

Article

Transforming agricultural land into agrotourism area: Environmental, economic and socio-cultural perspectives

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Copyright © 2024 by author(s). Journal of Infrastructure, Policy and Development is published by EnPress Publisher, LLC. This work is licensed under the Creative Commons Attribution (CC BY) license. https://creativecommons.org/licenses/ by/4.0/ Abstract: This study investigates the impacts of converting agricultural land into agrotourism areas on environmental, socio-cultural, and economic perspectives within Batukliang District, Central Lombok Regency, Indonesia. With a case study approach, this qualitative descriptive research employed interviews with three target groups: local farmers, residents, and tourism actors. The findings revealed seven key points identified as influences affecting the socio-cultural aspects of land change, including community impact, cultural preservation, cultural identity loss, community dynamics change, local cultural commercialization, cultural heritage loss, and traditional livelihoods. The results also unveiled nine financial impacts, 8 of which were associated with economic implications such as economic challenges, risk management, brand building, costs and investments, market access, increased revenue, and income diversity, which contribute positively to local economic development. The study concluded that integrating community involvement empowerment strategies, income diversification, sustainable farming promotion, and land-use regulation is crucial for developing a successful sustainable agrotourism destination.

Keywords: agriculture; land conversion; local perspectives; Lombok; rural area; tourist area

1. Introduction

Lombok Island, located in Indonesia, is a diverse region facing various challenges and opportunities. The island's competitiveness as a tourist destination is determined by natural, created, supporting, and reinforcing attributes (Sakti et al., 2023). Lombok's vulnerability to natural disasters like earthquakes has also led to innovative approaches such as urban farming for mitigation and adaptation, showcasing a blend of local resources for sustainability (Indriyatno et al., 2022). In the digital age, online media also plays a crucial role in promoting Lombok's tourism appeal globally, enhancing communication between tourism actors and visitors, thus boosting visibility and attracting tourists (Wati et al., 2022). The society on Lombok Island is characterized by pluralism, emphasizing harmony, togetherness, and unity among diverse tribes, religions, and civilizations, fostering a sense of cohesiveness and religiosity (Wirata, 2023). Furthermore, the island's biodiversity includes a variety of fruit species, with efforts to document and identify them for conservation and management purposes (Hudiwaku et al., 2022).

Lombok Island recently faced various natural disasters like earthquakes and tsunamis (Suhartini et al., 2023), resulting in ecological damage. Because the island's agricultural land is crucial in supporting the local economy and livelihoods (Jayaputra et al., 2022; Salmah, 2022). Issues such as land conversion from productive

agricultural land to non-agricultural use also constitute other issues that impact agricultural production and socio-economic conditions (Fitriani et al., 2022). Several studies were conducted to learn about related issues and assess their sustainable impact. One of them is research on soil color and organic matter status in Lombok's agricultural land that reveals insights into the impact of low cloud cover on soil properties (Indriyatno et al., 2022). Other research (Khoirunnisa and Kurniawan, 2019; Masnur et al., 2022; Suhartini et al., 2023) discussing efforts to enhance agricultural practices in areas such as several villages in Lombok was also carried out to increase crop productivity, improve farmers' incomes, and promote sustainable development. As a result, they demonstrated agriculture's importance as a local resource in providing food security and resilience to natural disasters.

The conversion of agricultural land into non-agricultural areas can have several negative impacts. Firstly, it can threaten food security and environmental sustainability, reducing food resources and water reserves (Han et al., 2022; Ren et al., 2023). Additionally, this conversion can also result in a change in the profession of the community, shifting farmers to other sectors like factory work, impacting ecosystems, and causing contamination of land, water, and air (Putri, 2021). Furthermore, the expansion of non-agricultural land can reduce the amount and quality of land availability for food production, affecting sustainable development goals (Ayun et al., 2020). Overall, transforming agricultural land into non-agricultural areas poses risks to food security, environmental balance, and community livelihoods.

However, transforming agricultural land into non-agricultural areas, such as tourist attractions, also has a positive impact since it involves utilizing natural resources and cultural heritage to create sustainable agrotourism destinations (Julia et al., 2023; Paul and Patil, 2022; Wijayanto et al., 2022). This process enhances local economies by increasing revenue, providing food sources, and promoting tourism activities that benefit both the government and the community (Shang and Zhu, 2022). Such initiatives, like community-based agrotourism programs, can incorporate organic cultivation and preserve cultural landscapes, attracting domestic and international tourists (Pandya et al., 2023). By offering agricultural experiences, product shopping, and scenic landscapes, leisure agricultural tourism has become popular, contributing to the development of the tourism industry. Through proper planning, infrastructure development, and marketing strategies, agricultural areas can be transformed into attractive tourist destinations, fostering socio-economic growth within farming communities.

The lack of studies that address the impact of developing agrotourism by taking over agricultural land from the perspective of farmers and local communities compared to studies that discuss agrotourism development strategies - is the main reason for conducting this research. The main discussion in this research is the need to investigate the impact of converting agricultural land into agrotourism area on farmers and local communities in the relevant areas. Therefore, the primary objective of this research is to examine the implications of shifting agricultural land into agrotourism areas on environmental, socio-cultural and economic perspectives within Batukliang Subdistrict, North Lombok Regency, as well as analyzing potential challenges and solutions by answering the following questions:

- 1) What are the driving factors for converting agricultural land into agrotourism areas?
- 2) What is the impact of transforming agricultural land into agrotourism areas in terms of the environment, socio-culture and economy?
- 3) What solutions are offered to the negative impacts of transforming agricultural land into an agrotourism area?

Meanwhile, Batukliang is being studied due to its geographical suitability for agrotourism development. Planning for its agrotourism destination is already underway (Anwar et al., 2022; Inzana et al., 2021; Pratama et al., 2024). In addition, the researchers also present several case studies related to the transformation of agricultural land into tourist areas in general by focusing on analyzing factors that contribute to the success or failure of land change practices as well as identifying lessons that can be used as references to be applied in the context of developing agrotourism areas.

1.1. Historical perspectives on transforming agricultural land into tourist attractions

Transforming agricultural land into tourist attractions is a growing trend to boost local economies and promote sustainable tourism (Aprilani et al., 2021; CANBAY, 2021; Emeh, 2014; Ghadami et al., 2022; Ndwiga, 2015). This transition involves leveraging natural resources, cultural landscapes, and agricultural activities to create engaging visitor experiences. Strategies include developing agrotourism concepts, architectural designs, and community-based initiatives to attract tourists while preserving the essence of rural life. Challenges such as unscientific planning, low operational efficiency, and inadequate management systems can also hinder these transformations. Factors driving this shift include the economic benefits of tourism over traditional agriculture, weak land use laws, lack of government support for agriculture, rising land prices, and changing farmer attitudes towards agriculture and income generation. Meanwhile, optimising these conversions requires holistic planning, community involvement, and sustainable practices to ensure long-term success.

The transformation of agricultural land into tourist attractions is a multifaceted process that, once again, involves historical, economic, and environmental considerations. Rural villages, such as Polobogo in Semarang Regency (Wijayanto et al., 2022), Borgo Parrini in Sicily (Sgroi, 2022a), Lamego and Tavora in Douro region (Mendonça, 2022), and Qingtian with its rice-fish system (Su et al., 2022), are examples that have implemented these practices and have undergone changes to combat degradation and abandonment. These sustainable development models that integrate social, economic, and environmental aspects through land transformation are crucial for the well-being of these rural systems. The interaction between society and the environment also plays a vital role in assessing the sustainability of rural villages (Rolando and Scandiffio, 2021). Other examples can be drawn from historical agricultural landscapes, like those between Turin and Milan, which offer unique opportunities for sustainable tourism by showcasing seasonal changes and the interplay between natural elements and human activities. These transformations

highlight the importance of preserving healthy rural ecosystems while promoting tourism and community development.

1.2. Environmental impacts of transforming agricultural land into tourist attractions

Studies highlight that such conversions can reduce agricultural land, affecting rice production and food security (Dewia et al., 2019; Harini et al., 2012; Parmawati et al., 2023). However, integrating agrotourism can revitalize rural economies and promote sustainable development by introducing environmentally friendly agricultural practices and ecotourism activities (Eşitti, 2023; Sgroi, 2022b). This integration supports organic agriculture and sustainable practices and ensures the protection of natural resources in rural areas, contributing to economic gains for local communities through tourism activities (Eşitti, 2023). Therefore, while converting agricultural land into tourist destinations may pose challenges to food security, implementing agrotourism can offer a balanced approach that benefits both the environment and the local economy.

1.3. Socio-cultural implications of transforming agricultural land into tourist attractions

In terms of socio-cultural implications, studies from various regions like Zimbabwe (Berc Radisic and Basan, 2007; Luo, 2019; Zvavahera and Chigora, 2023a), Indonesia (Hadian, 2018; Horner and Swarbrooke, 2020; Nezakati, 2012; Wijayanto et al., 2022), India (Kadi et al., 2015; Moliner-tena et al., 2021; Morfoulaki et al., 2023; Paul and Patil, 2022; Kokkranikal and Baum, 2002; Ku, 2016; Pandya et al., 2023) highlight how this shift impacts local communities. The change in land use can lead to socio-cultural transformations, such as shifts from closed to open societies, changes in values, and alterations in social norms. Additionally, tourism development can influence the conservation of cultural heritage, community cohesion, and economic structures. Stakeholders must consider balancing economic development through tourism and preserving cultural identity and traditional practices. Sustainable management practices and community involvement are essential to mitigate negative socio-cultural impacts and ensure the long-term well-being of the local population.

1.4. Economic benefits of transforming agricultural land into tourist attractions

Other studies indicate that agrotourism can lead to socio-economic transformation (Zvavahera and Chigora, 2023a), offering opportunities for increased local revenue and improved access to food within households (Allahyari, 2009; Angus et al., 2009; Julia et al., 2023). For instance, research conducted by (Sukati, Sanyal, and Awaain, 2020; Wan, 2011; Wijayanto et al., 2022) concluded that by leveraging natural resources and cultural heritage, areas like Polobogo Village have successfully enhanced their economic potential. In addition, other studies highlight the importance of agrotourism in organic cultivation environments, contributing to the growth of both domestic and international tourism sectors (McKercher, 1993; Paul and Anuradha Patil, 2022; Sutawa, 2012). Furthermore, rural tourism, as seen in Hakka country,

Taiwan, emphasizes the attractiveness of rural life and culture to tourists, creating opportunities for experiential engagement and satisfaction that drive repeat visits and economic growth (Chi et al., 2019). Overall, the transformation of agricultural land into tourist attractions can foster sustainable economic development and community prosperity, especially through the following contexts:

1.5. Increased job opportunities for local communities

Several studies conclude that transforming agricultural land into tourist attractions can significantly boost local economies by creating job opportunities for communities (Perspectives, 2023; Saarinen, 2010, 2011; Wijayanto et al., 2022; Zvavahera and Chigora, 2023a). One of which is through agrotourism ventures that have the potential to generate employment for locals, provide additional income streams for farmers, and contribute to rural development (Helbich and Leitner, 2009; Salvati et al., 2016; Zvavahera and Chigora, 2023b). They report that tourism offers diverse job opportunities to rural residents and aids in infrastructure development, positively impacting the community. By utilizing natural resources for agrotourism, villages can enhance their tourism potential and create a more optimal industry, leading to increased economic benefits and job prospects for locals. Therefore, transforming agricultural land into tourist attractions promotes economic growth and fosters social development through enhanced employment opportunities for the local population.

1.6. Boosting the local economy through tourist spending and infrastructure development

In the context of efforts to develop agricultural land into a tourist area, tourist spending and infrastructure development also play crucial roles in boosting the local economy. Infrastructure development, such as the Bedah Menoreh route in Indonesia (Fitri and Wijaya, 2022), has positively impacted the economy by attracting investors and enhancing tourism. Studies in Ghana (Ivanov and Craig Webster, 2007; Meyer and Meyer, 2015) and Poland (Kulawiak et al., 2018) emphasize the relationship between tourism, economic growth, and local development through investments in tourist infrastructure. Additionally, research in India conducted by Das and Naskar (2018) highlights the significance of infrastructure in tourism development, emphasizing the need for public-private partnerships and sustainable practices. Innovative approaches to tourism infrastructure development in regional economics, as discussed in Ukraine (Hrafska et al., 2022), further underscore the importance of modernizing and expanding infrastructure to drive economic growth by developing tourist areas.

1.7. Diversification of income sources for farmers and agricultural workers

Diversification of income sources for farmers and agricultural workers through transforming agricultural land into tourist attractions has also been shown to impact farm income and enhance overall performance positively (Tafidou et al., 2023; Vyslobodska et al., 2022). Rural tourism, including activities like ecological tourism and agrotourism, provides new avenues for profit generation and contributes to socioeconomic development in rural areas (Šehanović et al., 1997; Shang and Zhu, 2022). The development of green tourism can also help preserve local traditions, culture, and gastronomic preferences while stimulating infrastructure growth and employment (Oriade et al., 2020). Furthermore, the planning and analysis of ecological agricultural tourist attractions, combined with IoT technology, effectively enhance the industry's development (Byba, 2019).

2. Materials and methods

This research, which carries the theme of converting agricultural land into a tourist attraction, is a type of qualitative descriptive research with a case study approach. The case study method allows us as researchers to remain holistic and significant. This study was conducted in the Batukliang subdistrict, Central Lombok, West Nusa Tenggara, Indonesia. The location was selected as a research location because of several things: 1) agriculture in this area is a leading sector that has made a significant contribution to regional GRDP; 2) apart from that; Batukliang is also famous for its various types of amazing tourism, including natural and rural tourism, and 3) at the same time, many agriculture areas in this subdistrict have changed their function to become tourist areas.

2.1. Data collection

Data collection was carried out both primary and secondary. Participants in this research were divided into three target groups: the so-called local farmers whose agricultural land has been converted into a tourist attraction, tourism actors involved in the conversion of agricultural land into a tourist attraction, as well as residents whose areas have become tourist destinations due to the conversion of agricultural land. Primary data was obtained through in-depth interviews, document study, and observation. The main criteria for selecting the interview participants were the age of respondents who must be over 30 to assure their credibility, the participants of both sexes, and participants permanently residing in the village where the research was conducted (including farmers and residents). Specifically, there were 50 participants comprising 27 men and 23 women; the majority were aged between 30–70. In comparison, only three participants were older than 71, as seen in **Table 1**.

Demograph	ic Features	Abundance		
Gender	Male	27		
Gender	Female	23		
	30-40	4		
A	41–60	25		
Age group	61–70	18		
	>71	3		

Table 1. Demographic features of participants in the study area.

Demographi	c Features	res Abundance			
	Local farmers	20	20		
Target group	Residents	25			
	Tourism actors	5			
	Farmer	19			
	Educator	7			
	Housewife	9			
Main occupation	Civil servant	3			
occupation	Post-graduate student	3			
	Casual worker	4			
	Entrepreneur	5			

 Table 1. (Continued).

2.2. Data analysis

The interview data were transferred to a computer device and transcribed wordfor-word. The transcription results were grouped into relevant themes, adjusting the need for the findings for this article. The theme grouping process began during the field data collection process. This process was carried out using MAXQDA software, which can facilitate automatic data coding and classification, making it possible to create structured files for such research. The themes relevant to this study's purpose were then presented descriptively. Overall, this process follows the stages in qualitative research: the so-called reduction/verification, data display, and data interpretation (source). Meanwhile, the research model obtained at the planning stage of transforming agricultural land into an agrotourism area project was set out in **Figure 1**.

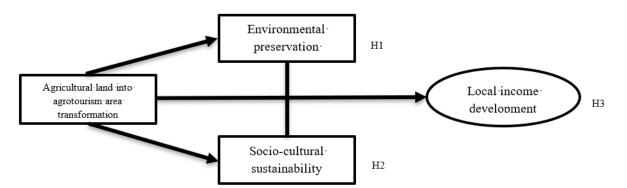


Figure 1. Research model of transforming agricultural land into agrotourism area.

Based on **Figure 1** above, the formulation of the research hypothesis can be set as follows:

H₁: Transforming agricultural land into agrotourism area influences environmental preservation.

H₂: Transforming agricultural land into an agrotourism area influences sociocultural sustainability.

H₃: Transforming agricultural land into agrotourism areas influences sustainable local income development.

3. Results and discussion

3.1. Profile of Batukliang Village

3.1.1 Geographical condition

The district of Batukliang is situated in the northern region of Central Lombok Regency, encompassing an area of approximately 5037 hectares divided into ten villages. This sub-district is positioned near Mount Rinjani and boasts fertile land suitable for agricultural purposes. The predominant land utilization includes rice cultivation, secondary crops, horticulture, forestry, and other related activities. In addition to its agricultural prospects, Batukliang District exhibits promising potential comparable to other regions, particularly in tourism, featuring captivating natural mountain landscapes. The territorial boundaries of Batukliang District are outlined as follows: to the north lies North Batukliang District, to the east lies Kopang District and East Lombok Regency, to the south lies Praya District, and to the west lies Pringgarata District. This upland area receives substantial rainfall near Mount Rinjani's base, fostering a notably cool climate conducive to thriving agricultural enterprises.

Based on the data in **Table 2** above, it can be concluded that Bayan District had the largest population in 2020, reaching 44,671 people. Meanwhile, the sub-district with the lowest population is Selamat District, which has 32,546 people.

No.	Villages	Area (km ²)	Percentage	
1.	Beber	8.02	15.92	
2.	Pagutan	6.00	11.91	
3.	Barabali	6.82	13.54	
4.	Bujak	7.09	14.08	
5.	Peresak	4.33	8.60	
6.	Mantang	2.48	4.92	
7.	Aik Darek	3.97	7.88	
8.	Selebung	5.63	11.18	
9.	Tampak Siring	3.43	6.81	
10.	Mekar Bersatu	2.60	5.16	
Tota	1	50.37	100.00	

 Table 2. Area and percentage detailed per village in Batukliang District in 2020.

3.1.2. Geographical condition

In 2018, the population of the Batukliang sub-district was documented at 76,887 individuals, comprising 35,362 male inhabitants and 41,525 female inhabitants. During the same period, the number of households was registered as 23,773, resulting in an average of 3 individuals per household. Concerning the area of the Batukliang sub-district, which spans 50.37 km², there are an estimated 1488 individuals per square kilometre. This numerical value exhibits a slight increase from the data of 2015, which indicated 1447 individuals per square kilometre. Analyzing the population density of each village within the Batukliang area, Mantang village stands out as the most

densely populated, with 3417 individuals per square kilometre. The remaining eight villages' density ranges from 928 to 2427 individuals.

The comparison of the male and female population (see **Table 3**), known as the sex ratio in demographic discourse, is documented at 85, illustrating that for every 100 female residents, there are 85 male residents. Stated differently, the female population holds a larger proportion than the male population. This trend of female population dominance over males is consistent across all villages in Batukliang District, with sex ratios falling between 80 and 89. Conversely, the analysis of the survival ratio reveals a dependency rate of non-productive age individuals in the productive age group, averaging 58. This statistic signifies that for every 100 individuals of productive age, 58 individuals are categorized as unproductive.

Table 3. Number of households and population in Batukliang District in 2020.

No.	Villages	Households	Residents		— Density (Soul/km²)	
			Male	Female		
1.	Beber	2857	3772	4478	1021	
2.	Pagutan	2240	3231	3669	1142	
	Barabali	3856	5451	6785	1781	
	Bujak	2664	3866	4642	1191	
	Peresak	2018	3220	3752	1599	
	Mantang	2543	4060	4734	3521	
	Aik Darek	2963	4714	5316	2508	
	Selebung	2329	3635	4082	1361	
	Tampak Siring	1562	2268	2700	1438	
0.	Mekar Bersatu	742	1145	1367	959	
		23,773	35,362	41,525	1515	

3.2. General perspectives on agricultural land into tourist area transformation

Perspectives on agricultural land, especially local perspectives, play a crucial role in transforming areas into tourist destinations. Pandya et al. (2022) emphasized understanding how rural communities navigate ecotourism and land use changes. Another research by Wijayanto et al. (2022) highlighted the shift towards utilizing agricultural land for agrotourism, showcasing the potential for local communities to leverage natural resources for tourism activities. Furthermore, the awareness and participation of local communities are essential for successful tourism development, as seen in studies focusing on rural areas and the impact on cultural privacy (Hyasat, 2023). From the results of the analysis that we obtained from interviews with all informants, we found that 7 points underlie the process of transforming cultural land into an agrotourism area in Batukliang District, as seen in **Figure 2**, including conservation, market demand, agrotourism potential, natural resources utilization, natural beauty, personal interest, dan economic benefits. Of the seven perspectives, conservation is the main factor in the transformation of land into agrotourism areas with a percentage of 18%.

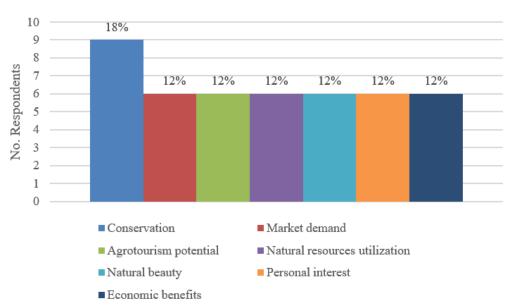


Figure 2. Local perspectives on the transformation of agricultural land into agrotourism area in Batukliang Subdistrict.

3.3. Impacts on agricultural land into tourist area transformation

The study focused on three impacts: environmental, socio-cultural, and financial. This particular section holds utmost significance within our findings as it involves examining three variables on converting agricultural land into agrotourism areas in Batukliang District and addressing the hypothesis established in **Figure 1** earlier. The utilization of MAXQDA software facilitated the analysis of interview outcomes, which were illustrated visually.

3.3.1. Environmental impact

Nine environmental impacts were identified from the interviews with all informants, encompassing local farmers, local societies, and tourism stakeholders. These impacts included sustainable development, environmental concerns, land loss, regulations, land use conflict, development balance, water resources, environmental impact, and food safety as seen in **Figure 3**. Most of these impacts were perceived as negative consequences on the environment resulting from converting agricultural land into agrotourism areas. Among these impacts, land loss, environmental concerns, and sustainable development were considered the most significant, with each holding the highest percentage of 13%.

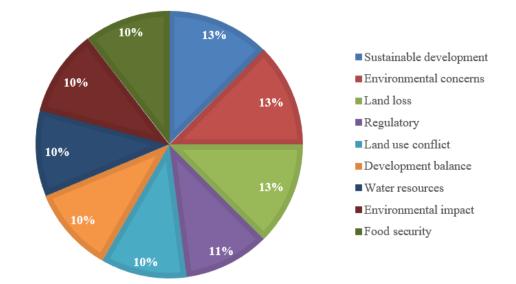


Figure 3. Environmental impacts on the transformation of agricultural land into agrotourism area in Batukliang Subdistrict.

3.3.2. Socio-cultural impact

Concerning the socio-cultural impacts, interviews were exclusively conducted with local farmers and community members to ensure more impartial findings. The findings revealed seven key points identified as influences that affect the socio-cultural aspects of land change, including community impact, cultural preservation, cultural identity loss, community dynamics change, local cultural commercialization, cultural heritage loss, and traditional livelihoods as seen in **Figure 4**. Similar to the previous environmental impact analysis, these seven aspects were predominantly perceived as negative socio-cultural impacts stemming from converting agricultural land into tourist attractions. Among these impacts, community impact was deemed the most probable, with a prevalence rate of 16%.

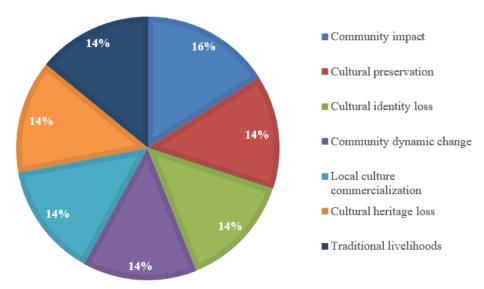
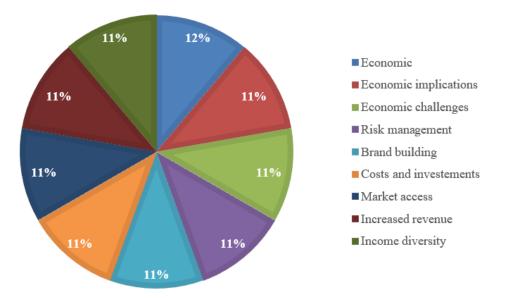
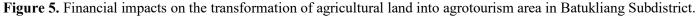


Figure 4. Socio-cultural impacts on the transformation of agricultural land into agrotourism area in Batukliang Subdistrict.

3.3.3. Financial impact

The final analysis is regarding the financial impacts. All participants were interviewed without any exceptions to attain a more impartial perspective. The outcomes of the interviews revealed nine highly probable financial impacts (see **Figure 5**), 8 of which were associated with economic implications such as economic challenges, risk management, brand building, costs and investments, market access, increased revenue, and income diversity. Unlike the findings of the preceding two analyses, these nine aspects were viewed as favourable outcomes resulting from converting agricultural land into tourist areas. These nine impacts were likely to occur with the same percentage, the so-called 11%.





3.4. Results and hypothesis comparison and solutions to offer

Based on the results derived from the analysis of the three impacts mentioned above, the deduction can be drawn that the conversion of agricultural land into an agrotourism area in Batukliang District, Central Lombok Regency, generally has negative effects on both farmers and local communities within the realm of environmental and socio-cultural consequences. Nevertheless, it is also acknowledged that the conversion of agricultural land from an economic standpoint may positively impact local economic development, encompassing economic opportunities, brand building, income diversity, increased revenue, and market access. This indicates that the impact of transforming agricultural land into an agrotourism area in Batukliang District, concerning environmental and socio-cultural aspects, does not align with hypotheses 1 and 2 ($H_1 \& H_2$). Conversely, from an economic perspective, transforming agricultural land into agrotourism areas is consistent with the third hypothesis (H_3), positing that the transformation of agricultural land into agrotourism areas impacts the sustainable development of local income.

As a part of our data collection process, solutions offered by all participants were also presented and examined based on findings from previous interviews. The solutions suggested encompass various benefits not only for stakeholders in the tourism sector but also for farmers and local communities regarding environmental, socio-cultural, and economic perspectives. The solutions offered by farmers and local communities include 1) community engagement; 2) community empowerment; 3) income diversification; 4) livelihood support; 5) sustainable farming promotion; 6) local market value; 7) land preservation; 8) cultural preservation; 9) capacity building and support services; 10) public awareness and education; as well as 11) land-use regulation. Meanwhile, the solutions offered by tourism actors include 1) local stakeholders' engagement; 2) community investment; 3) sustainable agriculture support; 4) responsible tourism promotion; 5) sustainable development partnerships; 6) policy change advocacy; 7) collaborative solution; as well as 8) education and awareness. These proposed solutions from both parties aim to foster collaboration, support sustainable practices, and enhance overall development in the respective areas.

3.5. Successful case studies of transforming agricultural land into tourist attractions

Successful case studies of transforming agricultural land into tourist attractions can be observed in various regions. For instance, Polobogo Village in Semarang Regency has leveraged its natural resources for agrotourism (Wijayanto et al., 2022). Similarly, Sawah Village in Kuningan Regency has economic benefits from developing agricultural areas into tourist destinations (Setiadi et al., 2022). Furthermore, the Pasirmulya subdistrict, West Java, has showcased the potential for rural tourism, particularly focusing on coffee tourism (Rahayu and Ekasari, 2022). These examples highlight the positive impact of rural transformation on local economies. Competitive analysis among these regions could reveal insights into best practices for sustainable agrotourism development, emphasizing the importance of community involvement, communication strategies, and infrastructure development to maximize the benefits of agricultural land utilization for tourism purposes.

The success of transforming agricultural land into tourist attractions hinges on several key factors identified in various case studies. Factors such as the potential of natural resources, community involvement, infrastructure adequacy, and innovation play pivotal roles in the sustainable development of agritourism (Nkwunonwo, 2020; Utami et al., 2023; Zulgani et al., 2023). For instance, Polobogo Village in Semarang Regency and Sawah Lope in Kuningan Regency, as described in advance, where Polobogo Village showcases good tourism potential through its natural resources, emphasizing the need for strong collaboration between the village government and the community for optimal industry outcomes (Rahayu and Astri Mutia Ekasari, 2022). Similarly, Sawah Lope village demonstrates the economic benefits of agricultural land development into tourist destinations, emphasizing the added value and the importance of monitoring for sustainable tourism growth (Romadi et al., 2023). These examples highlight the significance of strategic planning, community engagement, and resource management in successful agricultural-to-tourism transformations.

Lessons from various studies, including those above, can be applied to transform agricultural land into tourist attractions, especially within the Lombok region. Firstly, communication strategies are crucial in developing agrotourism villages, emphasizing the importance of effective communication with the media and utilizing human resources (Jelantik et al., 2023). Secondly, identifying ethnocultural practices and potentials can sustain tourists longer, showcasing the significance of folklore, festivals, and cultural events as attractions (Lestari and Yusra, 2022). Additionally, leveraging local wisdom and resources, such as vanilla plantations, can be a foundation for agrotourism development, emphasizing SWOT analysis for strategy formulation (Astuti et al., 2022). Moreover, understanding the impacts of land conversion on socio-economic conditions highlights the need to balance development with preserving agricultural productivity and community well-being (Salmah, 2022). Lastly, planning models based on land use changes can empower communities through agricultural and cultural tourism, emphasizing government support and infrastructure (Nugroho, 2017).

4. Discussion

The study regarding the transformation of agricultural land into agrotourism areas in Batukliang District reflects a broader trend observed in various rural areas, driven by the opportunity to diversify income sources and promote local economic growth. Perspectives from local communities highlight seven foundational points for this transformation: conservation, market demand, agrotourism potential, natural resources utilization, natural beauty, personal interest, and economic benefits. Conservation emerges as the primary driver of these aspects, suggesting a community is keen on preserving its environment while leveraging it for sustainable tourism. This is in line with a study conducted by Suksmawati et al. (2022), which outlines that conservation in tourism focuses on preserving ecosystems and cultural heritage while providing benefits to local communities. Furthermore, conservation plays a crucial role in developing tourist destinations by ensuring the sustainable management of natural and cultural resources, as highlighted in various papers (Akanni Soaga, 2023; Burger, 2000; Neto, 2003; Ursache, 2015). Ultimately, conservation efforts protect the environment and heritage and contribute to the long-term viability and attractiveness of tourist destinations (du Cros, 2001; Garrod and Fyall, 2017; Mihalič, 2000; Nocca, 2017).

In terms of environmental aspects, transforming agricultural land into agrotourism areas presents various environmental challenges. Key concerns include land loss, environmental degradation, and the sustainability of development practices. These concerns underscore the necessity for well-balanced approaches that mitigate detrimental impacts while promoting environmental stewardship. Ensuring sustainable development practices is paramount in upholding agriculture and tourism's ecological equilibrium and long-standing sustainability. Furthermore, within the context of social and cultural aspects, there exists a risk of cultural identity erosion, commodification of local traditions, and changes in community dynamics despite the potential for agrotourism development to encourage community involvement and cultural lands transformed into tourist sites often alter local customs to satisfy tourists. For example, unique farming practices may be replaced with visually appealing methods, diminishing cultural distinctiveness. Agrotourism often commodifies local culture, reducing it to mere attractions rather than authentic traditions. Traditional crafts, music, or dance may be modified to align with tourist expectations, compromising their original significance. Agrotourism can also result in power imbalances within communities, favouring resource-rich individuals. Large landowners transforming their properties into attractions can marginalize smaller farmers, leading to economic disparities. This shift can disrupt community dynamics and diminish mutual support among members.

The prevalence of negative socio-cultural impacts emphasizes the importance of strategies that protect and honour local culture while promoting tourism. Guaranteeing that local communities retain control over cultural narratives and tourism practices can aid in mitigating unfavourable consequences. Nevertheless, economic analysis uncovers an overall positive outlook, highlighting increased revenue, a variety of income sources, and improved market access as key benefits. These economic opportunities can improve the community's well-being and support broader economic development in Batukliang District.

However, the challenge lies in ensuring that these economic benefits are not achieved at the expense of environmental degradation or socio-cultural disintegration. Overall, the study's findings suggest a necessity for comprehensive solutions that address environmental, socio-cultural and economic aspects. Proposed solutions include community engagement, empowerment, income diversification, sustainable farming promotion, and land-use regulation. Additionally, stakeholders in the tourism industry propose engagement with local community members, provision of support for sustainable agriculture, encouragement of responsible tourism, and advocacy for policies. These strategies are designed to foster collaboration, support sustainable practices, and ensure the prosperity of both the agricultural and tourism sectors. We extensively outline the issues and resolutions discovered in our research (see Figure 6) to offer a clearer and more inclusive comprehension of transforming agricultural land into an agrotourism area in Batukliang District. The focus is on the positive and negative impacts, along with the solutions proposed as part of the tourist area development strategy that is agreeable to all stakeholders involved.

Studies emphasize the significance of community involvement in tourism development, highlighting its impact on economic growth, social well-being, and cultural preservation (Bhatt and Rakesh Dani, 2024; John et al., 2024; Suharto, 2024). Through active participation, communities can contribute to the direction of tourism activities, minimize negative impacts, and boost the local economy (Mulyan and Alfian Martoni, 2024). Several research studies discussed community involvement, including a study by Utama et al. (2024) and Yapanto et al. (2023), who analyzed community participation in tourist area management. In line with this, the significance of community empowerment strategies plays a crucial role in elevating the quality of life for residents (Isnaini et al., 2024; Nahara et al., 2023) as a key component for sustainable tourism development (Abou-Shouk et al., 2021). Research indicates that empowering residents psychologically and socially positively influences their support for sustainable tourism, ultimately impacting their quality of life (Gautam and Bhalla, 2024). Several researches discussed local empowerment, including a study by Riana and Fajri (2024) and Fare et al. (2023), who explored community empowerment and customary attachments to support participation.

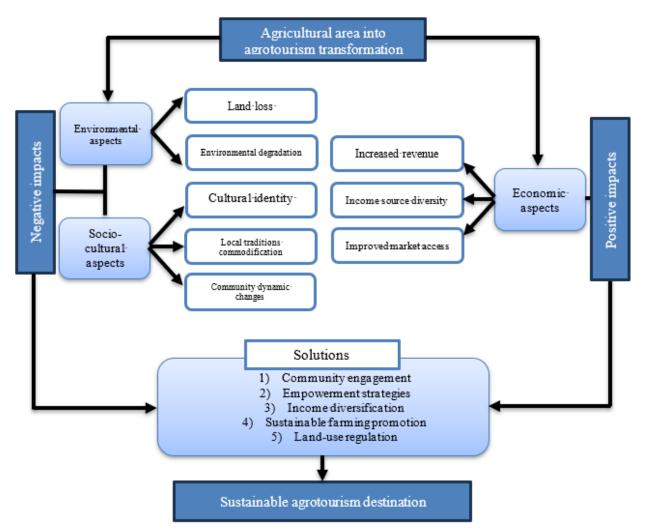


Figure 6. Problems and solutions offered towards sustainable agrotourism destination in Batukliang District.

Furthermore, promoting rural tourism based on farms can create additional income opportunities for farmers, contributing to the preservation of rural landscapes, job creation, and overall quality of life in rural areas (Byba, 2019). Therefore, income diversification within the tourism sector supports sustainable development and enhances community well-being and economic resilience (Pasanchay and Schott, 2021; Powell et al., 2018; Saarinen, 2019). Several research studies discussed income diversification, including a study by Veriasa et al. (2023) and Simatupang (2018), who examined the role of tourism receipts in short-run economic growth. Moreover, sustainable farming promotion also plays a crucial role in sustainable agricultural practice, where initiatives like Sein Farm integrate agriculture with tourism activities (Irfan et al., 2024; Ramadhan and Fasya, 2023). Sustainable commercialization of farm tourism revitalises agriculture and benefits farmers by raising awareness about the importance of cultivation and reducing farmer suicides (George and M. J., 2023). Several kinds of research discussed sustainable farming promotion, including a study by Djuwendah et al. (2021) and Muliati (2018), who discussed contemporary issues in developing a sustainable geo-tourism site. Finally, land-use regulation ensures the sustainable management of ecosystems and the preservation of natural areas (Petrovszki et al., 2024). Efficient land management (Abtahee et al., 2023; Khosravi

Mashizi and Sharafatmandrad, 2023; Mina et al., 2023) stimulates different forms of tourism, contributing to the expansion of the tourism industry (Shaimerdenova et al., 2023). Several studies discussed land-use regulation, including a study by Vipriyanti et al. (2024) and Sumarja et al. (2023) who explained the practice of land ownership and the associated problems analyzed through a socio-legal approach.

Integrating community involvement, empowerment strategies, income diversification, sustainable farming promotion, and land-use regulation is crucial for agrotourism tourism development based on transforming agricultural areas in Batukliang District, Central Lombok. These elements support economic growth, cultural preservation, and local communities' overall well-being. Engaging in tourism activities and sustainable practices enhances local farmers' and communities' quality of life and ensures the long-term viability of their resources, strengthening local economies' resilience.

5. Conclusion

The transformation of agricultural land into agrotourism areas in Batukliang District presents both opportunities and challenges. The study's findings highlight the potential economic benefits, such as increased revenue, income diversification, and enhanced market access, which contribute positively to local economic development. However, these advantages come with significant environmental and socio-cultural costs. The loss of agricultural land, environmental degradation, and shifts in community dynamics pose substantial risks that must be addressed to ensure sustainable development. This study is subject to several limitations that must be acknowledged. The reliance on interview data may introduce biases, as responses are subject to individual perceptions and experiences. Thus, future research should address these limitations by incorporating more variation methods to provide a more comprehensive understanding of land conversion impacts, allowing for more robust data analysis and comparisons. Research could also explore the effectiveness of proposed solutions, such as community empowerment and sustainable farming practices, in mitigating the negative impacts identified in this study. Finally, investigating the role of government policies and international tourism trends in shaping the development of agrotourism in rural areas could offer valuable insights for policymakers and stakeholders involved in sustainable tourism planning.

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