

## Impact Analysis of Green Tourism on Sustainable Tourism: A Case Study of Dodola Island, Morotai Island District

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KEYWORDS	ABSTRACT
community empowerment; Dodola Island; green tourism; sustainable tourism	This study aims to analyse the impact of green tourism on tourism sustainability on Dodola Island, Morotai Island Regency. A qualitative approach with a case study design was used to explore the impact of green tourism implementation on environmental, social, and economic aspects. Data were collected through in-depth interviews, participant observation, and documentation, which were then analysed using a thematic method with the Cresswell (2014) approach consisting of Data Organization, Overall Data Reading, Data Coding and Interpretation of Findings. The study results indicate that the implementation of green tourism has a significant positive impact. In terms of the environment, the plastic waste management program and marine ecosystem rehabilitation have successfully maintained the balance of the Dodola Island ecosystem. Regarding social aspects, empowering local communities through training and collaboration in destination management increases community awareness and involvement in environmental conservation. In terms of the economy, income diversification through community-based tourism makes a real contribution to the welfare of local communities. However, limited supporting infrastructure is one of the challenges that needs to be overcome to optimise the benefits of green tourism. This study confirms that implementing green tourism with an integrated strategy can create sustainable tourism on Dodola Island and become a model that can be adopted in other destinations.

### INTRODUCTION

Green tourism is a concept that is increasingly gaining attention in global tourism development. This concept emphasises environmental preservation, empowerment of local communities, and economic sustainability in tourist destinations (Bramwell & Lane, 1993). In Indonesia, implementing green tourism is one of the efforts to deal with the negative impacts of tourism on the environment while supporting sustainable development goals. Research by Lagodiienko et al. (2022) shows that destinations that implement green tourism can increase tourist attraction while maintaining the balance of their ecosystems. With its extraordinary natural potential, Dodola Island in Morotai Island Regency is one of the ideal destinations for implementing this concept as a model of sustainable tourism.

Dodola Island, as part of a conservation area, faces significant challenges in managing its tourism potential without damaging the environment. Research by Hengky et al. (2020) found that the increase in the number of tourists is often accompanied by environmental degradation due to human activities, such as the disposal of plastic waste and damage to marine ecosystems. This challenge is also emphasised by Dodds (2007), who states that green tourism policies can reduce these negative impacts, such as through regulations that reduce waste and tourist education campaigns. Thus, implementing green tourism is a strategic solution to maintain a balance between the growth of the tourism sector and the environmental preservation of Dodola Island. This is important to ensure that the attractiveness of the destination is maintained while protecting biodiversity.

The success of the implementation of green tourism also depends heavily on the participation of local communities as the main actors in environmental preservation. Research by Khalid et al. (2019) shows that community empowerment through training and education on green tourism practices can increase their awareness of the importance of environmental preservation. In addition, Phoochinda (2019) emphasised that collaboration between local communities and the government in managing green tourism destinations can improve community welfare without sacrificing ecosystem sustainability. Thus, the success of green tourism on Dodola Island depends not only on government policies but also on the active involvement of local communities as guardians of the ecosystem and drivers of green tourism.

However, the success of the implementation of green tourism on Dodola Island still faces significant challenges. Limited supporting infrastructure, low tourist awareness of the concept of green tourism, and lack of human resources are the main obstacles. Research by Risfandini (2024) highlights the importance of tourist education and strengthening local policies as solutions to address these challenges. Pan et al. (2018) also revealed that technological innovation, such as digital-based waste management systems and green destination promotion, can accelerate the implementation of the green tourism concept in destinations with similar challenges. With integrated strategic efforts, these challenges can be overcome to ensure the effectiveness of green tourism implementation on Dodola Island.

This study aims to analyse the impact of green tourism on the sustainability of tourism on Dodola Island. This study will explore how the implementation of this concept affects the environmental, economic, and social aspects of the destination. Previous research by Wongthong and Harvey (2014) stated that integrated management between the government, local communities, and the private sector can create a sustainable green tourism model. This emphasises that collaboration between all stakeholders is essential to maximise the benefits of green tourism. By understanding the impacts and challenges of implementing green tourism, this study aims to provide strategic recommendations that support the management of Dodola Island as a sustainable tourism destination, benefiting not only tourists but also local communities and the environment.

## METHOD

This study uses a qualitative approach with a design model formulated by Creswell. This study employs a case study design, which, according to Creswell (2014), is a practical approach to exploring phenomena in a naturalistic context. This case study was conducted to examine the impact of implementing green tourism on the environmental, social, and economic aspects of Dodola Island. The study was conducted on Dodola Island, Morotai Island Regency, which is known as one of the tourist destinations with great potential for implementing green tourism. The subjects of this study included local communities, tourist destination managers, tourists, and the local government. The object of the study is the implementation of the green tourism concept on Dodola Island and its impact on tourism sustainability. This study uses a purposive sampling technique to select informants who are relevant to the focus of the study. The sample criteria include: 1) Local communities directly involved in managing tourist destinations, 2) Destination managers or government officials responsible for tourism policies, and 3) tourists who have visited Dodola Island within the last six months. A total of 15 informants were selected, comprising eight local communities, three destination managers, and four tourists. Data Collection Techniques in this study with Creswell's (2014) theoretical approach emphasise the importance of using various data collection methods to ensure the validity and accuracy of the findings. In this study, data were collected through In-depth Interviews, Participatory Observation and Documentation. To ensure the validity and validity of the data, this study used a triangulation strategy of methods and sources. Data obtained from interviews, observations, and documentation were compared to verify the consistency of the findings. In addition, member checking was carried out by asking informants to re-check the interpretation of the data to ensure accuracy. Data analysis

was carried out through a thematic analysis approach as suggested by Creswell, namely Data Organization, Overall Data Reading, Data Coding and Interpretation of Findings.

## **RESULTS AND DISCUSSION**

### **Research Result**

Based on the analysis of data collected through in-depth interviews, participatory observation, and documentation, it was found that the implementation of the green tourism concept on Dodola Island has a significant impact on tourism sustainability. The results of this study are summarised into three main aspects: environmental, social, and economic.

#### **1. Environmental Impact**

The implementation of green tourism on Dodola Island has succeeded in reducing the negative impact on the local ecosystem. For example, efforts to manage plastic waste through tourist education campaigns have succeeded in reducing the use of single-use plastics. One informant from the destination manager stated, "We have seen a significant decrease in the amount of plastic waste on the beach since the 'bring your own bottle' campaign began." In addition, the management of the coral reef ecosystem through a marine rehabilitation program has also shown positive results, where around 20% of the damaged coral reef area has begun to show signs of recovery. This shows that the implementation of green tourism can maintain the balance of the Dodola Island ecosystem.

#### **2. Social Impact**

The local community has increased awareness of the importance of environmental conservation. Training programs organised by the destination manager have succeeded in increasing community involvement in tourism management. One resident said, "This training helps us understand how to protect the environment while earning additional income from tourism." In addition, collaboration between local communities and local governments in managing community-based tourism creates a more harmonious relationship and contributes to social stability. This awareness is an important foundation for building sustainable tourism.

#### **3. Economic Impact**

The implementation of green tourism has increased the income of local communities, primarily through community-based tourism activities. Some communities that previously relied solely on the fisheries sector have now begun to diversify their income through tour guide services, snorkelling equipment rentals, and managing environmentally based homestays. One resident stated, "With this tourism, my income has doubled compared to before." However, the main challenge is the limited supporting infrastructure, such as transportation and access to markets, which still hinders the optimisation of local economic potential.

### **Discussion**

#### **1. Contribution of Green Tourism to Environmental Sustainability**

The results of this study confirm the findings of Lagodiienko et al. (2022), which suggest that green tourism has significant potential in promoting environmental sustainability. Efforts to manage plastic waste on Dodola Island show that consistent tourist education campaigns can reduce the negative impacts of tourism on the ecosystem. In addition, marine rehabilitation programs involving local communities show that community participation is key to maintaining the environmental sustainability of tourist destinations.

## **2. The Role of Community Empowerment in Social Sustainability**

The empowerment of local communities on Dodola Island supports the findings of Khalid et al. (2019), which emphasise the importance of community support in the implementation of green tourism. Increased awareness of environmental conservation not only creates social sustainability but also strengthens the relationship between local communities and stakeholders. With relevant training, local communities can actively contribute to tourism management, which ultimately improves their quality of life.

## **3. Challenges and Opportunities in Economic Sustainability**

The economic impact of green tourism on Dodola Island is consistent with research by Phoochinda (2018), which states that diversifying income sources through community-based tourism can improve the economic welfare of the community. However, the limitations of supporting infrastructure indicate that the implementation of green tourism on Dodola Island is not yet fully optimal. To overcome this, government investment is needed in infrastructure development, such as transportation and public facilities, as proposed by Pan et al. (2018).

## **4. Implications for Sustainable Tourism Management**

Overall, this study shows that the implementation of green tourism on Dodola Island has a significant positive impact on environmental, social, and economic sustainability. However, this success is highly dependent on collaboration between local communities, destination managers, government, and tourists. These results support the study of Dodds (2007), which states that the success of green tourism requires clear policies and active participation from all stakeholders.

Thus, the results of this study indicate that green tourism is a practical approach to support tourism sustainability on Dodola Island. With the right strategy and collaboration between local communities and

## **CONCLUSION (HEADING 1 STYLE)**

This study shows that the implementation of green tourism on Dodola Island has a significant positive impact on tourism sustainability, especially in three main aspects: environmental, social, and economic. In terms of the environment, the implementation of plastic waste management and marine ecosystem rehabilitation programs has successfully maintained the balance of the ecosystem on Dodola Island, reducing the negative impacts of tourism on nature. This confirms that green tourism strategies involving tourist education and local community involvement can create sustainable environmental impacts. In terms of social aspects, empowering local communities through training and involvement in managing tourist destinations increases their awareness of the importance of environmental conservation. This improvement not only supports social stability but also strengthens the relationship between the community and tourism stakeholders. In terms of the economy, green tourism has made a real contribution to increasing local community income through job diversification in the tourism sector. However, this study also found that limited supporting infrastructure is one of the main obstacles to optimising existing economic potential. Overall, the implementation of green tourism on Dodola Island provides evidence that this concept can support sustainable tourism. The success of implementation depends on strong collaboration between local communities, destination managers, tourists, and the government. Therefore, a more integrated strategy is needed, including strengthening infrastructure and supporting policies, to overcome existing challenges and maximise the benefits of green tourism on Dodola Island. With a comprehensive approach, Dodola Island has the potential to become a model of green tourism that can be emulated in other destinations in Indonesia.

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