Sustainable Tourism Development Strategy in Kutang Beach Tourism Objects through Analytical Network Process (ANP) Approach

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Abstrak

Pengembangan pariwisata berkelanjutan tidak hanya berarti lebih dari sekadar melestarikan lingkungan alam, tetapi juga dapat menjadi sumber kemakmuran bagi masyarakat sekitar, sehingga dapat berdampak pada kesejahteraan sosial dan ekonomi. Penelitian ini bertujuan untuk merumuskan strategi pengembangan Pariwisata Berkelanjutan di Pantai Kutang, Desa Labuhan, Kabupaten Lamongan. Pendekatan penelitian kuantitatif dengan metode Analytic Network Process-Super Decisions, data utama yang digunakan diperoleh langsung dari responden ahli, ahli akademis, ahli kebijakan, dan praktisi sebagai pelaku langsung. Hasil analisis menunjukkan bahwa keberlanjutan dalam aspek sosial lebih dominan daripada menjaga keberlanjutan dalam aspek ekonomi dan lingkungan. Masalah utama yang harus dipertimbangkan dalam pengembangan pariwisata berkelanjutan adalah pembangunan fasilitas perbelanjaan. Oleh karena itu, strategi yang dilakukan adalah profesionalisme dalam manajemen destinasi, kemudian memperkuat peran pemerintah.

Kata Kunci:
Sustainability Pariwisata, Strategi, ANP

Abstract

Sustainable tourism development not only means more than preserving the natural environment, but can also be a source of prosperity for the surrounding community, so that it can have an impact on social and economic welfare. This study aims to formulate a strategy for the development of Sustainable Tourism in Kutang Beach, Labuhan Village, Lamongan Regency. Quantitative research approach with the Analytic Network Process-Super Decisions method, the primary data used is obtained directly sourced from expert respondents, academic experts, policy experts and practitioners as direct actors. The results of the analysis show that sustainability in social aspects is more dominant than maintaining sustainability in economic and environmental aspects. The main problem that must be considered in the development of sustainable tourism is the construction of shopping facilities. Thus, the strategy carried out is the professionalism of destination management, then strengthening the role of the government.

Keywords:
Tourism Sustainability, Strategy, ANP

INTRODUCTION

Tourism development is able to generate business activities to generate social, cultural, and economic benefits for a country. Therefore, almost all countries, both developed and developing countries, design a special agenda to build the tourism sector to support their economies. In line with this, the Indonesian government through the Ministry of Tourism and Creative Economy has developed guidelines for tourism development strategies based on Indonesia's long-term development vision: for Indonesia's independence, progress, justice and prosperity as well as the direction of development that favors the poor, creates business opportunities and the environment. Sustainable tourism can significantly contribute to the achievement of the national development vision in 2025 and run in accordance with development goals. Sustainable tourism development is expected to be able to empower the community around the tourist attraction. The existence of sustainable tourism objects is expected to be an opportunity to open up businesses and jobs so that they get social and economic benefits from the existence of tourist attractions. Optimal use of the environment, taking into account the carrying capacity of nature, ecology, social, and infrastructure, will create comfort not only for tourists but also for local communities. Sustainable tourism-based tourism development means more than the preservation of the natural environment, but has entered the realm of welfare and prosperity for the community. One of the tourist attraction destinations developed into a sustainable tourist attraction is Kutang Beach.

The tourism sector is a regional development program (Lamongan Regency Regional Regulation no. 7 of 2021). Until now, the local government has madeefforts to developtourism capacity by encouraging the increase of new tourist destinations. However, the increase in tourism quantity is allegedly not balanced with optimal efforts to manage tourism sustainability so that visitor enthusiasm only occurs in the early days of opening tourist attractions. This Kutang Beach tourist attraction is located in Kentong Hamlet, Labuhan Village, Brondong District, Lamongan Regency. To go to Kutang Beach Tourism is relatively easy because there are signs in the direction to tourist attractions. To get to Kutang Beach if from downtown Lamongan the distance is about 59 km, or about 1.5 hours. The route to the location if from the direction of Surabaya or Gresik towards Tuban is about ±20km from the Brondong District Office, which meets the intersection of Sidomukti Village, Brondong District. Tourists are advised to take the right lane, then enter the rural area until heading to Labuhan Village where the Kutang Beach tourist attraction is. This Kutang Beach tourist attraction is already popular in the people of Brondong District, Lamongan Regency as well as in Tuban Regency because of its place close to Tuban Regency.

The implementation of tourism development involves government, communities, business people, media, and academics as part of potential alternative strategies.Noywuli, Sapei, Pandjaitan, &; Eriyatno (2019) show that academics are one of the actors of sustainable development can contribute based on the suitability of scientific fields. Academics can play an optimal role through tourism development assistance as facilitators starting from the process of identification, planning, preparation, implementation, to supervision. In addition, Hora (2004) shows that academics, both teaching staff and researchers based on their expertise, can be a source of information on an object that has relevance to the field of expertise and profession. The involvement of academics and other parties in tourism

development is basically to achieve sustainable development goals. Chamidah et al. (2021) showed that the actors involved contribute according to their fields and capacities in the process of planning, implementing and developing development as fundamental stakeholders to optimize the tourism sustainability process.

Economic sustainability is good, beach tourism objects generally have a high level of tourist visits (Alvi et al., 2018). The decline in the number of tourist visitors due to low tourist attractiveness due to low tourism market potential and community capital (Cendrakasih et al., 2021). This condition shows that there are problems that must be overcome so that it can increase visitor interest which has a positive impact on increasing tourists can contribute to sustainable economic growth of the community. In2021, the government has poured funds for infrastructure development. However, it was not able to boost the number of visitors. Tourism capacity development certainly requires a large source of funding. So promotion is needed in order to attract the interest of capital investors. The problem of limited funding in the tourism development process is not enough to rely solely on funding sources from the government, so there needs to be encouragement and involvement of private institutions (businesses) (Rozikin, 2019).

The sustainability of tourism from social is shown by the solidarity and concern of the community for tourism objects. Subhan and Hidayat (2018) to optimize resource utilization, community participation and local wisdom, in order to be able to produce high-quality products as an alternative bridge in realizing the improvement of community welfare in the tourism development process, the presence of the government and the involvement of other institutional actors is needed. So that the goal of sustainable tourism development becomes easier to achieve. The presence of actors in the construction and development of a tourist attraction oriented to economic growth is very important because it will be able to form a solid force. Rozikin (2019) tourism requires an important role of actors in a process of sustainable development. The presence of tourism development actors is a support system in forming optimal strength because various forms of decisions and strategies in achieving goals are implemented jointly (Chamidah et al., 2021). However, the environmental problem of waste waste that can cause gas emissions and water pollution requires proper control and management (Husamah &; Huda, 2018). The complexity of the problem requires analysis to select priority strategies that can be used to carry out sustainable development (Girsang, 2019). Based on observations in the field that show problems and damages related to sustainable torism development in the object of research. First, environmental damage can be seen from the construction of a 200-meter bridge towards the middle of the sea and using the coastline as the main land for the bridge foundation. Second, other supporting facilities such as bathroom facilities and waste management are still not fulfilled. Third, tourist behavior that deviates from social norms such as, cases of sexuality and negative culture of visitors. Fourth, the phenomenon of the construction of the stall that does not pay attention to the elements of beauty and feasibility plus has not been arranged in a special area for traders.

Problems develop in Kutang Beach tourism objects in economic, social, environmental aspects with less sustainable categories because they are related to the level of tourist visits and limited infrastructure facilities in utilizing economic potential, social conflict constraints. In addition, the problem of waste management not in accordance with

environmental sustainability SOPs causes pollution. So to reveal and know and obtain solutions to these problems, it is important to analyze sustainable tourism development strategies in Kutang Beach tourist attractions.

TINJAUAN PUSTAKA

Sustainable Development **Theory**

Sustainability is sustainable *development* is a development concept that is implemented to meet the needs of the present while still paying attention to the potential of resources in meeting the needs and achieving future development goals in the long term (Yuliani et al., 2021). Munasinghe (1993) stated that *sustainability* is a development aimed at maximizing economic income accompanied by efforts to maintain resources in the long term, preserve aspects of the biological environment, and socio-cultural aspects which include equity and involvement of community participation (Purvis et al, 2019). The achievement of sustainable development goals to create resilience in the economic, social and environmental fields that are expected to improve community welfare, security and environmental sustainability can be seen through the alignment of development and measured through relevant indicators.

Yuliani et al (2021) revealed that there are six indicators of the success of sustainable development, namely: In favor of job creation, development has an impact on demographic conditions positively resulting in labor absorption by developing and creating new businesses in *the* surrounding environment; Favoring the poor, can be seen through activities and efforts to pay special attention to the poor due to low levels of education, health, income and competitiveness as well as the need for access to capital to develop businesses; Favoring the environment, shown through the condition of water quality, air, and environmental planning models in ensuring sustainability determines- whether or not the government's concern for development in the long term; In favor of gender equality, there is women's involvement with a balanced level of participation; Favoring anti-corruption, collusion and nepotism, avoiding financial harm behavior so that the development process runs according to goals and targets; Favoring the form of the Republic of Indonesia, it can be seen from development activities, there is no misappropriation of development funds and does not interfere with sovereignty.

Analytic Network Process **(ANP) Concept**

Saaty (2005) *Analytic Network* Process (ANP) is a data analysis method developed from the *Analytical Hierarchy Process* (AHP) method, both of which include methods used for *Multi Criteria Decisition Making* (MCDM) decision making. ANP is also to conduct analysis of problems that are generality and complex and cannot be arranged hierarchically because they consider the dependencies between elements in the hierarchy. One of the advantages of ANP is a priority measurement model based on ratios and proportions to capture interactions and influences that are oriented towards accurate prediction results and very precise decision making (Saaty, 2005).

METHOD

Quantitative methods with the ANP approach are used to measure the level of priority index of tourism sustainability strategies in economic, social, environmental, infrastructure, and valley aspects (Saaty, 2006). This research was conducted from January-July 2023. Primary data are obtained directly from the data source, data collection using questionnaires. Data sources in the form of expert respondents (experts) are determined and selected deliberately based on certain considerations (Noywuli et al., 2019). Meanwhile, the data analysis tool used is the *Analysis Network Process* (ANP) method with the help of *Super Decision Software* version 3.10. The method is used to determine the relative priority scale obtained from absolute numbers based on individual assessments (Saaty, 2005). The stages of data analysis include:

a) The preparation of the modeling structure is carried out based on literature review, both theoretical and empirical and carried out through in-depth interviews to examine deeper information and obtain actual problems in the field.

b) Weighting by experts, namely clusters that have been arranged and then made comparisons in a super matrix using the expert weighting method to compare a cluster with other clusters.

c) ANP synthesis, assessment data is then collected and inputted into super decision software to be processed to produce supermatrix-shaped output and then synthesized into priority. The results of each respondent will be inputted on a separate ANP network.

d) *Rater Agreement* is a measure that shows the level of conformity (approval) of respondents (R1-Rn) to a problem in a cluster. The tool used to measure rater agreements is Kendall's Coefficient of Concordance (W;$0 < W \leq 1$). W=1 indicates a perfect fit. To calculate Kendall''s (W), the first is to rank each answer and then add it up. The calculation of the Rater of Agreement is by the formula:

$$W = \frac{S}{mak\ s}$$

Where:
X : Number of clusters
R : The ranking weight of each respondent
n : Number of respondents
z : Number of clusters
U : Average total value in each cluster
S : The value of the sum of squares of deviations
MaxS : Maximum squared deviation value
W : Rater of Agreement

Based on previous researches using the *Analitycal Network Process* (ANP) method approach, a W value above 0.4 indicates a fairly high rater agreement rate, this means that experts or experts in assessing the pairwise comparison questionnaire, agree in determining the criteria in the concept of sustainable tourism development on the contrary, if A W value below 0.4 indicates a low level of respondent agreement, this means that experts or experts in

assessing the pairwise comparison questionnaire, do not agree in determining the criteria in the concept of sustainable tourism development.

RESULTS AND DISCUSSION

Presentation of ANP Analysis Data

The stages or procedures of ANP consist of 4 stages, namely 1) creating or compiling an ANP model, 2) compiling a pairwise comparison matrix 3) calculating a supermatrix, 4) analyzing the importance weights of clusters and nodes.
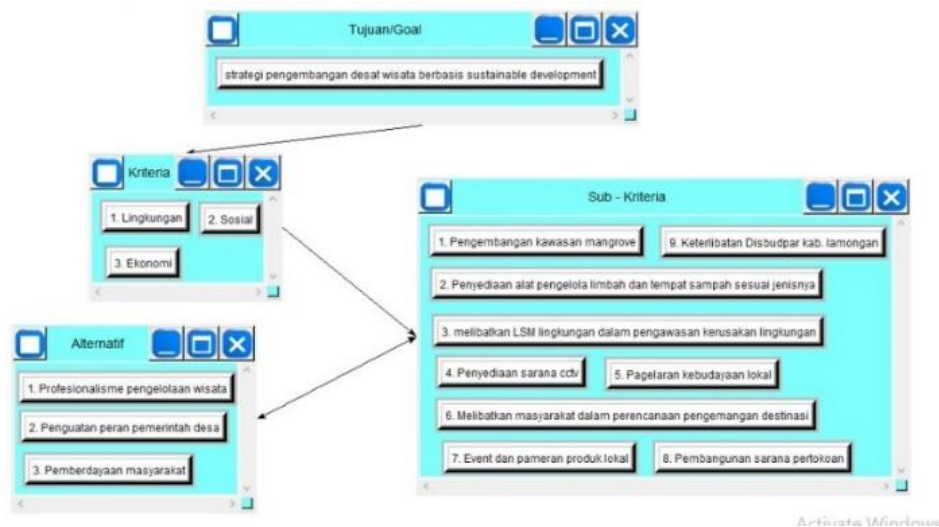
Figure 1. *ANP Model in Software Super Decisions*

The ANP model consists of 4 clusters, namely goal clusters (goals), criteria clusters (aspects), subcriteria clusters (problems), and alternative clusters (strategies). The first cluster of destinations consists of 1 node (element) in the form of a sustainable tourism development strategy in Kutang Beach tourist attraction. The second cluster of criteria in the form of tourism sustainability aspects consists of 3 nodes, namely economic, social, and environmental. The third cluster of subcriteria is in the form of problems that have a feedback relationship to each aspect cluster, then complex tourism sustainability problems are arranged into simpler based on the level of urgency of the problem in each aspect of sustainability in the research. The problem cluster nodes, namely 1) Development of mangrove areas; 2) Provision of waste management equipment and trash cans according to the type of waste; 3) Involving environmental NGOs in monitoring environmental damage; 4) Provision of CCTV facilities; 5) Local cultural performances; 6) Involve the community in planning destination development; 7) Events and exhibitions of local products; 8) Construction of shopping facilities; 9) Involvement of the Tourism and Culture Office. The fourth cluster is in the form of strategy, consisting of 4 strategy nodes, namely 1) Professionalism of tourism management; 2) Strengthening the role of village government; 3) Community empowerment. Strategies chosen based on literature studies and empirical studies all have feedback on nodes in the problem cluster.

Preparation of a comparison matrix between *nodes* in an interrelated *cluster*. Application of comparison matrix by providing an assessment of importance by applying a

scale of 1-9. Questionnaires are prepared and distributed to respondents or keypersons applying the normal comparison matrix model without modification so that comparison assessments based on importance are automatically applied.

The results of the synthesis of priorities of key strategy choices can be seen in the Analytic Network Process Priorities Synthesis Table.

Table 1. Analytic Network Process Calculation

Name of Cluster and Nodes	Normalized By Cluster	Rank
Destination Cluster		
Sustainable Tourism Development Strategy		
Cluster Aspects		
Social	0.0557863	1
Economics	0.0194792	2
Milieu	0.0194734	3
Cluster Issues		
Construction of shopping facilities	0.22258	1
Local cultural performances	0.08945	2
Involve environmental NGOs in monitoring environmental damage	0.05492	3
Provision of waste management tools and trash cans according to their type	0.05464	4
Involvement of the Department of Culture and Tourism	0.03746	5
Events and exhibitions of local products	0.02782	6
Provision of cctv facilities	0.01118	7
Development of mangrove areas	0.00915	8
Involving the community in destination development planning	0.00535	9
Cluster Strategy		
Professionalism of tourism management	0.08206	0,035
Strengthening the role of village government	0.05069	0,059
Community empowerment	0.01172	0,068

**Source:** *Super Decisions Software Output* 3.10 Processed, 2022

Based on the ratio value produced by the synthesis process in choosing strategic priorities (main), the selected strategy is a strategy to increase the value of tourism management professionalism.

Tourism Sustainability Strategy Priorities

Prioritization of tourism sustainability strategies for Lembung Mangrove Ecotourism objects using *the Analytic Network Process* (ANP) method with *Super Decisions* 3.2 software. The use of the ANP motto is based on the complexity of tourism sustainability issues. *The*

output of the synthesis analysis in Table 1 shows that the highest percentage weighted value in the choice of strategy in the alternative cluster is the strategy of increasing the professionalism of tourism management with a weight of 0.08206 or 8%, and the highest percentage value in the problem *cluster* is the construction of facilities Shops are 0.22258 or 2.2%, while the highest value in the *cluster* of *selected aspects of nodes* or social aspects is 0.0557863 or 55 %.

Based on the results of the ANP model analysis, it can be concluded that the strategy for sustainable tourism development in Kutang Beach tourism objects obtained a choice of strategies, namely strategies to increase the professionalism of tourism management; This is influenced by the problem factor of lack of availability of shopping facilities in tourist attractions, while the priority (alternative) aspect that affects is the social aspect. The influence and relationship that occurs between elements in one cluster with other *cluster* elements is the best alternative linkage model because the combination of two types of *inner* dependence and *outer dependence* linkages so that they can be used for decision making appropriately and accurately becomes a priority strategy and concept of sustainable development policy formulation (Girsang et al., 2019). The alternative linkage pattern based on the results of the strategy priority index in the resulting ANP model can be presented through the structure chart as follows.
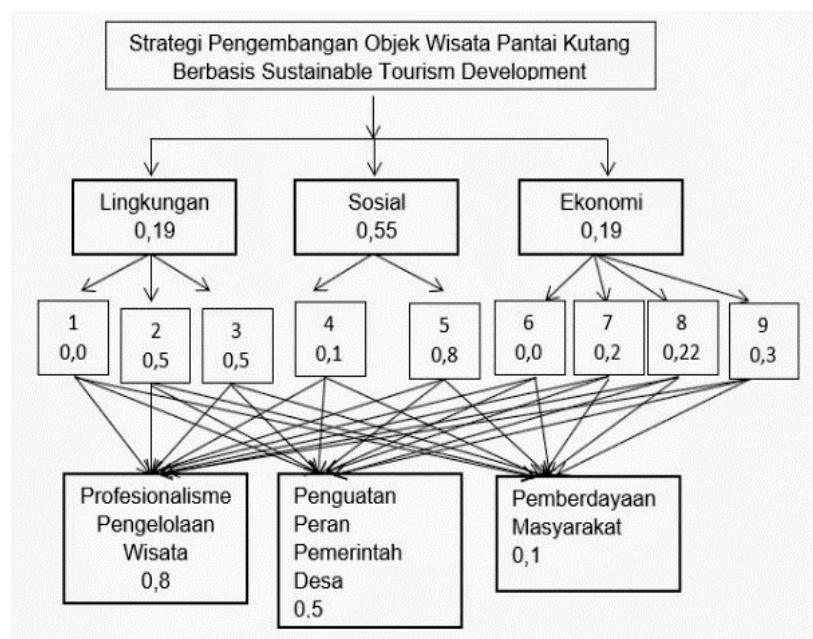
Figure 2. *Sustainable Tourism Development Strategy Index value at Katang Beach attraction*

The selection of the strategy to increase the professionalism of wsiata management as a priority for sustainable development that must be improved means that management carried out professionally in accelerating development and maintaining sustainability, , it shows that basically the main goal of the community, government, business people and industry is to build tourism to obtain income and profits directly. economy to meet the needs of life (Jorgensen &; McKercher, 2019). Meanwhile, from the three strategies that have been determined, all of them will be policies that will be the focus in the development of sustainable tourism in Kutang Beach tourist attractions. Furthermore, the number of *rater*

agreements in the *cluster* of problems and strategies that have been inputted produces a value of 0.54 which is on a strong scale, this means that experts or experts in assessing the pairwise comparison questionnaire, agree in determining problems and strategies in the development of sustainable tourism in Kutang Beach attractions. Here is the table of mi;ai Rater Agreement:

Table 2. *Rater Agreement* value

U value	41,5
S value	221
MaxS value	417,5
W value	0,54973545

Source: Primary Data, Processed 2022

CONCLUSION

The strategy of sustainable tourism development in Kutang Beach tourism objects results in a choice of strategies to improve the professionalism of tourism management, while the main problem that must be overcome is the development of shopping facilities, while from the three aspects of sustainable tourism development, the main choice is recommended to focus on sustainable tourism development In the social aspect .

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