Edu-Ecotourism Development Strategies Mapping

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Abstract
This study aims to find alternative strategies in developing the potential of Edu-ecotourism in Batudulang Village, Sumbawa Regency. This research begins by identifying the existing potency and analyzing the supporting and inhibiting factors, as well as identifying the opportunities that exist by using the SOAR analysis technique. This research employs descriptive qualitative. Data collection techniques used are field observations, interviews, and documentation. Determination of informants was also obtained by purposive sampling technique. The strategy from the results of this analysis is to develop all potencies that exists, both of natural resources such as biodiversity (flora and fauna) and the beauty of the landscape, as well as of the natural topography of the earth and the culture around the community that can be utilized. The Edu-ecotourism development strategy in Batudulang Village, Batulanteh District, Sumbawa Regency will be further discussed.

Keywords: Strategy, Development, Edu-ecotourism

INTRODUCTION
Sumbawa Regency constitutes one of the regions in West Nusa Tenggara Province which has natural wealth that can be utilized for tourism purposes. In 2018, Sumbawa Regency has a protected forest area of 167,130.68 Ha, 22537.90 Ha of new park forest, 138572.44 of limited production forest, 53691.88 ha of permanent production forest, 100.50 ha of natural tourism forest, 6000 ha of marine parks, bringing the total area of Sumbawa Regency forest to 3888.033 .40 Ha (Department of Forestry and Plantation of Sumbawa Regency 2018). From these data, it is clear that the wealth of forests in Sumbawa has been preserved by various methods, one of which is a nature tourism forest or ecotourism area. The
development of ecotourism in Sumbawa is currently starting to develop, this is supported by the existing potential and increasing public awareness of the importance of natural and cultural tourism.

According to the decision letter from the Sumbawa Regency Tourism, Youth and Sports Service (DISPOPAR) for 2021, there are 10 villages that have been registered as ecotourism villages in Sumbawa Regency which offer a variety of potencies, including hills, natural beauty, stretches of rice fields, waterfalls, a number of traditional arts, cultural heritage and other local uniqueness. The 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 constitutes one of 10 villages that have been designated as ecotourism villages by the Tourism, Youth and Sports Service (DISPOPAR) of Sumbawa Regency. Batudulang Village is one of the villages developed with the theme of ecotourism and is very well developed and well known by local and foreign tourists. Apart from that, Batudulang Village is also known as one of the coffee and honey producing villages on Sumbawa Island. Not only that, tourists can also participate in harvesting wild bee honey, as well as learn the local culture there. With this, tourists visiting Batudulang Village will not only get the opportunity to enjoy nature, but also gain local knowledge of the village community about nature and culture conservation.

The concept of developing Edu-ecotourism is offered in developing the potency of Batudulang Village, the so-called conservation concepts such as planting trees, utilizing the potency of forest as an educational medium so that tourists get local knowledge there. Until now, this wealth of potency and attractiveness has not been packaged with various unique and interesting ecotourism sub-themes, such as the concept of edu-ecotourism. Edu-ecotourism in principle does not only sell natural destinations, but also sells local science and philosophy, or ecosystem and sociosystem philosophy. The quality of the forests in Sumbawa region has declined as a result of illegal logging, land burning, land conversion and other actions that tend to damage forests (KPH Batulanteh, 2020). To reduce community pressure on forests, communities around forests need to be empowered in ecotourism activities. Thus, the community will be absorbed in edu-ecotourism activities, and indirectly further damage to the forest can be avoided.

Management of the Batulanteh forest area and its surroundings has not been carried out optimally, resulting in less effective coordination between sectors or across sectors. The pattern of utilization of natural resources by the community and the government has not been fully able to support natural sustainability. The conversion of forest land into plantation land for various tourism supporting facilities has contributed to the decline in the quality of natural environment.

The increasing awareness of various parties towards the environment and issues regarding environmentally sound development has contributed to the view of the importance of principles of sustainable tourism. The principle of tourism is expected to be able to maintain environmental quality,
maintain culture, improve the quality of education, empower local communities, and provide economic benefits to local communities, regions and governments. To achieve this goal, tourism management efforts are needed to support environmental sustainability through the application of edu-ecotourism pattern as a medium for environmental-based character education.

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 potency of edu-ecotourism in Batudulang Village certainly requires systematic and integrated planning, so that it can bring a positive impact on the village community. Starting from the background above, this research is very important to do in order to formulate a strategy for developing edu-ecotourism that is in tune with the unique ecotourism of Batudulang Village. Therefore, this research formulates a study of "Mapping an Edu-Ecotourism Development Strategy in Batudulang Village, Batulanteh District, Sumbawa Regency".

The purpose of this study is to describe the development strategy and the potency for edu-ecotourism owned by Batudulang Village, Batulanteh District, Sumbawa Regency. The scope of this research focuses on identifying tourism potency. The potency in question is natural and cultural tourism which can be developed into an edu-ecotourism medium in order to formulate a strategy for developing edu-acotourism in Batudulang Village, Sumbawa Regency.

LITERATURE REVIEW

Edu-Ecotourism

Edu-ecotourism is the development of ecotourism which was first introduced by the Organization of the Ecotourism Society in 1990, which is a form of responsible tourism that pays attention to environmental conservation, preserving the lives and welfare of the local population (Alamsyah, 2013; 7). Edu-ecotourism is not just the concept of traveling in the natural environment but also focuses on observing and understanding nature and culture, supporting conservation, and prioritizing the facilities and services provided by the local community. Even the ecotourism development strategy also uses a conservation strategy. Thus, edu-ecotourism is very appropriate and efficient in maintaining the integrity and authenticity of ecosystems in areas that are still natural. Even with ecotourism, the quality of nature conservation can be improved because of the insistence and demands of eco-travelers.

Ecotourism itself basically guarantees environmental sustainability with almost the same purpose as conservation, the so-called maintaining ongoing ecological processes that continue to support life, protecting biodiversity and ensuring the preservation and use of species and their ecosystems (Alamsyah, 2013; 4). As for edu-ecotourism itself, in essence there are factors where the intensity of cultural introduction and learning from an early age begins to occur, through learning designs that are deliberately
presented according to environmental material in the format of a tourist object. This was developed since the concept of edu-ecotourism has only stopped at campaigning for environmental conservation.

**Development of Edu-Ecotourism**

According to Nugroho (2015: 6) there are two strategies in developing edu-ecotourism that can be applied, the so-called designing various tourism products and developing the abilities, skills and competencies of the surrounding community. Increasing public awareness about the environment is one of the keys to ecotourism development, so it is clear that this will have implications for the emergence of various demands in all development sectors. These demands have and will encourage the growth of new businesses, new ways of approaching various activities, both the tourism business directly carried out by the tourism business world and community businesses in an effort to increase their level of welfare and encourage the active role of related government institutions.

In Ecotourism Development Theory, there are several principles that contain important principles in its implementation. Ecotourism principles according to the Indonesian Ecotourism Network (1996:1) emphasize four basic principles, they are: conservation principles, educational principles, community participation principles, economic principles, and tourism principles. Based on ecotourism principles, so that it is easier to understand what ecotourism principles are, Fennel (2002: 15) states that understanding ecotourism is essentially participation and learning based on experience which principally focuses on the natural history of an area, as long as it prioritizes the relationship between humans and nature. It aims at sustainable development (conservation and human life) through ethical behavior of tourism development programs and models.

Finally Avenzora et al., (2013: 561) concluded that in various contexts, ecotourism terminology should not only be interpreted as a tourist activity in natural, untouched and remote destinations, but must be interpreted as the spirit and soul of every form of tourism activity that is manifested in the form of upholding the 7 main pillars - consisting of (a) ecological pillar, (b) socio-cultural pillar, (c) economic pillar, (d) experience pillar, (e) satisfaction pillar, (f) memories and (g) pillar education in all areas that are in contact with and accessed by tourists to get optimum satisfaction in traveling, both at the planning stage, the journey to the destination, activities at the destination, the return journey, and the recollection stage.

**PREVIOUS STUDY**

There three main studies used as main references in this research: first, research conducted by Ali et al (2019) entitled "Strategy for the Development of the Ecotourism Sector in Sumbawa Regency (Case Study in Ecotourism Village Batu Dulang, Batu Lanteh District)". This type of research uses SWOT analysis. From this analysis, a strategy for developing Batu Dulang ecotourism object can be formulated.
in improving the quality of ecotourism, the so-called increasing promotions, holding events to bring in more visitors, improving the quality of human resources for ecotourism, increasing the construction of public infrastructure, and increasing empowerment in community involvement.

Second, research conducted by Aliet, et al (2018) with the title "Application of the Edu-ecotourism Concept as an Environment-Based Character Education Media". The focus of this research is to prioritize ecotourism education. The method used in this research is qualitative research using in-depth interviews and group-depth interviews. Based on the results of this study, the Gronggong area of Cirebon Regency has great potency to be developed as an edu-ecotourism destination. Edu-ecotourism has the utilization of natural resources by the community and the government through learning designs, which can fully support the sustainability of the Gronggong area, Cirebon district.

Third, research conducted by Evi Fitriana (2018) "Strategy for the Development of Kum Kum Tourism Parks as Educational Tourism in the City of Palangkaraya". This study uses a qualitative descriptive research method using a SWOT analysis tool. The results showed that the strategy for developing the Kum Kum tourism park included building infrastructure such as means of transportation and accommodation facilities, creating tourist attractions and promoting tourism objects, developing tourism products, and involving the government and the private sector in tourism management.

METHODS

This research was conducted in Batudulang Village, Batulanteh District, Sumbawa Regency. This research employs a qualitative descriptive research method. The informants selected in this study were the Head of Batudulang village, Tourism Awareness Group of Batudulang, and Village-Owned Enterprises of Batudulang. The selection of informants was carried out using a purposive sampling technique or a deliberate selection with several considerations. Data collection techniques are carried out through observation, interviews and documentation.

RESULTS AND DISCUSSION

Potential Attraction of Edu-ecotourism in Batudulang Village

As one of the villages that has a potency to be developed into Edu-ecotourism, Batu Dulang Village has very supportive potency, as follows:

Batudulang Village Forest

As one of the efforts to preserve nature while preserving the environment, KPH Batulanteh gives permits to the community for the utilization of protected forests and production forests, including the determination of HKM (Community Forest) working areas within the Batulanteh forest group, land acquisition of 300 hectares for the development of non-timber forest products. NTFPs) located in the
upstream watershed, so that through the utilization of HKM permits, the main products in the form of NTFPs (coffee, honey, empon-empon and cocoa) from this forest can be used as one of the protected forest programs which provide considerable benefits to local communities. This is one of the biggest oxygen donors in Sumbawa. This program is carried out to help maintain forest sustainability by involving local communities as actors.

Since the formation of the KPH, several potential forest resources have begun to emerge, especially in the Batulanteh KPHP area, one of which is the Sumbawa forest mangosteen or Septogarcinia sumbawaensis which only exists in Sumbawa and Bali. With respect to it, in this forest, there are also rare and endemic tree species that can be used as environmental education programs. Tourists can learn about types of flora such as jirak (Septogarcinia sumbawaensis) and types of Dipterocarpacea such as keruing (Dipterocarpus retusus). Communities around the forest take advantage of the potency of the forest area to support their daily lives, including for medicine as an alternative treatment. Apart from flora, in this forest area, there are also existing fauna such as sempeong birds, Sumbawa parrots, yellow-crested cockatoos, pungrlor, and white-headed eagles (haliastur indus).

In the context of ecotourism, this forest has a potency to be a location for educational development, moreover there are endemic flora and fauna so that it can be used as a place for education about ecology, as stated by (Alamsyah, 2013: 4) Edu-ecotourism itself basically guarantees environmental sustainability with the aim of almost the same as conservation, the so-called maintaining the ongoing ecological processes that continue to support life, protect biodiversity, and ensure the preservation and utilization of species and their ecosystems.

In the context of developing edu-ecotourism according to Nugroho (2015; 6) there are two strategies in developing edu-ecotourism; by designing various tourism products and developing the abilities, skills and competencies of the surrounding community. This is an important strategy in designing tourism products as well as conservation.

Potential Non-Timber Forest Products (HHBK) which can be used as edu-ecotourism media

In addition to the potency for timber forest products, the potency for non-timber forest products in the Batulanteh KPHP area is also quite diverse and spread over several forest groups. The non-timber forest products in question have so far been utilized by the community around the Batulanteh KPHP area. To improve people's welfare and improve the community's economy, Potential NTFPs spread across the Batulanteh KPHP management area that can be used as educational media for ecotourism include: a) forest honey, b) coffee, c) candlenut, d) cinnamon, rattan, and e) medicinal plants.

Local Culinary Potential Based on Non-Timber Forest Products (HHBK)

Besides having the potency for Edu-ecotourism, Batudulang Village also has a potency for culinary tourism that can be enjoyed by tourists. Culinary tourism is currently in great demand by tourists
since there are tourists who visit a destination just to enjoy the culinary delights. It's incomplete to visit Batudulang Village if you haven't tried its typical culinary delights such as gadung and spice coffee.

**Natural Topography Potency**

Some of the natural topographical potencies are owned by Batudulang Village including Tiu Dua Waterfall and Kokar Eta Cave. In addition to the potency above, there are several supporting potencies from other tourist attractions that can be enjoyed, the so-called the Tower of View and the Tree House.

**Edu-ecotourism Development Strategy**

The formulation of an edu-ecotourism development strategy in Batudulang Village can be analyzed through strengths and opportunities that 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 potency that has been described above, there are several potencies that become strengths, the so-called potency of forests. Batulanteh Forest has various types of endemic flora and fauna, such as Jirak(Septogarcinia sumbawaensis), Dipterocarpaceae species such as keruing (Dipterocarpus retusus), and Sumbawa forest mangosteen or Septogarcinia sumbawaensis which only exists in Sumbawa and Bali. In addition, the people around the forest take advantage of the potency of forest area to support their daily lives, 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 Suren), kesambi (Schleicheria oleosa) and natural forest honey (Apis Dorsata).

Apart from flora, in this forest area, there are also many fauna such as birds of the Sempeong type, Sumbawa parrots, yellow-crested cockatoos, Punglor, and white-headed eagles (haliastrur indus). In addition, Batudulang Village has a potency for natural topography, caves, waterfall view tower and tree house. In addition, Batudulang Village also has local culinary potency based on Non-Timber Forest Products (HHBK) which can be utilized for culinary tourism. However, there are still many unlawful acts in this forest, such as the conversion of forest functions to plantation land. This arises due to the existence of cultivated coffee plantations that change the function of forest land. It can be seen that the agricultural and plantation sectors are more promising, this is caused by several factors, one of which is 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 potency has not been utilized as well as possible due to the lack of participation from the community and village government. This is evidenced by the construction of several facilities at tourist sites that have been abandoned, human resource development, promotion and marketing that are less than optimal, so that the Batudulang Village area is less well known to the wider community and due to the impartiality of the government 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 a SOAR analysis which includes the opportunities as described in table 1 below.

<table>
<thead>
<tr>
<th>PRESENT</th>
<th>STRENGTHS</th>
<th>OPPORTUNITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>● Has a strong potential of flora and fauna</td>
<td>• The application of the Edu-ecotourism concept in Batudulang Village has tourism potential, which is an educational innovation step</td>
</tr>
<tr>
<td></td>
<td>● Has beautiful natural scenery, cool air</td>
<td>• The application of the Edu-ecotourism concept which was developed based on potential in the field is not only limited to carrying out environmental conservation but raises aspects of environmental themed educational space design.</td>
</tr>
<tr>
<td></td>
<td>● Educational media</td>
<td>• Income opportunities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FUTURE</th>
<th>ASPIRATION</th>
<th>RESULTS</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>• Develop all existing potential, both natural resource potential such as biodiversity (flora and fauna) and beautiful landscapes, as well as campgrounds and local community culture that can be utilized.</td>
<td>• Increasing public awareness by providing counseling about the benefits of tourism objects for them and inviting the community to participate in preserving the forest and the tourist objects in it.</td>
</tr>
</tbody>
</table>

Source: Author (2022)

Based on the presentation of the matrix, the strategies that can be implemented are:

1. Utilization of flora and fauna as educational media

The Batudulang forest area has a high potency for biological natural resources, both in terms of flora, fauna and natural scenery. With the potency currently owned, of course, there is a very large opportunity to be immediately developed as an Eco-tourism location. Edu-ecotourism as a concept of sustainable tourism which in its development plan must involve local communities in order to increase people's welfare. Ecotourism basically guarantees environmental sustainability with ecological processes that continue to support life, protect biodiversity and ensure the preservation and utilization of species and their ecosystems (Alamsyah, 2013; 8). As for Edu-ecotourism itself, in essence there are factors where the intensity of cultural introduction and learning from an early age begins to occur through learning designs that are deliberately presented according to environmental material in the format of a tourist object. This was developed since the concept of edu-ecotourism has only stopped at campaigning for environmental conservation. Edu-ecotourism development can be
developed using learning designs in order to support the sustainability of forest areas. Edu-ecotourism plays a role as a sustainable development strategy, by integrating educational innovations in environmental learning systems as an alternative to regional tourism development.

The existence of this potential can be used as an educational medium based on the environment, the development carried out can use the concept of edu-ecotourism according to (Alamsyah, 2013:8). Ecotourism development that is environmentally sound ensures more sustainable development. This is because ecotourism development does not exploit nature, but only uses nature and community services to meet the knowledge, physical and psychological needs of tourists (Fandeli, 2002).

The local community as an object that has various physical and socio-cultural characteristics is one of the resources and has become an integral part that must be given the opportunity and motivated to be involved in the development of Edu-ecotourism in Batudulang Village starting from planning to sharing results. Through the aspirations of the community which are expressed in ideas or energy that are in accordance with existing capacity, it will create an urge to participate so that a sense of ownership of existing natural resources will be created, so that in the management of forest areas it can guarantee its sustainability. The approaches that can be taken to support long-term development are:

a. Ecology, environmental aspects are very important to note so that in its development it does not cause damage to the potency of natural resources. Conservation principles must be considered to maintain the need for natural resources which are the main capital in the development of natural tourism.

b. The economy, the government with NGOs and tourism entrepreneurs work together in advancing the standard of living of the community through the development of small-scale entrepreneurs.

c. Socio-cultural, must be sensitive and respect socio-cultural values, traditional wisdom of the community, and preserve the culture of the local community.

This is consistent with the development of ecotourism which provides an opportunity to restore forest sustainability since ecotourism in addition to providing environmental services is also conserving natural resources and the environment by not destroying forests (Partomo, 2004).

2. Creating an educational tour package

The pattern offered by researchers is to take advantage of the existing potency by means of managers making tour packages by paying attention to the target market, such as tour packages for elementary school children by providing learning materials, by making forests as educational media. Where tourists can learn about the types of flora and fauna and tourists can enjoy nature tourism with an edu-ecotourism pattern as a place for talent development. Environmental education as early as
possible is not just to introduce children to environmental problems, but rather to develop children's good talents, through planting, the right perspective and attitude towards nature. So that further forest damage can be avoided by having this activity accompanied by a mentor who understands the environment. Whereas for general tourists, tour packages can use educational patterns by utilizing the potency of Non-Timber Forest Products and utilizing traditional medicines which are used as media where tourists can take advantage of this potency starting from its management until it can be enjoyed so that tourists visiting Batudulang Village do not only get the opportunity to enjoy nature but also get the chance to enjoy nature and local knowledge of the people there.

CONCLUSION
Based on the results of the research and discussion presented by the researchers, the following conclusions can be drawn: 1) the potency of Batulanteh forest area which consists of various types of flora and fauna can be used as educational media and non-timber forest products (HHBK) which can be used as traditional medicine, potential for natural topography so that it has the opportunity to be developed into Edu-ecotourism. 2) This Edu-ecotourism development strategy can be carried out by optimally developing both the flora and fauna, natural scenery, and the local wisdom of the local community in one tour package by utilizing the support of the government and the local community. The design of Edu-ecotourism development uses an environmental learning design by utilizing the potency of forest. This was developed because since the concept of edu-ecotourism has only stopped at campaigning for environmental conservation. Edu-ecotourism development can be developed using learning designs in order to support the sustainability of forest areas. Edu-ecotourism plays a role as a sustainable development strategy, by integrating educational innovations in environmental learning systems as an alternative to regional tourism development.

Based on the research results that have been presented by the researcher, on this occasion the researcher can provide suggestions for increasing the synergy of various parties in the context of developing edu-ecotourism in Batudulang Village such as the local government, the private sector, and the community, so that all parties involved can enjoy the results.

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