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***ECOTOURISM DEVELOPMENT OF MUNJANG MANGROVE
FOREST AND CONSERVATION EFFORTS BASED ON
COMMUNITY APPROACH***

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Abstract

Ecotourism development in a mangrove forest area includes many positive and negative aspects and requires a sustainable comprehensive study. Ecotourism potential must be assessed to provide an understanding of local people in managing natural resources. This study aims at identifying the potential for the development of ecotourism and determining the efforts of conservation strategies for supporting mangrove forests. Data collection was done by questionnaires and interviews using a 1-5 Likert scale measurement and SWOT analysis to determine ecotourism development strategies. The results of the study indicate that the Munjang mangrove forest has very good potential to be developed as an ecotourism area. It is supported by the efforts of conservation as the main key in realizing the development of sustainable ecotourism. The role of the community and stakeholders has been well established such as mangrove seeding and nursery activities. Finally, this study recognizes that the capacity of sustainability indicators is very important to map the transformation and constant challenges of supporting mangrove ecotourism so that it can provide conservation benefits, provide quality services for visitors and improve local communities' welfare.

Keywords: Ecotourism, Conservation, Support mangroves, Community Approach

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INTRODUCTION

Tourism has become an important social and economic activity in various parts of the world in the last few decades. Studies on tourism show that tourism activities have been able to contribute to the country's economy (Firdaus & Tutri, 2018). Tourism is currently considered as a form of motivation that underlies the fact of someone to travel to a location other than an ordinary residence, and the desire to rest and do complementary activities to fill spare time (Mondino & Beery, 2019).

The development of tourism is now experiencing a shift from the concept of "mass tourism" to special interest tourism "ecotourism" (Agarwal et al., 2018). Ecotourism is known as a form of eco-friendly tourism which is oriented to educating various focuses and meanings which are referred to as green tourism (d'Hauteserre & Funck, 2016; Furqan et al., 2010). Ecotourism also has a very important role in increasing people's income, cultural preservation, and environmental preservation efforts (Henri et al., 2017).

Ecotourism as a form of foreign exchange source for regions that are starting to stretch currently in the form of mangrove ecotourism. The concept of developing mangrove ecotourism

strategies is carried out by implementing mangrove conservation and rehabilitation efforts as one of the tourism programs, increasing participation, and empowering the tourism community (Wahyuni et al., 2015). Mangrove areas have a high potential for tourism development, this is based on the unique characteristics of the flora and fauna (Fahrian et al., 2015).

Mangrove ecotourism can be developed as a form of educational tourism that focuses on human behavior in sustainably protecting the environment. Based on Shephard et al. (2015), aspects of sustainability can be explained through knowledge, skills, and competencies and supported by effective aspects such as values, attitudes, and dispositions. Behavior that preserves natural resources can certainly increase economic value for life without having to damage it (Jurigová & Tucková, 2016).

Munjang mangrove forests have enormous potential as one of the attractions of the community. It can be seen by the increasing interest of the community in conducting special interest tours or ecotourism supported by tourist attractions and the potential of diverse flora and fauna. Munjang mangrove certainly has become an important part of the life of the surrounding community in supporting its economy so it needs conservative management to maintain the existence of the region. Therefore, the strategy for developing ecotourism in the

Munjang mangrove area needs to be directed at the management and use of mangrove areas as a sustainable ecotourism area.

MATERIALS AND METHODS

This research was carried out in June to September 2019 in Munjang mangrove forest, West Kurau Village, Koba District, Central Bangka Regency. This study examines respondents' perceptions as tourists who are visiting tourist attraction objects, types of tourist attractions, and the participation of the public and stakeholders in supporting conservation and conservation efforts.

Tourists in this study as many as 50 people were selected by purposive sampling by using the judgment sampling method with consideration of the selection of tourists deliberately carried out against people who understand and can provide information relating to research (Etikan, 2016). A criterion for tourists is aged more than 17 years and is objective in responding.

Data collection was done by observation, interviews, and documentation studies. Collecting data on perceptions of tourist attractions using a questionnaire that has been

tested for validity to be given to respondents in the Munjang mangrove ecotourism area. Information on conservation and conservation efforts that have been programmed and will be programmed by the community and stakeholders was carried out by using the open-ended interview method. It was aimed at getting more extensive and informative information (Munroe, 2015).

Questionnaire tabulation used a Likert scale to determine the value of perceptions of tourists with a range of 1-5 where 1 shows strongly disagree and 5 strongly agree. Likert scale is used for knowing the perceptions of tourists towards the development of ecotourism which is processed using predetermined scores (Likert, 1932). The direction of the ecotourism development strategy was formulated using a SWOT analysis (strength, weakness, opportunity, threat). This analysis was based on internal and external factors to maximize strengths and opportunities and can minimize weaknesses and threats (Sariisik et al., 2011).

RESULTS AND DISCUSSION

Tourists Profile

Based on the results (Table 1), the profile of tourists visited Munjang mangrove forest data shows that men and women had a great interest in ecotourism. The average age range of tourists who had a hobby of enjoying the natural atmosphere is in the age range of

19-25 years. It is supported by the average tourists who visited, they were students or university students are more dominating.

Usually, tourists visited the Munjang mangrove forest 1-2 times. It

is assumed by tourists' curiosity about new attractions so that it attracts their interest to visit. Tourists who visited commonly have an average income under 1 million, it is due to the highest number of tourists are from students or university students.

Table 1. Profile of tourists visiting the Munjang mangrove forest, in the West Kurau Village

Tourist Characteristics	Number of Tourist Visits			
	Local Bangka Belitung	Percentage (%)	Out of Bangka Belitung	Percentage (%)
Gender				
Male	19 people	41.30	2 people	50.00
Female	27 people	58.70	2 people	50.00
Age				
≥17 years old	7 people	15.22	3 people	75.00
19-25 years old	15 people	32.61	-	-
26-35 years old	11 people	23.91	-	-
36-45 years old	9 people	19.57	1 people	25.00
46-65 know	4 people	8.70	-	-
Profession				
Student / University Student	12 people	26.09	3 people	75.00
Government employees	10 people	21.74	1 people	25.00
Private employees	3 people	6.52	-	-
entrepreneur	2 people	4.35	-	-
Housewife	8 people	17.39	-	-
and others	11 people	23.91	-	-
Number of visits				
1-2 times	35 people	76.09	4 people	100.00
3-4 times	6 people	13.04	-	-
> 5 times	5 people	10.87	-	-
Income / month (Rupiah)				
<1 million	20 people	43.48	4 people	100.00
1 million - 3 million	11 people	23.91	-	-
3 million - 5 million	8 people	17.39	-	-
> 5 million	7 people	15.22	-	-

Tourist Perception

Based on the analysis of the questionnaire instrument using a Likert scale, it is known that the average tourist perception value is included in the agreed and neutral criteria for some of the questions asked. Questions asked to include natural beauty, flora, and fauna, comfort, community involvement, the

involvement of local government, number of local visitors, number of foreign visitors, fees, number of attractions, public facilities, electricity, cleanliness, transportation, roads, and lodging.

The results in Table 2 indicate that Munjang mangrove ecotourism is one of the tourist natural tourism objects that are quite attractive to the community. It is

following the Likert scale results which are based on the perception of tourists that the results are following the concept of sustainable tourism development by taking into account environmental sustainability. Besides, there is a tourism-aware community group formed in managing the Munjang mangrove area.

Ecotourism is gaining fast popularity as a form of alternative tourism

development that will advance and have multiple objectives such as conservation and sustainable development activities (Walter, 2013). It is certainly emphasized by TIES (2018), explained that ecotourism as a form of travel that can be responsible for natural areas to preserve the environment, maintaining the welfare of local communities sustainably.

Table 2. Likert scale results of tourist perceptions of Munjang mangrove ecotourism

No.	A list of questions	Perception Value	Assessment criteria
1	Mangrove Munjang has a natural beauty that is very supportive and attractive to be a special eco-tourism tourist attraction	3.96	Agree / good
2	Flora and fauna in Munjang mangrove are very unique compared to other regions	3.68	Agree / good
3	Mangrove tourist attraction area is an area that pays attention to tourist comfort	3.70	Agree / good
4	Munjang Mangrove engages the local community in its management	3.82	Agree / good
5	The local government has involvement in introducing the uniqueness and uniqueness of Munjang mangrove potential	3.70	Agree / good
6	Mangrove tourist attraction area is an area that is visited by many local tourists	3.80	Agree / good
7	Mangrove tourist attraction area is an area that is visited by many foreign tourists	3.12	Neutral / doubtful
8	The cost of boat rental and attractions in Munjang mangrove area is quite affordable	3.64	Agree / good
9	The number of attractions in Munjang mangrove area helps tourists to enjoy the natural scenery	3.40	Neutral / doubtful
10	Supporting facilities such as places of worship, toilets, and parking areas are adequate	3.50	Agree / good
11	Access to electricity in Munjang mangrove area is sufficient	3.30	Neutral / doubtful
12	The cleanliness in Munjang mangrove area is already good	3.62	Agree / good
13	Transportation access to Munjang mangrove ecotourism object can be easily accessed / reached	3.86	Agree / good
14	Access roads leading to the Munjang mangrove ecotourism object can be traversed / reached easily	3.46	Agree / good
15	The need to provide a place to stay while / homestay for tourists	3.72	Neutral / doubtful

Mangrove Ecotourism Conservation Efforts Support

Conservation efforts were done by most tourism aware communities together with nature and the environment care group by taking various actions. Various

land rehabilitation efforts were carried out to restore the mangrove forest to its original condition including nurseries, replanting, socialization to students, making various attractions that could attract local and foreign tourists,

publication to various media, and collaborating with the various agency. The stakeholder collaboration is very important for the development of sustainable tourism but is influenced by strength, trust, financial and external support (Kimbu & Ngoasong, 2013). Diversification of the function of mangrove forests as ecotourism will be successful if mangrove planting sustainably carried out appropriately with planting patterns and good planting techniques (Mulyadi & Fitriani, 2009).

Conservation and rehabilitation efforts were done by some environment care groups and have not yet supported the knowledge of respondents as tourists. It is based on the knowledge of question items about mangroves and their benefits in community life. The respondents only knew that mangrove forests are coastal forests that function to prevent abrasion. Besides, mangroves also have physical, biological, and economic functions (Riwayati, 2014).

It is due to the lack of socialization conducted by the government to the community, especially students/university students as visitors with the highest percentage (Table 1), so knowledge about mangrove conservation does not reach all

levels of society. Therefore, it is necessary for a conservation education approach related to the ecological benefits of mangrove forests in an integrated way (Majid et al., 2016). Based on Surjanti et al. (2018), stated using mangrove forests as a learning medium for the possibility of improving learning outcomes.

Based on Wahyuni et al. (2014), stated that the development of ecotourism required community participation in conservation efforts so that it would have a positive impact on the community and the environment itself. Therefore, to be able to optimize the mangrove resources, an assessment is needed to determine the potentials, problems, sustainable management strategies, and knowledge about the strategic value of the existence of mangrove forests is also needed (Kariada & Irsadi, 2014).

Analysis of Munjang Mangrove Ecotourism Development Strategy

Based on an analysis that considers the importance of external and internal factors and the interrelationships between these factors (SWOT analysis, Table 3), 4 alternative strategies are obtained. Munjang mangrove ecotourism activity strategies as follows.

Table 3. Results of SWOT analysis of Munjang mangrove ecotourism areas

Internal factors		External Factors	
Strengths		Opportunities	
<ol style="list-style-type: none"> 1. Unique nature supported by a high diversity of flora and fauna 2. The formation of tourism awareness groups has been formed 3. One alternative natural tourism objects 4. Mangrove nurseries can be used as one of the environmental conservation programs 		<ol style="list-style-type: none"> 1. The creation of protected areas and the world's green belts 2. Establishing cooperation with various agencies in developing Munjang mangrove ecotourism area 3. The majority of visitors are students so it can be used as an educational center 	
Weaknesses		Threats	
<ol style="list-style-type: none"> 1. Lack of availability of tour guides in ecotourism activities 2. Facilities and infrastructures that support tourism activities have not yet been fulfilled 3. Lack of community and visitor understanding of ecotourism 		<ol style="list-style-type: none"> 1. Negative impacts of tourism activities (garbage and mangrove-damaging activities) 2. Competition with other attractions 3. How to maintain a sustainable infrastructure is unclear 	

1. Developing mangrove conservation and rehabilitation as a tourism program

The negative impact of tourism is environmental damage, although the concept of ecotourism always prioritizes conservation, it cannot be denied that violations of these are still frequently encountered. It is not only due to the lack of knowledge and awareness of the surrounding community about the concept of ecotourism, but the opportunity for damage also exists if there is no sanction or strict supervision from the manager or the government. Based on Zainuri et al. (2017), community empowerment around mangrove areas plays an important role in efforts to restore mangrove areas.

Proper identification of problems of the environment can help in guiding protected areas. Conservation management practices will produce

sustainable ecotourism products (Gorddard et al., 2016). This identification as a form of preventing inequalities that can explain the barriers to conservation, and ultimately the conservation goals can help in achieving one of the environmentally sustainable programs (Bennett et al., 2017).

2. Increasing community participation and empowerment

Increasing community participation in the management of Munjang mangrove ecotourism can give benefit to the local economy. Community participation in managing mangrove ecosystems in addition to maintaining mangrove conservation will also improve community welfare (Turisno et al., 2018). The existence of community empowerment can certainly make Munjang Mangrove forest community-based ecotourism.

Community-based ecotourism was identified as having the ability to improve the local economy and has been introduced in many countries (Lee, 2013).

Based on Satria (2009) local people are not an obstacle to the development of ecotourism, because their role should not be separated in tourism programs. Community empowerment can certainly provide more value and positive perceptions of stakeholders will be great in supporting tourism planning and management (Lee & Hsieh, 2016).

3. Reinforcing law and regulation to preserve mangrove

Mangrove ecosystems have a very important function for coastal areas. The ecological function is as a provider of nutrients, spawning grounds for nurturing, and foraging for fauna associated with them (Haryani, 2013). Mangrove forests also contribute to coastline stabilization, carbon sequestration, coastal fauna habitat, and maintaining biodiversity (Duke & Maynecke, 2007).

The environmental management policy must be based on the legal framework that has been announced by the government to use and to manage mangrove forests (Pramudji, 2000). The determination of mangrove forest ecosystem areas can be done through

village regulations together by giving a new discourse to the community as community-based managers who are sustainable, and following environmental quality standards, carrying capacity in realizing sustainable development (Hasantua et al., 2017).

4. Strengthening the concept of ecotourism

Mangrove Ecotourism area has an attractive tourism potential that needs to be further developed by the government. It can have an impact on improving people's economy. Based on Ocampo et al. (2018), ecotourism refers to local arrangements that interpret connectivity between the environment and local communities. Ecotourism can also meet the needs of local communities and achieve environmental conservation goals (Canteiro et al., 2018).

Ecotourism as a form of environment-based tourism that in rapidly developing economic activities, especially in developing countries, generates large incomes for rural entrepreneurs, local communities, and local governments, which flows into broader service industries (Curtin & Kragh, 2014). Ecotourism is representative of the most valuable form of sustainable tourism development because it is closely related to natural resources (Stefanica & Vlavian-

Gurmeza, 2010). Ecotourism development is a way to utilize natural resources economically (Nyaupane & Poudel, 2011).

CONCLUSION

Mangrove forest area is suitable to be developed as ecotourism tourism. It is supported by the formation of a tourism-aware community group as a manager, the existence of community empowerment, and conservation efforts in the form of seeding and nursery of mangroves. Development of Munjang mangrove ecotourism must always optimally involve the community and stakeholders in every process. It is done to provide a broad space for local people to enjoy the economic benefits and strengthen the concept of ecotourism in Munjang mangrove sustainably.

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