



Adaptive Strategies for Sustainable Tourism in Hanjeli Tourism Village, Sukabumi Regency, Indonesia



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Abstract: The dynamics of adaptive tourism sustainability in Hanjeli Tourism Village, Sukabumi Regency, Indonesia, were investigated to assess how local communities respond to tourism-induced transformations and how such responses influence economic resilience. A qualitative research design employing a case study approach was adopted to compare socioeconomic conditions prior to and following the village's transition from a primarily agriculture- and mining-based economy to one centered on tourism. Historically reliant on subsistence farming, labor migration, and unregulated gold mining, the village has undergone a significant shift towards the cultivation of Hanjeli (*Coix lacryma-jobi*) and the implementation of educational tourism. Although initial resistance to tourism development was observed, a gradual adaptation was facilitated through the mobilization of endogenous resources, the implementation of community-based tourism (CBT), and the application of the sustainable livelihood framework (SLF). The involvement of stakeholders in homestay management, agro-tourism services, and local product development was found to significantly enhance economic resilience and reduce dependency on extractive and unsustainable income sources. The findings indicate that when adaptive strategies are rooted in local resource management and reinforced by active community engagement, long-term tourism sustainability becomes attainable. It is further suggested that policy frameworks should prioritize capacity-building programs and the diversification of economic activities to buffer against fluctuations in tourism demand, particularly under the influence of global uncertainties such as climate change and economic downturns.

Keywords: Sustainable tourism; Tourism village; Adaptive tourism village; Community-based tourism; Sustainable livelihood framework

1. Introduction

The development of tourism villages in Indonesia demonstrates a significant shift in the rural economy. Previously, villages relied on the agricultural sector or other traditional sectors as the main drivers of their economy. However, tourism has now emerged as the primary force in increasing income, creating jobs, and improving the welfare of rural communities (Krisnawati, 2021). This shift is driven by the need for more sustainable economic diversification. Through the development of tourist villages, rural areas aim to leverage their natural resources, culture, and traditions to attract tourists, which in turn will increase local income and improve the quality of life for the community.

The Indonesian government plays a crucial role in supporting this transformation through policies that promote the sustainable development of tourist villages. One of the key policies is the tourism village development program outlined in Law No. 10 of 2009 on Tourism (Undang-Undang Nomor (10), 2009), which regulates the role of local governments to facilitate, encourage investment, develop tourism, manage tourism, and allocate budgets to enhance tourism and local economic potential. This law provides a clear legal foundation for the management and development of tourist destinations in villages, prioritizing sustainability in environmental, social, and economic aspects. Additionally, Law No. 6 of 2014 on Villages grants villages greater authority to manage local resources

to improve community welfare, including the development of tourist villages. Thus, the government ensures that tourist villages can grow independently and sustainably, while still delivering optimal benefits for the community (Undang-Undang Nomor (6), 2014).

Despite the policies in place supporting the development of tourist villages, the implementation of these policies is often hindered by deeper issues. These issues are often related to the attitudes, commitment, and performance of various stakeholders involved in the tourism village development process (Ferdian et al., 2024). These stakeholders include local governments and communities and the private sector involved in the tourism industry. Therefore, more in-depth analysis and studies are needed on policies and strategies that can strengthen support for the sustainability of tourist villages that are adaptive to the existing dynamics. The Hanjeli Tourism Village in Waluran Mandiri, Sukabumi, is an example of economic transformation through the development of nature-based tourism and local culture. This village relies on local food products, such as Hanjeli, as well as traditional culture as its main attractions. However, the high dependence on the tourism sector brings its challenges (Haini & Loon, 2023). Fluctuations in the number of tourists, whether due to seasonal factors or changes in government policies, create economic uncertainty for the village community (Su et al., 2019). Therefore, the economic sustainability of this tourist village heavily depends on the village's ability to adapt to changes in market demand and policies, as well as explore other potentials beyond tourism as a source of income.

The adaptive economic sustainability of tourist villages can be further understood through the Complex Adaptive System (CAS) theory, which explains that complex systems, such as tourism village communities, must have the ability to adapt to various changes, whether in tourist demand, government policies, or environmental conditions (Chan, 2001; Chen et al., 2023). In terms of tourist villages, this adaptation includes the ability to respond to the changing dynamics of tourism and the environment in a flexible and responsive manner. The economic resilience of tourist villages, in this case, is determined by how well the community can adapt to these changes without sacrificing their long-term welfare. Another relevant theory for explaining the sustainability of tourist villages is CBT, which emphasizes the importance of active community participation in managing and developing tourist destinations. In this framework, local communities play a key role in determining the direction and form of tourism development in their villages. Active community participation can strengthen the attractiveness of the destination and ensure that the benefits of tourism are truly felt by the local population (Naranjo Llupart, 2022). Additionally, by adopting SLF, which focuses on utilizing local assets and strengthening community capacities, tourist villages can face the various dynamics in the tourism industry, such as policy changes and fluctuations in the number of tourists (Jing et al., 2024; Natarajan et al., 2022).

Although numerous studies have discussed the economic impact of tourism village development, few have examined how villages that were previously not tourism-oriented, such as Hanjeli, can adapt quickly and successfully to these changes. The transformation from the agricultural sector, migrant labor, and illegal gold mining to the tourism sector in Hanjeli Tourism Village presents new challenges that require further attention. Dependence on tourists and unpredictable income fluctuations pose significant risks to the village's economic sustainability. Therefore, this study aims to fill this gap by analyzing how tourism villages like Hanjeli can develop adaptive economic strategies based on income diversification and the utilization of local resources. By utilizing a holistic approach that integrates CAS, CBT, and SLF theories, this research aims to explore the strategies that can be used by tourist villages to achieve adaptive economic sustainability. This study is expected to provide in-depth insights into how rural communities can respond to changes occurring in the tourism sector, as well as the importance of synergy between governments, businesses, and local communities in creating policies and management programs that are more responsive to social, economic, and environmental changes. It is hoped that the findings of this research will provide evidence-based recommendations that can be used by the government, communities, and industry actors to design policies and programs that support the sustainability of tourism at the village level.

2. Literature Review

2.1 Previous Research

Rahman et al. (2020) conducted a study on the economic behavioral changes of communities in tourism villages, specifically in Pagar Jaya Village, Pesawaran District. The study revealed that while tourism increased income, its impacts were not uniform across all sectors. The shift in livelihoods from agriculture and fisheries to the tourism services sector was evident, with a notable development of local institutions such as Pokdarwis (tourism awareness group). However, challenges in the management of these institutions persisted, indicating that the shift toward tourism, while economically beneficial, requires more robust management strategies and institutional support. The study emphasized that although tourism brought economic benefits, these benefits were not equally distributed, highlighting the importance of inclusive policies that ensure broad participation from all community sectors.

In a similar vein, a study in Panusupan Tourism Village highlighted the positive role of CBT in enhancing local community participation in tourism management. According to Nisa (2019), CBT fosters local engagement by

enabling communities to play a central role in managing tourism resources, thereby facilitating a profit-sharing system that supports long-term economic sustainability. This approach helps distribute the benefits of tourism more evenly among community members, allowing them to directly benefit from the economic opportunities created by tourism, thus strengthening local economic resilience. Further research in Western Sichuan ethnic tourism villages, as reported by Chen et al. (2023), found that the adaptive capacity of households in tourism villages was notably higher than in non-tourism villages. The study highlighted that economic factors such as market conditions, ethnic cultural values, and government policies were critical elements influencing livelihood choices in these areas. Households in tourism villages demonstrated greater flexibility in adapting to changes in the local economy, largely due to the income diversification offered by tourism and the support provided by government policies.

Table 1. Indicators of each theory

Theory	Indicators	Definition
CAS theory	Distributed control	No single entity holds full control, and all parties contribute.
	Connectivity	Tourism is closely interconnected with other sectors, such as accommodation and restaurants, which expand as the number of tourists increases.
	Co-evolution	Adjusting lifestyles to preserve resources while attracting tourists.
	Sensitive dependence on initial conditions	Dependence on initial conditions, which can influence subsequent changes.
	Emergent order	An order that emerges without centralized planning, such as tourism trends.
	Far from equilibrium	Tourism develops and adapts to unstable conditions.
	State of paradox	Tourism often exists between two extremes, such as sustainability versus exploitation.
	Community participation	The community is involved in the management and decision-making processes of tourism development.
	Economic empowerment	The community benefits economically and experiences the creation of local employment opportunities.
	Preservation of local culture and traditions	The preservation of local culture and traditions is ensured through active community participation.
CBT theory	Sustainable natural resource management	Natural resources are utilized wisely, and environmental conservation practices are implemented.
	Equitable distribution of tourism benefits	Tourism benefits are accessible to the entire community, with initiatives aimed at improving infrastructure.
	Community autonomy in tourism management	The community independently designs, manages, and develops tourism, including the transfer of knowledge and training.
	Involvement in infrastructure development	The community participates in the construction and maintenance of facilities, such as through mutual cooperation.
	Vulnerability context	External factors such as environmental, economic, social, and political changes that affect livelihoods.
SLF theory	Livelihood assets	The assets held by the community, including human, social, natural, physical, and financial capital.
	Influence and access	The interconnection between assets and policies and institutions that influence the ability to access and utilize assets.
	Transforming structures and processes	The role of the government, the private sector, and policies in shaping livelihoods, including economic regulations and market access.
	Livelihood strategies	The choices made by individuals or households in managing assets to improve their livelihoods, such as business diversification.
	Livelihood outcomes	Increased income, reduced environmental impacts, and improved quality of life for the community through sustainable tourism management.

Source: Summarized from the studies by Chan (2001), Naranjo Llupart (2022), and Natarajan et al. (2022).

Chen et al. (2023) also investigated the development of minority village tourism in Guizhou, China, and identified key factors contributing to tourism growth, such as the region's tourism resources, geographic location, innovation, and stakeholder involvement. It was found that the success of tourism villages heavily depended on the active participation of local and external stakeholders, including the government, the private sector, and local communities. The study concluded that policy support, investments, and community empowerment played a crucial role in the development of tourism villages, underscoring the significance of collaboration between different actors in creating a sustainable tourism ecosystem. This collaboration ensures that tourism development is aligned with local needs and capacities, facilitating long-term growth while safeguarding cultural and environmental integrity. These studies collectively point to the importance of integrating local communities into the tourism development process. While tourism offers significant economic opportunities, its benefits are not automatic or evenly distributed. The active participation of local stakeholders, the development of local institutions

like Pokdarwis, and the creation of supportive policies are crucial in ensuring that tourism can be a sustainable and inclusive driver of economic growth. This also emphasizes the need for adaptive strategies that enable communities to respond to the dynamic nature of tourism and its associated challenges.

2.2 Theoretical Framework

The indicators related to the theories of CAS, CBT, and SLF employed in this study possess distinct focuses and approaches. However, they complement each other in providing a more comprehensive analysis. An explanation of these theoretical indicators is presented in Table 1.

To enhance both theoretical clarity and empirical relevance in explaining adaptive tourism sustainability, this study synthesizes the frameworks of CAS, CBT, and SLF into an integrative conceptual model. CAS provides a system-oriented foundation by conceptualizing tourism villages as dynamic, decentralized networks characterized by distributed control, connectivity, emergent order, and sensitive dependence on initial conditions, whereby early community interventions shape long-term developmental pathways (Chan, 2001). CBT contributes a normative framework focused on community participation, economic empowerment, cultural preservation, and governance autonomy, enabling local actors to engage actively in planning, managing, and sustaining tourism activities in ways that ensure equitable benefit distribution (Nisa, 2019; Naranjo Llupart, 2022). SLF adds a strategic lens that emphasizes the mobilization of livelihood assets—human, social, natural, physical, and financial—within evolving vulnerability contexts to generate resilient and sustainable economic outcomes (Jing et al., 2024; Natarajan et al., 2022). The synergy among these frameworks forms a coherent structure in which adaptive systems thinking (CAS) facilitates participatory governance (CBT), which in turn enables asset-based livelihood strategies (SLF), thereby providing a holistic foundation for analyzing the transformation of tourism villages such as Hanjeli. A conceptual diagram illustrating this triadic interaction would significantly enhance the explanatory power and operational clarity of the proposed model.

3. Method

This study employs a qualitative method with a case study approach to understand the adaptive sustainability of tourism in the Hanjeli Tourism Village. This approach was chosen to explore in depth how the local community adapts to the development of the tourism sector and its impact on local economic welfare. The study not only examines the current economic conditions of the community but also compares them with the economic conditions from five years prior and the period before the village was developed into a tourism village. Thus, this research provides a more comprehensive understanding of the changes occurring over three-time frames: before 2013, 2013-2020, and post-2020, which reflect the current conditions. A qualitative research approach was chosen due to its naturalistic nature, aiming to understand the phenomenon holistically within its real context (Sugiyono., 2020).

Data collection in this study was carried out through in-depth interviews with various stakeholders, including the village head, representatives from the tourism office, the head of Pokdarwis, tourism business owners, and local residents who experienced economic changes due to the development of the tourism village. The data collection site, located in the Hanjeli Tourism Village and Sukabumi Regency Tourism Office, is depicted in Figure 1. The informant selection technique employed is purposive sampling, which involves selecting individuals directly connected to the phenomenon under study (Sugiyono., 2020). Field observations were also conducted to document the changes in economic, social, and governance aspects of the tourism village. This research also utilized official documents as secondary data from the village to understand income levels before and after tourism development, enabling an analysis of the contribution of the tourism sector to the local economy.

To enhance the validity of the data and reduce bias, triangulation techniques were applied in this study. Source triangulation was applied by comparing the information obtained from various sources, such as the village government, tourism office representatives, business actors, and local communities. Method triangulation was also used by combining interviews, observations, and document analysis as data verification strategies (Safarudin et al., 2023). Additionally, theory triangulation was applied by utilizing several theoretical approaches, including CAS, CBT, and SLF, to understand the interrelations between community adaptation, economic sustainability, and tourism village management in a more comprehensive manner. This triangulation technique aligns with the qualitative research concept, which emphasizes using multiple sources and approaches to ensure the validity of the findings (Taherdoost, 2022).

Data analysis was conducted qualitatively with thematic analysis. The analysis process began by describing the characteristics of the Hanjeli Tourism Village, including its tourism potential and the socio-economic dynamics that have occurred. Subsequently, an analysis was conducted on the changes in the economic behavior of the community based on historical data obtained through the selected time period method, which involves comparing the conditions several years prior to the transition to the tourism sector, the initial years after entering the tourism sector, and the most recent years since becoming a tourism village. These changes were then linked to the theory

used to understand how the economic sustainability of the tourism village can be realized through adaptive strategies. Data analysis was conducted inductively, meaning conclusions were drawn based on patterns and themes that emerged from the field data (Sugiyono., 2020). The results of this analysis are expected to provide recommendations for local governments and stakeholders in designing policies that better support economic sustainability.

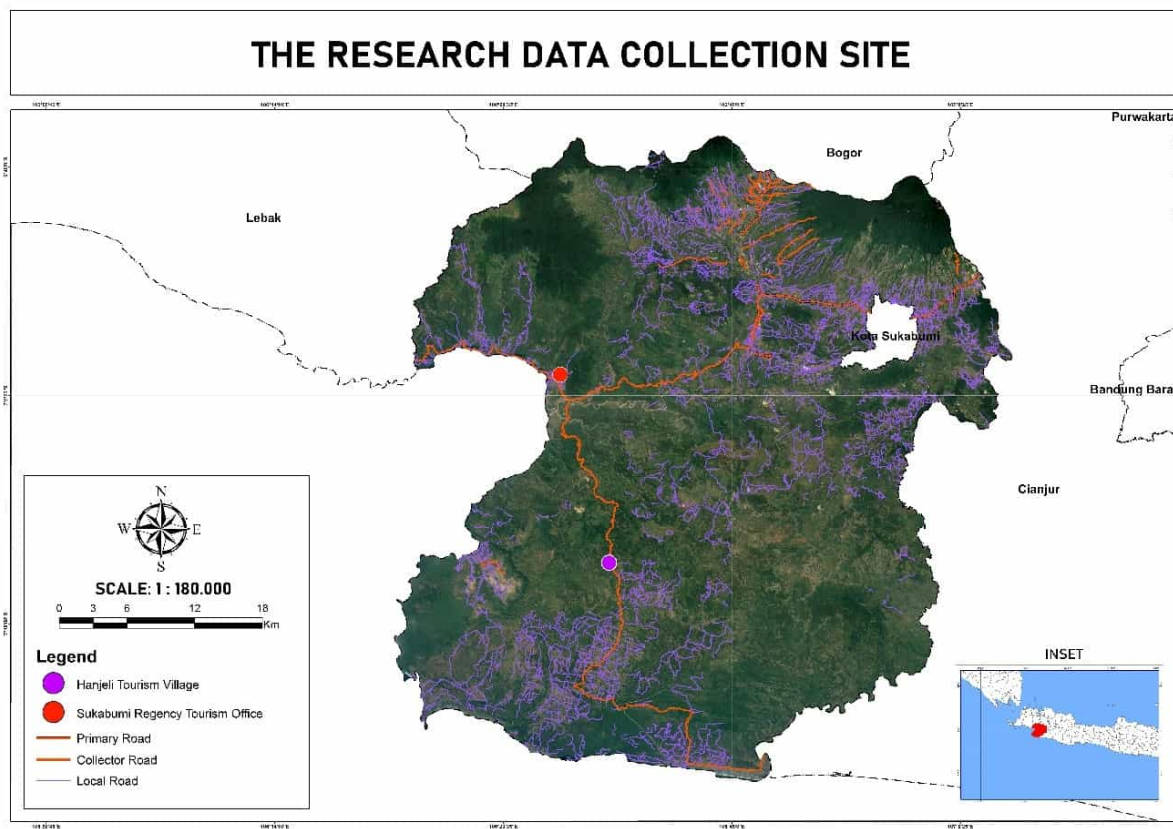


Figure 1. Data collection site of this study
Source: Badan Informasi Geospasial (2024).

4. Results and Discussion

4.1 Contextual Background

Hanjeli Tourism Village is located in Cekdam Waluran, Waluran Mandiri Village, Waluran District, Sukabumi Regency, Indonesia, presented in Figure 2, which illustrates its geographical position in relation to the surrounding regions. Although it is known as a tourism village, administratively, it is still part of Waluran Mandiri. The village is renowned as a center for conservation and education about the Hanjeli plant (Figure 3), a nearly extinct tropical grain plant. The formation of the tourism village was initiated by Asep Hidayat (2021), who was concerned about the socio-economic conditions of the community, with many people working abroad or engaging in illegal gold mining. He proposed developing local potential, particularly Hanjeli, to improve the economy without the need for villagers to leave their homes. Asep Hidayat (2021) stated, "I am concerned about seeing many residents go far to seek a living, leaving their children behind. In fact, our village has great potential from Hanjeli, culture, and nature. From there, I started thinking about how we could develop the village without having to leave our homes".

The idea led to the creation of a community empowerment program implemented through collaboration between local leaders, community groups, and the regional government of Sukabumi Regency. Collective awareness of cultural values, local agricultural potential, and the natural wealth available became a strong catalyst in shaping the village's identity as a CBT destination (Aznar & Hoefnagels, 2019). Since officially becoming a tourism village in 2020, various training programs and promotional efforts have been carried out to strengthen the community's capacity and the village's appeal. The village is situated in a hilly area with a cool climate and fertile soil, although water is scarce, which is advantageous for Hanjeli farming and educational tourism (Asep Hidayat, 2021). Socially, the community has strong social ties, characterized by a culture of mutual cooperation and traditions that are still preserved. This supports the development of sustainable tourism.

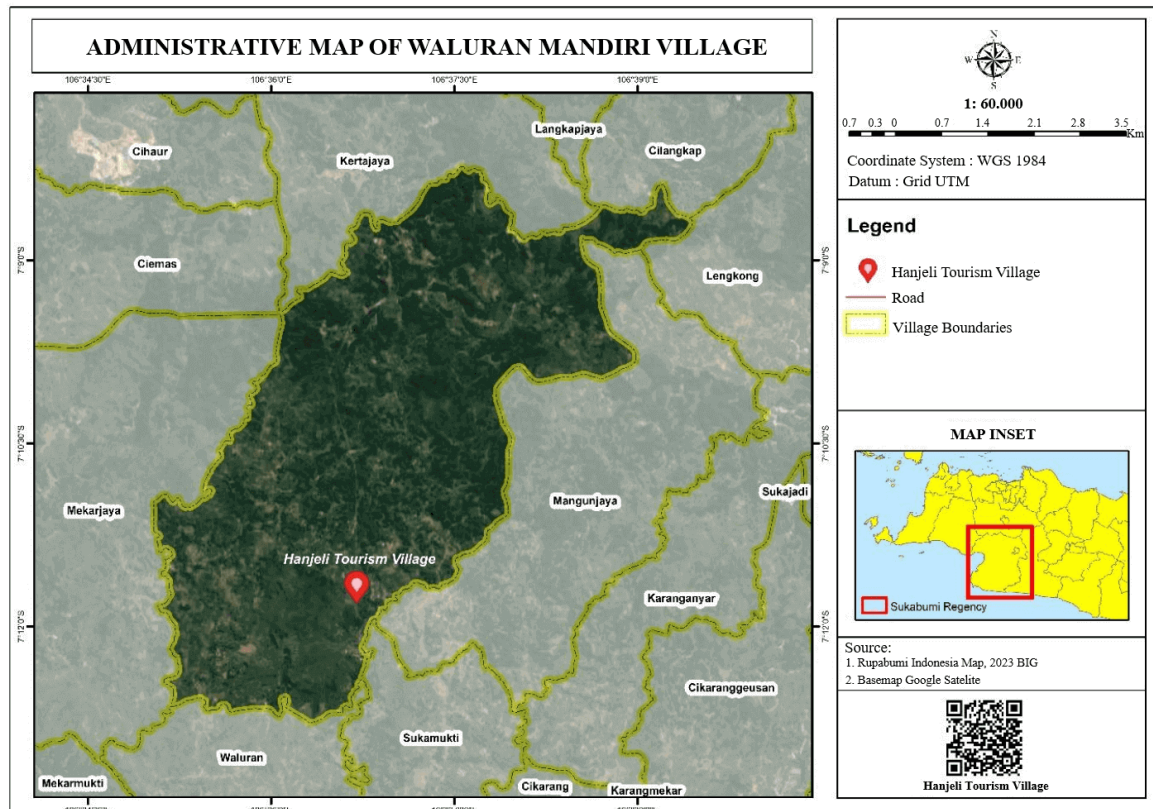


Figure 2. Administrative map of Waluran Mandiri Village
Source: Badan Informasi Geospasial (2024).



Figure 3. Hanjeli plant
Source: Documentation of Hanjeli Tourism Village.

From 2013 to 2020, despite some interest from tourists in observing Hanjeli cultivation, many residents continued to work in other sectors. However, since 2020, the village has focused on education and preservation of Hanjeli, transforming into an educational tourism destination that teaches visitors about the cultivation, harvesting, and processing of Hanjeli. The local community is actively involved in managing homestays and culinary businesses and serving as tour guides. The adaptation process in this village demonstrates dynamic tourism, aligned with the needs of the community and sustainability. The community has started to take an active role in managing the tourism village, reflecting the concept of adaptive tourism, where communities respond to the needs of tourists while developing strategies suited to local potential and socio-economic changes (Chan, 2001). During the COVID-19 pandemic, Hanjeli Village successfully developed a food security strategy based on Hanjeli, processing products into local foods sold online. The community also utilized the time for online training and reorganizing tourism attractions, demonstrating resilience and responsiveness to challenges.

The success of Hanjeli Tourism Village is closely linked to the role of stakeholders. The local government

serves as a facilitator of infrastructure and regulations, while Pokdarwis plays a key role in tourism activities (Nisa, 2019). Local communities are actively involved in managing attractions and preserving culture, while educational institutions and private sector partners support training and digital promotion. The synergy between stakeholders is crucial in promoting the sustainability of adaptive tourism (Sulistiowati et al., 2021).

Beyond its immediate contribution to tourism sustainability discourse, this study significantly enriches the literature on rural development and environmental conservation. The socio-economic transformation observed in Hanjeli Village, marked by increased household incomes, reduced dependence on extractive labor, and a decline in out-migration, echoes key themes in rural development scholarship emphasizing endogenous growth and community empowerment. Furthermore, the repositioning of Hanjeli, a formerly neglected and near-extinct crop, as an economic and cultural asset introduces an important conservation dimension. This aligns with emerging views that link sustainable tourism to biodiversity preservation and agroecological resilience (De Myttenaere, 2011; Ludwig, 2018). Hence, adaptive tourism villages represent not only economic interventions but also multisectoral development models that integrate social, ecological, and cultural sustainability for long-term rural resilience.

4.2 Community Adaptation to Change

The adaptation of the community in tourism villages demonstrates a dynamic process involving social, economic, and cultural transformation (Chan, 2001). This process alters the community's perception of local natural resources and culture, as well as their lifestyle, which previously depended on traditional sectors. The adaptation process in Hanjeli Tourism Village can be understood in three main phases: before 2013, 2013-2020, and post-2020. Before 2013, the economy of Waluran Mandiri Village, the administrative village of Hanjeli Tourism Village, was heavily reliant on agriculture, migrant labor, and illegal gold mining. The community preferred working in informal sectors that were vulnerable to price fluctuations, with most men working as illegal gold miners and women as overseas migrant workers. Despite its rich natural potential, there was minimal awareness of tourism, and the culture of agriculture and migrant labor made the community skeptical about transitioning to the tourism sector.

Between 2013 and 2020, the community's mindset began to shift with the establishment of Pokdarwis as part of efforts to develop the tourism village in a more organized and planned manner, opening communication between the community and the government (Nisa, 2019). During this period, training in tourism management, skills certification, and entrepreneurship was carried out. Initially skeptical, the community began to view tourism as a long-term economic opportunity that could support cultural and environmental preservation (Raveendran, 2024). The development of local food products, such as Hanjeli, attracted tourists, opening new economic opportunities and introducing local culture.

Since 2020, Hanjeli Tourism Village has undergone a major transformation, with an increase in both domestic and international tourists thanks to the development of local products and ongoing training. The homestays managed by the community became a new source of income, and local products such as Hanjeli, bamboo crafts, and traditional cuisine became increasingly popular. Social and cultural changes have also been significant, with the community beginning to see tourism as a means of preserving and promoting their culture. Education about Hanjeli for the younger generation has sparked pride in their cultural heritage. Economically, the community, which previously relied on agriculture, mining, or overseas migrant work, has now shifted to managing homestays and providing tourism services. This success has been driven by government policies that support training and capacity building at the village level.

4.3 Community Participation in Tourism Management

Community participation in tourism management in Hanjeli Tourism Village is crucial to ensure effective adaptation and sustainability. Based on the principles of CBT, the success of sustainable tourism depends on the extent to which local communities are involved in the planning, implementation, and management of tourism (Nisa, 2019). The community of Hanjeli Tourism Village, as the primary managers, utilizes local natural and cultural resources to create sustainable economic benefits, which, in turn, enhance their collective quality of life. Community participation extends beyond the economic sector and also includes cultural and environmental preservation. For instance, the management of homestays allows the community to provide accommodations while maintaining local wisdom, such as farming, crafting, and learning traditional agricultural techniques. Bamboo- and Hanjeli-based crafts, such as bags, bracelets, and soap, are produced and sold both in local markets and online, increasing household income and introducing the village's uniqueness to a broader market (Ludwig, 2018).

The community is also actively involved in maintaining cleanliness and environmental preservation through collective work and tree planting. These efforts reflect their understanding of the importance of conservation in supporting the sustainability of the tourism sector. With growing awareness, the community now views tourism not only as an economic opportunity but also as a responsibility to preserve natural resources. Community

empowerment is reflected in the training and certification provided by the Tourism Office and local government (Cahyaningrum et al., 2024). The training includes homestay management, production of locally sourced products, and interpersonal skills for interacting with tourists. This certification not only enhances service quality but also acknowledges the community's ability to manage the tourism destination professionally.

Table 2. Community participation in the management of Hanjeli Tourism Village

No.	Community	Number of People	Role
1	KWT Mekar Mandiri	35	Women's empowerment through agriculture and processing of local food products.
2	KT Warna Mekar	40	Agricultural processing and development to improve agricultural output and local economic empowerment.
3	Kelompok Rumah Kreatif	20	Development of creative products based on handicrafts and local arts.
4	Kelompok Tinaawi	16	Processing of various bamboo crafts.
5	Kelompok Aksesoris	15	Production and marketing of accessories made from local materials.
6	Kelompok Rumah Baca Saayunan	10	Providing access to education and literacy for the community.
7	Pokdarwis	17	Raising community awareness of tourism potential and involvement in the management of the tourism village.
	Total	153	

Source: Documentation of Hanjeli Tourism Village.

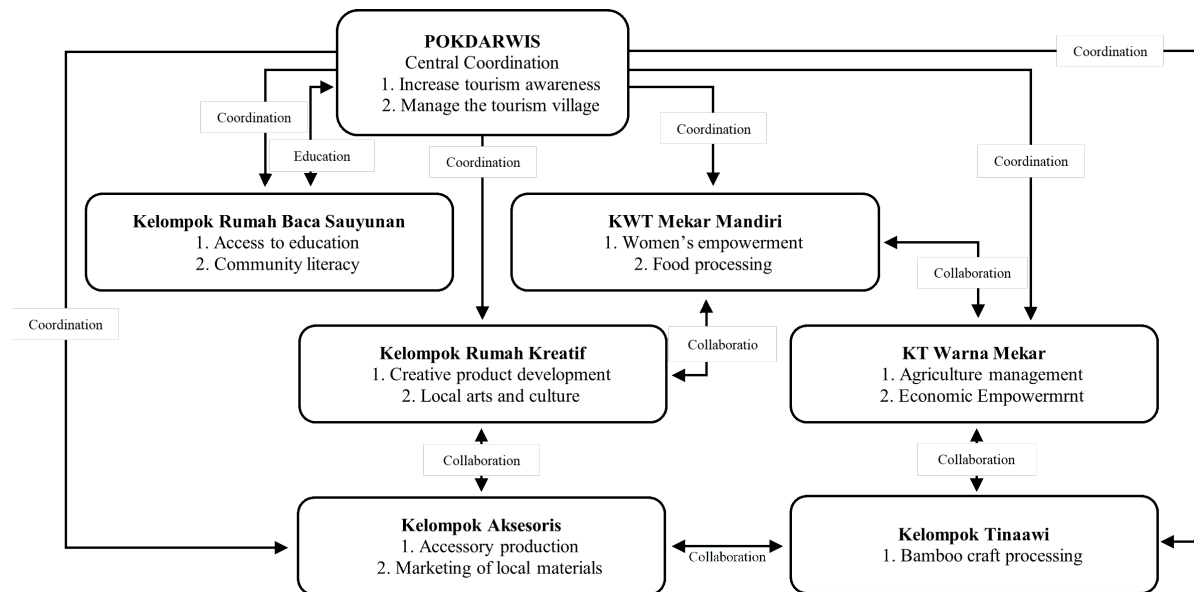


Figure 4. Mind map of inter-community interactions

The sustainability of the tourism village depends on the wise management of natural and cultural resources (Wibowo & Niami, 2024). Hanjeli Tourism Village has successfully integrated tourism with cultural and environmental preservation through a community-based approach that prioritizes local values. The processing of Hanjeli into economically valuable products helps strengthen local cultural identity and attracts tourists (De Myttenaere, 2011). Through the community-based approach, Hanjeli Tourism Village introduces sustainable tourism that incorporates economic, social, cultural, and environmental aspects. The community is not only a beneficiary but also an active manager who preserves and develops the tourism potential (Naranjo Llupart, 2022). The sustainability of tourism in this village depends on how well the community can manage and preserve the unique culture and environment for future generations, Zamroni and other researchers mentioned this in 2024. The communities present in the Hanjeli Tourism Village are presented in Table 2.

The sustainability of tourism in Hanjeli Tourism Village relies on the active involvement of the community in various aspects of destination management. Through a community-based approach, the village has successfully developed tourism that not only provides economic benefits but also preserves culture and the environment. The interactions between the communities in the village, which play a crucial role in this sustainable development, are illustrated in Figure 4.

4.4 Utilization of Local Assets in Economic Sustainability

The utilization of local assets is strategically important in supporting the economic sustainability of Hanjeli Tourism Village. According to SLF, economic sustainability depends on the optimization of various available capitals, such as natural, human, social, physical, and financial capital, to enhance economic well-being while preserving culture and the environment (Jing et al., 2024; Natarajan et al., 2022). Hanjeli Tourism Village wisely utilizes these capitals, particularly the Hanjeli plant as natural capital, which has now become the village's flagship commodity and a driver of the local economy. Processed Hanjeli products, such as handicrafts, rice, flour, dodol, and soap, not only attract tourists but also strengthen household economies in a sustainable manner. Wise management of the Hanjeli plant is necessary to preserve its sustainability, supported by education and training for the community regarding the importance of biodiversity.

Social capital, as a key element of SLF, also plays an important role in supporting the sustainability of the tourism village. Hanjeli Tourism Village has successfully established a network of collaboration between the local community, tourism managers, and the government. The formation of Pokdarwis, a community organization involved in tourism management, has been crucial in enhancing active community participation. This collaboration, from homestay managers to craft business owners, creates a social ecosystem that supports the creation of sustainable tourism experiences (Suardana et al., 2024). In addition to economic benefits, this collaboration has also improved the community's skills in tourism management and marketing (Aref & Redzun, 2008).

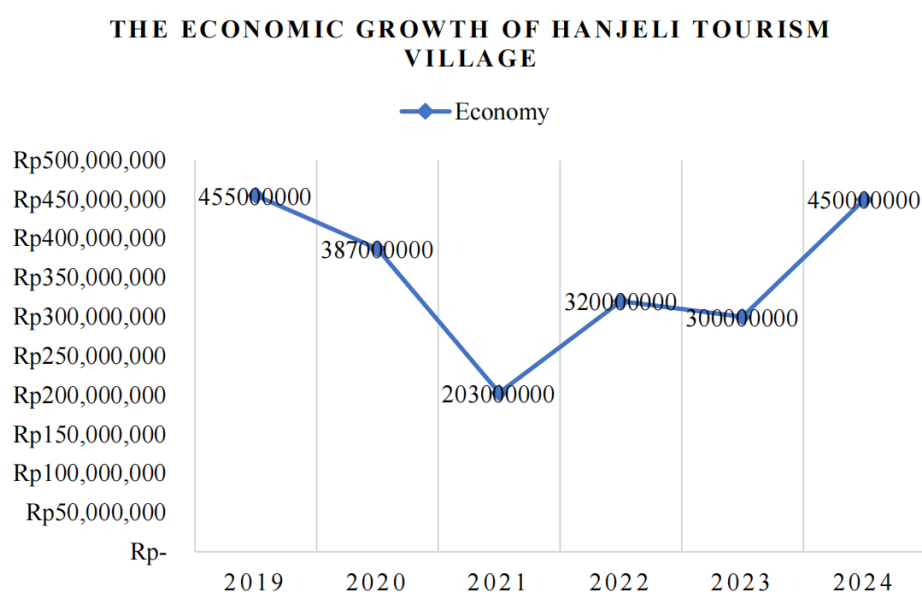


Figure 5. Economic growth chart of Hanjeli Tourism Village

Financial capital from tourism has been utilized to improve village infrastructure, such as road access and public facilities, which enhances the comfort of tourists. Revenues from the tourism sector have also encouraged economic diversification in the village, which is no longer solely reliant on agriculture. For example, micro, small, and medium enterprises (MSMEs) producing crafts from Hanjeli and bamboo have expanded their markets through events and e-commerce platforms, significantly increasing their income (Almadani et al., 2023). Furthermore, Hanjeli-derived products, which have received local and national recognition, are now marketed widely, helping to expand the village's economic capacity. The optimization of local assets in Hanjeli Tourism Village demonstrates that the economic sustainability of tourism can be achieved by integrating natural resource management, social cooperation, and inclusive economic diversification. This shows that by maximizing the use of local assets, a tourism village can create a sustainable positive impact while preserving the local nature and culture that are the main attractions for tourists.

The utilization of local assets has proven to provide economic stability despite facing significant challenges, such as the COVID-19 pandemic. The economic growth of the village, leveraging local assets over the years, is shown in Figure 5. In 2019, Hanjeli Tourism Village's revenue was recorded at 455 million IDR, demonstrating its substantial potential. However, despite the pandemic in 2020, which caused significant declines in many sectors, Hanjeli Tourism Village still managed to generate 387 million IDR. Although there was a decline in 2021, with revenue reaching only 203 million IDR due to the COVID-19 pandemic, the village was able to recover in 2022 with a revenue of 320 million IDR, followed by 300 million IDR in 2023. By 2024, the village's revenue had

stabilized once again, reaching 450 million IDR (Putra et al., 2024). What is particularly noteworthy about these results is the ability of Hanjeli Tourism Village to survive and maintain its revenue, even during the critical periods of the COVID-19 pandemic, thanks to the utilization of local assets such as the Hanjeli plant, processed products, and handicrafts marketed through various channels, including e-commerce and social media. This success reflects the resilience and economic sustainability achieved through the effective management of local resources and the collaboration between the community, tourism managers, and the government.

The empirical findings of this study align systematically with the three theoretical frameworks employed (CAS, CBT, and SLF). The principles of CAS are evident in the community's capacity to navigate economic uncertainty during the COVID-19 pandemic through emergent order and co-evolutionary behavior manifested in the diversification of income sources and the development of Hanjeli-based e-commerce. The CAS notions of distributed control and adaptive reorganization are reflected in how the village organically restructured its economy in response to external shocks (Chan, 2001). The tenets of CBT are embodied in the strengthening of local institutions such as Pokdarwis and thematic community groups, where residents manage homestays, agricultural education, and artisanal production. Active community involvement in tourism planning and operations demonstrates CBT's emphasis on inclusive governance and localized benefit sharing (Naranjo Llupart, 2022). Simultaneously, the SLF framework is observed in the community's strategic mobilization of social, natural, and financial capital to support sustainable livelihood trajectories. The Hanjeli plant, as a form of natural capital, not only provides economic returns but also contributes to ecological resilience (Jing et al., 2024; Natarajan et al., 2022). By explicitly mapping these results to their theoretical anchors, the study enhances its conceptual contribution and demonstrates the empirical robustness of the integrated framework.

4.5 Adaptation Strategies

Hanjeli Tourism Village demonstrates how tourism can evolve into a sustainable sector by involving the community in every stage of its management. According to the CBT theory, direct community involvement in the planning and management of tourism ensures that decisions reflect local interests, enhancing a sense of ownership and control over tourism potential such as local products and culture (Nisa, 2019). Through training, joint decision-making, and the formation of Pokdarwis, the community plays an active role in the development of the tourism village. The sustainable use of natural resources is a key strategy to maintain the natural attractions that serve as the primary assets of tourism. SLF emphasizes the wise management of natural capital (Jing et al., 2024; Natarajan et al., 2022). Hanjeli, processed into economically valuable products, reduces dependence on environmentally harmful sectors, such as illegal mining. Education on conservation and environmentally friendly farming practices has become an integral part of the sustainability of the tourism village (Raveendran, 2024).

The strategy for local economic development focuses on business diversification through the empowerment of small and medium enterprises (SMEs) based on local products (Widiastuti et al., 2021). Hanjeli Tourism Village creates new job opportunities with processed Hanjeli products and handicrafts, thereby increasing local household incomes. Marketing through local markets and digital platforms expands the market reach, supporting the village's economic sustainability. Collaboration between the government, community, and private sector is crucial for sustainability (Colaner et al., 2018). According to the CAS theory, the interconnection between sectors produces mutually reinforcing impacts (Chan, 2001). Hanjeli Tourism Village proves that partnerships with educational institutions and private sector partners strengthen the capacity of managers and the community to leverage local potential, creating a mutually beneficial ecosystem.

Sustainable infrastructure development and tourism management autonomy are also key strategies (Platov et al., 2021). The Hanjeli community actively participates in the development and maintenance of infrastructure, such as homestays, with the concept of mutual cooperation that ensures sustainability. Community involvement ensures the preservation of the environment and culture, which are the main attractions for tourists. Adaptation to change and resilience to crises are critical aspects. Hanjeli Tourism Village demonstrated resilience by developing a food security strategy based on local products during the COVID-19 pandemic, maintaining the village's economic stability. This reflects the principle of emergent order in the CAS theory, where the village adapted to external changes and created a new, more resilient order (Chan, 2001). The village succeeded in thriving despite significant challenges, proving that community-based strategies and the use of local resources can create long-term adaptive tourism sustainability. The adaptive tourism sustainability strategy, identified as a key finding of this study, is presented in Figure 6.

The success of Hanjeli Tourism Village in achieving sustainable tourism is reflected in the implementation of strategies for community empowerment, sustainable use of natural resources, local economic development, and inter-sectoral collaboration. Adaptive tourism itself refers to the ability of a destination to adjust to the needs of tourists, socio-economic conditions, global crises, and behavioral changes at emerging destinations that were initially not tourism-oriented. This adaptation process prioritizes a balance between economic development, cultural preservation, and environmental sustainability, ensuring that the destination can evolve in accordance with ongoing changes.



Figure 6. Adaptive tourism sustainability strategy

5. Conclusion

This study demonstrates that Hanjeli Tourism Village in Sukabumi Regency has successfully developed adaptive tourism sustainability strategies through a community-based approach and optimal utilization of local resources. The village's economic transformation, which initially relied on agriculture, migrant labor and illegal mining, has now shifted to managing natural and cultural potential through tourism focused on local products, particularly Hanjeli. This proves that tourism sustainability can be achieved by integrating economic, social, and environmental aspects in its management. In the process of adapting to the tourism sector, the community of Hanjeli Tourism Village has shown resilience and the ability to innovate. Local natural resources, such as the Hanjeli plant, have been successfully utilized to create economically valuable products that attract tourists. The economic sustainability of this village is not solely dependent on tourism but also on the active involvement of the community in managing homestays, producing local creative products, and developing MSMEs.

The success of Hanjeli Tourism Village in managing adaptive tourism is inseparable from the synergy between various stakeholders, including the local government, educational institutions, and the private sector. Community empowerment, based on training and active participation in tourism management, has been key in creating inclusive and sustainable economic sustainability. Additionally, resilience to changes, such as the COVID-19 pandemic, demonstrates that this village is capable of adapting to the dynamics of the tourism sector and developing food security strategies based on local products. To strengthen the policy impact, the adaptive tourism sustainability model developed in Hanjeli Tourism Village should be considered a strategic reference for broader rural development planning. Policymakers are encouraged to replicate this community-based model through national programs that emphasize the synergy of capacity-building initiatives, institutional strengthening, and environmentally aligned incentive structures. Key barriers such as limited human capital and fragmented coordination among local institutions can be mitigated through inter-sectoral collaboration between tourism, agricultural, and cooperative agencies. Moreover, adaptive tourism villages should be supported by clear performance indicators that align with CAS (adaptability and emergent systems), CBT (community ownership and participation), and SLF (asset resilience). It is also recommended that local governments establish technical units dedicated to mentoring village tourism actors, not only as facilitators but also as long-term strategic partners in the community-led sustainable development.

Data Availability

The data used to support the research findings are available from the corresponding author upon request.

Conflicts of Interest

The authors declare no conflict of interest.

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