Analysis of Community-Based Educational Ecotourism Development Policy in Taman Beach Area, Pacitan Regency

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Abstract. Taman beach as a sea turtle conservation area is a superior tourist destination in Pacitan which has the potential for community-based educational ecotourism development. The problems in the development framework are the lack of integrated management of tourism objects, lack of stakeholder support and involvement of local community. The purpose of the study is to formulate the right strategy to realize educational ecotourism development based on community participation in tourism object of Taman beach so it becomes an attractive destination in Pacitan Regency. The method used is SWOT analysis by analyzing external factors (opportunities and threats) and internal factors (strengths and weaknesses) with the EFAS and IFAS matrix. The results of the analysis show that the community-based educational ecotourism development strategy in the area of Taman beach is in quadrant I, that is through an aggressive strategy. The priority strategies that can be developed by local government and local community are (1) maintaining the sustainable preservation of natural and cultural attractions of local community potential, (2) increasing prevention of environmental pollution by involving all stakeholders, (3) enhancing the community ability to develop more creative and innovative tourist attractions, (4) increasing public understanding of the concept of educational ecotourism to prevent land-use conflict and (5) increasing the capacity of the community through debriefing as a supporting activity for educational ecotourism

1. Introduction

Pacitan Regency is one of the regions that has the most potential of beach tourism in East Java. One of its tourist attractions is Taman beach which functions as a sea turtle conservation. This conservation is supported by the beauty of its pristine beach and the development of tourist facilities such as flying fox and swimming pool. By having this potential, Taman beach can be developed to improve the economy and people's welfare. The development is carried out with the concept of sustainable development to minimize environmental damage (sustainable tourism) in accordance with the concept of ecotourism combined with community participation (community based ecotourism).

The sea turtle conservation provides its own characteristics and advantages for Taman beach. The presence of sea turtle species inhabiting Taman beach indicates that the food chain is still balanced, ranging from seagrass beds as a food source for detritus to green turtles as the main consumer. This
situation is then supported by the condition of fine sandy beaches and direct contact with the Indian Ocean which allows the sea turtles to migrate.

In supporting sea turtle conservation activities, in 2013 a Sea Turtle Rescue Society for Tourism (KMP2W) was formed. This activity was also facilitated by the granting of 10 ha of state land for the development of sea turtle conservation areas through Village Regulation Number 7 of 2012.

The strategy of developing the concept of community based ecotourism (CBE) places local community around tourism objects as regulators and managers who have full control of Taman beach, so that people can receive the benefits for the existence of tourism objects through increased welfare.

This research becomes significant since it aims to find the appropriate strategy through the development of sustainable ecotourism concept in the Taman beach tourism object so that it can increase tourist visits and the income of the community around the tourism area.

2. Theoretical base
According to Nugroho [1], ecotourism is a travelling activity that is combined and trained professionally, and it contains elements of education as an economic sector/business that considers the cultural heritage, participation and welfare of the local community and an attempt to conserve natural resources and environment.

The aim of ecotourism development is to protect the naturalness of the natural environment through the involvement of the surrounding community in the management and development of ecotourism which influences the increase of people's income, the provision of natural education, and environmental protection of tourism objects. Ecotourism can also be used as a means to improve the economy of community around tourism objects with their involvement in the socio-economic field, in this case the concept of ecotourism plays a significant role in improving the economy of the community [2].

According to TIES in Situmorang and Mirzanti [3], ecotourism is defined as a form of travel to natural areas with the aim of preserving the environment and improving the welfare of local community. Meanwhile, according to Ceballos-Lascurain [4], ecotourism is defined as environmentally friendly travel and tourist visits to areas that are still natural and relatively undamaged by the environment to enjoy and preserve their natural environment including the cultural aspects that support the preservation of the environment, minimize negative impact of visitors on the environment around tourism objects, and improve the economy through active involvement of the community.

Janusz and Bajdor [5] stated that the concept of ecotourism is a concept that supports sustainable tourism. Sustainable tourism is a form of tourism that takes into account the needs of current tourists and also the needs of future tourists generations that cover environmental, social and economic aspects as shown in Figure 1.

![Figure 1. Dimensions of Sustainable Tourism](Reference: Janusz and Bajdor (2013))
Niesenbaum [6] explained that ecotourism is a tourism concept to provide conservation education and "ecotourism is an effective way to achieve conservation education". When carrying out this ecological experience, visitors will get knowledge about habitat and preservation that will provide insight in order to be able to give a thought of concern about natural sustainability.

Ecotourism must be developed in accordance with the plans that have been prepared. Planning is carried out to direct the development of ecotourism so that it is in line with the objectives and targets which become the basic principles of ecotourism, including sustainability, educating for environmental and cultural protection and community empowerment [7].

3. Research Methodology
The method used in this research was descriptive method. The type of data are primary and secondary data. The primary data were obtained directly from the field observation, interviews and focus group discussions (FGD) with local community and interviewees who were competent in their fields. The secondary data were obtained from reviewing related documents, journals, statistical data, and related scientific research.

The data analysis was carried out by using SWOT analysis. This analysis is based on logic that can maximize strengths and opportunities, but simultaneously minimize weaknesses and threats. The result of the analysis was used to develop an educational ecotourism development strategy in the tourism area of Taman beach. SWOT analysis compares internal factors through IFAS analysis, in the form of strengths and weaknesses, with external factors through EFAS analysis, in the form of opportunities and threats, so that from the analysis results a strategic decision can be made for the development of Pantai Taman ecotourism. The results of IFAS and EFAS analysis show the position of each factor of strengths, weaknesses, opportunities and threats that influence the determination of the chosen strategy.

The first stage carried out in conducting SWOT analysis was to find out the internal strategy factors (IFAS) and external strategy factors (EFAS). Determinations of various factors, the weight of each factor and the level of importance of each factor were obtained from the results of interviews with the interviewees who were competent in their fields and adapted to conditions in the field. Furthermore, the IFAS and EFAS matrix were prepared, and diagram of the SWOT analysis was created to determine the description of the strategic position which was divided into four quadrants. Furthermore, a SWOT matrix was created to illustrate how the strengths and weaknesses were adjusted to the opportunities and threats faced in order to develop alternative strategies that could be implemented.

The total weighting scores determined the priority ranking of strategies in community-based education ecotourism development in Taman beach area. The total scores was obtained by summing all scores in each of the related strategic factor. Ranking was determined based on the order of the largest number of scores to the smallest of all available strategies.

4. Results and Discussion
Based on the results of data analysis in this study, the following results were obtained.

4.1. Identification of Internal and External Environmental Factors
The SWOT analysis was focused on internal and external environmental factors that directly affected the educational ecotourism development policy in Taman beach area. The results of the analysis would be the basis for the formulation of alternative educational ecotourism development in Taman beach area.

4.1.1. Internal Environmental Factor
Internal Environmental Factor consists of Strengths and Weaknesses. Strengths are the potency of educational ecotourism development in Taman beach area. Weaknesses are factors that are considered as the weakness of educational ecotourism development in Taman beach area.
4.1.2. External Environmental Factor

External Environmental Factor consists of Opportunity and Threats. Opportunity is a factor that is considered as a chance of educational ecotourism development in Taman beach area. Threats are factors that are considered the threat from educational ecotourism development in Taman beach area.

4.2. Results of Internal and External Strategy Factor Analysis

The IFAS matrix can be seen in Table 1 and the EFAS matrix presented in Table 2.

Table 1. IFAS Matrix of Educational Ecotourism Development

| No | Internal Factors                                                                 | Weight (W) | Rating (R) | Score (W x R) |
|----|----------------------------------------------------------------------------------|------------|------------|---------------|
| 1  | The existence of sea turtle conservation as a rare and unique species for educational ecotourism | 0.120      | 4          | 0.479         |
| 2  | The beauty of the landscape (natural panorama) of Taman beach surrounded by distinctive coral cliffs and a very long coastline. | 0.080      | 3          | 0.239         |
| 3  | The existence of "Taman Ria" Sea Turtle Rescue Society for Tourism (KMKPW)        | 0.109      | 4          | 0.436         |
| 4  | Local Government Support                                                          | 0.093      | 3          | 0.279         |
| 5  | The existence of tourist attractions to support ecotourism and the potential for developing other tourism activities | 0.054      | 4          | 0.217         |
| 6  | Custom (community friendliness and mutual cooperation)                            | 0.073      | 3          | 0.218         |
|    | **Total**                                                                        | **0.528**  |            | **1.868**     |

| No | Internal Factors                                                                 | Weight (W) | Rating (R) | Score (W x R) |
|----|----------------------------------------------------------------------------------|------------|------------|---------------|
| 1  | Limited ability and skills of the community in managing educational ecotourism   | 0.080      | 2          | 0.160         |
| 2  | Lack of integrated coordination and implementation among stakeholders in educational ecotourism management | 0.076      | 1          | 0.076         |
| 3  | Absence of Tourism Awareness Society Group (Pokdarwis)                           | 0.073      | 1          | 0.073         |
| 4  | Limited tour guides in educational ecotourism                                   | 0.070      | 1          | 0.070         |
| 5  | Unorganized arrangement of Taman beach area                                      | 0.063      | 2          | 0.126         |
| 6  | Lack of information and promotion of educational ecotourism                     | 0.052      | 1          | 0.052         |
| 7  | Limited facilities and infrastructure at the educational ecotourism site         | 0.057      | 2          | 0.115         |
|    | **Total**                                                                        | **0.472**  |            | **0.672**     |
|    | **Total Score**                                                                  | **1.000**  |            | **2.540**     |

Refers to an analysis of internal strategy factors with the IFAS matrix, the existence of turtle conservation as a rare animal unique to educational ecotourism reaching the highest weight (0.120 x 4 = 0.479) is an important force in the development of educational ecotourism at the Taman beach. While the existence of tourist attractions to support ecotourism and the potential for developing other tourism activities reached the lowest weight (0.054 x 4 = 0.217). A low score because these factors are one of the supporting elements of ecotourism activities.

The main weakness in the development of educational ecotourism on the coast of Taman is the limited ability and skills of the community in managing educational ecotourism (0.080 x 2 = 0.160). Good planning and implementation of structured activities can improve the achievement of activity results, but this cannot be seen in the development of educational ecotourism at the Taman beach. Likewise, people who do not have special expertise to receive and take advantage of opportunities for the presence of tourists to their area.

The total value obtained in the IFAS matrix is 2.540. This value shows internal strength that is able to cope with and overcome the weaknesses possessed in the education ecotourism development plan at
Taman Pantai. The total weighting value of IFAS is below 2.5, the internal condition is weak and if it is above 2.5, it indicates a strong internal condition [8].

Table 2. EFAS Matrix of Educational Ecotourism Development

| No | External Factors                                                                 | Weight (W) | Rating (R) | Score (W x R) |
|----|----------------------------------------------------------------------------------|------------|------------|---------------|
|    | **Opportunities**                                                                |            |            |               |
| 1  | Pacitan included in the National Tourism Strategic Area (KSPN) and Gunungsewu UNESCO Global Geopark | 0.139      | 4          | 0.555         |
| 2  | Potential increase in domestic tourist visits                                    | 0.096      | 3          | 0.289         |
| 3  | Access Lanes across South Java or South Coast Road (Pansela)                     | 0.116      | 3          | 0.347         |
| 4  | Cooperation between regions                                                      | 0.122      | 3          | 0.366         |
| 5  | Information Technology Development                                               | 0.098      | 2          | 0.195         |
|    | **Total**                                                                        | 0.571      |            | 1.753         |
|    | **Threats**                                                                      |            |            |               |
| 1  | The proliferation of sea turtles is slow, near extinction and sensitive to sound, vibration and light | 0.122      | 4          | 0.489         |
| 2  | The existence of similar tourism objects that have more complete facilities with supporting infrastructure | 0.069      | 2          | 0.139         |
| 3  | Environmental pollution                                                          | 0.098      | 4          | 0.390         |
| 4  | Law enforcement is still weak                                                     | 0.077      | 3          | 0.231         |
| 5  | Shift of land functions, conflicts of land interests and business interests in ecotourism management | 0.063      | 2          | 0.126         |
|    | **Total**                                                                        | 0.429      |            | 1.375         |
|    | **Total Score**                                                                  | 1.000      |            | 3.129         |

Refers to the EFAS matrix, the highest value of strategic opportunity factors is Pacitan entering the National Tourism Strategic Zone (KSPN) and the Gunungsewu UNESCO Global Geopark Network (0.139 x 4 = 0.555). The establishment of Pacitan Regency as a National Tourism Strategic Zone (KSPN) and the Gunungsewu UNESCO Global Geopark Network is an opportunity that can be captured by the community in participating in developing community-based education ecotourism. The lowest value on opportunities is the development of information technology (0.098 x 2 = 0.195).

The biggest challenge is that the turtle's breeding factor is slow, approaching extinction and sensitive to sound, vibration and light (0.122 x 4 = 0.489). Ecotourism education based on turtle conservation is an activity that sells turtle conservation. If there is a decrease in the number of turtles that land and lay eggs on the beach of the Park, then all educational ecotourism planning and development will be in vain.

The total score in the EFAS matrix is 3.129 which means that external conditions are also quite strong. This means that the development of educational ecotourism on the coast of Taman is able to take advantage of the opportunities that exist to deal with and anticipate the threats that come in the development of marine ecotourism. The total weighting value of EFAS is 2.5, it states that external conditions are weak and if it is above 2.5, it indicates a strong external condition [8].

4.3. Formulation of Educational Ecotourism Development Strategy Based on Community Participation in Taman Beach Area

Refers to the result of the SWOT analysis, it was known that based on the result of the scoring conducted on internal and external factors, the coordinate value was located in the quadrant I. The strategy that can be done is to maximize the strengths in order to take advantage of the opportunities. The analysis diagram image can be seen in Figure 2.
The result of the analysis revealed that the educational ecotourism development strategy based on community participation in Taman beach area in Pacitan regency was in quadrant I (rapid growth) through an aggressive strategy [9]. Rapid growth is a strategy that can increase the rate of growth of ecotourism faster than the previous year, and improving quality is a factor of strength to maximize all opportunities. This position is considered advantageous in which Pacitan Regency can continue to develop its ecotourism potentials because it has strengths to take advantage of existing opportunities and minimize existing weaknesses [10]. The alternatives of priority strategies were determined based on the ranking of the number of scores as shown in Table 3.

Based on ranking strategies, out of the 10 development strategies, ranking 1 to 5 is a top priority in the development of educational ecotourism at Taman Pantai. Development priority strategies that can be developed by local governments and local communities as follows:

1. Maintaining the sustainability of the potential of natural tourism objects and the culture of local communities for the development of educational ecotourism by utilizing KSPN and GGU and cooperation between regions with the principle of mutual benefit.
   The involvement of all stakeholders in the management of the Taman Pantai tourism area is very necessary in order to achieve the goals. This can be done by increasing people's understanding of the concept of educational ecotourism to provide an understanding of the importance of environmental sustainability, and it is hoped that the follow-up of the activity will be community involvement in maintaining cleanliness and environmental sustainability.

2. Increasing efforts to prevent pollution of the Park's coastal area environment by involving all stakeholders.
   Community and visitors activities around the Park's coastal area greatly influence the sustainability of resources. The socialization of regulations can be done by installing a regulatory board on restrictions on activities around the ecotourism area, accompanied by supervision in the implementation of these regulations.

3. Increasing the ability of the community to be able to develop a variety of more creative and innovative tourist attractions while still highlighting the elements of education and conservation to increase the interest of visiting tourists.
   Tourist attractions are an attraction that gives birth to the motivation and desire of tourists to visit a tourist destination. One of the attractions that attracts the attention of tourists visiting the beach
of Taman is turtle conservation, which is supported by the presence of other attractions such as swimming pools and flying fox. The events that are packaged in a more creative and innovative form can also attract tourist visits.

4. Increase public understanding of the concept of educational ecotourism so that there is no conflict in land use.

Increasing people's understanding of the concept of educational ecotourism will avoid environmental damage and minimize conflicts that can occur due to land acquisition and control.

5. Increasing the capacity of the community, through the provision of skills as support in educational ecotourism.

The provision of skills that can be done, among others, makes a variety of souvenirs and souvenirs typical of Pacitan and forms regional arts and culture groups and continues to be mentored to encourage, facilitate, and foster tourism development by the community independently.

Table 3. Ranking of Priority Strategy for Community-based Educational Ecotourism Development

| Alternative Strategy | Linkage                  | Score  | Ranking |
|----------------------|--------------------------|--------|---------|
| **S-O Strategy**     |                          |        |         |
| 1. Maintaining the sustainability of the natural attractions and culture of local community’s potential for educational ecotourism development by utilizing KSPN, GGU and cooperation between regions with the principle of mutual benefit. | S1, S2, S6, O1, O4 | 1.857 | 1 |
| 2. Enhancing the community ability to develop a variety of more creative and innovative tourist attractions while still emphasizing the elements of education and conservation in order to increase tourists visits | S3, S4, S5 & O2, O3 | 1.568 | 3 |
| **W-O Strategy**     |                          |        |         |
| 1. Increasing the capacity of the community through debriefing as a supporting activity for education ecotourism. | W1, W2, W4, O1, O4 | 1.247 | 5 |
| 2. Developing a household scale tourism industry such as souvenirs, local specialties, homestay, ecotourism guides and other creative industries. | W4, W7, O5 | 1.010 | 6 |
| 3. Facilitating the formation of Pokdarwis to enhance the role of the community in educational ecotourism | W3, W6, O2, O3 | 0.761 | 8 |
| **ST Strategy**      |                          |        |         |
| 1. Increasing sustainable prevention of environmental pollution in Taman beach area by involving all stakeholders. | S1, S2, S3, T3, T4 | 1.775 | 2 |
| 2. Increasing public understanding of the concept of educational ecotourism to prevent land-use conflict | S1, S4, S6, T4, T5 | 1.333 | 4 |
| **WT Strategy**      |                          |        |         |
| 1. Conducting sea turtle conservation for educational ecotourism development by involving the community | W2, W3, T1, T2 | 0.777 | 7 |
| 2. Integrated management and arrangement of the area involving all stakeholders | W2, W3, T4, T5 | 0.506 | 9 |
| 3. Increasing the quantity and quality of infrastructures by considering environmental sustainability | W5, W7, T2 | 0.380 | 10 |

5. Conclusions

Based on the analysis result of the research that had been carried out, it could be concluded that the strategy for community-based ecotourism development in Taman beach in Pacitan regency was in quadrant I through an aggressive strategy. The priority strategies for developing educational ecotourism include (1) maintaining the sustainable preservation of natural and cultural attractions of local community potential, (2) increasing prevention of environmental pollution by involving all stakeholders, (3) enhancing the community ability to develop more creative and innovative tourist attractions, (4)
increasing public understanding of the concept of educational ecotourism to prevent land-use conflict and (5) increasing the capacity of the community through debriefing as a supporting activity for educational ecotourism

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