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## A Community-Based Ecotourism Development Model In Aceh: A Socio-Ecological Perspective

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### Abstract

Nature tourism models are one type of local ecotourism-based tourism for communities living in the surrounding area. Nature tourism has amazing prospects due to its beauty, so it needs to be developed in accordance with the potential of the surrounding environment. The purpose of this study is to determine the model for developing Socio-Ecological nature tourism and the sustainable use of nature tourism. The research method used qualitative research, data collection techniques of observation, interviews and documentation. Data analysis techniques included data reduction, data presentation and conclusion drawing. The results of the study show that the development model has attractions, amenities, accessibility and availability of information services, security, and tour guides, opening opportunities for private investment in businesses such as homestays, lodgings/hotels, children's playgrounds and ensuring security. Its utilisation is through face-to-face communication between the Aceh Besar Disparpora government and the management, trust building to achieve commitment, commitment to process, building mutual understanding, preserving nature and the environment, creating job opportunities for the local community such as traders, accommodation providers and photographers, and maintaining the cleanliness and upkeep of the tourist environment.

**Keywords: Development Model, Nature Tourism and Socio-Ecological**

### 1. INTRODUCTION

Indonesia has a variety of natural resources that are regional assets, one of which is unique natural tourism potential that has the opportunity to be developed. There are many natural tourism destinations in various regions that have not been utilized and managed properly. Tourism potential covers all objects such as natural, cultural, and man-made attractions and requires maximum management in order to provide attractive value for visitors (Swain & Mishra, 2012). Potential is highly dependent on its geographical location and reflects the behavior of the local community in managing the potential properly (Paramita et al., 2018).

The province of Aceh is one of the regions known as the Veranda of Mecca and has abundant natural resources (Daud et al., 2022). A strategic position at the western tip of Sumatra Island (Syahroni et al., 2024). Aceh is also rich in natural potential and offers various forms of beauty, including nature, culture, arts, and others attractions (Herizal et al., 2021). Futhermore, Aceh has numerous tourist attractions in every region that have the potential to be promoted at the regional, national, and international levels (Devy &

Soemanto, 2017). Examples include the hot springs in Aceh Besar and the natural attractions in Lubukindah, South Aceh. Both of these natural attractions have more appeal to the local and national communities because they are located in mountainous areas (Saprijal et al., 2023).

Sociological Ecology is a form of nature tourism that is still natural, provides economic benefits and preserves the culture and community of the region (Adharani et al., 2020). Ecotourism is one type of tourism activity that began to gain popularity in the 1990s. As an archipelagic country with rich biodiversity (Hanum et al., 2021). Ecotourism is a concept of tourism development that offers a form of tourism that is friendly to nature and cultural preservation (Mu'tashim & Indahsari, 2021).

Sociological Ecology is a concept of tourism development and management based on environmental utilization for protection and community participation, with the presentation of educational and learning products that have a positive impact on the environment. Regional development and implementation in protected areas, open areas, cultivated areas, and cultural areas (Paturusi, 2008). Tourism development can improve the welfare of the surrounding community (Devy & Soemanto, 2017). Tourism development with an increased understanding of the concept of tourism is supported by the tourism office and other organizations (Prakitri & Damayanti, 2016). Tourist attractions influence visitor demand for tourist attractions and economic growth for the surrounding community (Simanjuntak & Masbar, 2020). To increase tourism promotion, a development strategy is needed to increase tourist visits (Ria & Helmi, 2021).

The management of tourist attractions to increase local income involves establishing cooperation with various agencies, namely the tourism office, community leaders, youth organizations and community empowerment institutions, investors and local governments, and tourist attraction managers (Marlina, 2019). The development of tourist destinations involves improving transportation access, facilities and infrastructure, media utilization, funding mechanisms, and human resources. In addition, visitors' evaluations of tourist attractions can serve as valuable references for future tourism development strategies (Tapatfeto et al., 2018). Building upon previous studies, this study offers a novel contribution by proposing a model of nature tourism development based on local ecotourism and the utilization of sustainable nature tourism potential in Aceh.

Nature tourism refers to travel activities or part of such an activity that is carried out voluntarily and temporarily for the purpose of enjoying the uniqueness and beauty of natural environments (Putri et al., 2019). Nature tourism is a recreational and tourism activity that utilizes natural potential to enjoy the beauty of nature, whether it is still natural or has been cultivated, in order to attract tourists to the location. Nature tourism is used as a counterbalance to life after engaging in very busy activities and the hustle and bustle of the city. Thus, by engaging in nature tourism, our bodies and minds become refreshed and can work more creatively again because nature tourism allows us to obtain physical and spiritual pleasure (Rusvitasari & Solikhin, 2014).

Despite its considerable potential, hot spring tourism in Aceh still requires greater attention through the implementation of a local ecotourism development model that actively involves various elements for smooth management and sustainable use of natural potential. In addition, adequate and environmentally friendly facilities are also essential, including accommodation, restaurants, infrastructure, and trekking routes leading to tourist destinations. Looking at the potential of this natural tourism, it has its own uniqueness, namely the availability of bathing pools and small cottages. From this potential, there is a great opportunity to develop it as nature tourism based on local, regional, national, and international Sociological Ecology.

Research on community-based ecotourism development in Aceh has predominantly focus on economic aspects, destination promotion, and increasing tourist visits, while the interrelationships between the social, ecological, and institutional dimensions of local communities have yet to be fully explored. Most studies have examined community participation primarily as an operational of tourism activities, without adequately explaining how local cultural values, village institutional capacity, environmental conservation practices, and government policies interact to shape the long-term sustainability of ecotourism initiatives. Furthermore, previous researchs have generally adopted partial and descriptive approaches, thus failing to produce a community-based ecotourism development model that comprehensively integrates socio-ecological perspectives. Consequently, a significant research gap exists regarding the absence of conceptual and empirical models capable of explaining the reciprocal relationships among communities, ecosystems, and local governance structures in community-based ecotourism development in Aceh.

Empirical evidence indicates that ecotourism development in several regions of Aceh continues to face substantial challenges. These include limited community capacity in destination management, weak coordination among government institutions, tourism awareness groups, and indigenous communities, and suboptimal environmental conservation efforts in tourist areas. In several tourist locations, community participation remains symbolic because decision-making is dominated by the government or external parties, so that economic benefits are not distributed evenly to local communities. On the other hand, increased tourism activity has also begun to give rise to ecological pressures such as environmental pollution, damage to coastal areas and forests, and changes in local socio-cultural values. These conditions indicates a gap between the ideal concept of community-based ecotourism and its implementation in practice. Therefore, there is a pressing need a community-based ecotourism development model that emphasizes a balance between social development and ecological sustainability in Aceh.

Natural-based tourism attractions in Aceh Besar Regency possess considerable appeal due to their mountainous setting and proximity to urban areas. Visitors from various regions are very enthusiastic about coming here every holiday, so the tourist site is crowded and has become a favorite destination for millennials and adults today. The hot spring tourist site can be reached from the city of Banda Aceh in about 1 hour. The

natural hot spring tourist attraction provides adequate facilities so that visitors can enjoy their vacation with relatives and family. Therefore, an approach focused on natural resources and the utilization of their potential related to the development of nature tourism in mountainous areas is needed to support the development of sustainable local ecotourism-based nature tourism, particularly in Aceh Besar Regency.

## 2. LITERATURE REVIEW

The development of ecotourism is a strategic approach in nature tourism that emphasizes a balance between environmental conservation and the welfare of local communities. Community-based ecotourism not only highlights the tourist experience of natural beauty, but also ensures that local communities play an active role in its management and utilization. This concept of community involvement is based on the principle that the sustainability of ecotourism can only be achieved if the local community receives fair economic and social benefits and is given the opportunity to participate in decision-making (Scheyvens, 1999).

Community participation and empowerment are important foundations in community-based ecotourism models. Research in various locations shows that active community involvement in ecotourism planning and management creates added value not only for environmental conservation but also for local social and economic capacity building. For example, in the participatory framework developed by Malikussaleh University, elements such as social capital, participatory governance, and equitable distribution of benefits are key factors in increasing community involvement in ecotourism and supporting the sustainability of nature tourism destinations (Ichsan et al., 2025).

In addition, literature shows that comprehensive empowerment models that integrate training, institutional support, and multi-stakeholder collaboration can help local communities not only preserve the environment but also improve their welfare in a sustainable manner. Research in the Bulu Tanah Pine Forest shows that community-based ecotourism is able to combine conservation and economic welfare improvement through active community participation and strong stakeholder support (Erdawati & Ayub, 2024). However, challenges remain in implementing community-based ecotourism development models, particularly in relation to local capacity, access to information, and coordination between the government, community, and private sector. A systematic study in Indonesia shows that the involvement of local communities is still often limited to the stage of resource utilization, while planning and decision-making are still not very participatory. This indicates the need to strengthen the capacity of communities in ecotourism management so that their contribution to environmental protection and economic development becomes more significant (Kia, 2021).

The Community-Based Tourism (CBT) theory is the primary foundation for developing community-based ecotourism because it positions local communities as key actors in the planning, management, and utilization of tourism products. This concept

emphasizes that tourism development is oriented not only towards economic gain, but also towards preserving local culture, protecting the environment, and improving community welfare. From a CBT perspective, community participation is a crucial indicator of the success of sustainable tourism development because communities have control over the tourism resources within their area. This theory is relevant for use in ecotourism development research in Aceh because the social and cultural conditions of the Acehnese people have strong communal characteristics, necessitating a community-based tourism development approach and local wisdom (Okazaki, 2008).

Furthermore, the theory of Sustainable Development is used to explain that ecotourism development must consider the balance between economic, social, and environmental aspects to ensure long-term sustainability. In the context of tourism, sustainable development emphasizes the importance of environmental conservation, equitable distribution of economic benefits to local communities, and protection of local cultural and social values. This approach assumes that tourism activities should not cause ecosystem damage or diminish the socio-cultural identity of the community. Therefore, community-based ecotourism development in Aceh needs to be designed through an integration of the utilization of natural tourism potential with environmental conservation efforts and strengthening the social capacity of local communities (Tryasnandi, 2023).

In addition, the theories of Social Participation and Community Empowerment are used to explain the importance of active community involvement in the entire ecotourism development process, including decision-making and destination management to the distribution of economic benefits. Community Empowerment Theory emphasizes that communities must have access, capacity, and power to determine the direction of development in their own areas. In ecotourism development, community participation is not merely symbolic, but must be realized in the form of social control, strengthening local institutions, improving skills, and the community's ability to maintain environmental sustainability. Thus, this theory is relevant to analyzing the relationship between social participation, community empowerment, and the success of community-based ecotourism development in Aceh from a socio-ecological perspective (Muda, 2025).

### **3. METHOD**

This study uses qualitative research methods with a descriptive approach, which seeks to obtain information and seek understanding based on facts that occur at the research location. It is then analyzed further and provides a clear and accurate picture, with the aim of solving problems in the field (Moleong, 2017). The research was conducted in the Mesjid Raya District, Aceh Besar Regency. Data were collected from both primary and secondary sources. Primary data were obtained through interviews and observations, while secondary data was obtained through library research, namely books, journals, newspapers, articles, magazines, and others. The data collection techniques employed in this study included observation, interviews, and documentation (Sugiyono,

2020). Based on the data collection techniques through observation at the research location and interviews with various related parties who know a lot about the subject being studied and documentation. The informants in this study were the Aceh Besar Regency Tourism Agency, tourism site managers, tour guides, village chiefs, and the local community. The data analysis techniques used were data reduction, data presentation, and conclusion drawing (Bungin, 2022).

#### **4. FINDING AND DISCUSSION**

##### **Model for Developing Nature Tourism Based on Local Socio-Ecological**

The local socio-ecological-based nature tourism development model positions the community as the primary actor in managing tourism resources while maintaining ecological balance and local cultural values. In the context of Aceh, this approach is relevant because the region boasts rich biodiversity, tropical forests, marine tourism, and strong local wisdom. Community-based ecotourism development focuses not only on economic growth but also on environmental conservation and strengthening the socio-cultural identity of local communities. Research on ecotourism development in Aceh shows that the integration of ecological, socio-cultural, economic, and local institutional aspects is a crucial foundation for creating sustainable tourism destinations. (Aswita, 2024).

The socio-ecological perspective in community-based ecotourism development emphasizes the reciprocal relationship between humans and the environment within a mutually influencing system. In Aceh, local communities possess traditional knowledge regarding nature conservation, forest management, and coastal resource utilization that can serve as the basis for sustainable tourism development. A study in Ketambe, Southeast Aceh, demonstrated that developing nature tourism based on socio-cultural values and local wisdom can strengthen community participation and authentically enhance tourist appeal. Furthermore, the ethnoecotourism model in Aceh emphasizes the importance of environmental education and ecological literacy as part of the tourism experience, supporting both nature conservation and local community empowerment (Ahmad, 2025).

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As explained by the Head of the Aceh Tourism Agency, Disparpora Aceh, Abdullah that:

“The utilization of natural potential by the community demonstrates a reciprocal relationship between social and ecological systems in the development of nature tourism. Communities view nature not only as an economic resource through tourism activities, but also as an important part of environmental conservation and preservation efforts. From a socio-ecological perspective, the development of nature tourism in Aceh reflects the community's adaptation to local resources by integrating economic, cultural, and environmental sustainability values. Destination promotion through ecotourism communities and strengthening Aceh's unique nature tourism brand identity serve as social strategies to increase tourist appeal while broadening collective awareness of the importance of preserving ecosystems. Furthermore, educating tourists about responsible behavior demonstrates efforts to build harmonious interactions between humans and the environment so that tourism activities continue to support ecological sustainability in the region.” (Interview with Abdullah, 2025).

Furthermore, Bahagia, the head of the department, explained that:

“The nature tourism development model demonstrates the close relationship between social, economic, and ecological aspects within the community's socio-ecological system. Hot spring tourism development is not only oriented towards increasing income and creating jobs, but also encourages the preservation of the local environment and culture as part of the sustainability of the tourism area. Transparent profit-sharing mechanisms through levies, homestays, and small business partnerships reflect efforts to maintain economic justice so that the benefits of tourism can be directly felt by local communities. Furthermore, increased community capacity in tourism services, conservation, and financial management demonstrates the strengthening of the community's social capacity to manage natural resources sustainably and adaptively to tourism development.” (Interview with Bahagia, 2025).

Next, Mulizar, the head of the tourist attraction management, explained that:

“The development of local ecotourism-based nature tourism in Aceh reflects a socio-ecological approach that emphasizes the interconnectedness of people, social institutions, and environmental sustainability. Synergy between the government, management, communities, and the private sector demonstrates the importance of social collaboration in sustainable natural resource management. Prioritizing environmental education, strengthening community institutions, and developing environmentally friendly infrastructure serve as forms of social adaptation to maintain ecological balance while improving community economic well-being through sustainable ecotourism activities.” (Interview with Mulizar, 2025).

According to Yusmanidarmembers of the tourist attraction management that: “The development of a hot spring tourism model demonstrates a socio-ecological approach that balances environmental sustainability, socio-economic well-being, and cultural preservation as an interconnected whole. Measuring socio-ecological impacts through environmental, socio-economic, and cultural indicators reflects adaptive and sustainable tourism management efforts. Community involvement in the monitoring system also demonstrates the importance of local participation in maintaining ecosystem conditions, ensuring equitable distribution of benefits, and maintaining cultural values and practices amidst tourism development.” (Yusmanidar, 2025).

According to Anita, Head of Tourism Management and Promotion, that: “The development of hot spring tourism demonstrates the interconnectedness of social, ecological, and institutional aspects within a socio-ecological system. A contextual, adaptive, and community-based tourism model emphasizes the importance of local community involvement in mapping tourism potential and risks, product development, capacity building, and sustainable environmental conservation. Integration with local government policies strengthens tourism management to maintain a balance between economic benefits, environmental sustainability, and social welfare. The principle of "happy here, happy there" reflects the creation of a tourism experience that not only satisfies visitors but also fosters awareness and educational value regarding the importance of preserving the natural tourism environment” (Interview with Anita, 2025).

The proposed nature-based tourism development model is founded on the principles of sustainable and community-based ecotourism. The model emphasizes the integration of tourism attractiveness, environmental sustainability, stakeholder participation, and socio-economic benefits for local communities. First, tourism attractions should be based on the unique natural characteristics of the destination, including scenic landscapes, biodiversity, and distinctive features such as natural hot springs, which serve as the primary motivation for tourist visits. Second, the provision of adequate amenities, including accommodation facilities, rest areas, sanitation facilities, and other supporting infrastructure, is essential to enhance visitor comfort and satisfaction.

Accessibility also constitutes a critical component of the model. Tourism destinations should be supported by reliable transportation systems, well-maintained road infrastructure, and convenient access routes to facilitate tourist mobility. In addition, the availability of supporting services, such as tourist information centers, security services, and trained tour guides, plays an important role in improving the quality of the visitor experience and ensuring tourist safety.

Environmental sustainability forms the core of the development model. Tourism development activities should prioritize nature conservation through environmental

protection measures, sustainable resource management, and the preservation of ecological functions. Consequently, all development initiatives should be preceded by feasibility studies, environmental impact assessments (EIA), and climate change mitigation strategies to ensure that tourism growth does not compromise environmental integrity.

The model further emphasizes community participation and empowerment as fundamental elements of sustainable tourism development. Local communities should be actively involved in planning, decision-making, management, and monitoring processes, while simultaneously benefiting from the economic opportunities generated by tourism activities. Such participation contributes to strengthening local institutions, preserving cultural values, and enhancing community welfare.

The implementation of this model requires collaboration among multiple stakeholders, including government agencies, local communities, private investors, and community-based organizations. In the case of Aceh Besar Regency, the government has played an important role through the Tourism, Youth, and Sports Agency by improving tourism infrastructure, including road rehabilitation, swimming pool renovations, the construction of additional sanitation facilities, and the installation of telecommunications infrastructure. These efforts have contributed to increasing the attractiveness and accessibility of tourism destinations.

Private-sector involvement is also encouraged through investment opportunities in tourism-related businesses such as homestays, lodging facilities, food services, and tour guide operations. Such investments can stimulate local economic growth while expanding tourism services available to visitors. Furthermore, visitor safety should be strengthened through the implementation of safety measures in potentially hazardous areas, particularly around hot spring sites and bathing pools. Additional recreational facilities, such as public parks and children's playgrounds, can further enhance destination attractiveness. To ensure security and visitor protection, cooperation with local security personnel and relevant authorities should be maintained as part of an integrated tourism management strategy.

Overall, this model seeks to establish a balanced relationship between tourism development, environmental conservation, community empowerment, and economic growth, thereby supporting the long-term sustainability of nature-based tourism in Aceh Besar Regency.

The development of hot spring tourism is based on SWOT analysis, which identifies the following strengths, weaknesses, opportunities, and threats:

Table 3.1

<b>Number</b>	<b>Strenght</b>	<b>Weaknes</b>	<b>Opportunities</b>	<b>Threat</b>
1	Possessing breathtaking natural beauty	Lack of information and tourism promotion	Tourist attractions close to the city center are about an hour away.	The dry season and the occurrence of water shortages

		through social media		
2	Research opportunities and conservation sites for the general public	Lack of quality human resources and tourism management	There are separate bathrooms for adults (men, women, and children).	Livestock still roaming around the location
3	Located under hills and mountains and the natural environment	Infrastructure limitations, such as bathrooms and toilets, are still lacking, and clean water is inadequate.	Increasing the appeal to local, regional, and international tourists	Competition among tourist attractions in the Aceh Besar region
4	Visitor comfort at tourist sites	Lack of creativity in running local businesses Lack of food availability, such as Acehnese cuisine and lodging	The benefits of hot water as a bathing facility for visitors suffering from skin diseases, strokes, and so on.	There is still a lack of trash bins and visitors' awareness of maintaining the cleanliness of tourist sites is still low.
5	Community participation is very involved in managing	No lodging or internet connection available	Increased economic activity in the local community	Potential landslides and flash floods
6	Transportation such as cars and motorcycles can easily reach tourist locations.	The rest areas are still not comfortable for visitors.	Conducting ongoing training and promoting the beauty of Aceh tourism at the national and international levels.	The dangers of hot water for young children, people with internal diseases, and the risk of ecological degradation if visits are not regulated by zoning and carrying capacity.

Based on the table above, it can be concluded that the development of nature-based ecotourism can be reviewed from the SWOT analysis aspect, namely strengths as

the first step in determining a sustainable nature tourism development strategy, weaknesses in nature tourism development need to be minimized to achieve a great opportunity in nature tourism development in the future, opportunities for hot spring tourism development require an opportunity indicator to determine success in managing nature tourism, and threats are a process that must be considered so that the nature tourism location can be maximized and prevent environmental damage at the tourism location.

### **Utilization of Sustainable Natural Tourism Potential**

The beauty of nature tourism is one of the attractive tourist destinations that emphasizes its utilization, so that its potential can be carried out sustainably and can provide benefits for the local community. In addition, it also emphasizes environmental conservation and economic benefits for the local community. This model is relevant for combining efforts to preserve natural resources with improving the welfare of local communities. Nature tourism is managed collaboratively with stakeholders and the community and requires special attention from the government in terms of the regional budget to add public facilities such as parking lots, prayer rooms, toilets, swimming pools, and others. Meanwhile, the community is expected to be actively involved in the utilization of tourism.

Various studies have shown that leveraging the potential of sustainable natural tourism in Aceh, particularly through a community-based ecotourism (CBT) approach, relies heavily on the integration of social, economic, cultural, and environmental aspects within a socio-ecological framework. The development of destinations such as hot springs requires local communities to be the primary actors in management, from potential identification and planning to tourism marketing, thereby creating economic empowerment and environmental preservation. Studies in Aceh Besar demonstrate that community involvement, institutional strengthening, and multi-stakeholder collaboration are key to realizing sustainable tourism that maintains ecosystem balance while improving the well-being of local communities (Wulandari, 2025).

From a socio-ecological perspective, ecotourism management must also consider environmental carrying capacity and local wisdom to prevent natural resource degradation due to tourism activities. This approach emphasizes the importance of integrating environmental conservation with community economic activities, where every tourism development must be accompanied by efforts to mitigate ecological risks and strengthen environmental awareness. Several studies on ecotourism in Aceh confirm that tourism sustainability is largely determined by the community's ability to maintain natural resources such as water, vegetation, and landscapes as part of an interconnected life system (Aswita, 2024).

Furthermore, community-based ecotourism development also requires the support of integrated local government policies and a governance system that adapts to social and environmental changes. This includes strengthening community capacity, improving infrastructure, and implementing a continuous monitoring and evaluation system to

ensure the sustainability of economic benefits without compromising ecological sustainability. Therefore, the ecotourism development model in Aceh is not only oriented towards increasing tourist numbers but also towards creating a balance between environmental sustainability, social welfare, and preserving local cultural values as a unified socio-ecological system.

Nurman, a tour guide in Banda Aceh, explained that:

“Hot spring tourism development is understood as a balanced interaction between ecological and social systems through the principles of environmental conservation and local community empowerment. Management of national parks and conservation areas focuses on maintaining ecosystem balance to ensure the sustainability of flora and fauna amidst tourism activities. Meanwhile, local communities play a vital role in the social system, acting as tour guides, homestay managers, and small business owners based on local potential. This integration of environmental protection and improving community welfare demonstrates that sustainable tourism can only be achieved through harmonious collaboration between humans and the ecosystem”. (Interview Nurman, 2025).

Furthermore, the Head of the Aceh Tourism, Youth, and Sports Agency explained that:

“Hot spring tourism management demonstrates the crucial role of institutional systems in regulating interactions between humans and the environment. Local government regulations, such as visitor restrictions, operating hours, and sanctions, serve as controls to maintain ecosystem carrying capacity and prevent environmental degradation caused by excessive tourism activity. Furthermore, visitor education forms part of a social system that raises conservation awareness and encourages responsible tourism behavior. This integration of policy, environmental preservation, and strengthening local cultural identity strengthens the sustainability of the socio-ecological system while enhancing the educational value and attractiveness of hot spring tourism”. (Interview with Abdullah, 2025).

In addition, Mulizar explained that the potential utilization is also explained by:

“The development of nature tourism emphasizes the importance of multi-stakeholder collaboration between the government, the private sector, investors, and communities in establishing an adaptive and sustainable management system. This synergy enables the integration of environmental conservation, social empowerment, strict regulations, and ecotourism education to maintain a balance between human needs and ecosystem carrying capacity. This holistic approach ensures the wise use of natural resources without disrupting the ecological balance, particularly in sensitive areas such as protected forests. Thus, the resulting socio-ecological system not only supports environmental sustainability but also ensures equitable distribution of economic benefits and strengthens

community capacity to maintain the sustainability of tourism destinations for future generations”.(Interview with Mulizar, 2025).

Next, Marni, a member of the local community, explained that:

“The utilization of hot spring tourism through a local ecotourism approach reflects a positive interaction between the community's social and economic systems and the sustainability of the environmental system. Community involvement in economic activities such as selling products in tourist areas demonstrates a form of empowerment that can increase income while strengthening local economic resilience. Furthermore, sustainable tourism development is a shared hope that natural resource utilization will be maintained and will not put undue pressure on the ecosystem. Thus, the relationship between economic benefits, community participation, and environmental sustainability forms a mutually supportive socio-ecological system in hot spring tourism management”. (Interview with Marni, 2025).

The sustainable utilization of natural tourism potential requires collaborative governance involving government institutions, tourism managers, local communities, and other stakeholders. Findings from this study indicate that effective collaboration has been established through regular communication and coordination between the Aceh Besar Tourism, Youth, and Sports Agency (Disparpora) and hot spring tourism managers. Face-to-face interactions and information-sharing activities have facilitated coordination among stakeholders and supported collective efforts to develop tourism destinations.

An important aspect of this collaboration is the development of trust among stakeholders. Trust-building has been achieved through continuous interaction between government agencies, tourism managers, and local communities. Such interactions have fostered mutual understanding and strengthened cooperation in managing and utilizing tourism resources. The existence of trust has also contributed to the successful implementation of collaborative programs aimed at improving tourism services and ensuring the sustainability of natural resources.

The findings further reveal that stakeholder commitment has played a significant role in supporting tourism development. The collaborative process demonstrates that stakeholders have adhered to agreed responsibilities and actively participated in implementing development programs. This commitment is reflected in the continuous monitoring and evaluation of tourism development activities, ensuring that agreed objectives are achieved effectively. Moreover, decision-making processes have been characterized by a shared understanding among stakeholders. Tourism development policies and management decisions are generally formulated through consultation and deliberation, allowing stakeholders to reach consensus while complying with existing regulations. Such an approach has contributed to the effective management and advancement of hot spring tourism destinations.

From an environmental perspective, sustainable tourism development emphasizes the preservation of natural resources, particularly the protection and maintenance of hot spring water sources that constitute the main attraction of the destination. Environmental conservation efforts are considered essential to ensuring the long-term viability of tourism activities and maintaining ecological balance within the area. In addition, maintaining the cleanliness of tourism facilities and preserving the quality of natural attractions have become key priorities in enhancing visitor satisfaction and sustaining destination competitiveness.

The sustainable utilization of tourism potential has also generated significant socio-economic benefits for local communities. Tourism development has created employment opportunities and provided alternative sources of income through various economic activities, including small-scale trading, accommodation services, food and beverage businesses, photography services, and tourism management. These opportunities have enabled local residents to participate directly in the tourism sector and benefit from the economic value generated by visitor activities.

Furthermore, local communities play an important role as tourism operators, destination managers, and agents of change in promoting environmentally responsible practices. Community involvement not only strengthens local ownership of tourism resources but also contributes to environmental awareness, social development, and economic improvement. Through active participation, local communities become key actors in supporting sustainable tourism development while preserving the natural and cultural assets of the destination.

To ensure continuous improvement, periodic evaluations are conducted through meetings involving Disparpora, village leaders, and tourism site managers. These evaluations serve as a mechanism for monitoring tourism performance, identifying emerging challenges, and formulating strategies to enhance the sustainable utilization of natural tourism resources. Consequently, the collaborative governance model implemented in the study area demonstrates the importance of stakeholder cooperation, environmental conservation, community empowerment, and regular evaluation in supporting the long-term sustainability of nature-based tourism development. The analysis of the findings shows that natural hot spring tourist attractions are one of the unique and strategic tourist attractions in Aceh, with clear water sources that can be utilized as health tourism by bathing in the pools provided. In addition, its spacious location provides opportunities to be managed with different concepts to attract more visitors. Furthermore, many local people have established businesses at the hot spring tourist attraction, which shows the existence of ecotourism for the local community. In addition, the community's interest in developing small businesses at tourist sites is facilitated by the management by providing a sales area. However, managers must plan carefully so that these areas and their contents continue to apply the concept of sustainability. The hot spring tourist attraction area has the potential for further

development, and since it has been managed from 2008 until now, it is still running, and the number of visitors from various regions is even increasing.

## 5. CONCLUSION

Based on the results of the research conducted, the following conclusions can be drawn: first, it has attractions, namely unique and interesting natural beauty, such as natural scenery, or unique activities of special interest, such as hot springs; it has amenities, supporting facilities such as comfortable accommodation and rest houses, an accessibility system that provides easy access to destinations, including good road infrastructure and convenient transportation, and a service system that provides information, security, and trained tour guides to enhance the visitor experience, opening up opportunities for the private sector to invest by running businesses such as homestays, lodgings and tour guides, creating children's playgrounds and tightening security so that visitors continue to feel comfortable at the tourist location.

Second, face-to-face dialogue between the Aceh Besar Disparpora government and tourism management parties, building trust (trust building) and collaboration processes are very much needed to build trust so that all parties are involved in utilizing the potential of natural tourism. the process of achieving commitment, a commitment that demonstrates that stakeholders are compliant in carrying out the collaboration with mutual agreement, shared understanding of joint decisions, preserving nature such as the availability of hot springs that still flow today, creating job opportunities for the local community by utilizing tourist sites as places to sell goods and participate in their management, maintaining tourist attractions as drivers of the local economy by opening businesses such as shops, accommodation providers, and photographers, emphasizing the cleanliness of tourist attraction facilities and the maintenance of hot springs, to maintain the quality of the visitor experience and the attractiveness of tourist attractions.

## 6. BIBLIOGRAPHY

- Adharani, Y., Zamil, Y. S., Astriani, N., & Afifah, S. S. (2020). Penerapan Konsep Ekowisata Di Kecamatan Cihurip Kabupaten Garut Dalam Rangka Perlindungan Dan Pengelolaan Lingkungan. *Prosiding Penelitian & Pengabdian Kepada Masyarakat*, 7(1), 179–186.
- Ahmad, B., & Hastuti, H. (2025). Strategic Development of Ketambe Nature Tourism: Integrating Local Wisdom and Community-Based Sociocultural Values in Southeast Aceh. *Baileo: Jurnal Sosial Humaniora*, 3(1), 117-135.
- Aswita, A., & Premana, Y. (2024). Ecoregional identity model of south-west route for spice botanical garden ecotourism development in Aceh Province. *Jurnal Pariwisata Pesona*, 9(2), 223-235.
- Bungin, B. (2022). *Analisis Data Penelitian Kualitatif*. PT. RajaGrafindo Persada.

- Daud, A., Ismail, F., Manan, A., & Saprijal, S. (2022). The History of Rapa'i Dabòh in Aceh. *Jurnal Adabiya*, 24(2), 121–131. <https://www.jurnal.ar-raniry.ac.id/index.php/adabiya/article/view/13068/pdf>
- Devy, H. A., & Soemanto, R. B. (2017). Pengembangan Obyek Dan Daya Tarik Wisata Alam Sebagai Daerah Tujuan Wisata Di Kabupaten Karanganyar. *Jurnal Sosiologi DILEMA*, 32(1), 34–44.
- Erdawati, M., & Ayub, Z. (2024). Empowering Communities through Ecotourism: A Holistic Model for Sustainable Development. *Journal of Education, Humaniora and Social Sciences*, 7(2), 405-412.
- Hanum, F., Dienaputra, R. D., Suganda, D., & Muljana, B. (2021). Strategi Pengembangan Potensi Ekowisata di Desa Malatisuka. *Jurnal Master Pariwisata (JUMPA)*, 8(1), 22. <https://doi.org/10.24843/jumpa.2021.v08.i01.p02>
- Herizal, H., Rasanjani, S., & Muhkrijal, M. (2021). Kebijakan Kepariwisata di Provinsi Aceh: Peluang dan Tantangan. *Jurnal Public Policy*, 7(1), 21–28. <https://doi.org/10.35308/jpp.v7i1.3341>
- Ichsan, Universitas Malikussaleh, Azhar, Munardi. (2025). *Enhancing Community Engagement in Ecotourism: Developing a Participatory and Community-Centered Framework*. *Journal of Accounting Research, Utility Finance and Digital Assets*.
- Istiyani, A. D. (2019). *Menggali Potensi Desa Wisata: Mewujudkan Masyarakat Sadar Wisata*. CV. Hikam Media Utama.
- Kia, Z. (2021). Ecotourism in Indonesia: Local community involvement and the affecting factors. *Journal of Governance and Public Policy*, 8(2), 93-105.
- Marlina, E. (2019). Pengelolaan Objek Wisata Air Panas Guna Meningkatkan Pendapatan Asli Desa (PADes) di Desa Cikupa Kecamatan Banjaranyar Kabupaten Ciamis. *Jurnal Moderat*, 5(1), 153–165. <https://jurnal.unigal.ac.id/index.php/moderat/article/view/1960>
- Moleong, L. J. (2017). *Metodologi Penelitian Kualitatif (Edisi Revisi)*. PT. Remaja Rosda Karya.
- Muda, F. (2025). Community participation in Indonesian sustainable tourism: A systematic review of models, impacts, and gaps. *Priviet Social Sciences Journal*, 5(8), 125-139.
- Mu'tashim, M. R., & Indahsari, K. (2021). Pengembangan Ekowisata di Indonesia. *Ist E-Proceeding SENRIADI 2021*, 1(1), 295–308. <https://jurnal.usahid solo.ac.id/index.php/SENRIABDI/article/view/863/652>

- 
- Okazaki, E. (2008). A community-based tourism model: Its conception and use. *Journal of sustainable tourism*, 16(5), 511-529.
- Paramita, M., Muhlisin, S., & Palawa, D. I. (2018). Peningkatan Ekonomi Masyarakat Melalui Pemanfaatan Sumber Daya Lokal Increasing Community Economy Through the Utilization of Local Resources. *Qardhul Hasan: Media Pengabdian Kepada Masyarakat*, 4(1), 19–30.
- Paturusi, S. A. (2008). *Perencanaan Kawasan Pariwisata*. Universitas Udayana.
- Prafitri, G. R., & Damayanti, M. (2016). Kapasitas Kelembagaan Dalam Pengembangan Desa Wisata (Studi Kasus: Desa Wisata Ketenger, Banyumas). *Jurnal Pengembangan Kota*, 4(1), 76–86.
- Putri, R. D., Ardiansyah, A., & Arief, A. (2019). Identifikasi Potensi Pengembangan Objek Wisata Alam Danau Picung Ditinjau Dari Aspek Produk Wisata Di Muara Aman Provinsi Bengkulu. *NALARs*, 18(2), 93–98. <https://doi.org/10.24853/nalars.18.2.93-98>
- Ria, D., & Helmi, H. (2021). Potensi dan Strategi Pengembangan Objek Wisata Ie Seuum Kecamatan Mesjid Raya Kabupaten Aceh Besar. *Jurnal Real Riset*, 3(1), 34–46. <http://journal.unigha.ac.id/indeks.php/JRR>
- Rusvitasari, E., & Solikhin, A. (2014). Strategi Pengembangan Wisata Alam Dalam Meningkatkan Kunjungan Wisatawan di Obyek Wisata Umbul Sidomukti Bandungan Semarang. *Jurnal Pariwisata Indonesia*, 10(1), 1–24.
- Saprijal, S., Bariah, C., & Syahrini, F. (2023). Pengelolaan Objek Wisata Ie Suum dalam Peningkatan Daya Tarik Wisatawan Luar Daerah di Kecamatan Mesjid Raya Kabupaten Aceh Besar. *Aceh Anthropological Journal*, 7(2), 140–153. <https://doi.org/10.29103/aaj.v7i2.12699>
- Scheyvens, R. (1999). Ecotourism and the empowerment of local communities. *Tourism management*, 20(2), 245-249.
- Simanjuntak, Y. M., & Masbar, R. (2020). Valuasi Ekonomi Objek Wisata Permandian Air Panas Ie Seuum Aceh Besar dengan pendekatan Travel Cost. *Jurnal Ilmiah Mahasiswa (JIM)*, 5(2), 66–73.
- Sugiyono, S. (2020). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D* (Edisi Kedua (ed.)). Alfabeta.
- Swain, S. K., & Mishra, J. M. (2012). *Tourism : Principles and Practices*. Oxford University Press.

- Syahroni, F., Z. R., Manan, A., Saprijal, S., & Azis, M. (2024). Sustainable Management Of Mukim Customary Forests In Aceh Jaya District : An Analysis Of The Role Of Imuem Mukim. *JlAP: Jurnal Ilmu Administrasi Publik*, 12(2), 179–190.
- Tapatfeto, M. A. K., Bessie, J. L. ., & Kasim, A. (2018). Strategi Pengembangan Objek Wisata dalam Upaya Peningkatan Kunjungan (Studi Pada Objek Wisata Pantai Oetune Kabupaten TTS). *Jurnal of Management (SME's)*, 6(1), 1–20.
- Tryasnandi, A., Maryani, E., & Andari, R. (2023). Concept Of Community-Based Tourism Development In Situ Tandon Ciater. *Journal of Tourism Sustainability*, 3(2), 101-105.
- Wulandari, E., Yusuf, M. A., Hanifah, W., & Fakhrana, S. Z. (2025). Pendekatan Pembangunan Wilayah Berbasis Komunitas untuk Pengembangan Pariwisata Berkelanjutan di Desa Luthu Lamweu. *Bayt ElHikmah: Journal of Islamic Architecture and Locality*, 3(1), 34-46.