the food is affordable and easy to access by all citizen in terms of the physical and economic aspects, and (3) the food and nutrient are meant to consumed for healthy, active, and productive life. The local resources-based food can be available optimally through food diversification and local food production priority. The affordability in terms of the physical and economic aspects is undertaken by stabilizing the staple food's price, managing the staple food reserve, and distributing the staple food well (Nasikh, *et al.*, 2015; Das, *et al.*, 2012; Denham & Donohue, 2022; Fuller & Denham, 2021). The community empowerment was basically done for the community's sake. The community empowerment was considered successful if the community could meet the purpose of the empowerment, namely creating independent, innovative, and

cosmopolitan community. The community empowerment attempt in Ngembal village could be said successful enough due to the fact that the community had the capability to utilize the potential in Bhakti Alam Agrotourism area. According to the research finding, there were two empowerment activities that aimed to improve the community welfare. First, the community could see the opportunity in Bhakti Alam Agrotourism to open new businesses to meet the visitors' needs. The government has instructed some community members to be willing to establish partnership to meet the visitors' needs. The needs were basically food and drink as well as ojek service to reach the tourism destination places. For those who intended to stay with their family, there were many inns and hotels. Some community members even rented their house for the visitors when the peak season occurred. When it came to the long holiday of Eid Al Fitr or New Year, the number of visitors would increase significantly, so the community should provide their house yard for the parking lot. In other words, the community has been able to see the business opportunities. The visitors' needs were able to meet and the community's income increased significantly. The second empowerment attempt was carried out by the government through the Cooperation and Micro-sized Agency. In 2002, the government conducted a training to process the potato to be potato chip that could be sold in Bhakti Alam Agrotourism and distributed to other regions. The training activities included the processing and packaging. In the initial stage, the government funded the business and provided tools that were needed in the processing and packaging processes. The government also supported the distribution process to other regions. The community was only to produce the potato chips. As the time went by, the potato chip production has been well-developed. The community sold the potato chips as the gifts in many restaurants and souvenir shops in Bhakti Alam Agrotourism. In addition, the community was also able to sell and distribute the potato chip by themselves despite a little support from the government. With the socialization activity conducted by the government, the community has been able to develop and improve their business. The empowerment activity in Ngembal has been done well. This was in line with the study by Rosnida, 2016; Fuller, et al. 2021; Fuller, et al. 2022; Fuller, et al. 2023) explaining that the empowerment activity was intended to the group that was considered weak and vulnerable. With the empowerment activity, they were expected to have the capability to (1) meet their basic need, (2) participate in the development process and decision making that affected their life, and (3) Show the productive resources that they could utilize to increase the income and obtain goods and services they needed. The innovation should not only concern the nutrient, quality, and food safety aspects, but it also needs to consider the consumer's preference. Thus, the local food industry with high ethnicity and special characteristic will always ensure their food safety. As the local food product has the specific characteristic, they need to be handled properly. The appropriate knowledge of food technology is also required. Other than innovation, the other important factor is the role of the regional government to support and develop the local food product (Degye, et al., 2013; Francis, *et al.*, 2015; Nasikh, 2017; Jones, *et al.* 2021).

6. CONCLUSION

In order to accelerate the agricultural land resources management, an action was required to increase the food sustainable food in Bhakti Alam Agrotourism. The ecotourism development in *Bhakti Alam Agrotourism* has been done quite well. It has met the ecotourism development principles, including the suitability between the kinds and characteristic of ecotourism, conservation attempt, economy, education, visitor satisfaction and experience, community participation, and local wisdom. One of the principles that should be developed further is the education principle. *Bhakti Alam Agrotourism* has applied the education principle, but it is limited on the environmental preservation and friendliness of local people. As a consequence, the manager should develop and add more educational facilities so that the visitors are more attracted and get more experiences when visiting *Bhakti Alam Agrotourism*. This tourism destination has also implemented the environmental economic management according to the definition of environmental economy which includes the environmental utilization, resources allocation, processing and production, as well as need fulfillment. *Bhakti Alam Agrotourism* is the initial result of the environmental economic management. The manager has been able to utilize the mountainous environment as a tourism destination that attracts many visitors due to its natural beauty and scenery. Other than the view, the manager also uses the agricultural field scenery to make the tourist visitors more interested.

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