Pakistan Journal of Life and Social Sciences

Clarivate Web of Science Zoological Record www.pjlss.edu.pk



https://doi.org/10.57239/PJLSS-2024-22.2.001316

RESEARCH ARTICLE

Mapping The Potential of Agrotourism as a Sustainable Tourism Product In Banyuwangi Regency

Aditya Wiralatief Sanjaya^{1*}, Masetya Mukti², Adetiya Prananda Putra³, Zulis Erwanto⁴

¹ Department of Tourism Destination, Banyuwangi State Polytechnic, Banyuwangi, Indonesia

^{2'3}Department of Business Management Tourism, Banyuwangi State Polytechnic, Banyuwangi, Indonesia

⁴ Department of Civil Enginering, Banyuwangi State Polytechnic, Banyuwangi, Indonesia

ARTICLE INFO	ABSTRACT
Received: Oct 18, 2024 Accepted: Dec 6, 2024 Keywords Potential Agrotourism Tourism Product Banyuwangi Regency Tourism Sustainable *Corresponding Author aditya.wirasan@ poliwangi.ac.id	Agrotourism is a form of tourism associated with agricultural or agrarian activities. The term originates from the combination of two words: "agro," meaning agriculture, and "tourism," referring to recreational travel or visits. Agrotourism combines elements of farming, plantations, livestock, fisheries, and other agrarian activities as attractions for tourists. The purpose of agrotourism involves an agricultural-based approach that allows tourists to better understand and learn about agricultural processes, immerse themselves in rural natural environments, and experience the agrarian way of life. Agrotourism activities may include visiting fruit orchards, tea or coffee plantations, livestock farms, flower gardens, and participating in agricultural tasks such as harvesting or planting. Banyuwangi holds significant potential for agrotourism by leveraging its natural beauty and the development of specific agricultural commodities. These include the Ijen Coffee Plantation, Kalibaru Tea Plantation, fruit tourism, agroforestry and ecotourism, organic farming, cultivation of ornamental and aromatic plants, livestock tourism, and fisheries. Examples of agrotourism activities at farms and fisheries. Agrotourism not only provides recreational experiences but also serves as an educational platform to raise public awareness about agricultural processes and the importance of agricultural sustainability. The development of agrotourism can bring economic benefits to local communities and has the potential to become one of the flagship products in supporting sustainable tourism development in Banyuwangi Regency.

1. INTRODUCTION

Banyuwangi Regency, located at the easternmost tip of Java Island, possesses a rich diversity of natural and agricultural resources. The regency is renowned for its natural beauty, which includes mountains, beaches, and fertile agricultural lands. With its strong natural and cultural potential, the development of agrotourism in Banyuwangi presents a promising strategy. Banyuwangi is blessed with natural wonders such as Mount Ijen, exotic beaches, and lush agricultural plantations. Its cultural diversity and local traditions further enhance its appeal to tourists.

Banyuwangi benefits from fertile soil and diverse climates, enabling the cultivation of a wide variety of crops such as coffee plantations, cocoa, fruits, staple crops, horticulture, livestock, and fisheries. These resources can be harnessed to develop agrotourism that focuses on sustainable agriculture.

In an era of heightened awareness of sustainability, agrotourism offers an ideal solution. By adopting sustainable farming practices, Banyuwangi Regency can offer tourism experiences that are both attractive and environmentally friendly. On a global scale, sustainable tourism has increasingly

become a primary focus. Sustainable agrotourism provides a way to balance tourism development with the preservation of natural and cultural heritage.

Support from local government is a key driver in the development of the tourism sector, including agrotourism. Policies and incentives promoting sustainable agrotourism can unlock new opportunities for entrepreneurs and local farmers. This is reflected in Banyuwangi Regent Regulation No. 30 of 2020, which outlines the rural area development plan in Banyuwangi.

Engaging local communities in agrotourism development is critical to its success. Active participation from farmers, local businesses, and surrounding communities plays a vital role in ensuring sustainability. Agrotourism can serve as a catalyst for local economic development by integrating farmers and small-scale entrepreneurs into the tourism value chain. This can enhance local incomes and reduce economic inequality (Swastika, I.P.D., et al., 2017).

Sustainable tourism is a tourism development concept aimed at creating long-term impacts on the environment, society, culture, and economy for both present and future generations, benefiting local communities as well as visiting tourists. The Ministry of Tourism and Creative Economy/Bureau of Tourism and Creative Economy (Kemenparekraf/Baparekraf) has outlined four main pillars of sustainable tourism development. These include **sustainable management** (tourism businesses), **long-term sustainable economics** (socio-economics), **sustainable culture** (preservation and development of culture), and **environmental sustainability** (Kemenparekraf/Baparekraf/Baparekraf/Baparekraf RI, 2021).

Agrotourism refers to a series of tourism activities that utilize agricultural potential as tourist attractions, including the natural scenery of agricultural areas, the uniqueness and diversity of production activities, agricultural technologies, and the cultural practices of farming communities. Agrotourism activities aim to expand knowledge, recreational experiences, and business relations in the field of agriculture, encompassing staple crops, horticulture, plantations, fisheries, and livestock. Additionally, agrotourism includes forestry and other agricultural resources.

The combination of natural beauty, rural lifestyles, and agricultural potential, if well-managed, can enhance tourism appeal. The development of agrotourism in a specific destination can contribute to increased income for local communities and regional governments. In other words, tourism functions can align with agricultural cultivation, rural settlement activities, and conservation efforts simultaneously (Gumelar S. Sastrayuda, 2010).

RESEARCH METHODOLOGY

The study involves spatial data, including the land-use area data for agricultural commodities in Banyuwangi, such as plantation areas, livestock areas, staple crop areas, fisheries areas, and horticulture areas. These data are analyzed and assessed from the perspective of the sustainable tourism concept, focusing on social, environmental, cultural, and economic factors. illustrated in the following figure 1.

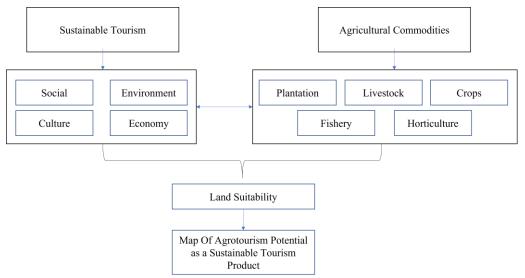


Figure 1: spatial data scheme for sustainable agrotourism potential

The foundation of this research methodology is based on fundamental principles of geography, emphasizing the interaction between society and nature, as well as mapping the complex formations of social and natural environments using cartographic modeling. Cartographic modeling refers to the use of a coordinated set of tools and techniques for analyzing and synthesizing geospatial data through geographic information systems (GIS) (Tomlin, C. Dana, 2017). This study utilizes the ArcGIS Pro 3.3 application with a geospatial RBI database to analyze land use in Banyuwangi.

The data collection and analysis method employs **Multi-Criteria Decision Analysis (MCDA)**, as outlined in the book by Dr. Antonius Alijoyo, et al. MCDA involves considering various relevant criteria simultaneously, such as economic, environmental, social, and cultural aspects, to determine the suitability of agrotourism land. The steps are as follows:

- a. Determination of criteria and value weights: Criteria and weight of land suitability for agricultural sector commodities as agrotourism potential.
- b. Alternative evaluation: Each location is evaluated based on predetermined criteria.
- c. Determination of Assessment and Weighting results: The location with the highest potential score is selected as the most suitable agricultural sector commodity land for agrotourism.

field research and literature. The population and sample are agricultural sector commodity units and sub-district units. Agricultural sector commodity units to determine the suitability of each farm's land for agrotourism. Sub-district unit for collecting socio-economic data. Data taken from all sub-districts in Banyuwangi with the help of a geographic information system.

Research variables in the aspects studied. The data used is primary data and secondary data. Data collection was carried out by involving students as enumerators.

No	Variables	Indicator	Data Collection
1	Regional Mapping	1. Regional	Geospatial data
		Potential	analysis,
		2. Land Suitability	Questionnaires
			and Statistics
2	Agricultural sector	1. Plantation	Statistical data
	commodities	2. Crops	analysis and
		3. Horticulture	secondary data
		4. Livestock	
		5. Fisheries	
3	Potential of	1. Results of	Forum Group
	Sustainable	Regional Potential	Discussion
	Agrotourism	Identification	
		2. Land Suitability	
		Results	
		3. Results of	
		Identification of	
		Potential agrotourism	
		criteria for agricultural	
		sector commodities	

Table 1. Research Variables

Data analysis employs a mixed-methods approach, combining quantitative and qualitative methods. The analytical techniques include **questionnaire scoring**, **laboratory analysis**, and **spatial analysis** to assess land suitability. Additionally, **Location Question analysis**, **Focus Group Discussion (FGD) analysis**, and spatial analysis are used to identify areas with potential for sustainable agrotourism development.

Focus Group Discussion is a systematic process of collecting data and information on a specific and highly focused issue through group discussions, for example, to identify problems in the agricultural

sector (Roberts et al., 2020). Spatial analysis is conducted using ArcGIS software. MS Excel is utilized for systematic computation, Adobe Photoshop for raster graphic editing, and Adobe Illustrator for vector graphic editing in map creation and mapping technique development (Nesterchuk et al., 2020).

Regional Potential Mapping and Land Suitability Analysis are conducted through the overlay of several base maps and RBI maps obtained from the Ina-Geoportal. The maps used are vector-based, displaying information about the extent of agricultural land. The data obtained are presented in the form of maps, tables, and graphs.

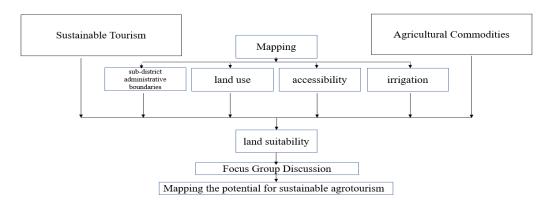
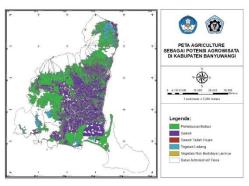


Figure 2: Agrotourism Potential Mapping (Source: Analysis of secondary data and primary data, 2024)

SYSTEMATIC SPACIAL DATA RESULTS AND DISCUSSION

Land Use Mapping by ArcGIS Pro 3.3

This research uses the help of the ArcGIS 3.3 application software to map regional boundaries, land use and map potential Agrotourism areas.





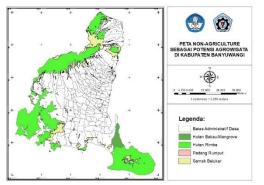


Figure 4: Potential Agrotourism Map (Non-Agriculture: Village Administrative Boundaries, Mangrove/Mangrove Forests, Jungle Forests, Grasslands, Shrubs)

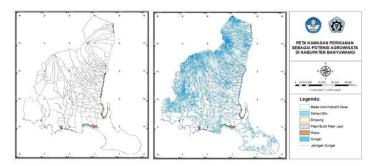


Figure 4: Potential Agrotourism Map (fishery Area: Lakes, ponds, sea sand/dunes, swamps, rivers)

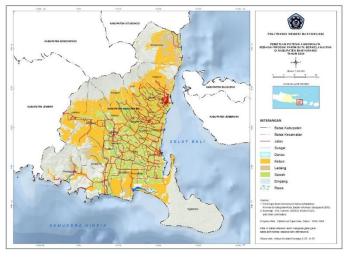


Figure 5. land use and map potential for Agrotourism

Forum Group Discussion: Criteria for Agricultural Sector Commodity Land with Potential for Sustainable Agrotourism

Sustainable tourism is a concept of tourism development aimed at creating long-term impacts on the environment, society, culture, and economy, benefiting both current and future generations, including local communities and visiting tourists (Kemenparekraf/Baparekraf, 2021).

The criteria for determining agricultural land suitability for potential sustainable agrotourism involve considering environmental, physical, social, cultural, and economic aspects that support the development of agricultural areas into tourism destinations. These criteria are derived from **in-depth interviews** and **focus group discussions (FGD)** with experts from the Department of Agriculture and Food as well as the Department of Culture and Tourism of Banyuwangi in 2024:

1. Physical and Environmental Criteria (Weight: 20%)

a. **Topography and Slope:** Land with moderate to flat slopes is more suitable for agrotourism activities; Slopes should ideally range between 0-15%. Steeper slopes (>15%) pose safety risks and accessibility challenges.

b. **Soil Quality:** Soil must be fertile and suitable for agriculture, with good organic matter content, appropriate pH levels for the crops, and sufficient water retention capacity; Soil that supports diverse crops, including horticulture, staple crops, or fruits, adds value to agrotourism.

c. **Livestock Quality:** Livestock facilities should have proper ventilation, lighting, cleanliness, drainage, and sufficient space, with visually appealing designs; Safety measures, such as secure barriers, proper layouts, and interaction guidelines, are essential; Educational and interactive facilities, effective waste management, and hygiene levels are crucial.

d. **Water Resources:** Adequate water availability for irrigation and agrotourism facilities is essential. Locations near water sources such as rivers, lakes, or reservoirs are preferable; Efficient irrigation systems are necessary to maintain agricultural productivity and year-round

tourism appeal; Visitor-friendly water features, such as ponds, reservoirs, or rivers, should be safe.

e. **Climate:** A local climate that supports agricultural activities, including adequate rainfall, comfortable temperatures, and sufficient sunlight distribution; Climatic zones attractive to tourists, such as cool mountain regions, can enhance tourism appeal.

2. Location and Accessibility Criteria (Weight: 15%)

a. **Distance and Accessibility:** The location must be easily accessible with good, safe roads. Proximity to major cities or other tourism hubs is a key consideration; Adequate public transportation and private vehicle access can boost tourist visits.

b. **Supporting Infrastructure:** Availability of infrastructure such as electricity, sanitation, clean water, parking spaces, and healthcare facilities; Nearby accommodations or restaurants enhance the appeal for tourists seeking extended visits.

3. Environmental Carrying Capacity Criteria (Weight: 10%)

a. **Plant Support Capacity:** Land must support various plant types attractive to visitors, such as fruit orchards, vegetable gardens, herbal plants, or flower gardens; Plant diversity adds value for visitors, offering visual, educational, and harvesting experiences.

b. **Livestock and Aquaculture Capacity:** Availability of livestock such as cattle, goats, rabbits, or horses in sufficient numbers and health; Aquaculture of fish such as tilapia, catfish, or eels in ponds, tanks, or rivers supporting cultivation.

c. **Environmental Sustainability:** Agricultural practices must consider eco-friendly and sustainable methods, such as using organic fertilizers, conserving water, and controlling soil erosion; Sustainable livestock breeding and fish farming; Suitability is determined by minimal negative impacts on the local environment, preserving ecosystems and natural habitats.

4. Social and Cultural Criteria (Weight: 15%)

a. **Local Community Support and Participation:** Local communities should support and be ready to participate in agrotourism activities, either as service providers or guides; Local cultural values, such as agricultural traditions, aquaculture, livestock practices, local festivals, or traditional cuisine, strengthen the area's suitability for agrotourism.

b. **Educational Potential:** The land should support educational activities such as farm tours, interactive gardening, or training in sustainable agricultural practices; Interactive experiences like harvesting, learning about cultivation, fishing, milking cows or goats, feeding livestock, or processing products provide unique tourism appeal.

5. Economic Criteria (Weight: 10%)

a. **Market Potential and Tourist Demand:** Land located in areas with a strong tourist market potential, such as proximity to other tourist destinations or major travel routes; Availability of land to develop additional facilities like cafes, restaurants, souvenir shops, or lodging to support economic growth around agrotourism.

b. **Investment Suitability:** Land with significant economic potential and manageable development costs, such as infrastructure or maintenance expenses; Ease of obtaining permits for tourism business development.

6. Aesthetic and Visual Appeal Criteria (Weight: 10%)

a. **Natural Beauty:** Land with scenic views, such as mountains, hills, or rivers, offers additional aesthetic value to attract tourists; Attractive and harmonious landscapes enhance the appeal of agricultural activities.

b. **Agricultural Visual Appeal:** Visually appealing agricultural setups, such as expansive fields, flower gardens, orchards, fish ponds, and clean livestock structures, provide captivating aesthetics; The presence of Instagrammable photo spots characteristic of the location adds to its attraction.

7. Sustainability and Land Management Criteria (Weight: 20%)

a. **Ease of Land Management:** The land should be easy to manage for both agricultural and tourism activities, including crop maintenance, livestock care, fish farming, water management, and infrastructure upkeep.

b. **Visitor Capacity:** The land must accommodate visitors without environmental damage or disruption to agricultural activities, including calculating land carrying capacity and supporting facility capacities.

c. **Adaptability to Climate Change:** The land must have resilience to climate change or extreme weather conditions to ensure agricultural and tourism activities run smoothly year-round.

These criteria are essential to ensure that agricultural land is genuinely suitable and has the potential to become an attractive, profitable, and sustainable agrotourism destination. A comprehensive evaluation of these aspects helps in making informed decisions. Agrotourism offers a promising path for rural economic diversification by generating additional income for farmers and creating new job opportunities (Hrymak et al., 2019).

The following are the results of the assessment of land suitability for agricultural sector commodities that have the potential for agrotourism per sub-district in Banyuwangi.

No	sub-district	Plantation	Crops	Horticulture	Livestock	Fishery
1	Pesanggaran	1.2	1.2	1.8	0.4	1.7
2	Siliragung	0.6	1.2	1.8	0.4	0.3
3	Bangorejo	1.1	1.8	1.8	0.2	0.1
4	Purwoharjo	1.1	1.0	1.2	0.4	0.1
5	Tegaldlimo	1.2	1.2	1.4	1.1	0.2
6	Muncar	0.4	1.2	1.4	0.7	1.8
7	Cluring	0.4	1.3	1.3	1.8	0.1
8	Gambiran	1.2	1.5	1.4	0.3	0.1
9	Tegalsari	1.1	1.4	1.1	0.4	0.2
10	Glenmore	1.1	1.4	1.8	1.2	1.1
11	Kalibaru	1.9	0.4	0.7	1.8	0.4
12	Genteng	0.6	1.6	0.9	1.8	1.1
13	Srono	0.5	1.8	1.9	1	0.4
14	Rogojampi	0.2	1.4	0.6	1.8	0.6
15	Blimbingsari	0.4	0.8	0.8	0.2	1.5
16	Kabat	0.2	1.8	1.1	0.9	0.2
17	Singojuruh	0.2	1.9	1.3	0.4	0.3
18	Sempu	1.2	1.7	1.9	1	0.6
19	Songgon	1.8	1.7	1.8	1.8	0.4
20	Glagah	1	1.3	1.8	0.3	0.7
21	Licin	1.8	1.4	1.8	1.7	1.8
22	Banyuwangi	0.2	0.2	1.1	0.1	0.8
23	Giri	0.4	0.6	0.6	1.6	0.2
24	Kalipuro	2	0.7	1.4	1.7	0.3
25	Wongsorejo	1.2	1.5	1.2	1.2	1.8

Table 2. Results of analysis of assessment and weighting of agricultural sector commoditiesthat have the potential for agrotourism in Banyuwangi per sub-district

Source: data processed 2024:

Potential/Suitable	2
Moderate	1
Not Potential/Not Suitable	0

Data Analysis of the Interviews and questionnaire

The results of the data evaluation in the table above, we can see several sub-districts with the highest points, each of which received a score of >1.8 in the agricultural commodity subsector, namely, for the potential for plantation agrotourism, it is in the Kalipuro, Kalibaru, Licin and Songgon subdistricts, the potential for food crop agrotourism is in Singojuruh, Srono and Kabat areas. The potential for Horticultural Agrotourism is in Muncar, Sempu and Srono districts, for ornamental plants and flowers in Pesanggaran, Siliragung and Bangorejo. Potential for Agrotourism in the Cluring, Songgon, Rogojampi, Genteng and Kalibaru Livestock subsectors. Meanwhile, the potential for agrotourism in the fisheries subsector includes Muncar, Wongsorejo and Licin.

No	Sub-district	Agrotourism Potential
1	Pesanggaran	 Coffee Plantation Agrotourism and Traditional Agricultural Educational Tourism in Kandangan Village. Kandangan Village also develop traditional agricultural educational tourism. Sugarcane Agrotourism in Pesanggaran Village has several sugarcane plantation areas that can be visited by tourists. Cocoa Agrotourism - Sumbermulyo Village known as a cocoa producing area in Pesanggaran District. In addition, currently the formation of agrotourism tour packages for dragon fruit cultivation visits at night and orange picking which are developed by local stakeholders. Horticultural and Medicinal Plants Agrotourism - Sarongan Village offers agrotourism based on horticulture and medicinal plants. Fisheries and Mangrove Agrotourism -Sumberagung Village offers tourism based on pond fisheries and mangrove ecotourism.
2	Siliragung	 Coffee Plantation Agrotourism and Livestock Education in Barurejo Villagewhich has coffee plantations that are suitable for developing agrotourism,Barurejo Village also has the potential for educational tourism based on livestock, especially cattle and goats. Rice and Horticulture Agrotourism in Kesilir Village Kesilir has quite extensive rice fields and can be developed as rice and horticulture-based agrotourism. Fruit Garden Agrotourism in Buluagung Village, potential for fruit garden tourism, especially with local fruits such as durian, mango and rambutan. Herbal Plant Agrotourism in Seneporejo village is known for several farmers who cultivate medicinal and herbal plants, such as ginger, turmeric, and temulawak. Sugarcane and Brown Sugar Agrotourism in Siliragung Village, as the sub-district center, has the potential for sugarcane plantation agrotourism and traditional brown sugar processing.
3	Bangorejo	1. Dragon Fruit Plantation Agrotourism and Organic Vegetable Horticulture Agrotourism in Kebondalem Village has a large dragon fruit plantation. Kebondalem Village also cultivates

		organic vegetables such as mustard greens, spinach, chilies, and
		tomatoes.
		2. Coffee and Cocoa Agrotourism in Sambimulyo Village has
		coffee and cocoa plantations that have developed into an
		agrotourism destination.
		3. Durian Plantation Agrotourism and beef cattle and goat
		farming. in Ringintelu Village starting to be known for its
		durian plantations which can be developed into agrotourism.
		1 1 0
		4. Freshwater Fisheries Agrotourism in Sukorejo Village which
		has freshwater fisheries cultivationsuch as tilapia, catfish, and
		gourami, fishing activities in fish ponds and enjoying the catch.
		Educational programs on how to cultivate fish sustainably.
		5. Rice and Corn Agrotourism in Temurejo Village has extensive
		rice and corn farming land, and several farmers have begun to
		develop and maintain traditional farming.Education about the
		legowo planting system and how to increase agricultural
		productivity.
4	Purwoharjo	1. Banana Plantation Agrotourism and Rice Agrotourism and
		Traditional Agriculture in Sidomulyo Village which has extensive
		banana plantations and a traditional rice planting system.
		2. Horticultural and Organic Vegetable Agrotourism in
		Purwoharjo Village, which is also the sub-district center, has a
		fairly large horticultural farming area such as chilies, eggplants,
		tomatoes, and other green vegetables.
		3. Orange Garden Agrotourism in Kradenan Village which has
		o o o
		extensive orange plantations and can be developed as an
		agrotourism destination.
		4. Coffee Plantation Agrotourism in Sidorejo Village is one of
		the villages in Purwoharjo District which has the potential for
		coffee agrotourism.
		5. Freshwater Fisheries Agrotourism in Glagahagung Village
		has freshwater fisheries cultivationsuch as catfish, tilapia, and
		gourami
		6. Medicinal Plant and Herbal Agrotourism in Grajagan Village,
		apart from being known as a beach tourism destination, has also
		begun to develop agrotourism based on medicinal plants and
		herbs such as ginger, turmeric, and temulawak, as well as how to
_	m 111	process them into health products.
5	Tegallimo	1. Coffee and Cocoa Plantation Agrotourism and Mangrove
		Forest Agrotourism in Kedungasri Village have coffee and cocoa
		plantations that are managed traditionally and modernly, in
		addition to having coffee plantations, it is also located close to a
		mangrove forest area that is rich in biodiversity. The potential
		of Agrotourism here can combine ecotourism and
		environmental education by exploring the path in the mangrove
		forest and enjoying the beautiful natural scenery.
		2. Rice and Horticulture Agrotourism in Purwoasri Village has
		a fairly large rice field area, with beautiful rice farming views.
		place to learnabout irrigation systems, as well as harvesting rice.
		In addition to rice, this village also develops horticulture such as
		organic vegetables
		3. Dragon Fruit Agrotourism in Kendalrejo Village has a
		productive dragon fruit plantation. You can pick dragon fruit
		directly from the tree during the harvest season and processed
		dragon fruit products such as juice and snacks.

		 4. Freshwater Fisheries Agrotourism in Tegaldlimo Village as the sub-district center, can develop the potential for freshwater fisheries-based agrotourism.Freshwater fish farming such as tilapia and gourami can be fished in the available fish ponds. And there is Education about environmentally friendly and sustainable fish farming techniques. 5. Sugarcane and Brown Sugar Agrotourism in Kalipait Village has a sugarcane plantation used for the production of traditional brown sugar.see firsthand the process of making brown sugar from sugar cane, starting from processing the sap to becoming ready-to-use brown sugar. 6. Banana Plantation Agrotourism in Tegaldlimo Village has a large banana plantation and is one of the village's leading commodities. It has banana processed products such as banana chips produced by the local community.
6	Muncar	1. Fish and Shrimp Pond Agrotourism in Kedungrejo Village is
		 famous for its extensive fish and shrimp ponds. There is educational tourism about fish and shrimp cultivation, starting from the process of breeding, maintenance, to harvesting. There are ponds and can be used as a means of learning about environmentally friendly brackish water fisheries cultivation techniques. 2. Dragon Fruit Garden Agrotourism in Blambangan Village has several dragon fruit gardens that are quite productive. The process of picking dragon fruit directly from the tree,especially during the harvest season, processed dragon fruit products such as juice, preserves and syrup are also often served as part of culinary tourism in this village. 3. Horticultural and Medicinal Plant Agrotourism in Tembokrejo Village can be used as a means of educational tourism by studying various types of vegetables and spices such as ginger, turmeric, and temulawak which are cultivated organically. 4. Banana and Corn Garden Agrotourism in Sumbersewu Village has extensive banana and corn farming land. Processed banana products such as banana chips are also a culinary attraction in this village. 5. Agrotourism of Rice Farming Land in Kedungringin Village which has a traditional irrigation system 6. Sugarcane Plantation Agrotourism in Sumberberas Village has a sugarcane plantation used for the production of traditional brown sugar. 7. Freshwater Fisheries Agrotourism in Wringinputih Village is not only known for its marine fisheries, but also has freshwater fisheries ponds, freshwater fish farming such as catfish, tilapia, and gourami. Ponds in here alsocan be used as a meanseducation about efficient and environmentally friendly freshwater fish farming techniques.
7	Cluring	1. Dragon Fruit Garden and Traditional Herbal Medicine Plants
		Agrotourism in Tampo Village has a large dragon fruit garden and also the cultivation of herbal plants such as ginger, turmeric, and temulawak, as well as how to process them into traditional health products. Education about the health benefits of herbal plants.

		2. Horticultural and Organic Plant Agrotourism in Renculuk
		 Horticultural and Organic Plant Agrotourism in Benculuk Village, apart from having popular tourist destinations such as the regional office, also has the potential for horticultural-based agrotourism with a focus on organic vegetable plants such as chilies, eggplants, tomatoes, and other green vegetables. Rice Agrotourism and Traditional Agriculture in Sraten Village which has extensive rice fields Freshwater Fisheries Agrotourism in Plampangrejo Village, such as fish farming such as catfish, tilapia, and gourami Coffee and Chocolate Plantation Agrotourism in Cluring Village has coffee and cocoa plantations that have the potential to become an agrotourism destination.
		6. Banana Plantation Agrotourism in Sembulung Village is known for its extensive banana plantations.
8	Gambiran	 Dragon Fruit Garden Agrotourism andOrganic Vegetable Horticulture Agrotourismin Wringinagung Village Rice and Horticulture Agrotourism and Medicinal Plant and Herbal Agrotourism in Gambiran Village Coffee and Cocoa Plantation Agrotourism andBanana Plantation Agrotourismin Yosomulyo Village Freshwater Fisheries Agrotourism in Jajag Village
9	Tegalsari	 Coffee Plantation Agrotourism, Banana Plantation Agrotourism, and Freshwater Fisheries Agrotourism in Karangdoro Village Rice Agrotourism and Traditional Agriculture andgoat and sheep farmingin Tegalsari Village Herbal and Medicinal Plant Agrotourism in Tegalrejo Village Banana Garden Agrotourism in Karangdoro Village Organic Vegetable Horticulture Agrotourism in Dasri Village
10	Glenmore	 Coffee and Tea Plantation Agrotourism andDairy and sheep farming agrotourism in Karangharjo Village is one of the villages with great dairy farming agrotourism potential. In addition, tourists can learn about milk processing into various derivative products.in Karangharjo Village Cocoa Garden Agrotourism in Sumbergondo Village Rubber Plantation Agrotourism in Margomulyo Village Vanilla Plantation Agrotourism and sheep and goat farms in Sepanjang Village Dragon Fruit Agrotourism in Sepanjang Village Organic Vegetable Agrotourism in Tegalharjo Village Freshwater Fisheries Agrotourism in Tulungrejo Village
11	Kalibaru	 Freshwater Fisheries Agrotourism in Tulungrejo Village Coffee and Cocoa Plantation Agrotourism, Clove and Nutmeg Plantation Agrotourism, and Rubber Plantation Agrotourism in West Kalibaru Village Dragon Fruit Agrotourism and educational tours about cattle farming and milk processing. Visitors can milk their own cows and see dairy products produced by local farmers in Kalibaru Manis Village Tea Plantation Agrotourism in Kebunrejo Village Vegetable Horticulture Agrotourism in Kajarharjo Village Herbal Plant and Traditional Medicine Agrotourism in Kalibaru Wetan Village Freshwater Fisheries Agrotourism in Kebunrejo Village
12	Genteng	1. Dragon Fruit Garden Agrotourism - Genteng Kulon Village
1	5	

13	Srono	 Coffee Plantation Agrotourism and Freshwater Fisheries Agrotourism in Setail Village Organic Vegetable Agrotourism and Free Range Chicken Farming and Duck Farming in Kembiritan Village Horticultural Plant Agrotourism and Herbal Plant Agrotourism (Turmeric and Ginger) in Kaligondo Village Cocoa Plantation Agrotourism and Banana Plantation Agrotourism in Genteng Wetan Village Dragon Fruit Agrotourism andRubber Plantation Agrotourismin Kebaman Village Banana Garden Agrotourism in Bagorejo Village Horticultural Agrotourism and Cocoa Plantation Agrotourism in Sukomaju Village Freshwater Fisheries Agrotourism in Parijatah Wetan Village
14	Rogojampi	 Dragon Fruit Garden Agrotourism and Vegetable Horticulture Agrotourism - Rogojampi Village Banana Plantation Agrotourism in Lemahbang Dewo Village Freshwater Fisheries Agrotourism in Bubuk Village Herbal and Traditional Medicine Agrotourism in Gintangan Village
15	Blimbingsari	 Coffee and Cocoa Plantation Agrotourism, Banana Plantation Agrotourism Village Freshwater Fisheries Agrotourism- Patoman Village Dragon Fruit Garden Agrotourism, Horticultural Agrotourism and Herbal and Medicinal Plants Agrotourismin Blimbingsari Village Coffee & Cocoa Plantation Agrotourism in Watukebo Village
16	Kabat	 Agrotourism Fruit Garden in Labanasem Village Organic strawberry, orange, and vegetable garden. Visitors can pick fruit directly from the garden and learn about organic farming. Coffee Plantation Agrotourism in Macanputih Village Coffee plantation with educational tours about coffee cultivation and processing, including local coffee tasting sessions. Integrated Livestock Agrotourism in Kabat Village such as cattle, goat and poultry farming. Tourists can learn about livestock management and participate in livestock and rice farming activities. Pondoknongko Horticultural Garden Agrotourism, Local vegetable and fruit garden with direct harvesting experience. There is also the potential for rice farming tourism that involves tourists in the planting and harvesting process.
17	Singojuruh	 Durian Garden Agrotourism in Sumbergondo Village Durian garden with various local varieties. Visitors can enjoy fresh durian directly from the garden during the harvest season and learn about durian cultivation. Orange Garden Agrotourism in Singojuruh village which has a large orange garden, with the experience of picking oranges directly from the tree. Coffee Plantation Agrotourism in Gumirih Village which can provide an educational tour experience about the coffee planting and processing process.

		10. Horticultural Agrotourism in Alasmalang Village
		11. Livestock Agrotourism in Singolatren Village with livestock
		education programs focusing on cows and goats
18	Sempu	1. Segobang Fruit Garden Agrotourism is availableFruit
10	benipu	gardens such as durian, rambutan, and mangosteen.
		2. Coffee Plantation Agrotourism in Tegalarum Village
		3. Vegetable Garden and Horticulture Agrotourism in
		Jambewangi Village
		4. Agrotourism Livestock in Tegalarum Village, cattle and goat
		farms, equipped with educational tours about livestock
		management and livestock products, such as milk and meat.
		5. Orange Garden Agrotourism in Temuguruh Village
19	Songgon	1. Coffee Plantation Agrotourism and livestock agrotourism in
	00	Sragi Village, Coffee plantations are famous for their quality
		robusta coffee, as well as cattle and goat farms integrated with
		educational tourism.
		2. Tea Garden Agrotourism and Alam Indah Flower Garden
		Agrotourism in Songgon Village, Beautiful tea gardens with green
		mountain views. As well as beautiful flower gardens with various
		types of ornamental plants.
		3. Fruit Garden Agrotourism in Parangharjo Village Fruit
		gardens such as durian, rambutan, and mangosteen.
		4. Horticultural Agrotourism in Sumberbulu Village,
		Horticultural farming with a focus on vegetables such as chilies,
		tomatoes, and various other organic vegetables.
20	Glagah	1. Osing Coffee Agrotourism, Herbal and Medicinal Plant
		Agrotourism in Kemiren Village
		2. Dragon Fruit Agrotourism, Vegetable Horticulture
		Agrotourism, and Freshwater Fisheries Agrotourism in
		Kampung Anyar Village 3. Clove Plantation Agrotourism in Glagah Village
		4. Banana Plantation Agrotourism in Tamansuruh Village
21	Licin	1. Coffee Plantation Agrotourism and Etawa goat farm in
21	ыст	Tamansari Village and ecotourism programs related to local
		culture. At the bottom of this village, coffee plantations are
		integrated with tourism activities, there is also an Etawa goat
		farm in the form of about dairy goat farming, see the goat milking
		process, and taste processed goat milk products.
		2. Educational Agrotourism of Rice and Fisheries fresh water
		in Kluncing Village: Utilizing the river flow for fish farming, this
		village is nicknamed "Fish Village". In addition, this village also
		combines nature tourism with agricultural activities.
		3. Organic Coffee Plantation Agrotourism in Banjar Village is
		also famous for its organic coffee plantations,Coffee cultivated
		here uses organic methods without chemical pesticides,
		resulting in high-quality and environmentally friendly coffee.
		Banjar Village also has an Etawa goat and dairy cow farm.
		Visitors can get involved in the daily activities of farmers such as
22	D .	feeding and milking goats or cows.
22	Banyuwangi	Banyuwangi Kota District, as the center of government and urban
		activities in Banyuwangi Regency, does not have the potential for
		agrotourism as large as other districts that are more rural or have
		extensive agricultural land. However, there are several urban farming initiatives and agricultural-based activities that are still
		interesting to visit in this area, for example:

	1	
		 Urban Farming in Kebalenan Village is one of the areas that promotes the concept of urban farming. Here, urban communities utilize narrow land or yards to plant vegetables, fruits, and medicinal plants. Vegetable Village in Singonegaran Subdistrict Singonegaran Vegetable Village is an agrotourism initiative in the middle of the city that invites people to grow vegetables independently. Banyuwangi Grape Village in Penganjuran Subdistrict has an interesting initiative, namely Grape Village, where the community develops grape plantations in the village area. Educational Agrotourism in Blambangan Park, although better known as a green open space and sports venue, is often the location for educational events about agriculture, such as agricultural exhibitions, ornamental plant bazaars, and hydroponic training or urban plant cultivation. These activities are usually organized by the local government or local farmer groups and become a place to learn about modern agriculture for urban communities. Poultry Farm Agrotourism In Sobo Village, there are several poultry farms managed by residents. Although not as large as farms in rural areas, tourists can see how egg-laying and broiler chicken farming is carried out in an urban environment. Tamanbaru Urban Village Organic Vegetable Garden, there are several farming communities that develop organic vegetable gardens. Although the scale is small, tourists can learn about vegetable growing techniques without using chemical pesticides. The Farming and Local Product Market in Karangrejo Village has a weekly market that displays local agricultural products. Although this is not a form of direct agrotourism, interested
		tourists can interact with local farmers who sell fresh products such as vegetables, fruits, and processed foods. This activity also
		provides insight into agricultural products grown in the Banyuwangi area and its surroundings.
23	Giri	1. Rice agrotourism in Temenggungan Village : Tourists can participate in agricultural activities such as planting rice and harvesting agricultural products.
		2. Freshwater Aquaculture Agrotourism : In several areas around Giri sub-district, such as Gurami Village, tourists can interact directly with breeders and learn about gurami fish cultivation.
		3. Flower and Plantation Agrotourism : Destinations in the area around Giri District also involve flower and horticultural plantations, where visitors can learn about agricultural and farming techniques, especially for ornamental plants and fruits such as oranges and coffee.
24	Kalipuro	1. CoffeePlantationAgrotourism,DragonFruitGardenAgrotourism, FreshwaterFisheriesAgrotourism, HerbalPlantAgrotourism,inKetapangVillage2. ClovePlantationAgrotourism, BananaPlantationAgrotourismandCoconutPlantationAgrotourism in BulusanVillage3.VegetableHorticultureAgrotourism in KalipuroVillage
25	Wongsorejo	1. Dragon Fruit Garden Agrotourism and Banana Plantation
		Agrotourism- Sidodadi Village

2. Agrotourism Mango Plantation and Goat Farming and
Freshwater Fisheries - Bajulmati Village
3. Clove Plantation Agrotourism and Vegetable Horticulture
Agrotourism in Wongsorejo Village
4. Freshwater Fisheries Agrotourism and Coconut Plantation
Agrotourism in Bengkak Village

Source: data processed from questionnaires and FGDs regarding the activity of agricultural commodities that have the potential for agrotourism

DISCUSSION

Banyuwangi has immense potential for agrotourism, thanks to its natural wealth and diversity of agricultural, plantation, livestock, and fisheries products. Below are several agrotourism potentials in Banyuwangi based on the five agricultural commodity sectors: plantations, food crops, horticulture, livestock, and fisheries, across various regions in Banyuwangi:

A. Plantation

1. **Coffee Plantations**. Banyuwangi is renowned for its Arabica and Robusta coffee plantations, particularly in highland areas such as Licin, Songgon, and Kalibaru. Tourists can learn about planting, harvesting, and processing coffee into ready-to-drink products. Notable destinations include **Kalibaru Coffee Plantation** and **Osing Coffee Agrotourism** in Kemiren Village.

2. **Cocoa Plantations**. Cocoa plantations are prominent in Kalibaru and Glenmore areas. Visitors can learn about cocoa cultivation and the processing of cocoa beans into chocolate. The **Glenmore Cocoa Factory** is a famous agrotourism destination where visitors can observe cocoa processing and taste local chocolate products.

3. **Clove and Nutmeg Plantations**. In areas such as Songgon, Glenmore, and Kalibaru, clove and nutmeg plantations are a source of income for local communities. Visitors can take clove garden tours and observe harvesting and drying processes. Cloves from these regions are renowned for their high quality and are widely used in the kretek cigarette industry.

4. **Tea Plantations in Kalibaru**. **Kalibaru Tea Plantation** offers an engaging agrotourism experience with stunning natural scenery. Visitors can tour tea gardens, observe the tea-picking process, and see tea processing at the factory. The cool, green landscape of the tea plantations is a unique attraction.

5. **Durian and Citrus Orchards**. Durian and citrus agrotourism are prominent in Songgon and Glenmore districts, as well as Pesanggaran, Siliragung, and Purwoharjo areas. Tourists can visit orchards, pick fruits directly from the trees, and enjoy fresh fruit products. **Sragi Village** in Songgon is known for its durian agrotourism, attracting many visitors during the durian season.

6. **Tropical Fruit Orchards**. Karangharjo and Benculuk villages in Glenmore district are known for producing tropical fruits such as mango, durian, rambutan, and guava. Tourists can visit these orchards, learn about tropical fruit cultivation, and enjoy fruit-picking experiences.

B. Food Crops

1. **Rice**. Villages like Lemahbang Dewo in Rogojampi district and several villages in Kabat district are famous for their expansive rice fields. Visitors can learn traditional and modern rice farming methods, from planting to harvesting, and participate in activities like rice planting and harvesting festivals.

2. **Corn**. Villages like Ringintelu in Bangorejo district offer corn agrotourism. Visitors can observe corn cultivation, from planting to harvesting, and learn about corn-based products like roasted or boiled corn and other snacks.

3. **Soybeans**. Kaligondo Village in Genteng district has significant potential for soybean agrotourism. Tourists can visit soybean fields, learn cultivation methods, and see the processing of soybeans into products such as tofu, tempeh, and soy milk.

4. **Cassava (Tapioca)**. Karangdoro Village in Tegalsari district is a leading producer of cassava. Tourists can observe traditional and modern cassava farming methods and enjoy various cassava-based products like chips, tape, and getuk.

5. **Tubers**. Glenmore district, especially Sepanjang Village, has potential for tuber agrotourism with crops like taro and sweet potatoes. Visitors can participate in planting tubers and enjoy processed products such as chips and desserts.

C. Horticulture

1. **Vegetables**. Regions like Glenmore, Songgon, and Glagah are ideal for vegetable horticulture, particularly organic cultivation. Villages like Kampung Anyar in Glagah are known for educational vegetable farming tourism.

2. **Dragon Fruits.** Dragon fruit is a top commodity in Banyuwangi, with large plantations in villages like Kampung Anyar in Glagah district and Bulurejo in Purwoharjo. Visitors can pick dragon fruits and taste products like juices and sweets.

3. **Herb and Medicinal Plants**. Herb plants such as ginger, turmeric, and galangal are cultivated in Kemiren and Licin villages. Tourists can explore herb gardens and learn about traditional medicine.

4. **Ornamental Plants**. Karangharjo Village in Genteng district is known for ornamental plant cultivation. Visitors can learn about various ornamental plants, their care, and propagation techniques.

D. Livestock

1. **Dairy and Etawa Goat Farming**. Found in Songgon, Kalibaru, and Licin districts, tourists can learn about dairy farming, milk production, and processing into products like yogurt and cheese.

2. **Beef Cattle Farming**. Areas like Tegaldlimo and Genteng districts offer beef cattle farming agrotourism. Visitors can observe feeding, maintenance, and cattle grazing activities.

3. **Duck, Chicken, and Egg Farming**. Kedungrejo Village in Muncar district is known as the "Duck Village," offering comprehensive experiences in raising ducks, processing eggs, and more.

4. **Honeybee Farming**. Honeybee farming is prominent in Wongsorejo and Kalibaru districts. Visitors can learn about bee cultivation, honey harvesting, and tasting fresh honey.

E. Fisheries

1. **Marine Fisheries**. Muncar, one of Indonesia's largest fishing ports, offers agrotourism opportunities where visitors can see fishermen at work and explore fish processing techniques.

2. **Aquaculture and Shrimp Farming**. Areas like Blimbingsari and Tegaldlimo focus on shrimp and milkfish farming, offering hands-on experiences in aquaculture.

3. **Freshwater Fish Farming**. Songgon and Srono districts host freshwater fish farming agrotourism with activities like fishing and cooking fresh catches.

With its natural wealth and diverse agricultural products, Banyuwangi has substantial potential to develop its agricultural sector toward **sustainable agrotourism**. Each region offers unique experiences, from educational tours to interactive activities involving farming, livestock, and natural products. Agrotourism not only supports the local economy but also promotes healthy and environmentally friendly lifestyles.

CONCLUSION AND RECOMMENDATIONS

The potential for agrotourism in Banyuwangi is extensive and diverse, supported by its abundant natural wealth and the variety of agricultural, plantation, and horticultural products. The region boasts numerous natural resources that can be optimized for agrotourism, including coffee, tea, cocoa, citrus plantations, and horticultural crops. Additionally, Banyuwangi has significant potential in the fisheries and livestock sectors, which can be developed into educational tourism as part of sustainable agrotourism. Each sub-district in Banyuwangi offers unique attractions, from tropical fruit orchards to spice plantations, which can serve as tourist draws. Agrotourism in Banyuwangi not only provides educational experiences about agriculture but also offers opportunities to enjoy the natural beauty and fresh agricultural products, with the potential to boost the regional economy.

To support the growth of agrotourism, adequate infrastructure is necessary, such as improved road access, tourist facilities like toilets, parking areas, and information centers. These enhancements will improve visitor comfort and satisfaction. Agrotourism should prioritize educational aspects by offering guided tours led by experienced guides, enabling visitors to understand farming processes, plant cultivation, and agricultural product processing. In addition to garden tours, agrotourism operators can develop value-added products from agricultural yields, such as workshops on making farm-based products like chocolate from cocoa, fresh fruit juices, and spice-based culinary offerings. Partnerships between local governments, private sectors, and local communities will strengthen the management and marketing of agrotourism. Local communities can be empowered to actively participate in agrotourism development, thereby supporting the local economy. Continuous promotion is essential through various channels, such as social media, tourism exhibitions, and partnerships with travel agencies. Leveraging digital technology, such as tourist guide applications or virtual tours, can also be an effective strategy to reach a wider audience.

Implications of the Study

The study on mapping the potential of agrotourism as a sustainable tourism product in Banyuwangi Regency has several key implications across various dimensions, including environmental sustainability, economic development, community involvement, and policy formulation. These implications highlight how agrotourism can contribute to the holistic development of the region while preserving its natural and cultural heritage.

The study aims to contribute to the Banyuwangi Government's policymaking efforts in optimizing the region's tourism potential.

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