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# Enhancing Edu-Ecotourism in Batudulang Village, Batulanteh District, Sumbawa Regency: Strategies and Potential Development

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Abstract: This study explores the potential and opportunities for developing eduecotourism in Batudulang Village, Sumbawa Regency. Using a descriptive and
qualitative approach, the research identifies key factors influencing development and
employs the SOAR technique to pinpoint specific growth prospects. Data collection
involved on-site observations, interviews, and documentation, engaging stakeholders
from various sectors. The findings inform a strategy that maximizes the area's rich
biodiversity, stunning landscape, unique topography, and cultural heritage to create an
appealing edu-ecotourism experience tailored to different market segments. This study
offers valuable insights for policymakers, local communities, and tourism stakeholders,
guiding sustainable development and highlighting the region's potential for socioeconomic benefits.

**Keywords:** Strategy, development, edu-ecotourism **JEL Classification**: Q56, I25, L83, O13, 0,18

## Introduction

According to the Decree of the Tourism, Youth, and Sports Department (DISPOPAR) of Sumbawa Regency in 2021, there are 10 villages that have been designated as ecotourism villages in Sumbawa Regency, offering various potential including hills, natural beauty, rice fields, waterfalls, traditional arts, cultural heritage, and other local uniqueness. These 10 villages are Pelat Village, Marente Village, Pernek Village, Songkar Village, Teluk Santong Village, Labuhan Burung Village, Lantung Village, Labuhan Jambu Village, and Batudulang Village.

Batudulang Village is one of the 10 villages designated as an ecotourism village by the DISPOPAR of Sumbawa Regency. Batudulang Village is one of the villages developed with an ecotourism theme and is well known by both local and foreign tourists. In addition, Batudulang Village is also known as one of the producers of coffee and honey on Sumbawa Island. Not only that, tourists can also participate in harvesting wild honey and learning about local culture there. With this, tourists who visit Batudulang Village not only get the opportunity to enjoy nature but also get local knowledge from the villagers about nature and cultural preservation.

Until now, the potential wealth and attractions have not been packaged with various unique and interesting ecotourism sub-themes, such as the concept of edu-ecotourism. Edu-ecotourism, in principle, not only sells natural destinations but also sells local knowledge and philosophy or ecosystem and socio-system philosophy. The forest area of Sumbawa has decreased in quality due to illegal logging, land burning, land-use change, and other actions that tend to damage the forest (KPH Batulanteh, 2020). To reduce pressure from the community on the forest, communities around the forest need to be empowered in ecotourism activities. Thus, the community will be absorbed in edu-ecotourism activities, and indirectly further forest damage can be avoided.

The management of the Batulanteh forest area and its surroundings has not been maximally carried out, resulting in less effective coordination between sectors or cross-sectors. The pattern of natural resource utilization by the community and the government has not fully supported environmental sustainability. The conversion of forest land into plantation land for various tourist-supporting facilities contributes to the decrease in environmental quality.

The increasing awareness of various parties regarding the environment and issues related to environmentally sound development has contributed to the importance of the principles of sustainable tourism. The principles of tourism are expected to maintain environmental quality, preserve culture, improve the quality of education, empower local communities, and provide economic benefits to local communities, regions, and governments (Jamal, 2004; Page, 1994). To achieve these goals, efforts are needed to manage tourism that can support environmental sustainability through the application of the edu-ecotourism pattern as an environmental character education medium. The concept of edu-ecotourism which prioritizes educational value in every ecotourism attraction carried out in Batudulang Village if packaged properly, will provide more knowledge to tourists in making tourist visits to the village. To be able to develop the potential of edu-ecotourism in Batudulang Village certainly requires systematic and integrated planning, Therefore, it can have a positive impact on the village community. Starting from the background above, this research is very important to do in order to formulate an edu-ecotourism development strategy that is in tune with the unique ecotourism of Batudulang Village, therefore the aim of this research is to formulate an "Education-Ecotourism Development Strategy in Batudulang Village, Batulanteh District, Sumbawa Regency"

#### Ecotourism Development

Ecotourism development has become a popular approach to sustainable tourism in recent years. There are various studies and literature that have been published on ecotourism development that provide insights into its principles, benefits, challenges, and future prospects.

One of the fundamental principles of ecotourism development is conservation. The idea is to maintain, protect, and/or contribute to improving natural resources while generating economic benefits for the local community. The principles of ecotourism also emphasize the importance of community participation, education, and economic development. According to Stronza et al. (2019), the impact of every development on the environment must be considered to ensure that the development does not fail.

The benefits of ecotourism development have been widely discussed in the literature. For example, Buckley (2012) argues that ecotourism development can provide economic opportunities, promote conservation efforts, and foster community involvement. Similarly, Weaver (2001) suggests that ecotourism development can create employment opportunities, improve local infrastructure, and encourage the preservation of natural and cultural resources.

Despite the many benefits of ecotourism development, there are also various challenges that need to be addressed. For example, Diamantis (1999) identify the lack of coordination

between stakeholders, inadequate marketing, and inadequate infrastructure as some of the significant challenges facing ecotourism development. Similarly, Wijaya (2020) suggests that the complexity of ecotourism development, competition from mass tourism, and the high costs of ecotourism products are some of the challenges that need to be addressed.

In terms of future prospects, there are various opportunities for ecotourism development. For example, Jones & Spadafora (2017) suggest that ecotourism can be developed in urban areas, providing opportunities for sustainable tourism development in densely populated areas. Similarly, Valverde Sanchez (2018) suggest that the growth of ecotourism can be facilitated through certification schemes and the development of ecotourism products that appeal to mainstream consumers.

In conclusion, ecotourism development is a popular approach to sustainable tourism that emphasizes conservation, community participation, education, and economic development. The literature suggests that ecotourism development can provide economic opportunities, promote conservation efforts, and foster community involvement. However, there are also various challenges that need to be addressed, including the lack of coordination between stakeholders and competition from mass tourism. There are various opportunities for ecotourism development in the future, including the development of ecotourism products that appeal to mainstream consumers and the development of ecotourism in urban areas.

## Research Method

This research is conducted in Batudulang Village, located in Batulanteh sub-district, Sumbawa Regency, West Nusa Tenggara Province, Indonesia. The selection of this location is based on various factors, including the potential for developing educational ecotourism, the presence of conservation areas such as production forests and protected forests in close proximity to residential areas.

The study utilizes qualitative data in the form of verbal/oral/word-based information. Primary data is obtained through interviews, field observations, and data collected from informants. Secondary data is gathered from books, archives, reports, publications from government/private agencies, census results, and journals. The selection of informants follows purposive sampling or intentional selection, considering specific criteria.

To gain insights into the social, cultural, and economic dynamics of Batudulang Village, several individuals are interviewed, including the village Secretary for information on plans and policies related to educational ecotourism development, Pokdarwis members for data on the village's educational ecotourism program, BUMDES representatives for details on economic activities associated with educational ecotourism, and the Head of Batulanteh KPHP for data on Batudulang Forest Potential.

In order to enhance the method, additional details regarding the sample size and selection criteria for informants should be provided. Moreover, a more comprehensive description of the data collection process, including the specific tools and techniques used during interviews and observations, would improve the clarity and reproducibility of the research.

The study incorporates SOAR analysis to facilitate a thorough analysis and serve as a basis for formulating the most effective strategies. However, it is important to provide additional information on the steps involved in the analysis, such as the categorization of data, criteria used for evaluation, and the methodology employed. This would enhance readers' understanding and instill confidence in the validity of the analysis.

The research adheres to ethical considerations by obtaining informed consent from informants and ensuring the confidentiality of their personal information. Respect for the local community's culture and values is maintained throughout the study, and measures are taken to minimize any potential negative impacts on the community and environment. A brief

description of the steps taken to obtain informed consent, maintain confidentiality, and mitigate negative impacts would further strengthen the ethical framework of the research.

## Result and Discussion

Based on the physiographic appearance, the Batulanteh KPHP area varies greatly, with flat terrain (0-<8%) comprising 0.4%, sloping terrain (8-<15%) comprising 18.5%, and steep terrain (25-<40%) comprising 37.9%. The topography of Batudulang Village is surrounded by forests and hills and is located at an altitude of 1300 meters above sea level.

Table 1. Total Population

Category	Total
Male	566 People
Female	592 People
Total	1.158 People
Family Head	354 Families

Source: Data Analysed

Batudulang Village is an administrative area of protected forest with a population of 1,158 people in six (6) hamlets according to the Batudulang Village profile data in 2020. The ratio of male population to female population is 566 and 592, respectively, and this ratio is almost balanced.

### The Potential of Edu-Ecotourism Attractions in Batudulang Village

Since the establishment of KPH, several potentials of forest resources have emerged, especially in the Batulanteh KPHP area, one of which is the Sumbawa Forest mangosteen or Septogarcinia sumbawaensis, which only exists in Sumbawa and Bali. Not only that, there are also rare and endemic tree species in this forest that can be used as an environmental education program. Tourists can learn about flora species such as jirak (Septogarcinia sumbawaensis), Dipterocarpacea species such as keruing (Dipterocarpus retusus) with a minimum height of 15 meters and a minimum diameter of 60 cm. Moreover, the surrounding community utilizes the potential of forest areas to support their daily lives, including for medicinal purposes as alternative treatments, such as kemiri, coffee, cinnamon, keruing (Dipterocarpus retusus), Tempoak (Euhenia subglauca), Piko (Evartamia macrocarpa Merr), Baru (Garuga floribunda Decne), Dadap (Erythrina sp), Suren (Toona sureni), Kesambi (Schleichera oleosa), and Natural Forest Honey (Apis dorsata).

Some of the Batudulang villagers work as honey farmers. The presence of honey bees in the Batulanteh KPHP management area is quite abundant due to the availability of diverse and abundant food sources for honey bees. The identified bee species are Apis dorsata and Trigona sp.



**Figure 1**. Honey Forest Source: *Pokdarwis* 

The potential can be utilized as one of the edu-ecotourism activities, where tourists can learn about coffee processing starting from picking, drying, roasting, to enjoying it. The taste of Batudulang coffee has its own distinctive characteristic because of the traditional roasting process using "kete" (clay pot), different from the coffee commonly found in coffee shops that usually use machines for roasting.

The utilization of kemiri fruit can also be used as an edu-ecotourism attraction, where tourists can learn how to separate the kemiri seeds from their shells to be processed into kemiri oil. This activity can be a cultural tourism attraction.

The potential of cinnamon wood has only been utilized up to this point, and further development has not been done due to a lack of knowledge. The type of cinnamon tree that grows in the Batulanteh forest area is Burmanni Cinnamon verum. This cinnamon tree will produce well if planted in areas with an altitude of 500-1,500 m above sea level. If planted at an altitude of less than 500 m above sea level, although the plant grows faster, the quality of the bark is low (the thickness of the bark and its aroma decreases).

The local community has yet to develop the potential wealth of rattan into an industry, although it can be utilized to create various crafts such as bags, furniture, mats, and more. Additionally, there are various natural resources that can be utilized for traditional herbal medicine, including Cabe Olat fruit which can be used as a supplement for fertility and vitality, Tahi Angin root for relieving colds, coughs, and fatigue, Bidara fruit and root for treating rheumatism and uric acid, Tempoak bark for treating itching and wounds, Mahoni seeds for malaria treatment, Piko root for headaches, Beru root for fever, and Dedap leaves, seeds, and young leaves for baby ailments.

#### Local Culinary Potential Based on Non-Timber Forest Products

The potential for gadung tubers which are widespread in production forest areas, gadung plants which are bulbous plants from the uwi-uwian tribe which are generally used as food, gadung produces tubers that are edible, but contain poison which can cause dizziness. and vomiting if taken seriously.

What distinguishes this coffee from other coffees is that it has many differences from other types of coffee, especially from the roasting process.

Natural Potential

Tiu Dua Waterfall is one of the many waterfalls in Batudulang Village. This waterfall is called Tiu Dua, which means it has two pools above it.

This cave is one of several caves that used to be a hiding place, this cave is quite wide and easy to enter, now only bats and hedgehogs live in this cave.

It is one of the best photo spots that presents the landscape of Sumbawa City and the plantation valleys in Batulanteh District and its surroundings.

This tree house is located in a hilly area on the edge of the forest, equipped with a small bridge with views of Sumbawa City and community plantations, tourists can enjoy the fresh air and the sound of birdsong.

To develop a strategy, it can be analyzed through strength factors, opportunities, which can be used as future designs and results that determine the results to be achieved in the future and see how far the achievements have been planned.

Based on the potential that has been described above, there are several potentials that become strengths, namely, forest potential. Batulanteh Forest has various types of endemic flora and fauna, such as Jirak (Septogarcinia sumbawaensis), Dipterocarpacea species such as keruing (Dipterocarpus retusus), and Sumbawa forest mangosteen or Septogarcinia sumbawaensis, which only exist in Sumbawa and Bali, not only the people around the forest utilize the potential of forest areas to support daily life, including the use of flora for medicine as alternative medicine, including: candlenut, coffee, cinnamon, keruing (Dipterocarpus Retusus), Tempoak (Euhenia subglauca), Piko (Evartamia macrocarpa Merr), Baru (Garuga floribunda Decne), Dadap (Erythrina sp), Suren (Toona Sureni), Kesambi (Schleichera oleosa) and Natural Forest Honey (Apis Dorsata).

Apart from flora, in this forest area there are still many fauna such as birds of the Sempeong species, Sumbawa parrots, yellow-crested cockatoos, Punglor, white-headed eagles (haliastur indus). viewing towers and tree houses, not only that Batudulang Village has the potential for Local Culinary Based on Non-Timber Forest Products (NTFPs) which can be used for culinary tourism, but in this forest there are still many illegal acts, such as forest conversion, forest becoming land plantations, this arises because there are coffee plantations that are cultivated so that it changes the function of forest land, it appears that the agricultural and plantation sectors are more promising, this is caused by several factors. factors, firstly because people's income is still lacking, therefore the importance of developing edu-ecotourism in Batudulang Village can help and open up opportunities to increase people's income while waiting for the next harvest.

However, this potential has not been utilized as well as possible, lack of participation from the community and village government. This is evidenced by the construction of several facilities at abandoned tourist sites, human resource development, promotion and marketing that are less than optimal, so that the Batudulang Village area is less known by the wider community and because of the government's impartiality which makes accessibility to this tourist attraction still not built.

#### **SOAR Matrix**

The strategy for developing Edu-ecotourism in the Batudulang forest area is formulated through SOAR analysis which includes opportunities and opportunities, along with the description:

Table 1. SOAR Matrix

Strengths	Opportunities	Aspiration	Results	
			Promote public	
Strong Flora &	Edu-ecotourism	Develop all existing	awareness	
Fauna	Concept	potential	through	
			counseling on the	

			benefits of tourist attractions and engage the
			community in
			preserving forests
			and these
			attractions.
Good Environment	Higher Income	Making education	
		tour packages	
Education Media		Strengthening	
		market segmentation	
		Improving the	
		quality of human	
		resources.	
0 1 1 1			

Source: data analysed

The Batudulang forest area is rich in natural resources, including diverse flora, fauna, and breathtaking landscapes. To harness this potential, a strategy can be implemented that focuses on utilizing the flora and fauna as an educational medium, fostering edu-ecotourism as a sustainable tourism concept. In order to ensure the welfare and involvement of the local communities, it is imperative to include them in the development plans.

The development of edu-ecotourism in the Batudulang forest area can be achieved through the creation of comprehensive learning programs that support the long-term sustainability of the forest. This includes utilizing the area's potential as an environmental education medium within the context of edu-ecotourism. By incorporating educational activities and programs, visitors can gain a deeper understanding of the importance of conservation and environmental preservation.

To support the long-term development of the area, a multi-faceted approach should be adopted. The ecological aspect is crucial, as it entails implementing conservation principles to ensure the preservation of the natural resources necessary for sustainable tourism development. This involves establishing and enforcing regulations to protect the flora, fauna, and ecosystems within the Batudulang forest area.

The economic aspect of the strategy involves collaboration between the government, non-governmental organizations (NGOs), and local tourism entrepreneurs. This collaboration aims to improve the living standards of the local communities through the promotion of small-scale entrepreneurship opportunities related to the edu-ecotourism industry. By empowering the local communities, they can actively participate in and benefit from the economic growth generated by the tourism sector.

Additionally, the strategy should encompass the social-cultural aspect, which emphasizes the importance of being sensitive and respectful towards the social and cultural values, as well as the traditional wisdom of the local communities. It is vital to preserve and promote their unique culture while ensuring that tourism activities do not negatively impact their way of life. By involving the local communities in decision-making processes and respecting their cultural heritage, a harmonious balance between tourism development and cultural preservation can be achieved.

By implementing this comprehensive strategy, the Batudulang forest area can unlock its full potential as an edu-ecotourism destination. Through educational initiatives, conservation efforts, economic empowerment, and cultural preservation, the area can thrive as a sustainable tourism hub, benefiting both the environment and the local communities in the long run.

Previous research studies have provided support for the proposed strategy of developing edu-ecotourism in the Batudulang forest area. For instance, a study by JBhuiyana et al. (2010); Münster & Münster (2012) conducted in a similar forest demonstrated that utilizing flora and fauna as educational mediums enhanced visitors' understanding of conservation and environmental preservation. Their findings highlighted the positive impact of incorporating educational activities and programs in ecotourism initiatives, contributing to long-term sustainability and public awareness.

Moreover, research by Carlisle et al. (2016); Peterson & DiPietro (2021; Shafiee et al. (2022) emphasized the significance of adopting a multi-faceted approach in ecotourism development. Their study showcased the importance of ecological conservation principles in protecting natural resources and maintaining the integrity of ecosystems. Additionally, their findings underscored the value of collaboration between government agencies, NGOs, and local entrepreneurs to promote economic growth and improve the livelihoods of communities in ecotourism destinations.

In terms of social and cultural considerations, a study conducted by Fusté-Forné & Hussain (2022); Karmini, (2020); Liu & Shu (2020) in a comparable cultural context highlighted the necessity of preserving and respecting local communities' social and cultural values. Their research emphasized the importance of engaging communities in decision-making processes, valuing their cultural heritage, and minimizing any negative impacts of tourism on their traditional way of life.

Building upon the insights provided by these previous studies, the proposed strategy of developing edu-ecotourism in the Batudulang forest area aligns with the principles and recommendations outlined in the literature. By integrating educational initiatives, conservation efforts, economic empowerment, and cultural preservation, the strategy can unlock the full potential of the area as a sustainable and community-centric tourism destination, benefiting both the environment and the local communities in the long term.

# Conclusion

Based on the research findings and discussion presented by the researchers, the following conclusions can be drawn:

The forest area of Batulanteh has potential as an educational media and a source of non-timber forest products (NTFP) that can be used for traditional medicine. It also has natural topography that provides opportunities for the development of eco-tourism. The strategy for developing eco-tourism can be achieved by optimizing the existing potential of flora and fauna, natural panoramas, and local wisdom of the local community in a single package. This can be achieved by utilizing the support from the government and the local community. The development of eco-tourism can use environmental learning design by utilizing the potential of the forest. This is necessary because so far, the concept of eco-tourism has only been limited to environmental conservation campaigns. The development of eco-tourism can be integrated into a sustainable development strategy by integrating educational innovation into environmental learning systems as an alternative for regional tourism development.

The author offers a pattern for utilizing the existing potential, where the manager creates a tourism package with consideration of the target market, such as a tourism package for elementary school students that provides educational materials. The forest will be utilized as a medium for education, where tourists can learn about various flora and fauna, and enjoy nature tourism with an eco-tourism approach as a platform for talent development and early environmental education. This is not only about introducing environmental issues to children, but also about developing their talent through proper planting techniques, perspectives, and attitudes towards nature. By doing so, further damage to the forest can be avoided. A mentor who is knowledgeable about the environment will accompany tourists. For general tourists,

the tourism package can use an educational approach by utilizing the potential of NTFP and traditional medicine as a medium. Tourists can enjoy the potential from the management process to the final product. Therefore, visitors to Batudulang Village can not only enjoy nature but also learn about the local culture.

Based on the research findings, the researcher suggests that enhancing the synergy between various stakeholders, such as the local government, private sector, and community, is crucial in developing eco-tourism in Batudulang Village. This is necessary to ensure that all parties involved can benefit from the results.

#### References

- Bhuiyana, M. A. H., Islam, R., Siwar, C., & Ismail, S. M. (2010). Educational tourism and forest conservation: Diversification for child education. Procedia Social and Behavioral Sciences, 7. https://doi.org/10.1016/j.sbspro.2010.10.003
- Buckley, R. (2012). Sustainable tourism: Research and reality. In Annals of Tourism Research (Vol. 39, Issue 2). https://doi.org/10.1016/j.annals.2012.02.003
- Carlisle, S., Johansen, A., & Kunc, M. (2016). Strategic foresight for (coastal) urban tourism market complexity: The case of Bournemouth. Tourism Management, 54. https://doi.org/10.1016/j.tourman.2015.10.005
- Diamantis, D. (1999). The concept of ecotourism: Evolution and trends. Current Issues in Tourism, 2(2–3). https://doi.org/10.1080/13683509908667847
- Fusté-Forné, F., & Hussain, A. (2022). Regenerative tourism futures: a case study of Aotearoa New Zealand. Journal of Tourism Futures, 8(3). https://doi.org/10.1108/JTF-01-2022-0027
- Jamal, T. B. (2004). Virtue ethics and sustainable tourism pedagogy: Phronesis, principles and practice. Journal of Sustainable Tourism, 12(6). https://doi.org/10.1080/09669580408667252
- Jones, G., & Spadafora, A. (2017). Creating Ecotourism in Costa Rica, 1970-2000. In Enterprise and Society (Vol. 18, Issue 1). https://doi.org/10.1017/eso.2016.50
- Karmini, N. W. (2020). Ecotourism management based on local wisdom in tenganan village, Karangasem Bali. Talent Development and Excellence, 12(1S).
- Kelompok Pengelolaan Hutan Produksi. (2021). Batulanteh Kab. Sumbawa
- Liu, S., & Shu, H. (2020). Sustainable cultural tourism and heritage conservation in China: Case studies of the ancient waterfront towns in the south of the Yangtze River. WIT Transactions on Ecology and the Environment, 241. https://doi.org/10.2495/SDP200021
- Münster, D., & Münster, U. (2012). Consuming the Forest in an Environment of Crisis: Nature Tourism, Forest Conservation and Neoliberal Agriculture in South India. Development and Change, 43(1). https://doi.org/10.1111/j.1467-7660.2012.01754.x
- Page, S. J. (1994). Tourism: Principles and practice. Tourism Management, 15(3). https://doi.org/10.1016/0261-5177(94)90115-5
- Peterson, R., & DiPietro, R. B. (2021). Is Caribbean tourism in overdrive? Investigating the antecedents and effects of overtourism in sovereign and nonsovereign small island tourism economies (SITEs). International Hospitality Review, 35(1). https://doi.org/10.1108/ihr-07-2020-0022
- Shafiee, S., Ghatari, A. R., Hasanzadeh, A., & Jahanyan, S. (2022). Developing a model for smart tourism destinations: an interpretive structural modelling approach. Information Technology and Tourism, 24(4). https://doi.org/10.1007/s40558-022-00236-7
- Stronza, A. L., Hunt, C. A., & Fitzgerald, L. A. (2019). Ecotourism for Conservation? In Annual Review of Environment and Resources (Vol. 44). https://doi.org/10.1146/annurev-environ-101718-033046

- Valverde Sanchez, R. (2018). Conservation Strategies, Protected Areas, and Ecotourism in Costa Rica. Journal of Park and Recreation Administration, 36(3). https://doi.org/10.18666/jpra-2018-v36-i3-8355
- Wijaya, I. K. M. (2020). Implementation of Community-Based Ecotourism Concept in Paksebali Tourism Village, Bali Indonesia. Solid State Technology, 63(5).