

The Impact Of Tourism On Land Conversion In Kerobokan Kelod Village, North Kuta District, Badung Regency

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Abstract

This study examines the impact of tourism on land-use conversion from agriculture to commercial purposes in Kerobokan Kelod Village, North Kuta District, Badung Regency, Bali. The area has undergone significant transformation due to rapid tourism development, marked by the conversion of productive agricultural land into villas, hotels, and restaurants. The aim of this research is to identify the resulting impacts and formulate mitigation strategies to balance tourism growth with environmental sustainability and the preservation of local socio-cultural values. The research adopts a qualitative descriptive approach supported by quantitative data, collected through in-depth interviews, direct observation, and documentation. Data analysis techniques involve SWOT analysis and the Analytical Hierarchy Process (AHP).

The findings reveal that while land conversion has contributed to increased income and employment opportunities, it has also led to the loss of agricultural regeneration, economic dependence on the tourism sector, and environmental degradation. The SWOT analysis generated 20 alternative strategies categorized based on strengths, weaknesses, opportunities, and threats. AHP prioritization identified three main strategies: (1) implementing land zoning regulations and investment monitoring to prevent speculation and ensure ecological sustainability; (2) developing community-based agrotourism to preserve culture and diversify the local economy; and (3) providing training and skills development programs to enhance the competitiveness of the local workforce. This study highlights the importance of participatory tourism governance rooted in local wisdom to ensure that economic growth does not compromise environmental resilience and cultural identity.

Keywords: ahp, land conversion, swot, tourism impact.



INTRODUCTION

Tourism is one of the strategic sectors that has an important role in the economic development of a country. This sector is able to make a significant contribution to increasing national income, job creation, and poverty alleviation. Indonesia, as an archipelagic country rich in natural beauty and cultural diversity, has great potential in tourism development. Bali Province is one of the real examples of the success of this sector. Bali has long been known as a leading tourist destination at the national and international levels. Bali's success in attracting millions of tourists every year is supported by a combination of natural charm, cultural heritage, and government policies that provide regional authority in the management of the tourism sector through Law No. 23 of 2014 concerning Regional Government.

However, behind this progress, the rapid growth of the tourism sector also has various negative impacts that cannot be ignored. One of the main issues that arises is the conversion of land use, especially from agricultural land to commercial areas such as hotels, villas, restaurants, and entertainment centers. This change in land function occurred massively and caused the narrowing of agricultural land which has been a support for local food security. In addition, land conversion also contributes to environmental degradation, including declining groundwater quality, increased pollution, and reduced green open space. This shows that poorly planned tourism development has the potential to damage the ecological and social foundations of local communities.

This phenomenon is very visible in Kerobokan Kelod Village, North Kuta District, Badung Regency, which is one of the areas with the fastest tourism development in Bali. This area was previously known as a fertile agricultural area, but now it has undergone a massive transformation into a tourist and residential area. These changes not only impact the physical landscape, but also affect the social and cultural structure of society. The loss of public spaces and communal places leads to a decline in social interaction and a weakening of local cultural values. Therefore, it is important to conduct research on the impact of tourism on land conversion in this region, in order to identify internal and external factors that can be used as a basis in formulating sustainable tourism development strategies.

LITERATURE REVIEW

Tourism Concept

Tourism is a variety of tourism activities and is supported by various facilities and services provided by the community, entrepreneurs, government, and local governments (Law of the Republic of Indonesia on Tourism Number 10 of 2009). The tourism referred to in this study is an



activity carried out in a short period of time that is directly or indirectly related to tourism which involves various elements of tourism that aims to influence the related sectors involved in it.

The Concept of Land Conversion

Utomo et al. (1992), said that land conversion or land use conversion can be interpreted as a change in the function of part or all of the land area from its original function (as planned) to other functions that have a negative impact (problem) on the environment and the potential of the land itself. From this definition, land use change is a form of change that occurs on land due to a change in use from the original use. Where these changes can have a negative impact on the surrounding environment.

Burker (2003) said that the term social change is seen as an ambiguous term. The term is sometimes used in a narrow sense, referring to changes in the social structure, but it is also sometimes used in a very broad sense that includes political, economic and cultural organizations. In his book, Burker mentions Spencer's theory of social change as a model that emphasizes social evolution, in other words social change that takes place slowly and cumulative (evolution) and society changes from a simple civilization level to a more complex civilization level and such change does not always lead to a better direction but change can lead to destruction. Social change can be influenced by factors from within and outside the society itself. The factors that come from the outside include according to Elly and Usaman (2010), namely causes that come from the physical natural environment around humans and the cultural influence of other people. In this study, Spencer's theory is used, namely the impact of tourism on land conversion that occurs in the social environment of the community occurs slowly from its development and tourism is an external factor that affects the changes that occur in Kerobokan Kelod Village.

Impact Theory

The impact of tourism can be reviewed from various perspectives, both etymological and sociological. According to Soerjono Soekanto (2006), sociological impact is the effect of social phenomena that affect people's lives, which can be positive or negative. In the context of tourism, these impacts include social, cultural, economic, and environmental changes. Faizun (2009) explained that the impact of tourism arises as a difference in community conditions before and after tourism activities. Meanwhile, Pitana and Gayatri (2005) divide it into three main aspects: socio-economic, socio-cultural, and environmental.

Environmental impacts often arise due to infrastructure development and overexploitation of resources. According to UNEP (2003), without good management, tourism



development can damage natural habitats, reduce water and soil quality, and cause pollution. Sunarta (1994) added that tourism development in sensitive areas such as coastal areas and protected areas has the potential to disrupt the balance of ecosystems and local management systems. However, if managed sustainably, tourism can be a means of preserving culture and nature, as well as encouraging the welfare of local communities (Sunarta, 2010).

From the social side, tourism has various impacts on the structure and values of society. Ismayanti (2010) groups the social impact of tourism into ten categories, including changes in the value of life, increasing economic competition, the emergence of new social institutions, and the occurrence of migration and population density. Urbanus and Febianti (2017) highlight the shift in values such as individualism, secularism, and consumerism due to intensive interaction between local communities and tourists. In addition, the emergence of social deviations such as prostitution and alcohol consumption is also a concern. Surwiyanta (2003) added three main influences: community polarization, family fractures, and the growth of a consumption-oriented society. Thus, the impact of tourism is very complex and needs planned management so that its benefits can be optimized and its negative impacts minimized.

METHOD

This research was carried out in Kerobokan Kelod Village, North Kuta District, Badung Regency, Bali Province, for three months from January to March 2024. This location was chosen because it is one of the fastest-growing tourism areas and is under pressure to change land use. This study uses a qualitative descriptive approach supported by quantitative data. The data used included primary data obtained through in-depth interviews, direct observations in the field, as well as visual and written documentation, as well as secondary data from related agencies such as BPS, urban villages, and tourism offices. Informants are determined purposively, including community leaders, village officials, tourism actors, and residents who are directly affected by land conversion.

The data analysis technique is carried out in stages using two main approaches, namely SWOT analysis and Analytical Hierarchy Process (AHP). SWOT analysis is used to identify strengths, weaknesses, opportunities, and threats related to tourism development and land conversion. Meanwhile, the AHP method is used to determine strategy priorities through weighting based on hierarchical structure and paired comparison matrix obtained from key informants. The consistency value of the ratio is calculated to ensure the validity of the results. Data validity testing is carried out through source triangulation to ensure that the data collected has a high level of accuracy and reliability.





RESULTS AND DISCUSSION

The impact of tourism on land conversion to agricultural land in Kerobokan Kelod Village

1. Individual economic dependence

The growth of the tourism sector in Kerobokan Kelod Village, Bali, has brought significant changes, especially in the conversion of agricultural land into commercial land and tourism accommodation. This change is driven by the increasing demand for tourist facilities such as villas, hotels, restaurants, and entertainment centers. Agricultural land that was previously used to grow rice or horticulture is now being diverted for more economically profitable purposes. This opens up opportunities for communities to diversify their sources of income and no longer rely entirely on the agricultural sector which is seasonal and vulnerable to weather and price fluctuations.

Community involvement in the tourism sector, both directly and indirectly, has created new job and business opportunities. Many residents who previously worked as farmers have now switched professions to hotel staff, tour drivers, homestay owners, and souvenir artisans. This diversification strengthens the economic dependence of individuals because society does not rely only on one sector to meet the needs of life. In addition, income from the tourism sector is generally higher and more stable than traditional agriculture, which promotes improved welfare and economic independence of families. The younger generation is also more interested in working in the tourism sector than continuing their parents' farming profession, reflecting a shift in social and economic values in society.

However, land conversion needs to be critically reviewed. High dependence on the tourism sector carries risks, especially during global crises such as the COVID-19 pandemic that had paralyzed this industry. On the other hand, the massive loss of agricultural land also threatens food security and environmental sustainability. Therefore, spatial planning and sustainable development policies are needed that are able to balance economic growth with the preservation of the ecological function of agricultural land.

2. Labour transfer

Tourism has become a leading sector in Bali, including in Kerobokan Kelod Village, which encourages the conversion of land from agriculture to commercial land such as villas, hotels, and restaurants. This change led to the shift of the workforce from the agricultural sector to the tourism sector, where people began to work as hotel staff, cooks, tour guides, and local entrepreneurs. These moves are generally voluntary because the tourism sector offers higher incomes, better economic prospects, and a modern work environment. The younger generation also tends to be more interested in working in this sector than farming which is considered difficult and unprofitable.





However, this shift also poses challenges such as the loss of farmer regeneration, a decline in agricultural productivity, and the limited skills of the workforce in the tourism sector so that they only occupy low positions with limited wages. Socially, there is an income gap between residents that can trigger social jealousy if not managed properly. Therefore, this labor transfer needs to be balanced with training, community empowerment, and protection of the agricultural sector so that the development that occurs remains fair, inclusive, and sustainable.

3. Changes in work

The rapid growth of the tourism sector in Kerobokan Kelod Village has encouraged the conversion of agricultural land into commercial land for villas, hotels, restaurants, and entertainment venues. This changed the structure of community work from those who originally depended on the agricultural sector to workers or business actors in the tourism sector. This shift is driven by more promising economic opportunities, as well as more diverse types of jobs and demand new skills, such as service, foreign languages, and management. The younger generation, in particular, are more interested in working in the tourism sector which is considered more modern and prestigious than farming.

However, these changes also pose challenges, such as the limited skills of the local workforce that causes most to occupy only low positions with minimal incomes. In addition, the loss of the role of the agricultural sector reduces local economic resilience and shifts social values such as mutual cooperation. Therefore, this transformation needs to be balanced with job training policies, increasing the capacity of human resources, and protecting vulnerable groups so that the benefits of tourism can be felt equally and sustainably by all levels of society.

4. Changes in land values

The growth of the tourism sector in Kerobokan Kelod Village has triggered a sharp surge in land value, which is the main driver of the conversion of agricultural land into commercial land for villas, restaurants, and other tourist facilities. Before tourism developed rapidly, agricultural land was used for local food production with a low selling value. But now, the price of land reaches Rp28-31 million per square meter and houses are worth billions of rupiah. As a result, many land owners are tempted to sell or rent it to investors, accelerating the conversion of rice fields into tourist areas. This changed people's views of land, from a long-term source of livelihood to a short-term economic asset, especially among the younger generation.

However, increasing land values also have various negative impacts, such as loss of access to productive land for young farmers, land speculation, and social inequality between landowners and non-landowners. In addition, inadequate spatial planning leads to land use conflicts, congestion, and environmental degradation. Therefore, although increasing land values provides



economic benefits, there needs to be strict control policies such as zoning, progressive taxes, land cooperatives, and community education so that these changes remain in line with the principles of sustainable development.

Strategies in minimizing the impact of tourism on the conversion of agricultural land in Kerobokan Kelod Village

a) Identification of Internal Factors in minimizing the impact of tourism on the conversion of agricultural land in Kerobokan Kelod Village

Identification of internal factors is an initial stage in analyzing factors in the form of strengths and weaknesses in minimizing the impact of tourism on the conversion of agricultural land in Kerobokan Kelod Village. Based on the results of the interview, several factors in the form of strengths and weaknesses can be found in Table 1.

Table 1 Internal Factor in minimizing the impact of tourism on the conversion of agricultural land in Kerobokan Kelod Village

Internal Factor	Information
Increased community income	Strengths
Availability of new jobs	Strengths
Increase in the economic value of land	Strengths
Diversification of the community's economy	Strengths
Infrastructure improvements	Strengths
Declining productive agricultural land area	Weaknesses
Loss of farmer regeneration	Weaknesses
Economic dependence on the tourism sector	Weaknesses
Lack of skills of local communities	Weaknesses
Occurrence of land conflicts	Weaknesses

Source: Data Results, 2026.

b) Identification of External Factors in minimizing the impact of tourism on the conversion of agricultural land in Kerobokan Kelod Village

Identification of external factors is an initial stage in analyzing factors in the form of opportunities and threats in minimizing the impact of tourism on the conversion of agricultural land in Kerobokan Kelod Village. Based on the results of the interview, several factors in the form of strengths and weaknesses can be seen in Table 2.

Table 2 External Factors in minimizing the impact of tourism on the conversion of agricultural land in Kerobokan Kelod Village

External Factors	Information
Development of agriculture-based tourism (agro-tourism)	Opportunities
Increased investment from the private sector	Opportunities
New job skills training opportunities	Opportunities
Opportunities for the development of local MSMEs	Opportunities
Increased regional attractiveness	Opportunities
Environmental degradation	Threats
Loss of local cultural identity	Threats
Socioeconomic inequality	Threats
Land speculation	Threats
Economic dependence on foreign tourists	Threats

Source: Data Results, 2026.

SWOT Analysis

In this study, several alternative strategy formulations in the form of SWOT (Strengths, Weaknesses, Opportunities, Threats) matrix will be examined which can be used in identifying strengths, weaknesses, opportunities, and threats arising from tourism development as well as how strategies can be designed to manage tourism impacts, especially the conversion of agricultural land in Kerobokan Kelod Village. Based on the results of the analysis of the SWOT matrix, several alternative strategies were obtained. The strategies are as follows.

A. S-O Strategy (Strengths-Opportunities)

1. Encouraging economic diversification through the development of agrotourism based on local culture

In the face of the rapid growth of tourism in Kerobokan Kelod Village, the development of agro-tourism based on local culture is a relevant and sustainable economic diversification strategy. Agrotourism combines agriculture, tourism, and local culture, so that agricultural land not only functions as a food producer, but also as a means of education, recreation, and preservation of traditions. Through this concept, people can maintain their land while earning additional income from tourists who are interested in traditional farming activities, Subak irrigation systems, and various Balinese cultural activities. This strategy not only increases the added value of agriculture, but also strengthens cultural identity and prevents the migration of

young generations to other sectors.

The advantage of this approach lies in its ability to maintain a balance between economic, social, and environmental. Agrotourism encourages the active involvement of local communities in designing and managing tourism activities, so that economic benefits are more equitable and not only enjoyed by large investors. However, its success requires cross-sectoral support, including training, adequate infrastructure, and effective promotion. With this synergy, local culture-based agro-tourism can be a concrete solution in facing the challenge of land conversion while supporting inclusive and sustainable development.

2. Optimizing the increase in private investment to expand local employment

Optimizing private investment is one of the important strategies in dealing with the impact of land conversion due to tourism growth in Kerobokan Kelod Village. Investment in the construction of villas, hotels, restaurants, and other tourist facilities has become the driving force of the local economy. However, in order for these investments to provide equitable benefits, there needs to be regulations that ensure the active involvement of local communities. Without supervision, investments tend to benefit large capital owners and marginalize local residents. Therefore, optimization strategies must be directed at the creation of inclusive jobs and community involvement in the tourism industry value chain. This can be achieved through local labor recruitment policies, skills training, and partnerships with MSMEs and local cooperatives.

Local governments play a central role in directing investment to side with the interests of the community through regulations such as job quotas for local residents, incentives for community-based businesses, and support for small businesses. This strategy not only reduces unemployment and social inequality, but also creates job diversification in the service sector, such as culinary, transportation, and creative industries. The chain effect of increasing people's incomes will strengthen local economic independence and create more equitable and sustainable development. With synergy between investors, the government, and the community, private investment can be a tool for equitable social and economic transformation.

3. Integrating skills training with the development of the service sector and MSMEs

The strategy of integrating local community skills training with the development of the service sector and MSMEs is an important step in facing the challenge of land conversion in Kerobokan Kelod Village. The growth of tourism has created a high demand for skilled labor in the fields of hospitality, culinary, transportation, and tourism services. However, the limitations of technical and managerial skills among local communities are often an obstacle to their participation in the sector. Therefore, targeted and practice-based training is urgently needed, with a focus on relevant skills such as hospitality, homestay management, digital promotion, and

foreign languages. This training must also be followed by business assistance, capital assistance, and strategic partnerships in order to encourage the formation of competitive MSMEs.

This approach will strengthen the local economy inclusively, especially for vulnerable groups such as women, youth, and former farmers who are directly affected by land conversion. With new skills and adequate support, they can develop businesses based on local potential, such as traditional culinary products, tourism services, or cultural crafts. In addition to opening new jobs, this strategy also forms a sustainable and independent entrepreneurial ecosystem. Collaboration between the government, training institutions, business actors, and the community is needed so that training is not only a ceremonial activity, but really has an impact on improving people's welfare.

4. Promoting the region as an international tourism destination based on culture and nature

In the face of land conversion due to tourism development in Kerobokan Kelod, the promotion of the area as an international tourist destination based on culture and nature is an important strategy to maintain a balance between economic development and locality preservation. Kerobokan Kelod has cultural richness such as agrarian traditions, Subak irrigation system, and unique Hindu ceremonies, as well as natural potential in the form of rice paddies and a natural rural atmosphere. This potential can be a major attraction for foreign tourists looking for an authentic experience. Promotion can be done through digital platforms, collaborations with travel agents, as well as collaborations with travel influencers, with an emphasis on the uniqueness of local activities such as farming, traditional cooking, and art performances.

For the promotion to run effectively, it is necessary to improve the quality of the destination, such as infrastructure, services, and local human resource skills. Local governments play an important role in supporting through the creation of thematic tour packages, annual cultural festivals, and strengthening the role of traditional villages as managers of tourist areas. With targeted and local potential-based promotions, tourism not only provides economic benefits, but also contributes to the preservation of culture and the environment. This strategy makes Kerobokan Kelod a unique, dignified, and sustainable destination in the eyes of the international world.

5. Increasing land value through investment based on sustainability principles

The conversion of agricultural land into a tourism area in Kerobokan Kelod Village has driven a significant surge in land values, but it is often speculative and ignores social and ecological impacts. Therefore, a strategy to increase land value in a sustainable manner is important, namely through investment that not only pursues financial gains, but also maintains the ecological and social function of the land. Examples are the development of agro-tourism, eco-villas, educational

parks, or green open spaces that are environmentally friendly and contribute to the sustainability of the region. This approach makes the value of land derive from its function in supporting green tourism and cultural preservation.

To make this happen, the role of local governments is crucial, especially through green investment incentives, ecological development regulations, and requirements for local community involvement in each project. Land values will become more stable and useful in the long term if they are used productively and responsibly. This strategy also prevents detrimental land speculation and creates a fairer and more sustainable spatial planning. That way, land is not only seen as an economic asset, but also as a social and ecological resource that is valuable for future generations.

B. W-O Strategy (Weaknesses-Opportunities)

1. Overcoming economic dependence and farmer regeneration with agro-tourism education

In the face of land conversion and the dominance of the tourism sector in Kerobokan Kelod Village, the agro-tourism education strategy is a promising solution to reduce dependence on conventional tourism while reviving the interest of the younger generation in agriculture. Agrotourism is positioned not only as a recreational activity, but also as an educational medium that combines economic, cultural, and environmental values. Through training, field practice, and internship programs, the younger generation can be introduced to modern agricultural techniques and how to package them into creative ventures that are interesting and relevant to the digital economy.

More than that, agro-tourism education strengthens the community's economic resilience by creating a stable and sustainable alternative source of income. When agriculture returns to high economic value through integration with tourism, people are no longer completely dependent on foreign tourists. This strategy requires collaboration between the government, schools, communities, and tourism business actors to create a village-based learning ecosystem that supports farmer regeneration and youth entrepreneurship. Thus, agrotourism not only maintains agricultural heritage, but also forms a resilient and competitive local economy.

2. Providing ongoing job training to upskill local communities

One of the main challenges in tourism development in Kerobokan Kelod Village is the low skills of the local community to fill jobs in the tourism sector that require high competence. To overcome this, a continuous job training program that is adaptive to market needs is needed. This training includes improving technical skills such as customer service, homestay management, cooking special meals, tour guiding, to digital marketing, as well as non-technical skills such as communication, time management, leadership, and work ethics. Training needs to be tailored to

the segmentation of the community, including youth, women, and vulnerable groups, so that all parties have equal access to tourism economic opportunities.

This training should ideally be carried out collaboratively by involving the government, training institutions, the private sector, and local communities. In addition, the training program should be accompanied by a skills certification as a form of professional recognition that increases employment or entrepreneurial opportunities. This strategy aims to create competent and independent local human resources, reduce dependence on foreign workers, and ensure that the economic benefits of tourism are felt directly by the local community. This program will also help the transition of the community from the agricultural sector to the service sector in a more structured manner, supporting inclusive and sustainable tourism development.

3. Supporting local communities to develop tourism-based MSMEs

In the face of land use changes and tourism growth in Kerobokan Kelod Village, the development of tourism-based Micro, Small and Medium Enterprises (MSMEs) is an important strategy to strengthen the community's economy. MSMEs play a central role in creating a local economy that is inclusive and based on local culture and resources. The form of MSMEs can include traditional food stalls, souvenir shops, vehicle rental services, handicrafts, homestays, traditional spas, and tour guide services. Local MSMEs provide an authentic experience for tourists while opening up empowerment opportunities for people from various social circles.

To encourage the growth of MSMEs, the government and stakeholders need to provide entrepreneurship training, management, digital marketing, and easy access to capital. In addition, it is important to build a supportive business ecosystem, such as an integrated promotional space, strengthening local brands, and integrating MSMEs into the tourism supply chain. This support must be sustainable and community-based so that MSMEs are not only economic drivers, but also tools for cultural and environmental preservation. With this strategy, economic growth can take place evenly, social inequality is suppressed, and people have strong economic independence in the midst of tourism dynamics.

4. Building synergy between the government and the community in the conservation of agricultural land

In the midst of the pressure of land conversion due to tourism expansion in Kerobokan Kelod Village, the preservation of agricultural land is a strategic issue that requires synergy between the government and local communities. The government has an important role in establishing spatial regulations, establishing perennial agricultural areas, and providing incentives for farmers to maintain the agricultural function of the land, such as through subsidies, equipment assistance, or tax exemptions. These measures aim to maintain the sustainability of agricultural



land as a buffer for food security, cultural identity, and environmental balance.

However, the effectiveness of the policy depends on the active participation of the community. Therefore, a participatory approach is key, involving village governments, farmer groups, youth, and indigenous leaders in spatial planning and supervision. This synergy can be realized through collaborative programs such as agro-tourism, organic farming, and modern agricultural training that increase the economic value of the land. The government can also support the marketing of local products and promote agriculture as part of the tourist attraction. By building fair and sustainable partnerships, farmland is not only preserved, but also economically empowered, socially, and ecologically for future generations.

5. Directing investment to also support modern agriculture and local communities

In the face of the rapid growth of tourism in Kerobokan Kelod Village, it is important to ensure that the incoming investment is not only focused on the development of tourist facilities, but also supports agricultural modernization and local community empowerment. Currently, the dominance of investment in the tourism sector such as hotels and villas has driven the massive conversion of agricultural land, narrowing the living space of the agrarian community. To overcome this, local governments need to regulate and direct investment to help strengthen the agricultural sector through incentives for investors who develop modern agriculture such as precision agriculture, drip irrigation, and organic cultivation. Cooperation between investors and local farmer groups will increase productivity without the need to expand land.

In addition to supporting agriculture, investment also needs to be directed at strengthening local communities through the development of village infrastructure, agricultural training centers, cooperatives, and micro business capital assistance. Corporate social responsibility (CSR) programs must also be directed at the real needs of the community, such as skills training, scholarships, and promotion of local products. The government needs to establish sustainable investment guidelines that require attention to social, environmental, and citizen participation aspects. With this strategy, Kerobokan Kelod not only develops as a modern tourist destination, but also maintains local economic resilience and cultural and environmental sustainability.

C. S-T Strategy (*Strengths-Threats*)

1. Utilize infrastructure for strict environmental and spatial surveillance

The growth of tourism in Kerobokan Kelod Village has encouraged significant infrastructure development, such as increasing road access, electricity networks, clean water, as well as telecommunication and internet services. However, without adequate oversight, this progress has the potential to lead to environmental degradation and spatial planning violations,





particularly through massive conversion of agricultural land. To overcome this challenge, a strategy is needed to utilize digital infrastructure such as the internet network and geographic information systems (GIS) to monitor land changes in real-time. Local governments can use satellite and drone data to identify spatial breaches, supported by an integrated and transparent database.

In addition to technology, physical infrastructure such as integrated service offices and village monitoring posts need to function as community reporting centers, supported by an application-based complaint system to increase citizen participation. Transportation infrastructure must also be directed to support the sustainability of agricultural land, not to facilitate uncontrolled expansion of development. The government needs to establish clear zoning regulations and make infrastructure a tool to control development. With this approach, infrastructure serves not only as a symbol of physical progress, but also as an instrument of supervision that maintains a balance between development and environmental sustainability as well as local agriculture.

2. Using increased revenue to finance the preservation of local culture

The growth of tourism in Kerobokan Kelod Village has had a positive economic impact on the community, especially through the hotel, culinary, transportation, services, and MSME sectors. However, to maintain the sustainability of development, there needs to be a strategy that directs part of the revenue from tourism to finance the preservation of local culture. Cultures such as traditional ceremonies, dance arts, traditional music, handicrafts, and the agricultural system of Subak are the main attractions of tourists, but they are in danger of extinction due to the pressure of modernization and low interest of the younger generation. Therefore, it is important to allocate funds through community dues, village funds, CSR, or government grants to support art training, sacred site care, cultural festivals, and the development of art groups.

This strategy aims to create a sustainable economic cycle, where local culture is not only preserved as an identity, but also developed into an ethical commodity with economic value. Incubation programs for local artisans can help them improve the quality and competitiveness of cultural products in the tourist market. When people see that their culture is valued and able to improve welfare, the spirit of preservation will grow naturally. Thus, economic growth and cultural preservation can go hand in hand within the framework of sustainable development rooted in local identity.

3. Economic diversification as a solution to dependence on foreign tourists

Dependence on foreign tourists in Kerobokan Kelod Village is a serious challenge because it makes the local economy very vulnerable to global crises, such as the COVID-19 pandemic which



caused a plummeting in tourist visits and loss of community income. To reduce this vulnerability, an economic diversification strategy is needed that not only focuses on the international tourism sector, but also develops local potentials that are more resilient to external shocks. Diversification includes strengthening domestic tourism and agrotourism based on local wisdom, as well as the development of MSMEs that produce typical culinary, handicrafts, and processed agricultural products that can be marketed through e-commerce.

Furthermore, economic diversification also involves the development of modern agriculture, fisheries, and culture-based creative economy sectors, supported by skills training, access to capital, and infrastructure to support production and distribution. By expanding the economic base, people gain alternative income, strengthen household resilience, and reduce risks when tourism weakens. This strategy not only opens up new jobs for the younger generation, but also builds economic independence based on local potential, making development more adaptive and sustainable.

4. Educating the public about environmental management in economic activities

The development of tourism and economic transformation in Kerobokan Kelod Village brings significant benefits, but it also causes great pressure on the environment, such as water pollution, soil degradation, and reduced green open space due to land conversion. Therefore, an environmental education strategy that is integrated with community economic activities is needed to foster awareness that economic growth and nature conservation can go hand in hand. This education must instill the principles of sustainable development through a practical approach based on community business needs, such as the use of energy-efficient, waste management, groundwater conservation, and the protection of local vegetation.

Education can be carried out through village training, community workshops, counseling by the environmental agency, and digital campaigns that are packed with easy-to-understand language and examples. The direct application of this education includes the use of WWTP in homestays, plastic reduction in stalls, the use of organic fertilizers in agriculture, and the adoption of technologies such as biogas and solar panels. When people understand that protecting the environment is part of the success of their business, economic activities can become the main force in nature conservation. This environmental education strategy is the foundation for the development of villages that are not only economically productive, but also healthy, sustainable, and livable in the long term.

5. Encouraging the use of green technology in the tourism sector

Sustainable tourism in Kerobokan Kelod Village requires an adaptive approach to environmental challenges arising from the growth of this sector. One of the key strategies is the



application of green technology, which includes the use of environmentally friendly systems and processes such as solar panels, biogas, WWTP, and recycled building materials. This technology contributes greatly to reducing carbon emissions, pressure on natural resources, and solid and liquid waste from tourism activities. The role of local governments is crucial, especially in creating incentives for business actors who adopt green practices, as well as implementing sustainability standards in the tourism business licensing process. This regulation can be accompanied by education and training for the public and tourists in order to create a broad understanding and support for the use of environmentally friendly technology.

Apart from being an environmental solution, green technology is also a differentiating factor that can increase the competitiveness of destinations. Tourists, especially from international circles who are increasingly aware of environmental issues, tend to choose destinations that show a real commitment to sustainability. Thus, the application of green technology in Kerobokan Kelod not only supports environmental conservation, but also strengthens the region's identity as a responsible and future-oriented tourist destination.

D. W-T Strategy (Weaknesses- Threats)

1. Preventing land and water degradation with environmental regulation and education

The increase in infrastructure development and tourism activities in Kerobokan Kelod Village poses serious challenges in the form of environmental degradation, especially land quality and water pollution. The conversion of agricultural land into commercial areas and tourist housing is often carried out without adequate environmental studies, which has an impact on waste runoff into irrigation canals, excessive use of chemicals, and reduced soil absorption. To overcome this, an integrative strategy is needed in the form of strict regulations and community-based environmental education. In terms of policy, local governments need to establish binding zoning regulations to maintain the function of agricultural land. Every tourism development must go through the EIA process or other environmental documents and must have an effective waste treatment system (WWTP). Supervision of its implementation must be carried out regularly by involving village officials and community leaders.

But regulation alone is not enough. Environmental education that targets the community, business actors, and the younger generation is very important to foster collective awareness of the importance of maintaining soil and water quality. Activities such as counseling, technical training, environmental competitions, and the integration of ecological materials in schools are effective forms of education. Village programs can also develop community-based activities such as waste banks, organic farming, water conservation, and the use of appropriate technology. With a collaboration between strong policies and participatory educational approaches, efforts to





prevent environmental degradation can run effectively and sustainably, maintaining food security, health, and long-term tourist attractions.

2. Regulating land ownership to prevent speculation and ensure fair access

The development of tourism in Kerobokan Kelod Village has caused a significant surge in land prices and encouraged speculative practices by outside investors. They buy large amounts of land without direct use, only to be resold at a higher price. This has an impact on the difficulty of local communities, especially the younger generation, in maintaining or acquiring land. To overcome this problem, a strategy for regulating land ownership that is fair, transparent, and socially just is needed. The main step is the drafting and enforcement of regulations on land ownership control, especially for non-resident buyers. Local governments can set ownership limits, implement progressive taxes on unproductive land, and give priority to local residents in buying and selling transactions. A digital-based land registration and monitoring system is also needed to prevent illegal buying and selling practices.

Support for local communities can be provided through land redistribution programs, fair long-term land tenancy schemes, and strengthening tenure through certification. In addition, the establishment of cooperatives or village land banks can be facilitated to enable collective ownership. The land can be used productively, such as for agro-tourism or community spaces, while preventing the dominance of speculative investors. With this strategy, local communities still have access to land as an economic resource, cultural identity, and living space. Wise land ownership arrangements will balance market dynamics with the principles of social justice in sustainable development.

3. Prioritizing participatory governance in locally-based tourism management

The rapid growth of the tourism sector in Kerobokan Kelod Village has a large economic impact, but it also raises social and governance challenges. One of the main issues is the lack of involvement of local communities in tourism planning, decision-making, and management. For this reason, the implementation of participatory governance is a key strategy in realizing inclusive and sustainable tourism development. Participatory governance places the community as the main actor, not just the object of development. This participation includes an active role in spatial planning, the preparation of tourist village regulations, the determination of zoning, and the licensing process of tourist facilities. This approach provides space for the community to express their aspirations, concerns, and creative ideas, thereby strengthening policy legitimacy and fostering a sense of ownership of the development that occurs.

Its implementation can be carried out through the establishment of tourism village forums, thematic village deliberations, tourism awareness groups (Pokdarwis), citizen tourism





cooperatives, and strengthening customary institutions. The government acts as a facilitator who provides access to information, technical support, and ease of procedures. The active involvement of various groups, including women, youth, farmers, artisans, and MSME actors, is important so that the benefits of tourism are spread evenly. With participatory governance, the direction of development can be adjusted to local values and needs, not just market interests. This strategy promotes a balance between economic growth, cultural preservation, and social justice at the community level.

4. Developing alternative economic schemes (agribusiness, digital) to reduce dependency

The dependence of the people of Kerobokan Kelod Village on the tourism sector, especially foreign tourists, causes economic vulnerability during global crises, such as pandemics. When the tourism sector weakens, people's incomes decline drastically and economic inequality increases. To reduce these risks, a strategy for developing sustainable alternative economic schemes, such as modern agribusiness and the digital economy, is needed. Agribusiness has great potential in what was once a productive agricultural area. Through an integrated and market-oriented agricultural approach, communities can develop activities such as organic farming, hydroponics, small-scale animal husbandry, cultivation of herbal crops, and the production of processed agricultural products such as packaged foods and fermented beverages. These products can be marketed locally, nationally, and even export through digital platforms.

On the other hand, the digital economy offers great opportunities for the young generation of villages. With skills training such as graphic design, digital marketing, social media management, dropshipping, and e-commerce, people can build technology-based businesses that are not directly dependent on tourism. Digitalization also strengthens MSMEs through online stores, digital product catalogs, and tourist destination promotions. Local and village governments play an important role in supporting this strategy through the provision of access to capital, technical training, internet infrastructure, and partnerships with startups, universities, or empowerment institutions. This alternative economic scheme creates a resilient, independent, and inclusive village economic ecosystem.

5. Engaging communities in preserving cultural identity and social heritage

The rapid development of tourism in Kerobokan Kelod Village brings serious challenges to the preservation of cultural identity and social heritage. The modernization and homogenization of cultures that follow the tastes of the tourist market often triggers shifts in local values, consumptive lifestyles, and marginalization of traditional cultures. To answer this challenge, a strategy is needed that places local communities as the main actors in cultural preservation. Local communities are strategically positioned as heirs of cultural values and best understand the socio-





cultural context of their region. Therefore, the active involvement of indigenous peoples, artists, youth, cultural leaders, and women's groups is essential in maintaining and inheriting cultural practices such as dance, traditional music, local architecture, regional languages, and local wisdom in agriculture and spatial planning.

Preservation strategies can be realized through village cultural forums, annual cultural festivals, and cultural education in local schools. Communities can also be encouraged to manage cultural galleries, small museums, cultural houses, and art studios as centers for education and cultural expression. Local governments and tourism actors need to partner with communities in designing cultural-based tourist attractions that maintain sacred and philosophical values, not just entertainment. Through community involvement, tourism does not become a cultural threat, but becomes a means of strengthening local identity and pride in ancestral heritage. This strategy will create harmony between modernity and tradition, and ensure development based on the cultural roots of the community.

Determining the AHP Priority Strategy (*Analytical Hierarchy Process*)

At this stage, priority strategies will be selected using the *Analytical Hierarchy Process* (AHP) method resulting from the SWOT matrix. This method is a method used for effective decision-making to solve a problem. The process of the analytic hierarchy in this study can be divided into three hierarchies, including: targets, objectives, and *alternative strategies*. Based on the AHP assessment data that has been processed, the results show that the first alternative priority (A3) is the Land Zoning and Investment Supervision Regulation. The second strategic priority (A1) is the Development of Community-Based Agro-tourism. The third strategic priority (A2) is Training and Skill Improvement of the Kerobokan Klod Village Community. Alternative (A3) was chosen as a priority strategy, because each resource person gave the highest assessment score on the alternative (A3), and the internal Kerobokan Klod stated in the interview session the AHP stage for the Determination of the Priority Strategy is the most recommended priority, namely the alternative (A3), which is about improving the Land Zoning and Investment Supervision Regulation to minimize the impact of tourism on land conversion in Kerobokan Klod Village. The results of the AHP analysis can be seen in figure 1.





Figure 1 AHP Results of Kerobokan Klot Village

Source: Researcher Analysis Results, 2026.

CONCLUSION

The conversion of land in Kerobokan Kelod Village from agriculture to tourism facilities such as villas, hotels, and restaurants is the impact of the rapid development of the tourism sector. This change does provide economic benefits in the form of increasing community income, but on the other hand threatens food security, ecological balance, and local agrarian cultural identity. The shift of the workforce from the agricultural sector to tourism has also led to a decline in farmer regeneration and an increased dependence on the service sector. Based on SWOT analysis of internal and external factors, 20 alternative strategies have been identified to minimize the impact of tourism on land conversion. From the results of the priority assessment using the AHP matrix, three main strategies that can be proposed are determined, namely Land Zoning and Investment Supervision Regulations (A3), Community-Based Agrotourism Development (A1), and Training and Skill Improvement of the Kerobokan Kelod Village Community (A2). This strategy is expected to be able to create a balance between tourism development and environmental and socio-cultural sustainability.

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