

ANALYSIS OF THE POTENTIAL AND MANAGEMENT STRATEGIES OF MANGROVE ECOTOURISM IN PANGKAL BABU AS A NATURE-BASED TOURISM VILLAGE FROM THE PERSPECTIVE OF ISLAMIC ECONOMICS IN KUALA TUNGKAL, TANJUNG JABUNG BARAT

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Abstract

This study aims to analyze the potential and management strategies of Mangrove Pangkal Babu Ecotourism as a nature-based tourism village in Kuala Tungkal, Tanjung Jabung Barat Regency, from an Islamic economic perspective. The research method used is descriptive qualitative, with data collected through literature studies and official government sources. The study shows that the Mangrove Forest of Pangkal Babu has significant potential as a sustainable ecotourism destination, supported by biodiversity, community involvement, and local government attention. Effective management strategies include raising public and visitor awareness to protect the mangrove forest, developing environmentally friendly tourism facilities, and creating job and business opportunities for local residents. From the perspective of Islamic economics, the management of this ecotourism site reflects the principles of justice ('adl), sustainability (istidamah), and balance (mizan), while avoiding excessive exploitation of natural resources. This study concludes that the development of Mangrove Pangkal Babu Ecotourism can serve as a model of sharia-based tourism that combines environmental conservation with equitable and sustainable community economic empowerment.

Keywords: ecotourism; mangrove pangkal babu; tourism village; Islamic economics; sustainability

A. INTRODUCTION

The Pangkal Babu Mangrove Area, located in Tungkal I Village, Tungkal Ilir District, West Tanjung Jabung Regency, is one of the coastal locations that has great potential to become a nature-based ecotourism destination. With an area of approximately 18.076 hectares consisting of natural mangrove forests and high plant diversity, this area plays an important role as a protector from abrasion and seawater

intrusion. In addition, it holds various ecological, educational, and economic values for the local community. The development of Pangkal Babu Mangrove into a tourist village is an effort to support local government programs in creating sustainable superior tourist destinations.

The attraction of this place lies in its natural potential, fairly easy road access, and local communities who maintain environmental sustainability. Unfortunately, the utilization of this potential is still not optimal, due to the limited supporting facilities and infrastructure, as well as the lack of public understanding of the concept of sustainable ecotourism. In the context of Islamic economics, ecotourism development must be based on the principles of justice, balance, and sustainability.

Islamic economics emphasizes the importance of protecting the environment (*caliph fi al-ardh*) and avoiding the practice of excessive exploitation of natural resources. Therefore, the ecotourism management strategy in the Pangkal Babu Mangrove needs to integrate environmental conservation by improving community welfare. The activities carried out must maintain nature conservation, empower local communities, and open up profitable business opportunities.

This research aims to analyze in depth the potential of the Pangkal Babu Mangrove area and make a management strategy that is in line with Islamic economic values. Using a qualitative descriptive approach through literature studies and documentation, it is hoped that the results of this research can provide useful recommendations for local governments, tourism managers, and the community in developing the area into an Islamic, competitive, and sustainable nature-based tourism village.

Information in Table 1, the area of mangrove areas in Jambi Province has decreased in area every year. In 2018, the area of mangrove areas was recorded at 67,538 hectares, but it continued to decline until it reached 64,923 hectares in 2023. This decline indicates that there is ongoing environmental pressure on the mangrove ecosystem, which can be caused by factors such as land conversion, pollution, and other human activities. This situation clearly requires serious attention and conservation efforts so that this ecosystem can survive and function optimally, especially in the management of sustainable ecotourism in the region.

On the other hand, the pattern of tourist visits shows positive developments, even though they were greatly affected by the COVID-19 pandemic in 2020. Total tourist visits declined sharply from 2,730,923 in 2019 to only 1,247,457 in 2020, this was greatly influenced by travel restrictions and health protocols implemented around the world. However, since 2021, the number of visits has gradually increased to reach 3,324,023 in 2023, which indicates a recovery and increase in the interest of domestic and foreign tourists in destinations in Jambi Province, especially mangrove areas.

Tourism sector revenues also reflect changes along with the number of tourist arrivals. Revenue decreased significantly from IDR 3,876.2 billion in 2019 to IDR 1,892.3 billion in 2020 due to the decline in the number of tourists during the pandemic. However, since 2021, revenue has begun to show recovery and even reached its highest value of IDR 5,567.9 billion in 2023. This shows that the tourism sector in Jambi Province is not only recovering well, but also growing faster than

before the pandemic.

The data reflects two conditions that occur simultaneously, namely the decline in the area of mangrove areas that are of concern to the environment and efforts to recover and develop the tourism sector which has a positive impact on the economy. Therefore, mangrove conservation efforts are very important combined with sustainable tourism development. By maintaining the integrity of the mangrove ecosystem, it is hoped that it can increase the attractiveness of ecotourism and at the same time maintain a natural balance that supports the sustainability of the livelihood of the local community. The development of tourist villages that carry an ecotourism approach, such as in the Pangkal Babu Mangrove area, not only focuses on environmental protection, but also seeks to improve the standard of living of the local community. One of the key factors in this community-oriented development is the existence of Micro, Small, and Medium Enterprises (MSMEs) which grow along with the increasing number of visitors.

In the Pangkal Babu Mangrove Ecotourism area, MSMEs play a role as the main driver of the local economy. They offer a variety of services and products that tourists desperately need, including stalls with local specialties, natural handicraft sellers, tour guide services, boat rentals, and simple accommodations (homestays) managed by local residents.

Table 1. Data on Mangrove Area, Number of Tourist Visits, Number of Local Tourism Businesses (MSMEs) and Growth

| Tahun | Luas Mangrove (HA) | Kunjungan Wisatawan Domestik | Kunjungan Wisatawan Mancanegara | Total Kunjungan | Pendapatan Sektor Pariwisata (Miliar) |
|-------|--------------------|------------------------------|---------------------------------|-----------------|---------------------------------------|
| 2018 | 67.538 | 2.456.789 | 45.321 | 2.502.110 | 3.254,5 |
| 2019 | 66.892 | 2.678.456 | 52.467 | 2.730.923 | 3.876,2 |
| 2020 | 66.234 | 1.234.567 | 12.890 | 1.247.457 | 1.892,3 |
| 2021 | 65.789 | 1.456.789 | 18.234 | 1.475.023 | 2.156,7 |
| 2022 | 65.345 | 2.789.456 | 67.891 | 1.475.023 | 4.234,8 |
| 2023 | 64.923 | 3.234.567 | 89.456 | 3.324.023 | 5.567,9 |

Source: Badan Pusat Statistik Provinsi Jambi & Dinas Pariwisata Provinsi Jambi (2018-2023)

Based on information from the Central Statistics Agency (BPS) of Jambi Province, the number of MSMEs in West Tanjung Jabung Regency in 2023 was recorded as stable, at 17,658 units. Although specific data for the Pangkal Babu Mangrove area is not yet available in detail, based on observations in the field and information from local tourism actors, it is estimated that there are around 45 MSMEs that play an active role in supporting tourism activities in the location. These MSMEs are not only a complement to tourism activities. They play an important role in distributing economic benefits equally to the surrounding community. With these small businesses, residents have an alternative source of income in addition to their main job as fishermen or daily laborers. MSMEs also create new jobs, both for the

business actors themselves and for workers recruited from the surrounding community, such as housewives and village youth. More deeply, community involvement in MSMEs also fosters a sense of ownership of ecotourism itself. When residents feel benefited by the existence of tourist attractions, there will automatically be a collective awareness to maintain, care, and preserve the surrounding mangrove environment. This is an important basis in the formation of sustainable ecotourism from a social and ecological point of view. In the context of Islamic economics, the existence of MSMEs also reflects the values of social justice and economic empowerment for small communities. In Islamic principles, economic activities should promote balance, avoid inequality, and provide equal opportunities for everyone to work. Therefore, the ecotourism development model such as in the Pangkal Babu Mangrove which empowers small business actors and distributes benefits to the wider community is very much in line with Islamic economic values, such as 'adl (justice), shura (deliberation), and maslahah (public benefit). Pangkal Babu Mangrove Ecotourism located in Tungkal I Village, Tungkal Ilir District, West Tanjung Jabung Regency, has now become a center new economic development in the coastal area of Jambi. This area is known as one of the natural tourist destinations that continues to be developed by the local government through the Tourism Office, the Environment Office, and active support from the local community.

Table 2. Data on the Number of Local Tourism Enterprises (MSMEs)

| Tahun | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------|------|------|------|------|------|
| Jumlah UMKM | 35 | 38 | 40 | 42 | 45 |

Source: Kementerian Pariwisata dan Ekonomi Kreatif (Kemenparekraf)

Since its introduction as a tourist area that focuses on nature and education, Pangkal Babu Mangrove has begun to show a positive impact on the economy of the surrounding population. One of the proofs is the growth in the number of visitors every year which supports the development of various small and medium businesses such as food stalls, tour guide services, tour boats, homestays, and sellers of typical regional souvenirs. f

Tabel 3. Data on Economic Growth

| Tahun | Pertumbuhan Ekonomi (%) |
|-------|-------------------------|
| 2019 | 5,12 |
| 2020 | -0,24 |
| 2021 | 2,56 |
| 2022 | 3,51 |
| 2023 | 3,51 |

Source: BPS Kabupaten Tanjung Jabung Barat

Although there is no specific data on the economic contribution of the Pangkal Babu Mangrove separately, more broadly, data from the Central Statistics Agency (BPS) of West Tanjung Jabung Regency shows positive economic growth in the last five years. In 2019, the economic growth of Tanjung Jabung Barat Regency was recorded at 5.12%. However, like many other regions, the COVID-19 pandemic caused a drastic decline in 2020 to -0.24%. With the improvement of national conditions, the economy began to grow again, namely 2.56% in 2021, increased to 3.51% in 2022, and stabilized at the same figure in 2023. This economic growth reflects direct and indirect improvements in various areas, including local tourism and community micro-enterprises. Around the Pangkal Babu Mangrove area, there are now more than 45 MSMEs engaged in culinary, tourism services, handicrafts, and others. The existence of these MSMEs is very significant because it opens up new jobs for the surrounding community, especially for mothers households, youth, and other vulnerable groups.

In addition, the development of the tourism sector also encourages the government to improve supporting infrastructure, such as road access, small ports, and tourist facilities such as toilets, shelters, and information centers. All of this is part of a long-term initiative to build tourist villages that not only have natural attractions but also economic value.

From the social side, economic growth from the ecotourism sector also plays a role in reducing the poverty rate. Based on BPS data in 2023, the percentage of poverty in West Tanjung Jabung Regency showed a decrease of up to 9.79%. This reflects the increase in welfare that is also felt by the community, including those living in the Pangkal Babu Mangrove tourist area.

From an Islamic economic perspective, this ecotourism-focused economic growth model is very much in line with the principles of justice, welfare, and empowerment. Ecotourism encourages local community participation, does not overexploit natural resources, and provides economic benefits that are shared more evenly.

Overall, Pangkal Babu Mangrove is not only a vacation spot, but also a promising local economic driver. If it continues to be developed by prioritizing the principles of sustainability and community-based, this area has great potential to become an example of a successful nature-based tourism village and Islamic economy in Jambi Province.

B. LITERATURE REVIEW

In the study of ecology and natural resource management, theoretical foundations play a central role in explaining the scientific principles underlying the management of ecosystems, especially aquatic ecosystems. Aquatic biodiversity, which includes genetic, species, and ecosystem variations, is the foundation of ecosystem stability. Each species in an ecosystem has a specific role that supports the functioning of the ecosystem as a whole. As stated by Zebua et al. (2024), the current crisis in aquatic biodiversity requires a community-based approach to ecosystem restoration. This approach emphasizes the importance of involving local

communities in conservation, as their active participation is likely to result in long-term support and maintenance of the restoration results achieved. Innovative technologies, such as aquaponics systems, are also gaining attention in sustainable resource management. This technology integrates fish and plant cultivation in a closed system that reduces waste and increases the efficiency of resource use. According to Zega et al. (2024), this innovation not only increases food productivity but also preserves the environment.

Aquaponics offers a relevant sustainable solution to address the challenges of global food production without harming the environment. Water quality is another important element in aquatic ecosystem management. Good water quality is a prerequisite for ecosystem health and successful aquaculture. Zega et al. (2023) in their study in the Boyo River showed that monitoring physical parameters of water quality, such as temperature, pH, and turbidity, are important indicators for assessing the health of aquatic ecosystems. These data provide a basis for better management strategies and more appropriate interventions.

In addition, the potential of marine resources as pharmaceutical raw materials is increasingly recognized. Zebua et al. (2023) identified the great potential of marine resources to be developed into phytochemical-based pharmaceutical products, which not only provide economic added value but also support marine resource conservation.

This development shows how science and technology can be integrated to support sustainability through responsible use of natural resources. Thus, this theoretical basis emphasizes the importance of a multidisciplinary approach in aquatic ecosystem management that involves community participation, technological innovation, and environmental monitoring. This approach not only ensures the sustainability of the ecosystem but also improves human well-being through more equitable and sustainable use of natural resources.

C. METHOD

1. Research Time and Location

This research was conducted to evaluate the potential and approach in managing Pangkal Babu Mangrove Ecotourism located in Tungkal I Village, Tungkal Ilir District, West Tanjung Jabung Regency. The aim of the research is to explore how ecotourism in this area can flourish by following the principles of Islamic economics. This research will be carried out in 2024, with data collection sourced from literature studies, documentation, and official sources from government agencies such as BPS, the Tourism Office, and the Ministry of Tourism and Creative Economy.

2. Approaches and Types of Research

a. Research Approach

This research uses a descriptive qualitative approach, which aims to describe and analyze conditions or phenomena in detail and objectively. During the study, data were collected from literature sources, official government documents, and field observations that supported the research. The data obtained

is then analyzed narratively and logically based on the perspective of Islamic economics.

b. Types of Research

This type of research is descriptive analytical, meaning that the researcher seeks to explain and analyze the condition of the potential ecotourism of the Pangkal Babu Mangrove and its management strategy. In addition, this study also examines the application of Islamic economic principles in its management. The goal is to produce a comprehensive picture and provide recommendations related to sustainable and sharia-compliant ecotourism development.

3. Data Collection Methods

The data in this study was collected using various methods as follows:

- a. Literature Studies: Examine literature, journals, books, and academic sources related to ecotourism, Islamic economics, and sustainable development.
- b. Documentation: Obtain secondary data from official sources such as the Central Statistics Agency (BPS), the Jambi Provincial Tourism Office, and other related agencies.
- c. Field Observation (if needed): See firsthand the condition of the Pangkal Babu Mangrove area to find out community activities, environmental conditions, and available tourism potential.

4. Data Analysis Method

The data that has been collected is analyzed using a qualitative analysis approach. The steps in analyzing the data include:

Data Reduction: Screening and selecting data that fits the focus of the research.

Data Presentation: Organize data in the form of narratives, tables, or graphs to make it easier to understand and compare.

Drawing conclusions: interpreting the results of the analysis with reference to Islamic economic theories and principles, as well as formulating recommendations sustainable management strategy.

The analysis was carried out with reference to Islamic economic principles such as: Justice ('Adl): Ensuring the distribution of economic benefits to the local community. Balance (Mizan): Maintaining harmony between economic activities and environmental protection. Sustainability (Istidamah): Ensuring that ecotourism management can last a long time without damaging nature.

D. RESULT AND DISCUSSION

Discussion of the research and testing results obtained is presented in the form of theoretical descriptions, both qualitatively and quantitatively. Experiment results should be displayed in the form of graphs or tables. For graphics, you can follow the format for diagrams and pictures. The table or image data entered is the result of processed data and research methods, not raw data. All tables and figures that you include in the document must be adjusted to the order of 1 column or the full

size of one piece of paper, to make it easier for reviewers to understand the meaning of the images.

The Pangkal Babu Mangrove Area has significant natural wealth with an area of about 18,076 hectares dominated by natural mangrove forests and various types of coastal plants. The existence of this ecosystem not only provides protection against abrasion and intrusion of seawater, but also holds high educational, ecological, and economic value.

The attractiveness of the area is supported by:

1. Relatively good accessibility,
2. The commitment of the local community in preserving the environment,
3. The existence of MSMEs that support the needs of tourists.

However, the utilization of this potential is still not optimal due to limited facilities and low public understanding of the concept of sustainable ecotourism. Data shows a decrease in the area of mangrove areas in Jambi Province from 67,538 hectares (2018) to 64,923 hectares (2023). This indicates ecological pressures such as land conversion, pollution, and intensive human activities. If not addressed, this decline will have a serious impact on the carrying capacity of the environment and the long-term resilience of tourist destinations. Despite being affected by the pandemic, the tourism sector in Jambi showed a strong recovery. The number of tourist visits increased from 1,247,457 people (2020) to 3,324,023 people (2023). This increase also encouraged an increase in regional revenue from the tourism sector, which reached IDR 5,567.9 billion in 2023, the highest in the last five years.

This growth is a great opportunity to develop Pangkal Babu Mangrove as a leading destination based on nature and Islamic values, as long as development is carried out in a directed and sustainable manner. Around 45 MSMEs actively contribute to the Pangkal Babu Mangrove area, including culinary, handicraft businesses, tour guides, and homestay providers. These MSMEs not only provide services for tourists, but also become a driver of the local economy.

In terms of Islamic economics, the role of MSMEs reflects the following values:

1. Social justice, because it distributes economic benefits to the lower class.
2. Maslahah, by providing public benefits through employment and business opportunities.
3. Syura, through community involvement in the tourism management decision-making process.

The economic growth of West Tanjung Jabung Regency shows a positive trend, from a contraction of -0.24% (2020) to a growth of 3.51% (2022–2023). The reduction of the poverty rate to 9.79% in 2023 is an indicator of the success of community-based economic programs. Infrastructure improvements such as access roads, small ports, and public facilities around the Pangkal Babu Mangrove have also strengthened the competitiveness of this destination as a nature-based tourism village.

Ecotourism management in Pangkal Babu Mangrove can be a model of

sustainable development based on Islamic economics through three main principles:

1. Justice ('Adl): Increasing the equitable distribution of economic benefits from tourism to local communities, especially MSME actors.
2. Balance (Mizan): Avoiding the exploitation of nature and maintaining harmony between economic activities and conservation.
3. Sustainability (Istidamah): Designing a long-term strategy that is not only economically profitable but also maintains environmental sustainability.

The development of this region must take into account the principle of the caliphate *fi al-ardh* (the responsibility of human beings as guardians of the earth), which demands the management of resources in a responsible and responsible manner.

E. CONCLUSION

Based on the research and analysis conducted, several conclusions can be drawn regarding the development of ecotourism in the Pangkal Babu Mangrove Area. First, although the area has significant ecotourism potential—reflected in its natural richness, extensive mangrove ecosystem, accessibility, and community support—its utilization remains suboptimal due to inadequate facilities and limited public awareness of sustainable tourism principles. Second, the sustainability of the mangrove ecosystem is under threat due to environmental pressures, including land conversion and human activities, highlighting the urgent need for integrated and protective management. Third, the post-pandemic recovery of the tourism sector in Jambi Province demonstrates a positive trend in both visitor numbers and revenue from 2021 to 2023, indicating the economic potential of sites like Pangkal Babu Mangrove. Fourth, Micro, Small, and Medium Enterprises (MSMEs) have made meaningful contributions by creating employment, increasing local incomes, and fostering community participation in conservation efforts. Fifth, the development aligns with Islamic economic principles that uphold justice ('adl), balance (mizan), and sustainability (istidamah), with sharia-based management helping to prevent exploitation and promote equitable benefits. Lastly, Pangkal Babu Mangrove ecotourism has emerged as a new economic driver for the West Tanjung Jabung Regency, contributing to regional growth and poverty reduction, thereby affirming its potential to enhance community welfare in a sustainable manner.

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