Resilience of Rural Destinations as a Foundation for Long-Term Competitiveness: A Social-Ecological System Approach

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Abstract

Rural tourism destinations face environmental, socio-economic, and tourism-related pressures that threaten their long-term competitiveness. This study examines rural destination resilience using a socio-ecological systems (SES) approach, focusing on interactions between social and ecological components. An exploratory qualitative case study employed semi-structured interviews, field observations, and documentation involving tourism stakeholders and local communities. Data were analysed thematically through systematic coding, interpretation, and triangulation. Findings reveal that resilience emerges from interactions among social, institutional, and ecological dimensions. Community participation, trust, cultural practices, adaptive governance, long-term planning, continuous evaluation, and local regulations such as awik-awik enhance adaptive capacity. Ecological sustainability and natural resource authenticity underpin destination attractiveness, while water scarcity and natural disasters threaten livelihoods and tourism continuity. Collective awareness and community adaptation help preserve destination identity and functions. Resilience is therefore a dynamic process of anticipation, adaptation, and transformation, requiring community empowerment, responsive governance, and environmental protection to sustain rural tourism competitiveness.

Keywords: Rural tourism, destination resilience, socio-ecological system, community participation, adaptive governance, long-term competitiveness.

Introduction

In recent decades, rural tourism has experienced increasingly significant growth in response to the saturation of mass tourism and increased tourist awareness of the importance of more meaningful, authentic, and sustainable experiences. This shift in tourist preferences is driving the emergence of rural destinations as alternatives that offer closeness to nature, more intense social interaction with local communities, and distinctive and contextual cultural values (Kachniewska & Kachniewska, 2015) Rural tourism is also growing as interest in nature-based tourism and a sustainability orientation that emphasizes a balance between economic, social, and social dimensions and environment (Adie et al., 2023; Joshi et al., 2024; Winter et al., 2020). In this context, rural destinations are no longer understood solely as recreational spaces, but as strategic arenas for the preservation of local culture, the strengthening of the community's economy, and the conservation of natural resources and ecosystems (Del Soldato & Massari, 2024; Yanan et al., 2024).

Furthermore, rural tourism development has an important role in supporting inclusive and sustainable regional development (Abbasi et al., 2020; Ćurčić et al., 2021; Ivona, 2021). Through the involvement of local communities, rural tourism has the potential to strengthen social capital, expand employment opportunities, and increase community capacity to manage resources independently (Park et al., 2012; Sun et al., 2023) However, the success of rural destinations cannot be measured solely through quantitative indicators such as the number of tourist visits or increased economic income (Majdak & de Almeida, 2022; Maziliauske, 2024; Trukhachev, 2015). This success is increasingly determined by the ability of destinations to survive, adapt, and develop sustainably in the face of various changes and pressures, both

internal and external (Gössling & Scott, 2025; Orîndaru et al., 2021; Streimikiene et al., 2021). In other words, the long-term competitiveness of rural destinations is highly dependent on their resilience (Azmi et al., 2023; Wu et al., 2025).

In practice, rural tourism development faces a variety of complex and multidimensional challenges. Environmental degradation due to tourism pressure and overexploitation of resources is one of the main problems (Han et al., 2025; Mansor & Ibrahim, 2021; Yang et al., 2022). Uncontrolled land-use changes also have the potential to disrupt the ecological balance and erode the rural character that is the main attraction of destinations (Ghadami et al., 2022; Iannucci et al., 2022). In addition, the economy's high dependence on the tourism sector can increase the vulnerability of local communities to fluctuations in demand and external crises, such as a global economic slowdown or disruption of the tourism market (Huynh et al., 2022; Qin & Chen, 2022). Other challenges that are no less important are the limited capacity of local institutions, weak governance, and low coordination between actors in destination management (Dias et al., 2026; Errichiello & Micera, n.d.; Hartman, 2025).

The vulnerability of rural destinations is further exacerbated by various external shocks, including global economic crises, natural disasters, and increasingly intense and unpredictable impacts of climate change (Fernández-Morales et al., 2024; Gössling & Scott, 2025). Changes in weather patterns, increasing frequency of hydrometeorological disasters, and ecosystem degradation have the potential to disrupt the sustainability of tourism activities and threaten the livelihoods of local communities (Kifworo & Dube, 2024; Pandey, 2025). In this context, a development approach that is only oriented towards short-term economic growth becomes inadequate (Awosusi et al., 2022). On the contrary, a conceptual framework is needed that is able to explain how rural destinations can maintain their function, identity, and competitiveness in the midst of uncertainty and ongoing change (Giddy et al., 2022; Harris, 2010; Zielinski et al., 2025).

Therefore, the concept of destination resilience is increasingly gaining attention as a strategic approach in the study of sustainable tourism (Della Corte et al., 2021; Holladay, 2018). Destination resilience refers to the capacity of a destination to anticipate, absorb, adapt, and recover from disruptions, as well as to renew and transform when conditions demand structural changes (Hall et al., 2024; Jabeen et al., 2025; Prayitno et al., 2025). In the context of rural tourism, resilience is not only related to physical and economic aspects but also encompasses intertwined social, institutional, cultural, and ecological dimensions (Shi et al., 2022; Stotten et al., 2021). Thus, resilience is an important foundation for the creation of sustainable destination competitiveness in the long term (Cheung & Li, 2019; Karsokiene et al., 2025; Paunović et al., 2020; Wakil et al., 2021). Understanding the resilience of rural destinations cannot be done partially or sectorally, but rather needs to be placed within the framework of a socio-ecological system (Mallick, 2019; T. Wang et al., 2024). This approach views destination as a complex system consisting of social and ecological components that are interdependent and dynamically interacting (da Silva et al., 2025; T. Wang et al., 2025; Yin et al., 2024). Social systems include local communities, cultural values, institutions, social networks, and governance practices (Kilonzi & Ota, 2019; Thomas et al., 2019), while ecological systems include natural resources, landscapes, ecosystems, and environmental services that support tourism activities. The interaction between the two systems forms a pattern of adaptation and destination response to various external and internal pressures (Bao et al., 2025; Chen et al., 2024; Kristina et al., 2025).

In the framework of a socio-ecological system, resilience is understood as the ability of the system to absorb disturbances, adapt to change, and transform without losing its main function, identity, and basic potential as a tourism destination (Espeso-Molinero & Pastor-

Alfonso, 2020; González-Quintero & Avila-Foucat, 2019; Sebastián & Dalgo, 2019). This approach allows for a more comprehensive analysis of the dynamics of rural destinations, as it highlights not only the final outcomes of development, but also the processes of interaction, social learning, and the adaptive capacity of the actors involved (Niva et al., 2019; Zhao et al., 2024). Thus, resilience is not understood as a static condition, but rather as a dynamic process that continues to evolve as social, economic, and environmental contexts change (Doorn et al., 2019; Dorji et al., 2024; Mayar et al., 2022).

Although studies on tourism sustainability and competitiveness have advanced rapidly, most research still focuses on the economic and marketing aspects of destinations, such as increasing visitor numbers, tourist satisfaction, destination image, and promotional strategies. Such an approach tends to place competitiveness as a result of market performance alone, without delving deeply into the social and ecological foundations that underpin it. On the other hand, research that comprehensively examines the resilience of rural destinations as a basis for long-term competitiveness through a socio-ecological systems approach remains relatively limited, especially in developing countries. These limitations create a knowledge gap related to how the interaction between social and ecological components simultaneously shapes the resilience capacity of destinations, as well as how this resilience contributes to sustainable competitiveness.

Based on these gaps, this study aims to analyse the resilience of rural destinations as the foundation of long-term competitiveness through a socio-ecological system approach. In particular, this study aims to: (1) identify the social and ecological components that make up the resilience of rural destinations; (2) analyse the patterns of interaction between social systems and ecological systems in the face of various pressures and changes. Thus, this research is expected to make a theoretical contribution to the literature on destination resilience and socio-ecological systems in tourism studies, as well as a practical contribution to the formulation of inclusive, long-term rural destination management policies and strategies.

Literature Review

1. Rural Tourism and Destination Resilience in the Perspective of Sustainable Development

Rural tourism in recent decades has been increasingly recognized as a strategic instrument in promoting sustainable development, especially in areas that have structural limitations in terms of economy, infrastructure, and market access (Apostolopoulos et al., 2020; Lane et al., 2022; Mcareavey & Mcdonagh, 2011). In contrast to mass tourism which tends to be oriented towards resource exploitation and short-term economic growth, rural tourism emphasizes the principles of community-based management, controlled scale of development, and sustainable utilization of local potential (Cvijanović et al., 2025; Dłużewska & Giampiccoli, 2021; Zhao et al., 2024). The literature shows that the development of rural tourism not only contributes to the diversification of the local economy, but also plays a role in strengthening social cohesion, maintaining the sustainability of local culture, and protecting the natural ecosystems that are the main bases of tourist attractions.

Nevertheless, rural tourism development also faces various structural challenges and complex dynamics of change (Lv et al., 2021; Priatmoko et al., 2023). A number of studies highlight the pressures on environmental carrying capacity, the risk of cultural commodification, and inequality in the distribution of economic benefits between community groups. This condition shows that the success of rural tourism cannot be separated from the capacity of destinations to manage change and uncertainty in a sustainable manner (Ariyani & Fauzi, 2024; Đurić et al., 2025; Williams et al., 2021). In this context, the concept of destination resilience has become an increasingly relevant analytical framework.

Destination resilience refers to the ability of a tourism system to anticipate, absorb, adapt, and recover from various disruptions (Hall et al., 2024; Smolčić Jurdana & Agbaba, 2025; Wided, 2022), both environmental, social, economic, and institutional (Farsari, 2023; Filimonau & De Coteau, 2020). In rural tourism, destination resilience has strategic significance given the high dependence on natural resources and local social capital that is relatively vulnerable to external changes such as climate change, tourism market fluctuations, and social transformation (Partelow, 2021; Pham et al., 2021). Contemporary literature emphasises that destination resilience is not solely understood as the ability to recover post-crisis, but as a long-term adaptive capacity embedded in governance structures, social relations, and resource utilisation patterns (Bertella, 2022; Faisal et al., 2020; Kokkranikal et al., 2024). Thus, the integration of the concept of rural tourism and destination resilience confirms that sustainable tourism development depends not only on the destination's physical potential but also on the strength of the social system, institutions, and the adaptive capacity of local communities in the face of the dynamics of sustainable change.

2. Socio-Ecological System Approach in Understanding the Sustainability and Resilience of Rural Tourism Destinations

The Social-Ecological System (SES) approach offers a comprehensive conceptual foundation for understanding the complexity and dynamics of tourism destinations, particularly in rural areas (Liu et al., 2023; Zagarkhorloo et al., 2021). This approach views humans and the environment as a single system that interacts, interdependent, and evolves simultaneously (Constantino et al., 2021; Gain et al., 2021; Nagel & Partelow, 2022). Within the framework of SES, changes in one component, both social and ecological, will affect the stability, function, and sustainability of the system as a whole (Feng et al., 2021; Sutherland, 2007; S. Wang et al., 2021) This perspective is becoming increasingly important in the study of tourism, given that tourism activities inherently involve intensive interactions between local communities, visitors, governance, and natural ecosystems.

In the context of rural tourism, the SES approach enables a more holistic analysis of the relationships among tourism activities, local institutional structures, community behaviour, and environmental conditions. Tourist destinations are no longer understood solely as economic spaces but as complex adaptive systems vulnerable to various internal and external pressures. These pressures can be in the form of environmental degradation, socio-cultural changes, economic inequality, and weak governance capacity. Therefore, the sustainability of rural tourism destinations is largely determined by the ability of their socio-ecological systems to maintain basic functions while adapting to change.

The literature confirms that the SES approach is highly relevant for assessing the resilience of tourism destinations. Resilience within the SES framework is understood as the ability of a system to absorb disruptions, adapt, and undergo transformations without losing its identity and core functions. In rural tourism, resilience depends not only on healthy ecosystem conditions, but also on the quality of social capital, the effectiveness of local governance, and the level of community participation in decision-making. This approach emphasises the importance of cross-sectoral and cross-scale management, which can integrate economic, social, and environmental interests in a balanced manner. Thus, applying the Socio-Ecological System approach to the analysis of rural tourism destinations provides a strong conceptual framework for understanding the sustainability and resilience of destinations as a whole. This approach not only enriches theoretical understanding, but also provides practical implications for the formulation of adaptive and sustainable rural tourism management policies and strategies.

Methodology

1. Research Design and Its Justification

This research uses a qualitative design with an exploratory case study approach, combined with the social-ecological systems (SES) framework. The qualitative approach was chosen because the purpose of the research was not to measure causal relationships statistically, but to understand in depth the dynamics, meanings, and processes that shape the resilience of rural destinations as the foundation of long-term competitiveness. Destination resilience is a multidimensional and contextual concept, so it requires an interpretive understanding of the interactions among actors, institutions, social values, and ecological conditions that cannot be fully captured by a quantitative approach. The case study approach is used because it enables an in-depth exploration of destination resilience in a real-world context, accounting for local characteristics, social dynamics, and specific human–environment relationships. The socio-ecological system framework is used as an analytical lens to integrate the social dimension (society, institutions, social capital, management practices) and the ecological dimension (natural resources, landscape, environmental carrying capacity, and ecological pressures). Thus, this design is considered relevant to explain how the interaction between these elements shapes the adaptive capacity and competitiveness of rural destinations in the long term.

2. Research Setting, Population, and Sample

This research was conducted on one or several rural tourism destinations that have developed and show the dynamics of community-based management and dependence on local natural resources. The selection of locations is carried out purposively, taking into account the following criteria: (1) having nature- and culture-based tourism activities; (2) involving local communities in management; (3) facing pressure or socio-ecological change; and (4) having an active local institutional structure. The study population includes all actors involved in the rural tourism system, either directly or indirectly. The sample was selected using purposive and snowball sampling techniques to capture informants with knowledge, experience, and strategic roles in destination management. The main informants include: (1) destination managers or tourism awareness groups; (2) community leaders and local leaders; (3) local tourism business actors; (4) representatives of the village government or related institutions; and (5) local communities who are directly affected by tourism activities. The number of informants is flexible and determined by the principle of saturation, which is reached when the data obtained show a repeating pattern and no longer yield significant new information.

3. Data Collection Techniques

Data collection is carried out through several techniques to ensure the depth and validity of the findings. First, semi-structured in-depth interviews were used to explore the perceptions, experiences, and strategies of related actors in dealing with change, pressures, and efforts to build destination resilience. The interview guidelines were prepared based on the dimensions of the socio-ecological system, such as adaptive capacity, governance, social relations, and environmental conditions. Second, field observations were conducted to gain a direct understanding of the destination's physical conditions, management practices, social interactions, and the dynamics of natural resource utilisation. Observations were limited in their participatory nature, with researchers noting patterns of behaviour, tourism activities, and relevant ecological contexts. Third, documentation studies are used to complement primary data, including policy documents, village regulations, management plans, activity reports, and archives and other secondary data related to tourism and environmental development. Triangulation between sources and techniques is used to improve the credibility and validity of

data.

4. Data Analysis Techniques

Data analysis was conducted qualitatively using a thematic approach based on the socio-ecological system framework. The analysis process began with the transcription of interview data and the preparation of field notes, then continued with the open coding stage to identify initial themes related to destination resilience. Next, axial coding was conducted to group themes into main categories, including social components, ecological components, forms of interaction, and adaptation mechanisms. The next stage was interpretive analysis to understand the relationships between categories and how socio-ecological interactions shape the resilience and competitiveness capacity of destinations. The results of the analysis were then mapped onto the conceptual framework of the socio-ecological system to explain patterns of adaptation, resilience, and transformation in rural destinations. To maintain validity, the study applied triangulation of sources and methods, as well as re-checking the findings through reflective discussions with key informants. This approach enables the development of a comprehensive, contextual understanding of the resilience of rural destinations as a foundation for long-term competitiveness.

Findings

The results of the interviews show that the resilience of rural destinations is strongly supported by a combination of social, institutional, and quality factors of destination management. From the perspective of local actors, the main strength of the destination lies in the availability of adequate facilities, the quality of service, and the consistent maintenance of environmental cleanliness and quality. The friendliness of the community and managers is a key element that not only shapes the tourist experience but also strengthens the destination's image in a sustainable manner. In addition, attention to tourists' needs and continuous evaluation in destination management reflect the adaptive capacity important for maintaining comfort and safety. On the other hand, institutional aspects such as long-term vision and mission, directed management, and the ability to utilise technology, especially social media as a means of promotion, show that the resilience of destinations is not only reactive, but also proactive in responding to the dynamics of tourism development.

In the social dimension, the involvement of local communities has emerged as the main foundation of the sustainability of rural destinations. The active participation of the community not only strengthens local identity but also serves as the primary medium for presenting an authentic tourism experience. Social values such as cooperation, belief, and cultural practices and traditions that are still maintained contribute to building strong social capital. The findings show that communities not only play a complementary role, but also act as a key actor in the rural tourism system. The level of hospitality and acceptance of tourists is even a determining factor in encouraging repeat visits, which ultimately has implications for the sustainability of the local economy. This emphasises that, within the socio-ecological system framework, the social dimension plays a strategic role in strengthening destination resilience through interaction mechanisms and inter-stakeholder relationships.

From an institutional aspect, the existence of formal and informal rules is an important instrument in maintaining a balance between tourism activities and environmental sustainability. The implementation of simple rules, such as prohibiting littering and providing written information for tourists, shows a systematic effort to foster responsible collective behaviour. In addition, the existence of local norms such as awik-awik reflects local wisdom in regulating the sustainable use of resources. These community-based institutions not only serve

as a tool of social control, but also as an adaptation mechanism in the face of pressure on natural resources. In addition, in the ecological dimension, the authenticity of natural resources is identified as the most crucial element for sustaining destination sustainability. That authenticity is not only the main attraction but also reflects the destination's integrity in offering an experience that is not artificial. The findings show a close relationship between the quality of natural resources and the community's role in managing them. The interaction between human and natural resources forms an interdependent system, in which the success of destination management is largely determined by the community's ability to maintain and utilise these resources wisely.

Furthermore, the interview results revealed the dynamics of environmental changes affecting destination sustainability, such as reduced water discharge and the impacts of natural disasters. These changes affect not only ecological conditions but also the economic stability of communities that depend on the tourism sector. The decline in tourist numbers due to unfavourable conditions shows a strong link between environmental factors and the local economy. However, the findings also show that there is a collective awareness of the community on the importance of maintaining a balance between humans and nature. Efforts to preserve the environment are seen as a long-term investment in ensuring the destination's sustainability. Overall, these findings suggest that the resilience of rural destinations is formed through dynamic interactions between social and ecological systems. The community's capacity to build cooperation, maintain cultural values, and sustainably manage natural resources is a key factor in addressing various pressures and changes. Thus, resilience is not only reflected in the ability to withstand disruptions but also in the ability to adapt and continue to evolve, which ultimately becomes the main foundation for building the longterm competitiveness of rural destinations.

Discussion

The findings of this study confirm that the resilience of rural destinations is inseparable from the close interaction among social, institutional, and ecological dimensions, as affirmed within the framework of socio-ecological systems. The strength of service aspects, community friendliness, and consistency in maintaining destination quality show that social factors play a fundamental role in shaping an authentic and sustainable tourism experience. This is in line with the view that social capital, such as trust, collective norms, and cooperation, is a key element in enhancing the adaptive capacity of local communities in the face of change.(Park et al., 2012; Sun et al., 2023). Thus, resilience depends not only on physical resources but also on the quality of social relations within the destination. Furthermore, findings on the importance of long-term vision, continuous evaluation, and technology utilisation show that institutional capacity has a strategic role in strengthening destination resilience. Adaptive management and long-term planning enable destinations not only to respond to change but also to anticipate future dynamics. In this context, the existence of formal and informal rules, including local norms such as awik-awik, reflects a community-based governance mechanism that maintains a balance between the utilisation and conservation of resources. This reinforces the argument that effective governance is a key prerequisite for achieving sustainable destination resilience (Hall et al., 2024; Prayitno et al., 2025).

In the ecological dimension, the emphasis on the authenticity of natural resources as the primary attraction indicates that environmental integrity is the primary foundation for the sustainability of rural destinations. The high dependence of tourism activities on environmental conditions highlights the interdependence between social and ecological systems. These findings are in line with the perspective of a socio-ecological system that views changes in one

component as having a direct impact on the other (González-Quintero & Avila-Foucat, 2019). Therefore, efforts to preserve the environment are not only conservation-oriented but also an adaptive strategy for maintaining the competitiveness of destinations. In addition, the presence of environmental pressures, such as reduced water resources and the impacts of disasters, indicates that rural destinations are vulnerable to external disturbances. The impact is not only ecological but also pervasive economically, especially for people who depend on the tourism sector. However, the findings show that the community's collective awareness of the importance of maintaining a harmonious relationship with nature is an important asset in dealing with these pressures. This reflects the adaptive capacity that enables the destination to absorb interference and adjust without compromising its primary function.

Overall, the results of this study confirm that the resilience of rural destinations is a dynamic process formed from the continuous interaction between social and ecological systems. Resilience is not only interpreted as the ability to survive, but also as the capacity to adapt and transform in the face of change. In this context, resilience is the primary foundation for building the long-term competitiveness of rural destinations, as emphasised in the conceptual framework of this research. Thus, the socio-ecological system approach provides a more comprehensive understanding of how rural destinations can develop sustainably amid complex challenges.

Conclusion

This study concludes that rural destination resilience is fundamental to long-term competitiveness and emerges from dynamic interactions between social and ecological systems. Beyond natural resource quality, resilience depends on social capital, effective governance, and communities' capacity to respond to change. Community participation, cooperation, trust, and cultural practices strengthen collective action and support destination sustainability. Institutional arrangements, including long-term planning, continuous evaluation, and formal and informal regulations such as awik-awik, help balance resource utilisation with conservation. Meanwhile, the authenticity and ecological integrity of natural resources remain essential to destination attractiveness and tourism continuity. These findings highlight the interdependence between communities and their environment, requiring integrated and sustainable management. Environmental change, natural disasters, and tourism fluctuations can undermine ecological conditions and local livelihoods, yet collective awareness and adaptive capacity enable destinations to withstand disruptions while preserving their functions and identity. Resilience should therefore be understood as an ongoing process of anticipation, adaptation, and transformation rather than a fixed condition. Theoretically, this study reinforces the socio-ecological systems approach as a comprehensive framework for explaining rural tourism resilience and competitiveness. Practically, it underscores the need to strengthen community capacity, establish adaptive governance, and protect natural resources through inclusive, integrated, long-term destination management strategies.

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