

PROMOTING SUSTAINABILITY DEVELOPMENT THROUGH AGROTOURISM ACTIVITIES IN RANAU, SABAH

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ABSTRACT

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Promoting sustainability through agrotourism is an excellent approach. Farmers could promote sustainability and provide opportunities for visitors to experience farming in addition to their own agricultural endeavors. One of the areas in Sabah that attracts most visitors is Ranau, which is recognized as a tourist destination and core for the agricultural sector. The study's primary goal was to use agrotourism to promote sustainable development. Five farmers were randomly chosen for this study and conducted in-depth interviews to gather data using a qualitative methodology. Three stages of the coding method in qualitative data analysis were used to analyze the study's results and produce fresh research findings. The results of the study indicated that agrotourism activities were a possible way to promote sustainability. Activities related to agrotourism have the potential to protect the environment, boost economic viability, engage communities and raise awareness and education. The local council and state government can make extensive use of these findings and prepare guidelines and policies. This would help the agrotourism sector, particularly in the Ranau district, which is a popular tourist destination in Sabah. It might also serve as a pilot study that other districts hope to promote their area as an agrotourism destination could utilize as a point of reference.

INTRODUCTION

Visitors can gain firsthand information and experience with sustainable farming techniques including integrated pest control, organic farming, and permaculture through agrotourism (OECD, 1994; Fleischer & Tchetchik, 2002; Franić & Grgić, 2002; Ciani, 2017; Brščić, 2020). Attending farm-to-table events and consuming food that is farmed nearby can help tourists adopt sustainable consumption practices and reduce the carbon footprint that comes with food transportation. Agrotourism producers can also demonstrate environmentally friendly practices that minimize damage to the environment, preserve natural resources like soil and water, and lessen dependency on chemical inputs (Mastronardi, 2015). Moreover, agrotourism farms can showcase recycling and waste reduction techniques including utilizing animal feces as fertilizer, composting organic waste, and cutting back on plastic packaging.

Additionally, visitors could discover how critical it is to cut down on food waste and to assist farms that place a high priority on recycling and sustainable packaging. It demonstrates how agrotourism efforts can draw attention to farm-based biodiversity and natural habitat preservation initiatives, such as preserving native plant species, establishing wildlife corridors, and conserving water sources. In the meantime, the visitors learn how agriculture is linked to ecosystem services and biodiversity preservation, supporting Sustainable Development Goal 15 (Life on Land). Thus, the goal of this study was to investigate to what extent agrotourism activities were able to promote sustainable development in Ranau, Sabah.

LITERATURE REVIEW

Sustainability Development.

Sustainability is the capacity to satisfy current needs without compromising the capacity of future generations to satisfy their own needs (WCED, 1987, p.247). It is composed of three primary pillars: environmental sustainability, social sustainability and economic sustainability (Latip et al., 2015). Environmental sustainability entails preserving ecosystems and natural resources, reducing waste and pollution, and making sure that human activity does not go beyond the environment's carrying capacity (Amos & Lydgate, 2020). Meanwhile, social sustainability prioritizes upholding and improving everyone's quality of life, advancing social justice and equity, honoring cultural variety, and encouraging resilience and community cohesiveness. Furthermore, economic sustainability also means fostering inclusive, equitable, and ecologically conscious economic growth and success (Luan et al., 2016). It entails the economical utilization of resources, equitable wealth distribution, and assessment of the long-term effects on the economy.

Sustainable Development Goal 12, "Responsible Consumption and Production," aims to promote sustainable patterns of production and consumption. This is because the way we produce and consume resources and goods has a significant impact on economic growth, environmental sustainability, and human well-being (UNDP, 2021). To introduce sustainable consumption and production and lessen the strain on natural resources like water, forests, and minerals, as well as to preserve biodiversity and ecosystems, it is crucial to promote responsible consumption and production (Khaw-ngern et al., 2021).

This study highlights SDG 12, which calls for agrotourism in Ranau, Sabah, to promote sustainable development. Farmers not only raise cattle and practice farming, but they also

welcome visitors to participate in the activities. The farm offers a variety of activities, some of which include sustainable principles in their operations.

Agrotourism Activities.

Agrotourism is an excellent means to emphasize sustainable development. It is a multifaceted tourism offering that blends leisure and farming in a farming environment (Sznajder et al., 2009). Agrotourism activities aim to enhance understanding and exposure to agriculture and leisure while emphasizing conservation efforts for the environment, society, and culture (Saptaningtyas et al., 2022). Concurrently, the growth of agrotourism and ecotourism provides an opportunity to see the experiences of farmers in a particular destination (Budiasa & Ambarawati, 2014).

Furthermore, agrotourism teaches people about human interaction with resources in a non-consumptive, ethically managed, and environmentally benign way. It also promotes control initiatives and benefits local communities (Fauzi & Anna., 2010; Duffy et al., 2016). The goal of agrotourism activities is to bring in money for the local community and farmers. This is a crucial economic component for the tourism industry's sustainability. Agrotourism creates job opportunities for local communities. Hence, agrotourism activities like farm tours, workshops, and the sale of local products allow farmers to augment their income. According to Kumar et al. (2021), agrotourism has the potential to boost agricultural output and revenue while preserving the environment.

Prior research indicated that many rural communities engage and participate in agrotourism (Figliana & Sudarma, 2021). This demonstrates that the potential for development of agrotourism activities has

intrigued the interest of the local community (Djuwendah et al., 2023). Additionally, they believe that they have been granted equal rights to participate in the development of agrotourism and are pleased to be working together on this (Suansri, 2003).

Educating farmers about sustainable farming methods is a key component of agrotourism activities. Encouraging farmers to learn about sustainable agriculture can enhance the visitor's experience (Nabilah & Djuwendah, 2022). It subtly draws attention to how crucial sustainable management techniques are for the farming sector. Many visitors cause damage by bringing both organic and non-organic garbage from outside of tourist sites. As a result, agrotourism operators must instruct guests on how to properly dispose their trash. Effective waste management is important for the agrotourism areas' aesthetic appeal as well as for the well-being of humans (Suamba et al., 2023).

METHODOLOGY

This study was conducted using an in-depth semi-structured interview. The in-depth interview was designed to investigate to what extent agrotourism activities can promote sustainable development in Ranau, Sabah. Further, the interviews were conducted with five agrotourism operators in Ranau, Sabah. All five interviews were conducted face-to-face. The face interviews allowed the researcher to "adapt the questions since it is necessary to clarify doubts, and ensure that the responses are properly understood, by repeating or rephrasing the questions" (Sekaran & Bougie, 2009). The agrotourism operators were chosen as the key respondents because they can justify the research objectives and are able to provide the most reliable answers (Guest, Brunce, & Johnson, 2006). Table 1 shows the in-depth interview informants profile.

Table 1 In-depth interview informants profile

Informants	Farming Types	Years of Operation
Farmer 1	Aqua Farm	5 years and above
Farmer 2	Strawberry Farm	5 years and above
Farmer 3	Goat	5 years and above
Farmer 4	Fish	5 years and above
Farmer 5	Livestock	5 years and above

Source: Derived by the Authors.

To further understand the outcomes, the collected data was coded, and transcription was made. Three steps of the coding approach were used to analyze the data in this qualitative study. The steps are as follows: (1) open coding, (2) axial coding, and (3) selective coding (Strauss, 1987; Neuman, 2009). Glaser and Strauss (1967) recommended utilizing the saturation approach to establish sample sizes for the qualitative phase. When little information is obtained following the collection of new data, it is known as the saturation point.

FINDINGS

Agrotourism Activities

The farmers were asked about the activities they offer at their destinations. The owner of the aqua farm informed visitors that they can experience harvesting vegetables, which are also reasonably priced for purchase. Meanwhile, the strawberry farmer informed visitors that they can enjoy strawberry picking and make their own jam and ice cream.

Additionally, the goat farmer notified visitors that they can experience milking and feeding the goats. Visitors can also purchase goat milk, cheese, and goat sausage. At the fish farm, visitors who have prior experience can feed the fish, and the fish farmer explained that there is a season for catching the fish. Another farmer, who has a variety of livestock including ducks, chickens, rabbits, and fish, allows visitors to observe the process of turning animal waste into fertilizer and to pet the animals.

The activities mentioned by the farmers demonstrate how visitors participate in agrotourism. The response from visitors to these activities has been encouraging. Agrotourism destinations provide a wide range of engaging, distinctive, and imaginative activities, generating positive feedback for the agrotourism sector because visitors not only travel but also acquire new knowledge. The following were statements made by the farmers about agrotourism activities at their sites.

"Visitors will experience harvesting the vegetables, and they can buy them from the farm..." (Farmer 1)

"When they visit our strawberry farm, they can experience strawberry picking and must buy and pay for it. Besides that, the visitors can also participate in jam and ice cream making at our shop..." (Farmer 2)

"...they can experience milking and feeding the goat. At our farm, we also sell goat milk products such as goat's milk, goat's cheese, and sausage. These items are sold at a reasonable price..." (Farmer 3)

"Our fish are reared naturally at the river; the visitors can experience feeding the fish while enjoying themselves... in fact, we also allow the fish to be caught at certain months to control the population..." (Farmer 4)

"We have many animals the visitors can pet; for example, ducks, chickens, rabbits, and fish... they can also experience to see how the fertilizer was made from the animals waste..." (Farmer 5)

Environmental Conservation

One of the key components of agrotourism is environmental conservation (Khaw-ngern et al., 2021). The farmers were questioned regarding the initiatives of environmental conservation measures they were using in their agrotourism businesses. Putting garbage cans on their farms was one of the farmers' ideas. All waste material were segregated and recycled appropriately. In addition, farmers create visually appealing signage to remind visitors of their duty to protect the environment.

Furthermore, most of their farms' operations incorporated sustainable methods. This was one of the inventive approaches to motivate guests to contribute to environmental preservation (Nabilah & Djuwendah, 2022). The farmers were utilizing composted organic fertilizer to prevent the soil's quality from declining. With this strategy, the agrotourism operations will be sustained and the soil can be used again after harvesting. The farmers made the following significant statements.

"We prepare bins according to the types of waste so that it is easy for us to manage the waste. But some visitors do not follow the instructions given, and we need to separate the waste..." (Farmer 1)

"There is signage with graphics that we have placed at the entrance. This is to give our visitors awareness about the importance of the ecosystem...." (Farmer 2)

"The activities we hold here are more about exposure to sustainable cultivation methods and how we take care of our plants without using chemical fertilizers..." (Farmer 4)

"We don't use chemical fertilizer here; what we use is organic fertilizer from food waste that we compost ourselves..." (Farmer 5)

Economic Development

The interview revealed that participating in agrotourism businesses can increase the income of farmers. This demonstrates unequivocally how engaging in agrotourism can increase the farmer's income streams. Furthermore, the agrotourism business has been well-received, given the prevailing tourism trend that prefers places derived from the environment. The face-to-face interviews with five farmers also highlighted that most of the visitors want to be part of the activities offered by them. The agrotourism activities included farm stays, fruit and vegetable picking, honey sampling, and others.

Aside from that, travelers choose to travel within the nation following the pandemic that struck the world in 2020 and continued until 2022 because of safety reasons. The rise in tourists visiting Sabah following the COVID-19 pandemic is evidence of this. Ranau, Sabah has received high numbers of tourists since the

outbreak. It also led to the opening of a new agrotourism business with a variety of activities offered to visitors. Consequently, farm owners can earn extra money by participating in agrotourism. Some instances pertinent remarks made by the farmers were listed below.

"After working on this agrotourism, it has added a little to my monthly income". (Farmer 1)

"..to some extent, it helps financially; there is some to save and pay commitments". (Farmer 3)

"Getting involved with agrotourism helps the residents here financially; now many have shown interest in getting involved". (Farmer 4)

"..monthly income increases when many tourists come here, the entrance ticket price is not expensive, but that helps a lot". (Farmer 5)

Community Engagement

The farmers were also asked to share to what extent the community engages in agrotourism. The majority of Ranau's local communities engage in agrotourism businesses because it offers a lot of advantages and prospects. According to earlier research, the local community was at first hesitant to participate in this industry, but after witnessing the success of other farmers, they became interested in doing so as well.

In addition, farmers indirectly maintained the ecosystems on their farms by engaging in agrotourism. The soil can be made more fertile and provide more crops for harvest by replanting and using chemical-free fertilizers. Also, the local community works together to help with the promotion of nearby agrotourism destinations. They support one another to get visitors to their farms. The local community also makes sure that their farms are always clean on a regular basis to preserve the sustainability of their environment. The following were statements made by the farmers about community engagement in agrotourism.

"Seeing that other farmers are making a profit, other residents continue to be interested in getting involved in agrotourism.." (Farmer 1)

"The community here is very supportive of each other if anyone wants to get involved in agrotourism.." (Farmer 2)

"Communities are very helpful to each other to promote other people's agrotourism destinations and places to tourists who come..." (Farmer 3)

"We here often hold mutual efforts to ensure that the agrotourism area in our place is kept clean and tidy so as not to affect the image of our village.." (Farmer 5)

Education & Awareness

Education and awareness are also one of the important factors in promoting sustainability. Essentially, agrotourism activities have an impact on the environment. Therefore, other than providing visitors with information about the value of environmental conservation, farmers used agrotourism activities to preserve the ecosystem's balance.

Additionally, visitors are made aware of the need to protect the environment. The environment is very crucial to the success of agrotourism. The farmers also disclosed that they provide more environmentally friendly animal husbandry and agribusiness at their destination. Farmers that grow vegetables, for instance, utilize fertilizer that they compost with leftover food. This was one of the best initiatives because it looks after the farm ecology as well as the quality of the soil. The following were the statements made by the farmers.

"This agrotourism operation gives exposure to tourism and shows how important it is to take care of the environment" (Farmer 1)

"There is signage with graphics that we have placed at the entrance. This is to give our visitors awareness about the importance of the ecosystem...." (Farmer 2)

"The activities we hold here are more about exposure to sustainable cultivation methods and how we take care of our plants without using chemical fertilizers..." (Farmer 4)

"We don't use chemical fertilizer here, what we use is organic fertilizer from food waste that we compost ourselves..." (Farmer 5)

CONCLUSION

The results of this study showed that agrotourism activities can promote sustainability. The importance of

environmental protection was emphasized in most of the activities offered at agrotourism destinations. Apart from farming and raising livestock to fulfill daily requirements, these activities also adhere to the principles of sustainable agriculture, as outlined in SDGs 12 "Responsible Consumption and Production."

Promoting sustainability through agrotourism activities involves integrating environmental conservation, economic viability, community engagement, education and awareness. Very little research has been done in Malaysia to date on how to promote sustainability through agrotourism. Therefore, the findings can be used by the Ranau district office as well as the state government to encourage the community to participate in agrotourism. In addition to being known as a tourist destination, Ranau will also be known as one of the agrotourism destinations in Sabah. Hence, agrotourism could benefit both farmers and tourists while promoting sustainability if it is performed ethically.

In addition, the initial exposure obtained from this study will serve as a guide for policymakers, particularly the state government of Sabah. The created policy will serve as a manual for agrotourism operators on how to embed sustainability practices in the activities offered at their farms. Considering this, it is advised that more study be done to create policy framework that can be utilized by everyone.

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