Resilient Community Strategies in Rural Tourism: Insights from Pentingsari Village in Indonesia

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ABSTRACT

This paper explores the resilience of the Pentingsari Tourist Village in Indonesia in the face of various challenges. Qualitative methodology analyzed data from community initiatives, tourism development projects, and challenge experiences to formulate a model based on four critical issues in translating resilience in the social world by Davoudi. The village's ability to recover from the 2010 eruption of Merapi volcano and the COVID-19 pandemic highlights the importance of early warning systems, effective leadership and community empowerment, sustainable infrastructure, and income diversification in building resilience. This case study of the Pentingsari Tourist Village provides valuable insights into the mechanisms of resilience and the importance of community-based approaches in rural tourism.

Keywords: Rural tourism, Resilient tourism, Tourist village

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Introduction

Rural tourism is a complex dynamic between cultural preservation, local economy, and environmental sustainability [1]. According to studies, the various factors that contribute to the success of the tourism industry in rural locations are related to the local culture. These include the availability of natural beauty, the quality of life, and the economic potential of the region [2,3]. However, rural communities are often on the frontlines when dealing with the effects of disasters. Although disasters can have a major effect on the built and natural environment, they also have a huge influence on the development and survival of rural communities [4]. Understanding and implementing resilient practices are essential to ensure the sustainability of these communities.

The concept of resilience was first introduced to ecological systems by Holling [5]. The concept of resilience has garnered significant attention due to its critical role in advancing sustainability. It is commonly applied across various domains, including engineering, ecology, socio-ecological systems, and climate change adaptation [6]. Resilience can also serve to preserve and manage the fundamental structures and functions of a community during a disaster [7]. In this context of study, resilience refers to a community's capacity to anticipate, prepare for, respond to, and recover from adverse events, including natural disasters, economic fluctuations, or social changes [8]. It involves the ability to adapt and transform in ways that sustain livelihoods, preserve cultural heritage, and protect the environment [4].

Despite the growing body of literature on resilience, there is a notable gap in empirical studies that explore resilience in rural tourism contexts, particularly in disaster-prone areas. Within the rural studies literature, two prominent themes emerge: (1) the examination of farming and its contribution to social-ecological resilience and (2) the investigation of various aspects of community resilience in rural settings [9]. Agricultural systems are closely linked to environmental design and can support food production while sustaining ecosystem services [9]. Another example is the temporal and regional variation in disaster-prone areas' capacity to withstand disasters, which is significantly affected by environmental, social, infrastructural, and economic factors [10]. Furthermore, research highlights that positive attitudes, self-esteem, and inner resilience can help businesses overcome challenges in the tourism industry, particularly in regions susceptible to natural disasters [11]. However, there is an increasing need to conduct studies on the aspects of resilience in practice [9].

Leaving a need for localized, community-specific insights. This research aims to fill this gap by providing detailed, context-specific analysis of resilience strategies employed in Pentingsari Village. Pentingsari Village in Indonesia presents a unique case where resilience is tested against natural hazards such as volcanic eruptions, alongside the pressures of tourism development. Investigating this village's resilience strategies provides valuable insights into how communities can develop resilience against both environmental and socio-economic challenges [12]. Rather than adhering to a fixed strategy, resilience involves individuals employing various approaches to adapt to situational changes [4]. Understanding

and observing how resilience manifests in the social context is crucial [4]. Rural communities function primarily as social systems in which diverse social, economic, and cultural interactions occur. These communities are interwoven through networks of relationships and shared cultural practices that shape their social fabric [13]. Therefore, a field survey of the case study was conducted to evaluate these rural tourism communities' perceptions of their responses to disaster risks in their area.

This study aims to fill a gap in the literature by providing empirical evidence on the resilience strategies employed in a rural tourism context, particularly in disaster-prone areas. This study theoretically advances academic discourse on community resilience in rural tourism by employing Davoudi's framework, which highlights the intentionality of human actions, desired outcomes, system boundaries, and considerations of justice. This theoretical approach facilitates a nuanced analysis of resilience, incorporating the social, economic, and environmental dimensions [14]. This framework highlights critical issues that need to be considered to help translate resilience from the natural world to the social world [14]. Therefore, this framework can play a role in this research as the main theme derived from the observations of phenomena found in the field, particularly in the context of rural tourism communities.

The findings also offer valuable insights for policymakers, community leaders, and tourism practitioners on effective strategies for enhancing community resilience. It is well-known that rural tourism serves as one of the driving forces for regional growth and development by involving locals in tourism activities. To achieve this, community participation and support are crucial factors [1]. This study provides actionable recommendations to confirm that resilience-building efforts benefit all community members, supporting inclusive and equitable development.

Objectives of the study

The specific objectives are addressed as follows:

1. To identify the current practices and strategies used by rural tourism areas
2. To develop a model for resilient community strategies in rural tourism.

Methodology

1. Research Design

This study employs qualitative research, focusing on understanding the role of tourism actors in resilient rural tourism. The characteristics of qualitative research are defined by the nature of the object that serves as the focus of the study [12]. This study adopted a field observation and in-depth interview approach as the main methods to understand the implementation of resilience in rural tourism communities. Field observations are conducted to document the existing conditions at a location. In the context of a tourist village, this research documents facilities and infrastructure that support rural

tourism. Data collection through direct interactions using interviews with sources is also conducted to obtain deeper information.

2. Location of research

Purposefully, the study was chosen in Pentingsari Tourist Village. This village is located 12.5 km from the Merapi Volcano Summit and vulnerable to volcanic activity. Currently, Pentingsari Tourism Village offers experiential tourism activities in the form of learning and interaction about nature, the environment, agriculture, plantations, entrepreneurship, socio-cultural life, various traditional arts and local wisdom that is still deeply rooted in a community with a typical rural atmosphere on the slopes of Merapi volcano.

3. Data collection and participant

Table 1 List of Participants

No.	Participants	Roles
1.	A1	- The Leader of POKDARWIS (Tourism Management in the Tourism Village)
		- Homestay owner
2.	A2	- The Elder of the Village
		- The founder of the tourist village
3.	A3	- MSMEs Owner
		- Homestay owner
4.	A4	- Attraction Coordinator
		- Tour Guide
		- MSMEs Owner

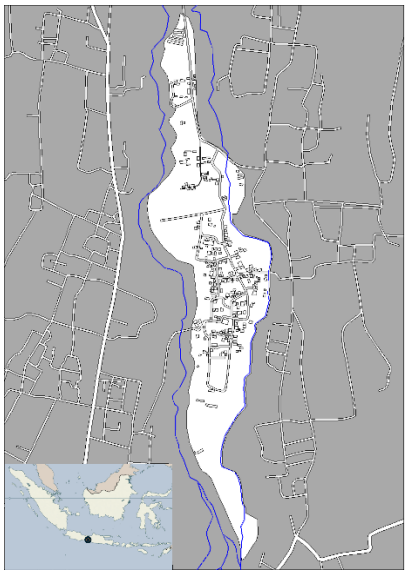


Figure 1 Location of Study

In-depth interviews were conducted to represent the subjective of the interviewees/actors of the tourism village [15]. A total of four respondents participated in the survey conducted between 1-30th November 2023 consisting of the leader of POKDARWIS (Tourism Awareness Group) which is a group that organizes tourism in the area, The Elder of the Village, Homestay owner and MSMEs Owner who work in tourism-related sectors. The interviews were conducted using a semi-structured format at various locations, including the informants' homes, and local tourism sites. Informants were selected purposively, based on their direct involvement in the development of Pentingsari Tourist Village.

A1, the primary participant in this study, served as the researchers' entry point for further inquiry. Through A1's access, extensive information was gathered from A2, the founder of the tourist village, who also owns a homestay. A2 provided valuable insights, particularly regarding the village's foundational history. Based on the information provided by A1, the study explored other community members involved in tourism operations and activities within the village. A3, a village resident, operates a coffee production business and also uses their home as a homestay. A4 serves as an attraction coordinator and tour guide, having been involved in tourism-related activities since the tourist village's inception. In addition to coordinating attractions, A4 runs a batik crafting business, which includes both sales and training sessions for visiting tourists.

Each interview lasted approximately 1 to 1.5 hours. The audio recordings were transcribed into text for subsequent thematic analysis. The transcriptions were organized based on the research theme, and the results were interpreted and presented descriptively in alignment with the research objectives. This process aligns with the stages of qualitative research, encompassing data reduction/verification, data display, and data interpretation [15].

Results

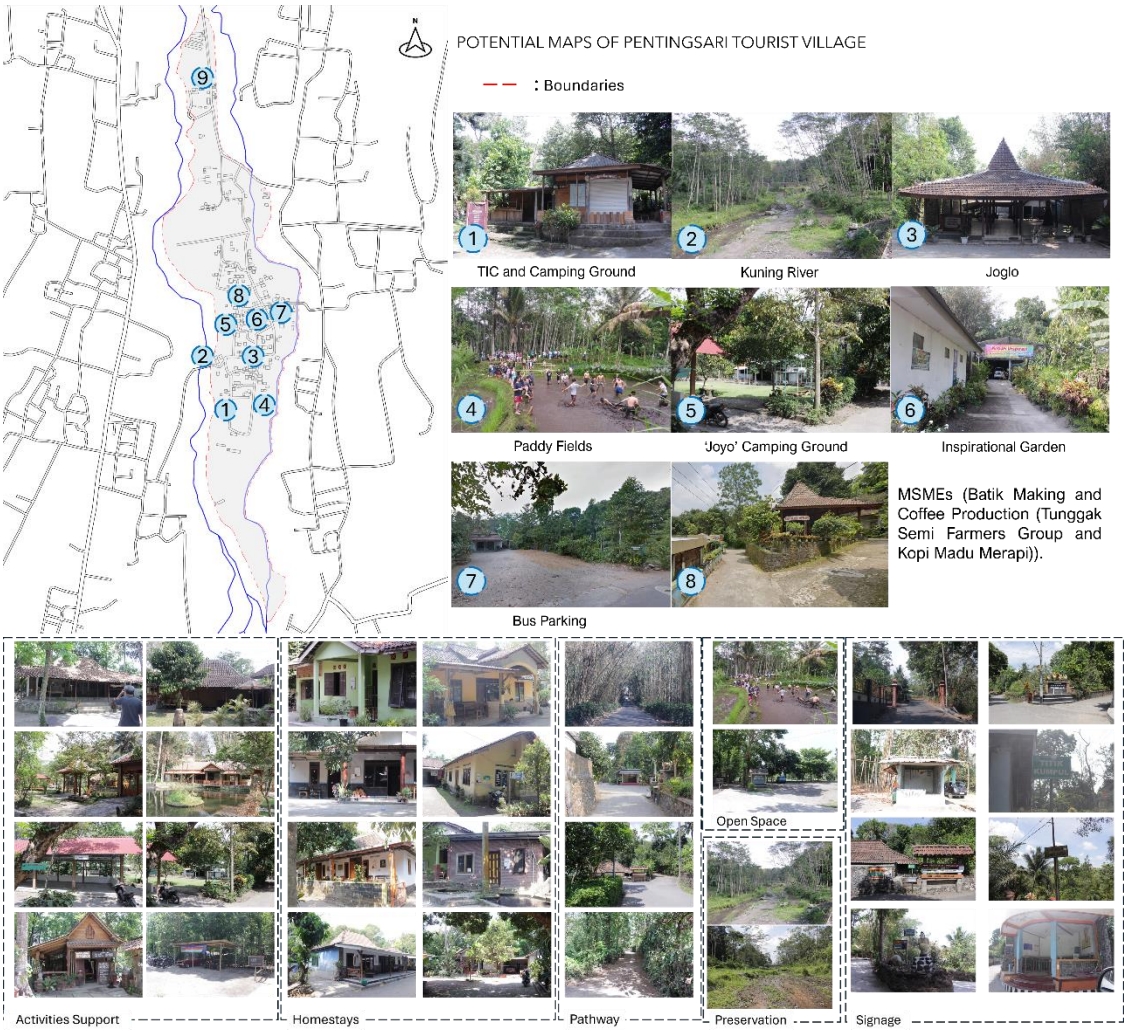


Figure 2 Documentation of Pentingsari Tourism Village

1. Tourism development in Pentingsari

In the early 1990s, Pentingsari was one of the underdeveloped hamlets on the slopes of Mount Merapi, characterized by isolation and limited accessibility. In 2008, village elders initiated efforts to organize, manage, and preserve the environment, encouraging the community to take pride in their village by establishing it as a tourist destination. These efforts began with five homestays and cultural attractions managed by the Tourism Awareness Group, a community-based organization. Initially, the homestays were modest homes owned by tourism village activists. Participation in a tourist village competition brought the village recognition and awards, leading to guidance and support for tourism development. The first assistance focused on improving the homestays to provide greater comfort for visitors.

A significant challenge was shifting the mindset of villagers, primarily farmers and gardeners, to embrace roles as tourism actors. Despite this, the persistence of the tourism leaders and the enthusiasm of the community fostered the growth of the tourist village. Over time, more villagers became involved, and the village adopted a model that promoted immersive community experiences through homestays. Visitors were offered a range of activities, including working in rice fields, exploring rivers, and engaging in local arts and crafts.

2. Tourism products

Pentingsari offers tour packages featuring various village sites, including Joglo buildings, campgrounds, rice fields, and the Kali Kuning River. Activities at the Joglo buildings include training sessions, welcoming activities, creative pursuits, and cultural events. Campgrounds offer camping and group travel activities, while the Kali Kuning River is used for water-based games. The increase in tourists has led to the formation of new businesses, such as batik-making enterprises and coffee farmer groups, which provide educational programs and products. These businesses are integral to the village's tourist attractions. Pentingsari offers a wide range of activities, including guided tours and live-in experiences in homestays, allowing visitors to experience the village's authentic lifestyle. The village targets urban visitors seeking a life-changing experience and offers comparative study packages for groups interested in tourism village management.

Homestays are a key component of Pentingsari tourist village, with more residents offering their homes to guests each year. Initially, residents used children's rooms for tourists, but there are no strict requirements for homestays, only that they maintain their facilities and cleanliness. As the village developed, more visitors led to higher income for homestay owners, motivating them to enhance their accommodations. They added more rooms, bathrooms, and amenities like drinking water dispensers. Homestay owners also participated in various training sessions on hospitality and facility improvement, provided through CSR initiatives and government efforts. By early 2024, there will be eighty houses with over 180 bedrooms, each accommodating at least two guests. The village ensures even distribution of visitors among homestays each month.

3. Tourism support

Pentingsari operates as a self-sufficient tourist village, managed by the village tourism organization. This organization oversees capital, profits, and tourism development with support from various sources, including local government and Corporate Social Responsibility (CSR) initiatives like Bakti BCA. The village's medium-term development plan funds infrastructure projects to enhance tourism and accessibility. New businesses, arts organizations, and training programs contribute to the village's tourism and business activities. A significant portion of Pentingsari's funding comes from tourism-related activities. Initially, capital assistance was acquired to establish the tourist village. Entrepreneurs rely on their funds, generating revenue through product sales and profit-sharing from tour packages. This model fosters self-sustainability and local economic growth within the village.

4. Regional Development and Tourism Practices

Pentingsari focuses on sustaining its tourism initiatives by addressing potential issues and protecting its environment. The village has established a conservation area to safeguard natural flora and fauna while providing guests with an authentic experience. Partnerships with local communities and the village government help improve infrastructure and promote responsible management. Equipped with proper training, Pentingsari offers guests a variety of culturally significant activities. Micro, small, and medium enterprises (MSMEs) play a key role in enhancing tourism offerings. Examples include Kopi Madu Merapi, which develops unique coffee flavors and engages in community-oriented projects, and Badong Batik, known for its batik-making expertise and workshops. Pentingsari integrates traditional craftsmanship with experiential tourism to preserve cultural heritage and generate economic opportunities. The residents demonstrate resilience and cooperation, relying on the tourism industry for their livelihood. Leadership plays a pivotal role in guiding the community towards progress and navigating challenges, fostering sustainable growth and prosperity.

5. Challenges faced by Pentingsari Tourist Village

In 2010, the development of Pentingsari was disrupted by the eruption of Mount Merapi, leading to a 40-60 days evacuation. Policymakers applied the sister village scenario, which involves cooperation between affected villages and less risky partner villages. Refugees were empowered through training and preparedness during the evacuation period. The cold lava floods in Pentingsari destroyed approximately 90% of the agricultural land, with volcanic ash burying crops. As a result, all tourist visits to Pentingsari were canceled. To adapt, the community employed traditional practices to enhance disaster resilience and support the tourism industry.

Since 2018, Mount Merapi has maintained a Level III alert status, indicating that increased volcanic activity could occur at any time. The tourist village actively monitors Merapi's activity and ensures timely communication with tourists. Traditional wisdom plays a crucial role in disaster preparedness, as the community observes natural indicators of volcanic activity. The community of Merapi Volcano are faced with the unpredictable nature of the eruptions. Although it's located within the danger zone of the eruption of Merapi, this village is still able to carry out its usual activities. Their resolve to stay is rooted in their belief that the events that are happening are part of a divine plan. The impacts of the eruption are also representative of nature's inherent rights. The residents' approach to dealing with the situation is one of acceptance. Early warning systems, including alarms and warning signs, are implemented to safeguard the community and tourists. Villagers collaborate with relevant agencies to minimize risks, establish reliable communication channels, and distribute *kentongan* (traditional signaling devices) to homestays. These measures strengthen resilience and prioritize residents' and visitors' safety and well-being.

The COVID-19 pandemic significantly impacted tourism in this community, leading to the cancellation of scheduled visits and the implementation of a lockdown policy that halted tourism activities. During this period, residents relied on their savings to sustain themselves. Due to the uncertainty of the situation, many returned to their primary occupations as farmers and gardeners. As conditions improved and travel policies were implemented, the village quickly adopted new normal protocols and gradually resumed welcoming visitors. While the number of visits has yet to return to pre-pandemic levels, it continues to grow steadily.

Discussion and Conclusions

1. The understanding of the concept of resilience in Pentingsari Tourist Village

The people living on the slopes of Merapi Volcano face constant threats from its unpredictable eruptions. Despite its continuous activity, the volcano's direction and periodicity remain unknown. Various cultural, environmental, and economic factors contribute to the community's resilience. Most residents rely on agriculture, benefiting from the fertile soil provided by the volcano. The area's natural beauty and the potential of Merapi Volcano have fueled the growth of rural tourism. The attractive landscapes draw in tourists, enabling local communities to develop tourism-related activities.

Enhancing resilience in rural tourism in volcano-prone areas involves various strategies, such as community-based tourism (CBT) and resilient enterprises. CBT helps transform tourism destinations and involve external agencies for recovery support [16]. The COVID-19 pandemic has also impacted rural tourism, leading tourism actors to utilize agricultural resources and mutuals cooperation to remain resilient. These strategies contribute to the sustainability and recovery of rural tourism in volcano areas, ensuring the industry's ability to face challenges.

To understand resilience in rural tourism in Pentingsari better, this study tries to apply the proposed four key issues that need to be considered to develop a comprehensive understanding of the concept of resilience and its ability to be translated into the social world from the findings of this research. First, the intentionality of human actions (how can resilience be built, and counter-productive actions avoided?). The first concept pertains to self-organization, a core element of resilience thinking. When applied to the social context, this concept takes on significant ideological implications, as it aligns closely with notions of self-reliance [14]. Self-reliance is a fundamental principle in community development, as it fosters a sense of belonging among community members, gradually enhances rural living conditions, and strengthens community cohesion. In this community context, development is motivated by the elders' initiative to organize, manage, and preserve the environment while fostering pride in the village through its establishment as a tourist destination. This vision gradually gained acceptance within the community, prompting contributions aligned with individual expertise. Residents began offering their homes as homestays, while various village groups, including coffee farmers, women's

associations, batik artisans, and youth organizations, actively participated in tourism-related activities. By participating in development projects, communities actively work to improve their standard of living to the best of their capabilities [1].

Secondly, the goals and outcomes of resilience for local communities (resilience to what ends?); There are concepts of social sustainability embedded in this community, essentially, it's about understanding what the community is striving for when they work to become more resilient. From this community we can see ideas emerging in building resilience in rural tourism, in addition to using agriculture for their daily needs, villagers also offer it as a tourism product. Efforts to enhance economic diversity in tourism villages include developing new products and businesses, fostering innovation in the tourism sector, and supporting MSMEs. Eco-friendly practices such as waste reduction and conservation are essential for protecting natural resources. For example, the Tourism Group in Pentingsari has been replanting areas affected by cold lava flows with fruit trees, aiming to create a new tourism destination that benefits both visitors and the local community.

Third, defining the system boundary (resilience of what to what?); The term "to what" refers to a community's disruptions that can occur. In this study, the main disturbance is the eruption of Mount Merapi, which can be unpredictable. They acknowledge that the decisions that affect their existence are made by a higher power, and they will continue to rise from the ashes. The village elders, the community, and other external parties provide motivation and support. Their recovery efforts are focused on resilience and reorganization. Through this perspective, the residents have gained the necessary knowledge and resilience to face the challenges that come with future eruptions.

Fourth, issues of justice and fairness (defining resilience for whom?); This leads to better outcomes for everyone. It comes into action through the cooperative behaviour of individuals, bringing benefits to all people. In difficult times, the most important thing is the safety of local communities. The safety of the community is always at the top of the list when it comes to addressing difficult situations. During these times, the residents must prioritize their well-being. This can be done by implementing various measures to protect them from threats, providing them with the resources they require, and supporting their mental and physical health. Securing communities during challenging times is a top priority.

Integrating these diverse aspects reveals that the resilience of communities living near Merapi Volcano is multifaceted, rooted in agricultural reliance, tourism development, self-organization, and community-driven initiatives. Their resilience strategies are reflected in their ability to leverage natural resources for economic diversification, adopt eco-friendly practices, and maintain social cohesion through community-based tourism. The community's adaptability and collective efforts in response to both environmental hazards and the COVID-19 pandemic underscore the importance of self-reliance, sustainable practices, and inclusive participation. This comprehensive approach not only enhances their capacity to withstand and recover from disruptions but also ensures long-term sustainability and

improved quality of life for residents. The continuous support from external agencies and the proactive role of local leaders further strengthens the community's resilience framework, providing a model that other rural tourism areas can emulate to achieve similar successes.

2. Lesson learned from resilience-building in Pentingsari Tourism Village

Pentingsari exemplify resilience-building efforts in the Merapi volcano areas. Continuous eruptions raise concerns about tourist safety and community well-being, affecting tourism operations. The lack of resources and infrastructure further challenge the tourism industry by impeding accessibility and attractiveness. Sustainability issues are significant in the rural tourism industry of Merapi, Indonesia. Balancing cultural and natural resource preservation with tourism demands careful management to ensure long-term viability. Residents must also learn to cope with natural disasters and emergencies. Drawing upon existing data, the study proposes a model comprising five factors that encapsulate these resilience-building endeavors. This study primarily focuses on Pentingsari tourism village which may not represent all rural communities. Long-term impacts and adaptations might not be covered extensively, which may overlook ongoing challenges and changes. Conducting long-term studies to examine how rural tourism communities adapt and evolve over time is crucial. Future studies should include diverse rural tourism communities from various regions and countries, enabling a comprehensive understanding of resilience in different contexts and facilitating the identification of universal strategies.

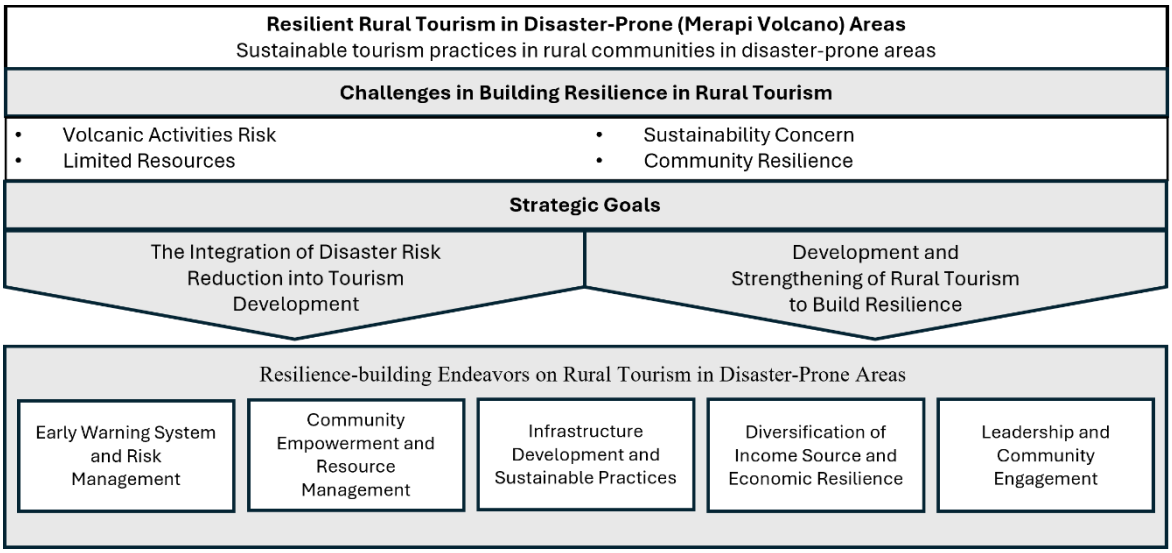


Figure 3 Model of Resilient-building endeavors on rural tourism

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