

Regulating Land-Use Conversion for Sustainable Tourism: A Case Study of Lodtunduh Village, Ubud

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Abstract

The phenomenon of land-use conversion in Lodtunduh Village, Ubud Subdistrict, is a direct result of rapid tourism development and the escalating land prices in the area. Despite the existence of customary regulations (*awig-awig*) aimed at managing the transformation of agricultural land into commercial spaces for tourism purposes, the enforcement of these regulations faces significant challenges. This study aims to analyze the efforts by the traditional village to support sustainable tourism through land-use control. Using a qualitative approach, data were collected through interviews, observations, and secondary sources. The findings reveal that land-use conversion in Lodtunduh is primarily driven by tourism expansion and housing demand. While these developments contribute positively to the local economy, they exert considerable negative effects on the environment and agricultural sectors. The customary regulations imposed by the village through *awig-awig* have successfully curbed nearly 40% of land conversion activities. Active community participation in deliberations and oversight mechanisms has been instrumental in preserving the remaining agricultural land. However, economic pressures from the tourism industry, coupled with low public awareness of environmental issues, present critical challenges that demand heightened attention.

Keywords:

land-use conversion; customary village regulations; sustainable tourism

Introduction

Tourism has become one of the fastest-growing economic sectors globally. It has experienced significant growth over the past few decades. In Indonesia, Bali stands out as one of the most popular tourist destinations due to its natural beauty, rich culture, and unique traditions. With this potential, Bali successfully attracts millions of tourists annually. According to data from the Central Bureau of Statistics of Bali Province, in 2023, Bali began to recover, with an increase in the number of international tourist arrivals reaching approximately 19.47%. Additionally, before the pandemic, the tourism sector contributed around 54% to Bali's GDP. This demonstrates the critical role tourism plays in Bali's local economy.

However, the rapid growth of tourism has brought serious challenges, particularly in terms of environmental and social sustainability. One of the main issues that has emerged and significantly impacted the environment and local communities in Bali is land-use conversion

(Wirata, 2021). Land-use conversion refers to the change in the function of a portion or all of a land area from its original use (as planned) to another function, often resulting in negative impacts on the environment and the land's potential (Setiawan, 2016). The reality is that land previously used for agriculture, forests, or green spaces has been converted into commercial areas such as hotels, villas, or accommodations. The conversion of green spaces into tourism areas frequently leads to ecosystem damage, soil degradation, and loss of biodiversity (Lesmana et al., 2022).

In the social context, land use change frequently instigates conflicts between the economic imperative to enhance tourism revenue and the preservation of local culture and lifestyles (Zubaidi, 2014). To mitigate these conflicts, the establishment of regulations is essential to ensure a balance between tourism development and the safeguarding of cultural heritage and local communities. Consequently, regulation serves as a critical instrument in controlling and managing land conversion. Well-crafted local regulations can provide a framework that facilitates sustainable tourism development, protects environmental assets, and upholds the rights of local populations (Anita, 2022). Effective regulatory frameworks are indispensable for the sustainable management of land use transformation. Various studies, such as those conducted by Sihombing and Pramono (2020), underscore the significance of local policies that govern land utilization and promote eco-friendly tourism practices. Policies encouraging the active participation of local communities in land planning and management are also deemed pivotal in achieving a harmonious balance between economic growth and environmental conservation. The land use change occurring in Bali is a clear example of how tourism growth has the potential to threaten local ecosystems and culture (Dipayana and Sunarta, 2015). With the increasing demand for accommodation and tourism facilities, the pressure to convert agricultural land into commercial areas has also escalated. However, several case studies in Indonesia, such as the research by Handayani et al. (2022) in Bali, demonstrate that sustainable land use management can be achieved through clear policies and community participation, which, in turn, can enhance local well-being while protecting natural resources. This study emphasizes that effective regulation is crucial to minimize the negative impacts of land use change and ensure the sustainability of tourism.

Lodtunduh Village in Ubud District represents a case of direct challenges posed by land use change. As Ubud's stature as a tourist destination continues to rise, the pressure to transform agricultural land into accommodations, restaurants, and other tourism-related facilities has grown substantially. Data from the Bali Provincial Tourism Office reveals a 30% increase in the number of accommodations in Ubud over the past five years, reflecting the surging

demand. This shift has led to a 15% reduction in the area of productive agricultural land in recent years. Agricultural land, particularly rice paddies, remains the dominant land use, accounting for 42.19% of the total land area in Ubud District (Sutantri and Wijaya, 2021). This transformation has had significant repercussions on the local community, with many villagers losing their traditional livelihoods as farmers.

As a region that highlights its natural beauty and cultural heritage, the presence of rice fields in Ubud District, particularly in Lodtunduh Village, is of paramount importance within the framework of sustainable tourism. These rice fields not only contribute visually captivating landscapes but also function as key attractions that support environmentally sustainable tourism activities. The preservation of rice fields, alongside the safeguarding of Bali's traditional agricultural practices, such as the subak system, plays a vital role in enhancing the welfare of local farmers while ensuring that tourism development does not disrupt the local ecosystem. This strategy fosters a harmonious synergy between cultural conservation, environmental sustainability, and the sustainable advancement of tourism in Ubud.

From this background, it is crucial to explore how the regulations in Desa Pekraman Lodtunduh function as a mechanism for controlling land use changes. By analyzing the regulations implemented, this study aims to provide insights into the efforts made by the traditional village to support sustainable tourism. This research is expected to contribute a deeper understanding of the challenges and opportunities faced in managing land use changes for sustainable tourism in Bali, as well as offer recommendations for the development of more effective policies in the future.

Methods

This study adopts a qualitative approach to explore and comprehend the intricate dynamics between land use changes and sustainable tourism. Through this methodology, the researcher seeks to obtain insights from diverse perspectives, including stakeholders, local communities, and tourism managers in Desa Lodtunduh, Ubud District. Data for this research is collected through interviews with key stakeholders, such as village leaders, community members, and tourism industry actors in Desa Lodtunduh, in order to capture their perspectives and experiences. The aim is to identify the challenges and opportunities faced and to formulate appropriate recommendations for more sustainable land management practices in the region. Furthermore, secondary data, including online resources, academic articles, and other supporting documents, are utilized to enrich the analysis and provide a broader contextual framework for the field findings. The data analysis process follows the steps outlined by Miles

and Huberman (2014:10-14), which guide the researcher through: (1) data collection, (2) data reduction, (3) data presentation, and (4) drawing conclusions.

Results and Discussion

General Overview of Lodtunduh Village in Ubud District

Lodtunduh Village is one of the villages located in the Ubud District, Gianyar Regency, approximately 15 kilometers from the center of Gianyar Regency. Lodtunduh Village is bordered by several areas as follows:

1. To the north, it borders Mas Village, Ubud District.
2. To the east, it borders Batuan Kaler Village, Sukawati District.
3. To the south, it borders Batuan Village, Sukawati District.
4. To the west, it borders Singapadu Kaler Village, Sukawati District.

Lodtunduh Village covers an area of 627 hectares, consisting of 11 hamlets/banjars: Banjar Abiansemal Kaja Kauh, Banjar Abiansemal, Banjar Kertawangsa, Banjar Tengah, Banjar Kelingkung, Banjar Silungan, Banjar Gelogor, Banjar Mawang Kaja, Banjar Mawang Kelod, Banjar Apuh, and Banjar Lodsema (Lodtunduh Village Government).

The area of *Desa Pakraman Lodtunduh*, Ubud District, is experiencing significant pressure related to land use change. This is marked by a shift in land use from traditional agricultural land, which has long been the backbone of the local economy, to commercial land and accommodations to support the growth of the increasingly prominent tourism sector.

The conversion of land use in Lodtunduh Village, Ubud District, Gianyar Regency, has primarily been driven by pressures from the growth of the tourism sector and the increasing demand for residential areas. Situated in the heart of Ubud's tourism hub, the village has witnessed a transformation of agricultural land, particularly rice fields, into non-agricultural uses, including the development of villas and other tourism-related infrastructure. Between 2012 and 2017, Lodtunduh Village experienced a reduction of approximately 10.09 hectares of rice fields (Sutantri and Wijaya, 2021).

Based on observations and literature studies, it was found that since 2015, there has been a significant increase of approximately 30% in the amount of land converted from green land to tourism-related uses. This transformation has had positive economic impacts, such as an increase in local income and job opportunities. However, it has also resulted in serious consequences for the local ecosystem, including a decline in soil quality that disrupts agricultural

productivity, as well as a loss of biodiversity, including flora and fauna that once dominated the village area.

Regulation of Lodtunduh Pekraman Village

The customary village regulations in Lodtunduh Village serve as a crucial instrument for regulating and managing land use, particularly in the context of the rapid tourism development within the region. These regulations aim to maintain a balanced and sustainable relationship between the economic needs of the local community and environmental conservation. In this regard, the regulations delineate specific provisions that restrict the conversion of agricultural land into areas designated for tourism purposes, thereby ensuring the preservation of agricultural landscapes and promoting sustainable land use practices.

According to data from the Gianyar Regency Agriculture Office, agricultural land in Ubud District is facing considerable pressure from land conversion. In this context, the implementation of the village regulations is anticipated to sustain agricultural productivity at levels 20% higher than regions that do not adopt similar regulatory frameworks. Furthermore, the establishment of protected zones for strategically significant agricultural areas, such as subak rice terraces with high cultural and ecological value, represents a critical measure that aligns with UNESCO's recognition of subak as a World Heritage Site (Gianyar Regency Agriculture Office, 2012).

Lodtunduh Village, as an area with 14 subak, namely: Subak Uma Desa, Subak Dangin Alas, Subak Dangin Sema, Subak Dajan Teges, Subak Delod Teges, Subak Buda Manis, Subak Langon, Subak Gunung, Subak Mawang Ulu, Subak Mawang Teben, Subak Babakan, Subak Belimbing, Subak Apuh, and Subak Lateng, faces significant challenges regarding land conversion.

Figure 1.

Map of Subaks in Lodtunduh Village



Source: Lodtunduh Village, 2024

According to the research conducted by Artawan and Sunarta (2016) in Subak Umadesa, Lodtunduh Village, the findings suggest that farmers are facing significant pressure to sell their agricultural land due to the high market prices, further exacerbated by the growing demand from the tourism sector. Despite these challenges, the study reveals that efforts are being made within the subak community to preserve their agricultural land through the development of agro-ecotourism initiatives. These initiatives include offering trekking routes and providing tourists with direct agricultural experiences, with the objective of ensuring the continued viability of the agricultural sector alongside tourism. The subak community has implemented various strategies to safeguard their agricultural land in the face of increasing pressure for land conversion. One key instrument employed to mitigate the rapid land use change is the customary village regulation.

In a broader context, many traditional villages in Bali, including Lodtunduh Village, have customary village regulations, known as *awig-awig*, one of the primary functions of which is to strictly regulate land use within the village area. This includes provisions that prohibit the sale or conversion of rice fields without the approval of the customary village council. *Awig-awig* represents a form of customary regulation that is enforced by the entire community residing within the adat village, ensuring that land use decisions align with the cultural and environmental values of the community.

On the other hand, these regulations also encompass strict provisions regarding tourism business permits, requiring business operators to conduct environmental impact assessments (AMDAL) and ensuring community participation at every stage of the decision-making process. The implementation of effective permit regulations within the context of tourism development serves not only as a strategic measure to ensure compliance with existing regulations but also has significant potential to mitigate various negative impacts often associated with tourism growth, such as environmental pollution and ecosystem degradation, with estimated reductions of up to 30% (Meirini, Astara, and Utama, 2020). Therefore, the customary village regulations in Lodtunduh Village not only contribute significantly to economic growth, accounting for approximately 40% of the village's income (Gianyar Regency Statistics Office, 2021), but also ensure that the development of the tourism sector is carried out in a sustainable manner, responsible for both environmental sustainability and the preservation of local cultural identity.

The Impact of Customary Village Regulations in Controlling Land Conversion

Customary villages play a pivotal role in regulating land conversion within the adat territories of Bali, including in Lodtunduh Village, Ubud District. Through the legal framework of customary law, known as *awig-awig*, the customary village establishes regulations for land

use with the aim of protecting subak and agricultural land from the pressures exerted by the tourism sector and housing development. In the case of Lodtunduh Village, *awig-awig* functions as a primary safeguard against the sale of rice fields, requiring members of the adat community to obtain consent from customary authorities before engaging in land conversion. The implementation of *awig-awig* enables Lodtunduh Village to assume a critical role in environmental and cultural preservation, ensuring that agricultural land is utilized in accordance with local values, particularly the Hindu principle of *Tri Hita Karana*, which promotes the harmonious coexistence of humans, nature, and the divine (Sumantra et al., 2017). The research findings indicate that the customary village regulations in Lodtunduh Village have proven to be quite effective in controlling land conversion. Data obtained shows a reduction in agricultural land conversion by up to 40% over a specified period (Gianyar Regency Agriculture Office, 2021). Despite significant pressure from various investors attempting to convert agricultural land into more lucrative tourism facilities, the policies implemented by the village have succeeded in preserving a substantial portion of agricultural land, which, in turn, contributes significantly to the sustainability of the local economy.

These regulations also play a crucial role in preserving the cultural identity of Lodtunduh Village. With the traditional subak irrigation system, recognized by UNESCO as a World Heritage, the subak continues to be maintained and preserved by the local community. Interviews reveal that approximately 75% of the population in Lodtunduh Village supports the existing regulations, as they believe these policies not only protect the natural beauty and surrounding environment but also serve as a key attraction for tourists visiting the area. A study titled "Implementation of the Gianyar Regency Regulation on Building Permit Fees for Tourism Buildings in Gianyar Regency," conducted in 2020, explains that the village regulations not only help preserve agricultural land but also provide significant support to the local community in maintaining their livelihoods as farmers. This, in turn, creates a harmonious balance between sustainable tourism development and environmental conservation, which is vital for the continuity of the village's culture and economy.

Figure 2.**Villas Located in the Expanses of Rice Fields**

Source: Researcher's Documentation, 2024

Community Participation

Community participation in the regulatory formulation process is crucial for the success of the policies implemented. Research indicates that when communities are involved in the regulatory process, policy effectiveness increases and is more aligned with local needs (Sepyah et al., 2022). Village deliberations, as a means of participation, allow residents to express their opinions and expectations regarding land use, which in turn can enhance the legitimacy and acceptance of the resulting regulations (Bahar et al., 2022). Community involvement in decision-making also fosters a sense of ownership, which is a key factor in environmental sustainability and natural resource management (Nurhasanah et al., 2017). When communities feel engaged, they are more likely to share the responsibility for preserving the local environment and culture, leading to better protection efforts (Putra, 2024).

The community of Lodtunduh Village plays a crucial role in implementing the customary village regulations to control land conversion through the application of **awig-awig** (Dewi, 2016). Community participation in the formulation of regulations related to land conversion in Lodtunduh Customary Village has proven to be a key factor in ensuring the sustainability of land use and protecting local interests. In this process, village deliberations serve as the primary platform for residents to come together and voice their opinions, aspirations, and concerns. According to data from the Gianyar Regency Community and Village Empowerment Office (2022), approximately 80% of the residents of Lodtunduh Village actively participate in village deliberations that address land use issues.

The community is also responsible for overseeing the implementation and compliance with **awig-awig**, which governs land use planning and prohibits land conversion. This oversight is carried out directly by the customary village administrators to prevent outside investors from purchasing land solely for commercial development (Sumantra et al., 2017). The community is also provided with channels to submit suggestions and complaints related to the regulations in place. A report from the Gianyar Regency Environmental Agency (2021) noted that 50% of the complaints received concerning land conversion came from community members who were actively involved in oversight activities. This highlights the direct involvement of the community in enforcing regulations. The holding of open discussion forums with the community also facilitates direct interaction between the residents and the government. According to the annual report of Lodtunduh Village Government (2022), 70% of the community members felt more engaged and empowered after participating in the forums organized by the village government.

Overall, community participation in the formulation of regulations related to land conversion in Lodtunduh Customary Village has resulted in regulations that are more legitimate and sustainable, which not only preserve agricultural land but also protect the local cultural identity and environment. This emphasizes that community involvement is an inseparable aspect of sustainable development.

Challenges Faced in Controlling Land Conversion in Lodtunduh Village, Ubud District

Controlling land conversion in Lodtunduh Village, Ubud District, faces several significant challenges. One of the main challenges is the high economic pressure from the tourism sector. The rapid increase in land prices has tempted many farmers to sell their rice fields to developers who wish to build tourist accommodations such as villas or other tourism-related facilities. This situation is further exacerbated by the high demand for properties in the Ubud area, which is being targeted for global tourism development (Artawan and Sunarta, 2016).

The lack of awareness among the community regarding the importance of preserving agricultural land and the limitations in implementing sustainable tourism also pose significant challenges in controlling land conversion in Lodtunduh Village, Ubud District. Although some villages in Ubud, including Lodtunduh, have attempted to develop agro-ecotourism concepts, these initiatives seem insufficient to fully address the pressures of tourist accommodation development. The development of tourism infrastructure, such as villas and hotels, continues, often targeting subak areas as construction sites, despite the fact that subak should be preserved as green land.

Another challenge in controlling land conversion in Lodtunduh Village is the lack of strict enforcement of regulations. Despite the traditional village and the community adhering to the awig-awig as their regulation, its application on the ground remains inadequate. This issue often arises from conflicts of interest between developers and the local population. Additionally, insufficient oversight from both the government and traditional village authorities has further exacerbated the situation.

Conclusion

Based on the analysis above, it can be concluded that the phenomenon of land conversion in Lodtunduh Village, Ubud District, is a consequence of the rapid growth of the tourism sector and the rising land prices in the area. Although the village has established customary regulations known as awig-awig to limit the conversion of agricultural land into commercial land for tourism, the implementation of these regulations still faces various challenges. Some of the most significant challenges include economic pressure, the low awareness of the community that hinders the effectiveness of the regulations, and weak enforcement of customary law due to conflicts of interest within the community. Initiatives from the community, such as the development of agro-ecotourism, have not been sufficient to help preserve a portion of the land in Lodtunduh Village. The situation indicates that increased collaboration between the community, government, and traditional village authorities is still needed to ensure that environmental preservation is balanced with tourism development.

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