

Sustainable Tourism in 2024: The Role of Tourists and Industry in Preserving Marine Nature

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Abstract

In 2024, sustainable tourism will become the main focus of the global tourism industry, especially in preserving marine nature that is vulnerable to environmental damage. Marine tourism, such as diving and snorkeling, is increasingly popular, but also poses a threat to marine ecosystems. These tourism activities have had serious impacts on coral reefs, fish populations, and seawater quality. Therefore, a collaborative strategy is needed between tourists and the industry to create a balanced positive impact. The tourism industry is required to introduce environmentally friendly tourism practices, while tourists need to be educated to be aware of the impact of their activities on the environment. This study aims to identify the role of tourists and industry in preserving the ocean through sustainable tourism practices in Indonesia. This study uses a Systematic Literature Review (SLR) approach to examine scientific studies and relevant practices in sustainable marine tourism management. Based on the results of the analysis, it was found that collaboration between tourists, industry, and government can increase the effectiveness of marine conservation. On the other hand, there are challenges related to implementation costs, as well as public understanding of the importance of a healthy marine ecosystem. Therefore, increasing public awareness and strong policy support are important to ensure the sustainability of the tourism sector and the sustainability of the marine environment in Indonesia.

Keywords: Sustainable tourism, marine tourism, marine sustainability, Indonesia.

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1. Introduction

Climate change and increased tourism activities have threatened the sustainability of marine ecosystems around the world, including in Indonesia. As the largest archipelagic country, Indonesia has very high marine biodiversity wealth, such as coral reefs and fish populations that play an important role in maintaining the balance of the global ecosystem (Setiawan, 2023). Climate change and increased tourism activities are serious threats to the sustainability of marine ecosystems around the world, including Indonesia. As the largest archipelagic country, Indonesia has more than 17,000 islands and is known as the world's center of marine biodiversity. Indonesia's rich marine ecosystems include coral reefs, seagrass beds, mangrove forests, and various species of fish and other marine animals. These ecosystems not only support the lives of coastal communities but also play an important role in maintaining the balance of the global ecosystem. However, the impacts of climate change such as warming sea water and increased ocean acidity due to carbon emissions have caused serious damage, including the phenomenon of coral bleaching. Damaged coral reefs lose their function as habitats for thousands of marine species, disrupt the food chain, and reduce the



natural protection of the coast from erosion and large waves. In addition, unsustainable tourism activities, such as coral-damaging diving, plastic waste, and coastal development without regard to environmental impacts, are further deteriorating the condition of marine ecosystems. These threats require immediate attention, considering that Indonesia's marine ecosystems contribute greatly to global climate stability, carbon absorption, and world biodiversity. Protection efforts must include sustainable tourism management, strict regulations on human activities in coastal areas, education for tourists, and collaboration between the government, local communities, and the private sector. With these steps, the sustainability of marine ecosystems that are vital to Indonesia and the world can be maintained (Hidayat, et al. 2024).

However, the increasing interest in marine tourism has negative impacts on the environment, ranging from pollution to habitat destruction. The sustainability of existing marine ecosystems is not only important for biodiversity, but also has direct implications for local economies that depend on tourism (Sari, 2022). The growth of marine tourism in Indonesia, especially in popular areas such as Bali, Lombok, and Raja Ampat, brings significant economic benefits to local communities. However, behind that, there is a big problem in the form of pollution and damage to coral reefs due to irresponsible tourist behavior and unsustainable tourism management. The growth of marine tourism in Indonesia, especially in popular destinations such as Bali, Lombok, and Raja Ampat, has had a very positive economic impact on local communities. With the increase in domestic and international tourist visits, the local economy is helped through job creation, increased income from the hotel, transportation, restaurant, and other tourism service sectors. Marine tourism has also become an important source of income that supports infrastructure development in these areas.

However, behind these significant economic benefits, there are major challenges in the form of pollution and environmental damage, especially to highly vulnerable coral reefs. Unsustainable tourism activities, such as diving without professional guidance, snorkeling that damages coral, and indiscriminate littering by tourists, have caused serious damage to marine ecosystems. Plastic and other waste thrown into the sea can entangle or poison marine life, while physical contact with fragile coral reefs can break or permanently damage coral structures. In addition to irresponsible tourist behavior, tourism management that does not pay attention to sustainability aspects is also a contributing factor to the damage. The lack of strict regulations regarding the number of tourists in ecologically sensitive areas, inadequate waste management, and lack of education about environmentally friendly tourism behavior exacerbate this condition. As a result, several coral reef areas in popular tourist areas have experienced a drastic decline in health, which can ultimately threaten the beauty and attractiveness of the tourist destination itself (Sajriawati, 2024).

To address this issue, a holistic and sustainable approach is needed in managing marine tourism in Indonesia. The government and stakeholders in the tourism sector need to set strict regulations regarding the number of tourists, waste management, and coral reef protection. In addition, educating tourists about environmentally friendly tourism behavior and training for local tourism actors is essential so that the marine ecosystem remains protected and can be enjoyed by future generations. By implementing sustainable tourism practices, Indonesia can continue to develop its marine tourism without sacrificing environmental sustainability.

According to research by Widodo (2021), the increase in plastic waste and carbon footprints resulting from tourism activities have a major impact on the decline in water quality and damage to coral reefs. Therefore, the implementation of responsible tourism practices is very important. In response to this problem, various countries have begun to adopt the concept of sustainable tourism, which prioritizes environmental protection and the welfare of local communities. Indonesia as one of the global tourist destinations has also made similar efforts. A study by Rahmawati (2022) shows that sustainable tourism strategies in Indonesia are starting to develop with the implementation of various conservation policies. However, the role of tourists and the tourism industry is often overlooked in this initiative, which focuses on regulations without involving them as stakeholders. Tourists as direct users of marine

resources have an important role in preserving the environment. Research by Nugroho (2022) states that educating tourists about the impact of their behavior on marine ecosystems can reduce the ecological footprint. On the other hand, the tourism industry as a facilitator is also responsible for ensuring tourism practices that have minimal negative impacts, such as providing environmentally friendly facilities and supporting conservation infrastructure.

Despite initiatives from the government and non-governmental organizations, support from tourists and tourism industry players is still minimal. Despite a number of initiatives from the government and non-governmental organizations to develop sustainable tourism, support from tourists and tourism industry players is still relatively minimal. One of the main reasons is the lack of awareness and education among tourists regarding the impact of their activities on the environment, especially marine ecosystems. Many tourists do not fully understand the importance of preserving nature while traveling, so they tend to ignore environmentally friendly behavior, such as littering or damaging coral reefs. In addition, although the tourism industry in Indonesia has begun to make efforts to adopt environmentally friendly policies, many industry players prioritize short-term profits over long-term sustainability. The lack of incentives to encourage tourists to behave more responsibly, as well as the industry's inability to provide rewards for tourists who support sustainability, further exacerbates this problem. On the other hand, government policies that support sustainable tourism are often hampered by weak supervision and lack of coordination between stakeholders, both at the central and regional levels. In fact, even though there are policies that have been implemented, such as limiting the number of tourists or reducing plastic waste, implementation in the field is still far from expectations. This is exacerbated by the conflict of interest between conservation efforts and economic pressures to increase tourist numbers in order to increase regional income. In addition, the lack of infrastructure that supports environmentally friendly tourism practices in many destinations is also a major obstacle. Without adequate facilities, such as efficient waste management systems or environmentally friendly transportation, it is difficult for tourists to behave in accordance with the principles of sustainability. Therefore, although there have been positive steps, there are still many challenges that need to be overcome so that sustainable tourism can develop more effectively in Indonesia.

A study by Pratama (2023) revealed that most tourists still do not understand the importance of maintaining marine ecosystems, which is exacerbated by the lack of effective regulations from the government. Therefore, a more holistic approach is needed that involves all stakeholders in order to achieve sustainable tourism goals. With increasing awareness of the negative impacts of tourism activities, both tourists and the tourism industry are expected to play an active role in maintaining marine sustainability. This study seeks to identify collaborative strategies that can be implemented by tourists and the industry to minimize negative impacts, and make marine tourism in Indonesia a model of sustainable tourism that can be emulated by other countries.

2. Method

This study uses Systematic Literature Review (SLR) as a method to analyze relevant studies related to sustainable tourism in the marine tourism sector. This approach was chosen because SLR allows researchers to collect, filter, and review various existing research results systematically and in a structured manner. SLR aims to provide a more comprehensive picture of the role of tourists and the tourism industry in preserving marine nature. This process begins with the identification of relevant literature, followed by filtering based on predetermined criteria, to an in-depth analysis of the findings of existing research.

Data Collection Instruments

The main instrument in collecting data for this research is a literature search conducted through academic databases, scientific journals, articles, and policy documents published in the last five years, with a focus on Indonesia. The literature search focused on research discussing the topics of sustainable tourism, marine environmental management, and the contribution of tourists and industry in preserving marine ecosystems. Several databases used

in the literature search include Google Scholar, Scopus, and national journal databases such as Garuda (Garba Rujukan Digital) and trusted university journal portals. In addition, articles published by non-governmental organizations and government policy reports related to sustainable tourism were also included in this study.

In the literature selection process, two main criteria were applied: inclusion criteria and exclusion criteria. Inclusion criteria include: (1) literature relevant to the theme of sustainable tourism in the marine tourism sector, (2) research discussing the role of tourists and industry in preserving marine nature, (3) studies that focus on Indonesia or have contextual relevance to the situation in Indonesia, and (4) articles published in journals or official reports in the last five years. Meanwhile, exclusion criteria include: (1) studies that do not discuss aspects of sustainability or marine environmental management, (2) articles that are not relevant to the marine tourism sector, and (3) literature that has an unclear or unaccountable methodology.

Data analysis

The data analysis process in this study was carried out qualitatively by integrating findings from selected studies. The first step in the analysis was to categorize the findings based on key topics or issues, such as the role of tourists in preserving marine nature, policies implemented by the tourism industry, and challenges and opportunities faced in implementing sustainable tourism. Each article analyzed was then examined to identify strategies proposed or implemented by the tourism industry, and how these policies interact with tourist behavior in the context of marine environmental conservation.

After categorization, a thematic analysis was conducted to find patterns or trends that emerged from the existing studies. For example, whether there are certain tendencies in policies implemented by governments or industries that have successfully supported sustainable tourism, or whether there are differences in the impact of these policies between one tourism area and another. In addition, this study also assessed the quality of the methodology in each article analyzed, by assessing whether the study used the right approach to reach valid and relevant conclusions.

As a final step, a synthesis of the findings was conducted to draw general conclusions regarding the role of tourists and the industry in preserving marine nature and to identify policy recommendations that can be implemented in the future. The results of this synthesis provide a comprehensive view of the existing challenges and effective strategies in managing sustainable tourism in coastal and marine areas of Indonesia. Overall, the data collection and analysis process carried out in this study aims to identify concrete steps that can be taken by various parties, including the government, tourism industry, and tourists themselves, to support marine nature conservation through sustainable tourism practices.

3. Results and Discussion

The results of the study show that tourists have a significant role in preserving the marine environment, especially through responsible behavior that can minimize negative impacts on the ecosystem. This is reflected in the findings that environmentally conscious tourist behavior, such as not littering, following the rules set by destination managers, and avoiding damage to coral reefs or other marine flora and fauna, can have a major positive impact on the sustainability of marine nature. Previous research has shown that tourists who are educated about the importance of preserving marine nature tend to be more obedient to existing rules and more careful in choosing tourism activities that do not damage the marine ecosystem (Firdaus et al., 2021). One successful example is the "green tourism" or ecotourism program implemented in several marine tourism destinations in Indonesia, where tourists are encouraged to participate in environmentally friendly activities, such as cleaning beaches or participating in coral reef restoration activities.

In addition, this study also found that awareness and education provided to tourists greatly influence their attitudes and actions during their travels. This education can be done in various ways, such as environmental awareness campaigns, direct counseling, or information provided at tourist attractions. By increasing tourist awareness, it is hoped that they can

contribute to preserving the environment and supporting sustainable tourism (Sajriawati, 2024). This study emphasizes the importance of the role of education in shaping more responsible and environmentally friendly tourist behavior, which can ultimately help preserve the beauty and attractiveness of tourist destinations. Education about the impacts of mass tourism on the marine environment, such as plastic pollution, coral reef damage, and loss of biodiversity, can increase tourist awareness of the importance of preserving nature (Irawati, et al. 2024). By providing clear and in-depth information about how tourism activities can damage the marine environment, tourists will be more aware and motivated to behave more responsibly. For example, they will be more careful in disposing of waste, avoiding the use of single-use plastics, and respecting marine habitats.

This education can be done in various ways, such as environmental awareness campaigns, direct counseling, or information provided at tourist attractions. By increasing tourist awareness, it is hoped that they can contribute to preserving the marine environment and supporting sustainable tourism. Research shows that tourists who receive education about the importance of protecting the environment tend to be more careful in their behavior, such as not littering, respecting local flora and fauna, and following the rules that apply at tourist destinations. One important finding from this study is that tourists who have a better understanding of the ecological consequences of their tourism activities tend to prefer to participate in activities that support sustainability and are more careful in choosing tourist destinations that prioritize environmental conservation (Hidayati et al., 2020). In addition to the influence of individual behavior, the results of the study also identified the role of tourists in supporting sustainable tourism policies implemented by destination managers. Many tourists showed a willingness to pay more if the proceeds could be used to support conservation efforts, such as contributions to coral reef conservation funds or waste management in tourist areas. This desire reflects the increasing awareness and concern of tourists for nature conservation, which can encourage more destinations to adopt sustainable tourism practices. However, this study also shows that although the role of tourists is very important, their positive impacts can be limited without adequate supervision and supportive policies. Therefore, to increase the role of tourists in preserving the marine environment, closer collaboration is needed between the government, tourism industry, and local communities. The government and tourism destination managers need to increase efforts to provide appropriate information and education to tourists, as well as provide facilities that support sustainability, such as efficient waste management and conservation programs that directly involve tourists. With this holistic approach, the role of tourists in preserving the marine environment can be maximized, so that the goal of sustainable tourism can be achieved (Nisak, 2023).

A study by Utami (2023) suggests that tourists who receive education regarding the impact of their behavior on the environment are more likely to adopt environmentally friendly practices. This proves that educational approaches need to be improved to encourage more responsible tourist behavior. The tourism industry in Indonesia also plays an important role in creating sustainable tourism through various initiatives, such as reducing the use of single-use plastics, creating conservation programs, and supporting local communities. According to research by Kusuma (2024), there is strong evidence that support from industry players can increase the effectiveness of marine environmental conservation. The industry is expected to collaborate with the government and local communities to create business models that support environmental sustainability. However, there are challenges in implementing sustainable tourism in the marine tourism sector, such as the high cost of procuring environmentally friendly infrastructure and the lack of public understanding of the importance of marine ecosystems. A study by Ananda (2023) shows that local community awareness of the impact of tourism activities on the environment is still low, requiring intervention from the government and the private sector. The government as a regulator needs to play a strategic role in supervising and regulating tourism activities in order to maintain the sustainability of marine nature. According to Susanto (2022), strict but flexible regulations will help ensure that tourism practices remain oriented towards environmental conservation without reducing tourist interest. These regulations should also be accompanied by incentive policies for industry players who

contribute to conservation programs. Based on the results of this study, tourists and the tourism industry have the same responsibility in preserving Indonesia's seas. Awareness and active involvement from both parties are the keys to the success of sustainable tourism that is in line with marine ecosystem conservation efforts in Indonesia. Tourists and the tourism industry have the same responsibility in preserving Indonesia's seas. Awareness and active involvement from both parties are the keys to the success of sustainable tourism that is in line with marine ecosystem conservation efforts in Indonesia (Marwan, M., & Isnaeni, N. 2022). Tourists need to be aware of the impact of their activities on the marine environment and behave responsibly, such as not littering, avoiding the use of single-use plastics, and respecting marine flora and fauna. Proper education and information can help increase this awareness (Abdul, A., & Mokodompit, EA 2024). On the other hand, the tourism industry must also play an active role in preserving the marine environment. This can be done by implementing environmentally friendly business practices, such as efficient waste management, the use of renewable energy, and supporting conservation programs. In addition, the tourism industry can also provide facilities and information that support tourists to behave in an environmentally friendly manner. Collaboration between tourists and the tourism industry is essential to achieving sustainable tourism goals. By working together, both parties can ensure that tourism activities not only provide economic benefits but also support marine ecosystem conservation efforts in Indonesia.

4. Conclusions

Sustainable marine tourism in Indonesia requires collaborative contributions from tourists, industry, and government. Tourists can contribute through responsible behavior, such as not littering, avoiding the use of single-use plastics, and respecting marine flora and fauna. Education and awareness about the importance of preserving the marine environment are essential to encourage this responsible behavior. The tourism industry needs to provide facilities and infrastructure that support environmental sustainability. This can include efficient waste management, the use of renewable energy, and supporting conservation programs. In addition, the industry must also provide information and education to tourists about sustainable practices that they can do while traveling. The government plays a role in regulating and ensuring that tourism activities are carried out in accordance with conservation principles. This includes creating and enforcing regulations that protect the marine environment, as well as supporting initiatives that promote sustainable tourism. The government can also work with industry and local communities to develop programs that support environmental sustainability. With the joint efforts of tourists, industry, and government, it is hoped that the Indonesian tourism sector can develop sustainably without damaging the invaluable marine biodiversity. This collaboration is important to ensure that tourism not only provides economic benefits, but also supports marine ecosystem conservation efforts in Indonesia.

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