The role of mangrove ecotourism towards the environmental sustainability in Bangka Regency

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Abstract. The exploitation of natural resources becomes an undeniable reality to fulfil the need and to improve economic growth. Excessive exploitation has threatened environmental sustainability. Creating ecotourism related to sustainability, education, economy and participative movement of society becomes solution to tackle the issue. The study aims to analyse the role of mangrove ecotourism towards environmental sustainability. Qualitative descriptive with interactive analyses was used as the method of the study. Observation and in-depth interviews were employed as the data collection technique. The study discovered that ecotourism mangrove played a vital role in ensuring environmental sustainability. It showed that tourism awareness groups built the tourist attraction by utilizing the 40 ha of mangrove forest. It implied that the livelihoods of society had altered from tin mining into the brackish water aquaculture. This had decreased the number of natural resource exploitation of tin mining

1. Introduction

Indonesia is a well-known country that is rich of natural resource. However, due to the exploitation of natural resource, it becomes scarce. The natural resource damage has been worse from year to year [1]. The damage can be avoided and even be repaired. One of the ways to solve is by developing the ecotourism [2]. It is a tourism activities that utilize the natural resource by following sustainable tourism principles which concerns on environmental sustainability and people welfare [3].

In Indonesia, the natural resource creates opportunity to develop the ecotourism. It can support to reduce the natural resource damages. The ecotourism has increased for both demand and supply sides [4-6]. The ecotourism has its own characteristics which focuses on the conservation, environmental education, economic welfare, and local culture [7].

The Bangka Belitung Islands Province is rich of the natural resource earned from seas, forest, and mining. There are 950 small islands in the province whereby 60% of them are surrounded by the mangrove accounted 63,914 ha.

Belinyu, part of Bangka’s district, is rich of natural resource. It has 40 ha area of mangrove. The district has developed the ecotourism to achieve the environmental sustainability and increase the welfare of the society. However, the exploitation of natural resource occurs in the district. The practice
has started since 2017 in the tin mining. It creates the threatening situation to the sustainability of environment.

The threat of environmental damages can be mitigated by developing the ecotourism. Emma [8] argues that through community-based ecotourism, it can foster the society to be more aware to protect their environment. The society begins to implement the eco-friendly lifestyle. The development of community-based ecotourism has provided some principles which are: (i) nature-based tourism; (ii) ecological value; (iii) environmental vision; (iv) benefit for local people; and (v) visitor attraction and satisfaction [9].

Belinyu has mangrove that can be developed as ecotourism destination. The International Ecotourism Society argued that ecotourism is able to provide the natural venue, to contribute to the natural sustainability and to improve the local people welfare. It is part of sustainable tourism. It includes the tourism activities such as marine tourism, rural tourism, cultural tourism, and business travel [10]. In Belinyu District, the ecotourism development is able to avoid the environmental damage due to the tin mining activity.

2. Literature Review

Generally, ecotourism has some components of tourism activities such as education, sustainability and economic welfare [11]. Furthermore, ecotourism can be as an alternative innovation in the tourism sector. It supports the ecological sustainability and provides benefits for society.

In Indonesia, the ecotourism has the criteria of the development and the implementation of the tourism activities in conservation, open, fostered and culture which requires to see five capacities: ecotourism capacity, ecology capacity, physical capacity, physical capacity and social capacity [12-14].

Ecotourism has a specific characteristics as it concerns on the environmental sustainability and providing the benefit of economy to the local people. Thus, every tourism activities should fulfil the sustainability criteria which are: natural tourism-based, emphasizing on conservation activity, concerning on the sustainable tourism development, relating with the educational development activity, accommodating the local content and providing the benefit for local economy.

The tourism pattern has changed from the low quality tourism into the higher quality [15]. Special interest tourism is an example of the high quality tourism. It has developed since 1980s. It is nature-based tourism that concerns on the environmental sustainability.

3. Research Methodology

Belinyu District, Bangka Regency was selected as the location of the study. The district was chosen as it concerned on the ecotourism development and the environmental sustainability. The qualitative method was used to analyse the data. In depth interview was employed as the data collection technique. The total informants of the study were 8 people who were the businessperson, the illegal tin miners, the shrimp farming owner, and the mangrove forest manager.

The interactive analysis was used as the data analysis that was conducted continuously from the beginning of the data collection until verification process at the end step of the study [16]. The steps of the interactive analyses were as follows: data reduction, data presentation, and conclusion.

4. Results and Discussion

The study found that the tin mining activity became the main source of income of the illegal tin miners. It indicated that they have inadequate choice of job and had no chance to get better occupation. Furthermore, they agreed to leave their current job if the ecotourism activity offered a job opportunity. Hadi, 57-year old, described that he was interested to create business in the ecotourism sites if it would develop and move forward.

The ecotourism in Rabeng Perpat Permai had its potential tourism destination. It could stimulate the miner to switch the source of income from the illegal tin mining to tourism sector. The place had various facilities in supporting the tourism destination. The facilities were bridge around the mangrove, photo
shot spot, boats, fish pond. Furthermore, the culture could be presented as the tourism attraction. The place had Rabeng Kito Festival that showed Belinyu’s culture.

The small and medium enterprises (SME) development was initiated in collaboration with local government and local people to encourage people in changing their illegal activity into the legal one. It provided the job opportunity for the local people so that they can improve the income and achieve the welfare [17]. The SME was formed to contribute in improving the ecotourism quality, environment and economic welfare [18][19].

It could attract the tin miners to leave the illegal tin mining activity which could lead to the environmental damage. It also offered an opportunity among the local people to create fish, shrimp, and crab ponds. The local people had formed the fish farming group. They had utilized the development of mangrove tourism. The group was actively involved in developing the local tourism activity called as Rabeng tourism as well as the mangrove.

The head of fish farming group, Sirpandi, stated that since the development of ecotourism, the group had manually created some of the fish farming such as Nile tilapia, milkfish, shrimp, and mangrove crab. The creation of pond for aquaculture was very supported by the ecosystem as it had the brackish water. It was formed due to the existence of the mangrove conservation that aimed to develop the ecotourism. The study revealed that the development of mangrove for ecotourism had a positive impact towards the environmental sustainability and the local people welfare.

5. Conclusion
The study concluded that the environmental exploitation derived from the illegal tin mining can threat the environmental sustainability. One of the ways to avoid the exploitation was by utilizing the potential mangrove in the ecotourism development. The government should be more concerned on providing the financial and non-financial support the local people so that the ecotourism could be sustained.

References
[1] Zainuddin S, Soetarto E, Adiwibowo S and Panjaitan N K 2010 Kontestasi Kekuasaan dalam Pengelolaan SDA Jurnal Academica Fisip Untad 2 455–68
[2] Irma Ayuningtyas D and Hadi Dharmawan A 2015 Dampak Ekowisata Terhadap Kondisi Sosioekonomi Dan Sosio-Ekologi Masyarakat Di Taman Nasional Gunung Halimun Salak Sodality: Jurnal Sosiologi Pedesaan 5 247–58
[3] Mulyana E 2019 Upaya Pemberdayaan Ekonomi, Sosial dan Budaya pada Masyarakat Melalui Pengembangan Bisnis Ekowisata Business Innovation and Entrepreneurship Journal 1 38–43

[4] Sharpley R 2006 Ecotourism: A consumption perspective Journal of Ecotourism 5 7–22
[5] A. do P, H. A and C. N 2012 Ecotourism from both hotels and tourists’ perspective Economics and Sociology 5 132–42

[6] Meletis Z A and Campbell L M 2007 Call It Consumption! Re-Conceptualizing Ecotourism as Consumption and Consumer Geography Compass 1 850–70
[7] Kiper T 2013 Role of Ecotourism in Sustainable Development Advances in Landscape Architecture

[8] Hijriati E and Mardiana R 2015 Pengaruh Ekowisata Berbasis Masyarakat Terhadap Perubahan Kondisi Ekologi, Sosial Dan Ekonomi Di Kampung Batusuhunan, Sukabumi Sodality: Jurnal Sosiologi Pedesaan 2 146–59
[9] Nazarullah F, Hardika and Desyanty E S 2017 Pemberdayaan Masyarakat Melalui Program Ekowisata “Lepen Adventure” Jurnal Pendidikan Teori, Penelitian, Dan Pengembangan 2 1071–6
[10] Nugroho I 2004 Buku Ajar Ekoturisme (Malang: Program Studi Agribisnis, Fakultas Pertanian, Universitas Widyagama)
[11] Nugroho, Iwan (Universitas Widyagama M 2004 Buku Ajar Ekoturisme (Malang: Universitas Widyagama Press)
[12] Butarbutar R and Soemarno S 2013 Environmental Effects Of Ecotourism In Indonesia Journal
of Indonesian Tourism and Development Studies 1 97–107

[13] Arismiyanti N K 2018 Development Strategy of Sustainable Marine ASEAN Journal on Hospitality and Tourism, 15 118–38

[14] Nurinsiyah D N, Gunawan B, Husodo T and Uchiyama T 2015 Ecotourism Development in Indonesia: A Case Study in Kawah Putih, West Java Journal of Rural Problems 51 197–202

[15] Fandele C and Nurdin M 2005 Pengembangan Ekowisata Berbasis Konservasi di Taman Nasional (Yogyakarta: Fakultas Kehutanan UGM, Pusat Studi Pariwisata UGM dan Kementerian Lingkungan Hidup)

[16] Miles M and Huberman M 2002 Analisis Data Kualitatif, Buku Sumber tentang Metode-Metode Baru (Jakarta: UI-Press)

[17] Tahir H M, Razak N A and Rentah F 2018 The contributions of small and medium enterprises (SME’s) On Malaysian economic growth: A sectoral analysis Advances in Intelligent Systems and Computing 739 704–11

[18] Welter F, Smallbone D, Isakova N and Slonimski A 2001 SMEs and economic development in Ukraine and Belarus: Some policy perspectives MOCT – MOST: Economic Policy in Transition Economies 11 252–74

[19] Akugri M S, Bagah D A and Wulifan J K 2015 The Contributions of Small and Medium Scale Enterprises to Economic Growth: A Cross-Sectional study of Zebilla in the Bawk West District of Northern Ghana European Journal of Business and Management 7 262–74

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