



Environmental Education-Based Beach Tourism Development Model At The Marina Beach Area of Semarang City

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ABSTRACT

This study investigates and develops an environmental education-based beach tourism concept for Marina Beach in Semarang City. The qualitative case study research examines sustainable beach tourist development potential, obstacles, and methods using participatory observation, in-depth interviews, focus group discussions (FGD), and document analysis. Marina Beach has great potential as an environmental education-based tourism attraction, but environmental degradation, community disengagement, and infrastructural issues hinder it. The development approach incorporates sustainable tourism and ecotourism concepts with environmental protection, education and interpretation, community engagement, and multi-stakeholder collaborations. It takes stakeholder commitment, collaboration, and local adaptation to implement this strategy. Given its limitations and suggestions for further research, this study helps sustain beach tourism in Indonesia and worldwide.

INTRODUCTION

Tourism is recognized as one of the fastest expanding economic sectors, with major contributions to regional income and employment creation. According to figures from the Ministry of Tourism and Creative Economy (Kemenparekraf) of the Republic of Indonesia (2020), the tourism sector generated 4.80% of national GDP and employed 12.6 million people in 2019. However, unregulated tourist development can have a severe influence on environmental sustainability, particularly in vulnerable coastal areas (Dahal et al., 2021). Prakoso et al. (2022) discovered that tourism activities at Marina Beach in Semarang had resulted in decreased seawater quality and plastic contamination in the surrounding region.

To overcome these difficulties, a tourism development strategy focused on sustainability and environmental education is required (Putra et al., 2024). The term "sustainable tourism" refers to the development of tourism that serves the demands of existing tourists and local communities while also conserving and expanding future prospects. Meanwhile, environmental education-based tourism (or ecotourism) seeks to reduce negative consequences, raise environmental awareness, and bring direct financial advantages to nature conservation ((The International Ecotourism Society (TIES), 2019). Ecotourism concepts have been successfully implemented in Mount Gede Pangrango National Park (Purnomo et al., 2020) and Nglanggeran Village in Yogyakarta (Ayu & Sumarti, 2021).

Marina Beach in Semarang City is a promising and well-located beach tourist location in Central Java. The area is known for its natural beauty, biodiversity, and rich historical and cultural elements, which attract tourists. According to data Department of Culture and Tourism of Semarang City (2019), visitor visits to Marina Beach increased by 12.4% in 2018, reaching 689,465 individuals. However, tourist growth at Marina Beach confronts a number of issues, including environmental deterioration due to trash, pollution, land use change, and a lack of understanding and community engagement in conserving the region (Prakoso et al., 2022).

Previous research has looked into several factors of tourist growth at Marina Beach in Semarang. Wibowo et al (2018) conducted a SWOT analysis to assess the potential and growth plans for Marina Beach tourism. The studies found that Marina Beach has natural charms and decent accessibility, but it need improvements in infrastructure, advertising, and community engagement. Nugroho et al (2021) investigated the environmental effects of tourism activities at Marina Beach and discovered increasing garbage, damage to coastal vegetation, and decreased seawater quality. Meanwhile, Saputri & Mulyani (2023) explored local populations' opinions and engagement in sustainable tourism management at Marina Beach, finding that while most locals favor tourist growth, participation is restricted and has to be increased.

Despite various studies on tourist growth at Marina Beach in Semarang, there is no study particularly addressing a model for creating ecologically education-based beach tourism as a means of achieving sustainable tourism in the region. As a result, the purpose of this article is to investigate and propose a

model for establishing ecologically educational beach tourism that may be implemented at Marina Beach in Semarang City. The suggested model would incorporate ecotourism principles (The International Ecotourism Society (TIES), 2019), sustainable tourism ideas (UNWTO, 2020), and best practices from ecotourism developments in other Indonesian destinations (Ayu & Sumarti, 2021; Purnomo et al., 2020). This article is aimed to contribute theoretically and practically to sustainable tourism development in Semarang's coastal area by conducting a comprehensive literature research and developing a model customized to the conditions at Marina Beach.

LITERATURE REVIEW

Theory of Sustainable Tourism.

The World Tourism Organization (WTO) proposed the idea of sustainable tourism in 1988. The UNWTO (2020) defines sustainable tourism as "tourism that takes full account of its current and future economic, social, and environmental impacts, addressing the needs of visitors, the industry, the environment, and local communities." Sustainable tourism focuses on :

- a. optimizing environmental resource consumption.
- b. Respecting the authenticity of socio-cultural groups.
- c. Maintaining long-term economic viability
- d. Encouraging participation and collaboration among all stakeholders

The philosophy of sustainable tourism is an important basis for tourist growth in coastal regions like Marina Beach in Semarang. Implementing sustainable principles can assist reduce tourism's negative environmental consequences, maintain local traditions, and maximize economic advantages for communities (Prakoso et al., 2022; Saputra & Setiawan, 2018). In addition to sustainability principles, the idea of carrying capacity plays an essential role in sustainable tourist development. Carrying capacity is the greatest number of people that a tourist site can accommodate without causing harm to the physical, social, economic, and cultural settings (McCool & Lime, 2001). Assessing carrying capacity assists tourism managers in determining ideal visitor restrictions, managing spatial use, and developing impact mitigation methods (Prakoso et al., 2022).

Theory of ecotourism

Ecotourism is responsible travel to natural regions that protects the environment, supports local communities, and includes interpretation and education (The International Ecotourism Society (TIES), 2019). Ecotourism principles include minimizing negative physical, social, behavioral, and psychological impacts, building environmental and cultural awareness, providing positive experiences for visitors and hosts, providing direct financial benefits for conservation, generating financial benefits for local communities and private industry, providing memorable interpretative experiences, and designing and constructing facilities.

Ecotourism has become a popular option for establishing natural tourism sites in a variety of locales. Previous study has shown that ecotourism concepts

can help to conserve biodiversity (Purnomo et al., 2020), economically empower local populations (Ayu & Sumarti, 2021), and raise environmental awareness (Nugroho et al., 2021). In the case of Marina Beach in Semarang, creating ecologically education-based tourism can use ecotourism principles to promote coastal ecosystem preservation while improving the quality of life for nearby populations.

Ecotourism shares many similarities with biodiversity conservation ideas. According to Thapa & Karki (2022), ecotourism can help safeguard endangered species, preserve natural ecosystems, and fund conservation research and education. However, unregulated ecotourism expansion has the potential to have negative repercussions such as wildlife disturbance, vegetation deterioration, and environmental contamination (Nugroho et al., 2021). As a result, ecotourism planning and management must be approached with caution, taking into account conservation principles and environmental carrying capacity.

Coastal Tourism Development

Several prior studies have looked at different elements of beach tourist growth in Indonesia. Wibowo et al. (2018) used a SWOT analysis to create tourist development plans for Marina Beach in Semarang. The study's findings recommended measures such as creating natural and cultural tourist assets, improving facilities and accessibility, aggressive promotion, and community participation in tourism management.

Saputra & Setiawan (2018) researched community-based ecotourism development in Pemuteran Village, Bali. According to the findings, robust community engagement in ecotourism planning, execution, and supervision has boosted economic prosperity, protected coral reefs, and strengthened local institutions. The ecotourism development strategy in Pemuteran may be used to generate environmental education-based tourism at Marina Beach in Semarang. Prakoso et al. (2022) investigated the elements influencing coastal environmental quality at Marina Beach in Semarang. According to the research findings, tourism activities, trash disposal, and land use changes pose significant challenges to coastal environmental sustainability. To solve environmental challenges while maximising beach tourist potential, combined efforts from the government, commercial sector, and community are required.

Nugroho et al. (2021) assessed the environmental effect of tourism activities at Semarang's Marina Beach. The findings revealed increasing trash volume, damage to coastal flora, and saltwater contamination as a result of unregulated tourism activities. The study advocated for the application of ecotourism principles, stronger laws, and environmental education for tourists and local residents. Saputri & Mulyani (2023) investigated the attitudes and engagement of local populations in sustainable tourist management at Marina Beach in Semarang. While the majority of people favor tourist development, engagement rates are modest. To increase community involvement and active roles in sustainable beach tourism management, effective community empowerment techniques are necessary.

Theory of Social Change in the Tourism Context

Tourism growth has an influence not only on the economy and the environment, but also on local communities, potentially causing social change. Tourism, according to the Theory of Social Change, has the potential to be a change agent, introducing new values, ideas, and behaviors into established social systems. Interactions between visitors and local populations can result in cultural exchanges, norm shifts, and changes in lifestyle and spending habits (Pham, 2020).

In the framework of growing ecologically education-based beach tourism, societal changes such as improved awareness and community engagement in coastal environment preservation are anticipated. Active participation in ecotourism activities, such as becoming tour guides, service providers, or attraction managers, can help communities build knowledge, skills, and attitudes that promote sustainable practices. However, tourism-induced societal changes might have negative consequences, such as cultural commercialization, economic inequality, and social conflict (Pham, 2020). As a result, tourist development should take into account local populations' objectives and capacities, as well as work toward equitable benefit sharing.

Community Participation Perspective on Tourism Development

Community involvement is an essential component of sustainable tourist development. According to Tosun (2006), community involvement is the process by which local communities actively participate in the planning, decision-making, execution, and oversight of tourist operations. Participation may take several forms, including consultation, collaboration, and community empowerment (Saputri & Mulyani, 2023).

Previous study has shown that community engagement in tourist development may give a variety of benefits, including enhanced ownership, stronger local capacity, economic benefit distribution, and the protection of natural and cultural resources. Tosun (2006), on the other hand, lists a number of impediments to community engagement, including a lack of information, competing interests, power disparities, and a lack of institutional support.

In order to build ecologically education-based beach tourism in Marina Beach, Semarang, community engagement initiatives must be inclusive and adaptable. Steps that can be taken are: (1) social mapping to understand community needs, potentials, and aspirations; (2) stakeholder dialogues to build shared vision and action plans; (3) training and mentoring to strengthen community capacity in ecotourism management; (4) local institutional development to coordinate participation and benefit distribution; and (5) participatory monitoring and evaluation to ensure accountability and continuous improvement (Ayu & Sumarti, 2021).

METHODOLOGY

This study applies a qualitative approach using a case study design. The qualitative technique was adopted to acquire a thorough knowledge of the phenomena of creating ecologically educational beach tourism at Marina Beach in Semarang. The case study methodology allows for a thorough examination of the particular context, dynamics, and difficulties of tourist growth in the area (Yin, 2018b).

This study collects data using a variety of methods, including participant observation, in-depth interviews, Focus Group Discussions (FGDs), and document studies. The acquired data will be evaluated using thematic methods (Braun & Clarke, 2006). The analytical steps are as follows: transcription and familiarization with data, first coding, topic search, theme review, theme definition and naming, and report writing.

Several measures will be employed to guarantee that the research is legitimate and reliable:

1. **Triangulation:** The researcher will employ a variety of data sources, data collection methods, and theoretical viewpoints to ensure that the findings are consistent and credible (Creswell & Poth, 2018).
2. **Member checking:** The analysis findings will be reviewed with participants to verify that their experiences are accurately interpreted and represented (Yin, 2018a).
3. **Audit trail:** The researcher will meticulously document the whole study process, including methodological decisions, instrument construction, data collection, and analysis, to facilitate tracking and replication (Saputri & Mulyani, 2023).
4. **Reflexivity:** The researcher will critically assess their involvement, biases, and impact on the research. Reflexivity is essential for increasing transparency and honesty in the study process (Ayu & Sumarti, 2021).

RESEARCH RESULT

Based on thematic analysis of data obtained through participatory observation, in-depth interviews, Focus Group Discussions (FGDs), and document studies, many important themes emerged related the development of ecologically education-based beach tourism at Marina Beach in Semarang.

Theme 1: Potential for Environmental Education-Based Tourism

According to the research findings, Marina Beach in Semarang has tremendous potential for development as an environmental education-based tourism destination. The identified potentials include:

1. **Natural beauty and biodiversity:** Marina Beach has breathtaking natural scenery, including sandy beaches, mangrove vegetation, and a diversified flora and fauna species (Wibowo et al., 2018).
2. **Historical and cultural significance:** The region has historical landmarks such as the Portuguese Fort and Fisherman's Village, which exhibit cultural diversity and coastal community contact with the sea.

3. Environmental education activities: Tourists and local residents can participate in environmental education programs such as mangrove tours, bird watching, coral reef planting, and coastal ecosystem introduction (Nugroho et al., 2021).

Theme 2: Challenges for Sustainable Tourism Development

Despite its promise, Marina Beach's tourist growth confronts various hurdles to attaining sustainable tourism:

1. Environmental degradation: Unregulated tourism activities, such as inappropriate garbage disposal, vandalism, and natural resource exploitation, have harmed the coastal ecosystem (Prakoso et al., 2022).
2. Lack of awareness and community participation: Local communities are not fully engaged in the development, management, and oversight of tourist operations. Awareness of the need of environmental protection also requires improvement (Saputri & Mulyani, 2023).
3. Infrastructure and Facility Limitations: Infrastructure such as road access, waste management systems, and environmental interpretation facilities are insufficient to enable sustainable tourist development (Wibowo et al., 2018).

Theme 3: Strategies for Environmental Education-Based Tourism Development.

To solve issues and maximize tourist potential at Marina Beach, many techniques for creating environmental education-based tourism have been identified:

1. Zoning and carrying capacity management: By dividing the tourism area into zones with varying degrees of use and visitor carrying capacity restrictions, negative environmental consequences can be mitigated (McCool & Lime, 2001).
2. Development of environmental education programs: Tourism management, educational institutions, and environmental groups work together to plan and implement engaging, participatory, and locally relevant environmental education programs (Purnomo et al., 2020).
3. Community engagement: Active participation of local communities in tourist planning, management, and monitoring, along with capacity building and economic empowerment, can create ownership and responsibility for environmental protection (Ayu & Sumarti, 2021).
4. Multi-stakeholder partnerships Creating synergistic relationships between the government, the corporate sector, communities, and appropriate institutions can help to mobilize the resources, skills, and commitment required for sustainable beach tourism (Saputra & Setiawan, 2018).

Theme 4: A Model for Environmental Education-Based Beach Tourism Development

Based on the synthesis of identified potentials, obstacles, and tactics, a model for growing environmental education-based beach tourism at Marina Beach, Semarang, may be formed as follows:

1. underpinning: The principles of sustainable tourism (UNWTO, 2020) and ecotourism (The International Ecotourism Society (TIES), 2019) serve as the ethical underpinning for tourist development.
2. Pillars: Four interrelated and reinforcing major pillars are: (1) environmental conservation, (2) education and interpretation, (3) community engagement, and (4) multi-stakeholder partnerships.
3. Strategies: Each pillar has its own set of operational strategies, including zoning and carrying capacity, environmental education initiatives, community empowerment, and stakeholder engagement.
4. Impact: Expected positive outcomes include greater environmental knowledge and pro-environmental behavior, biodiversity protection, better community well-being, and high-quality, meaningful tourism experiences.

This approach highlights the significance of integrating and balancing environmental, social, economic, and institutional factors in sustainable beach tourist growth. Marina Beach in Semarang is projected to provide a good example for other coastal tourism sites in terms of responsible and beneficial tourism for all stakeholders by applying this concept.

DISCUSSION

The research findings provide insights on the possibilities, problems, tactics, and model for establishing ecologically education-based beach tourism in Marina Beach, Semarang. These findings are consistent with past studies and notions about sustainable tourism, ecotourism, and community involvement in coastal resource management.

Potential for Environmental Education-Based Tourism

The identified potentials for environmental education-based tourism at Marina Beach, Semarang, including natural beauty, biodiversity, historical-cultural values, and environmental learning opportunities, are consistent with ecotourism principles that emphasize conservation, education, and quality visitor experiences (The International Ecotourism Society (TIES), 2019). These findings are also consistent with prior studies demonstrating that ecotourism may successfully maintain biodiversity, improve environmental learning, and encourage environmentally beneficial behavior (Nugroho et al., 2021; Thapa & Karki, 2022).

Challenges for Sustainable Tourism Development

Identified problems in sustainable tourist growth, such as environmental deterioration, a lack of knowledge and community engagement, and infrastructural constraints, highlight the difficulty of managing tourism in coastal regions. These findings are consistent with prior studies demonstrating that unmanaged tourist operations can cause environmental harm, social conflicts, and economic inequality (Dahal et al., 2021; Prakoso et al., 2022). As a result, employing sustainable tourism concepts that consider environmental, social, and economic factors is critical (UNWTO, 2020).

Strategies for Environmental Education-Based Tourism Development

Identified measures for establishing environmental education-based tourism, including zoning and carrying capacity management, environmental education program creation, community engagement, and multi-stakeholder partnerships, are consistent with ecotourism and sustainable tourism principles. Zoning and carrying capacity management are critical methods for reducing negative tourist impacts on the environment while maintaining tourism quality (McCool & Lime, 2001). Well-designed environmental education initiatives can increase tourists' awareness, understanding, and appreciation of conservation ideals (Palupiningtyas et al., 2020; Purnomo et al., 2020; Sabrina Risky Permadani & Nina Mistriani, 2021).

Community involvement in the planning, management, and control of tourist activities is critical to attaining sustainable tourism (Tosun, 2006). Previous research has shown that strong community engagement may increase ownership, build local capacity, and promote equitable benefit distribution (Ayu & Sumarti, 2021; Saputra & Setiawan, 2018). Multi-stakeholder partnerships comprising the government, corporate sector, communities, and appropriate institutions are also essential for mobilizing resources, skills, and commitment to sustainable tourism development (Saputri & Mulyani, 2023).

Model for Environmental Education-Based Beach Tourism Development

The proposed model for developing environmental education-based beach tourism is based on sustainable tourism and ecotourism principles and includes four major pillars (environmental conservation, education and interpretation, community participation, and multi-stakeholder partnerships), reflecting a holistic and integrative approach to managing coastal tourism destinations. This paradigm is consistent with ecotourism's conceptual framework, which emphasizes the balance of conservation, community empowerment, and excellent tourist experiences (The International Ecotourism Society (TIES), 2019).

Implementing this concept at Marina Beach in Semarang is projected to maximize the potential of environmental education-based tourism, solve sustainability issues, and have a good influence on the environment, local people, and the economy. These findings are also useful for promoting sustainable coastal tourism in other similar places. However, successful implementation of this paradigm involves long-term commitment, sensitive facilitation, and ongoing adaptation by all stakeholders.

Environmental education has a role in changing tourist behavior

The study emphasizes the need of environmental education as a key component in promoting sustainable beach tourism at Marina Beach in Semarang. Well-designed environmental education programs can increase tourists' knowledge and understanding of environmental concerns while also encouraging ecologically responsible behavior (Nugroho et al., 2021). Previous study has shown that ecotourism experiences combined with excellent environmental interpretation can impact visitors' attitudes, beliefs, and actions towards nature conservation (Ardoin et al., 2015; Ballantyne & Packer, 2011).

However, altering visitor behavior through environmental education is not a quick or simple process. To fit the qualities and motives of visitors, interpretation tactics must be innovative, participatory, and culturally appropriate (Ham, 2016). Environmental education initiatives must also be smoothly interwoven into the overall tourist experience, rather being seen as add-ons or supplements (Powell & Ham, 2008). Furthermore, ongoing monitoring of the effects of environmental education programs on tourist behavior modification is required to assure efficacy and continual development (Stern et al., 2014).

Challenges to Community Participation in Ecotourism Development

Community involvement is an essential component of sustainable ecotourism development. However, the research findings highlight various barriers to establishing substantial and meaningful community engagement, including a lack of knowledge, ability, and local institutions (Saputri & Mulyani, 2023). These issues are consistent with prior studies showing a variety of hurdles to community engagement in ecotourism development, including knowledge gaps, competing interests, power disparities, and insufficient institutional support (Stone & Stone, 2020; Tosun, 2006).

To address these issues, a more inclusive, adaptable, and contextualized community engagement strategy is necessary. Strategies can include: (1) social mapping to understand community needs, potentials, and aspirations; (2) stakeholder dialogue to build shared vision and action plans; (3) training and mentoring to strengthen community capacities in ecotourism management; (4) local institutional development to coordinate participation and benefit distribution; and (5) participatory monitoring and evaluation to ensure accountability and continuous improvement (Ayu & Sumarti, 2021; Saputra & Setiawan, 2018). These strategies need long-term commitment, thoughtful facilitation, and supporting policies from a variety of stakeholders.

Implications of Sustainable Tourism Policy and Practice

The study's findings have important implications for sustainable tourism policy and practice, particularly in terms of establishing ecologically education-based beach tourism. The proposed development model, which is based on sustainable tourism and ecotourism principles and has four major pillars (environmental conservation, education and interpretation, community participation, and multi-stakeholder partnerships), can be used as a reference framework by policymakers, destination managers, and tourism practitioners to plan, implement, and evaluate sustainable beach tourism development.

However, the use of this paradigm must be adjusted to each destination's particular setting, taking into account local ecological, socio-cultural, economic, and institutional aspects. Collaboration between the government, tourism sector, local communities, educational institutions, and non-governmental groups is also required to successfully implement this strategy (Saputri & Mulyani, 2023). Conducive rules and regulations, proper incentives, and new finance methods are also required to ensure the model's long-term adoption (Purnomo et al., 2020).

Furthermore, the study underlines the significance of continuing research and assessment in monitoring impacts, identifying lessons learned, and adjusting tactics for establishing ecologically education-based beach tourism. Collaboration among academics, practitioners, and communities to generate relevant and usable information is critical for driving innovation and continual improvement in sustainable tourism development (Ayu & Sumarti, 2021).

CONCLUSIONS AND RECOMMENDATIONS

Based on the research findings on the development model of environmental education-based beach tourism in Marina Beach area, Semarang City, the following conclusions and implementations may be made:

1. Marina Beach in Semarang City has great potential for development as an environmental education-based tourism destination, thanks to its natural beauty, biodiversity, historical-cultural significance, and chances for environmental learning. These potentials are consistent with ecotourism concepts that prioritize conservation, education, and high-quality tourism experiences.
2. Marina Beach's beach tourist expansion has various hurdles to attaining sustainable tourism, including environmental deterioration, a lack of knowledge and community engagement, and infrastructural limits. These problems illustrate the complexities of coastal tourist management and highlight the significance of implementing sustainable tourism concepts that consider environmental, social, and economic factors.
3. Strategies for developing environmental education-based tourism include zoning and carrying capacity management, educational program development, community participation, and multi-stakeholder partnerships, all of which reflect a holistic and integrative approach to ecotourism and sustainability. These tactics must be executed in an adaptable and contextualized manner, taking into account local traits and dynamics.
4. The proposed model for developing environmental education-based beach tourism, which is based on sustainable tourism and ecotourism principles and has four major pillars (environmental conservation, education and interpretation, community participation, and multi-stakeholder partnerships), offers a conceptual and practical framework for achieving responsible, sustainable, and beneficial beach tourism.

ADVANCED RESEARCH

This study shed light on the development paradigm of environmental education-based beach tourism in Marina Beach, Semarang City. However, like with previous studies, this research has significant limitations that must be acknowledged and addressed in future research, including:

1. This study is confined to a single area, Marina Beach Semarang. While the research findings can provide useful insights, generalizing them to other beach tourist sites must be done with caution, taking into account each destination's unique qualities in terms of ecology, socioculture, economics, and institutions.
2. This study takes a qualitative approach using a case study style. While this technique allows for a thorough examination of the phenomena of creating environmental education-based beach tourism, it has limits in terms of statistical generalization and establishing cause-effect linkages between variables. Quantitative or mixed-methods approaches might enhance the knowledge gathered from this study.
3. This study's data gathering took place during a restricted time span. Despite using data triangulation and various data collection methods to improve the validity and reliability of findings, longitudinal research over a longer period of time could provide a more comprehensive understanding of the dynamics and long-term consequences of developing environmental education-based beach tourism.
4. The study focuses on the opinions of important stakeholders including tourism managers, government officials, local people, and visitors. However, the viewpoints of other players, such as non-governmental organizations, educational institutions, and the larger tourist sector, have not been extensively investigated. Involving a larger range of stakeholders may improve knowledge of the complexity of sustainable beach tourist development.

Recommendations for Future Research:

1. Future study might widen the scope by include additional beach tourist sites with varying features. Comparative studies across locations can provide light on the contextual aspects that influence the implementation of environmental education-based beach tourist development models, as well as uncover best practices and cross-contextual learning.
2. Quantitative or mixed-methods research approaches can be used to empirically test relationships between key variables in the environmental education-based beach tourism development model, such as environmental education program effectiveness, community participation levels, and tourism activities' economic and environmental impacts. These methods can supplement qualitative findings and improve the evidence foundation for decision-making and policy formation.
3. Longitudinal study over a longer time period can be used to better understand the long-term dynamics and cumulative effects of environmental education-based beach tourist development. Such studies can look at how views, behaviors, and socio-ecological variables evolve over time, as well as uncover

elements that promote or impede the long-term sustainability and resilience of beach tourist locations.

4. Future study might involve a broader range of stakeholders, such as non-governmental organizations, educational institutions, the tourist sector, and other relevant parties. Diverse viewpoints can help us better understand the roles, responsibilities, and power dynamics in sustainable beach tourist development, as well as identify potential and obstacles for multi-stakeholder engagement.
5. Participatory action research may be used to actively include local people in the research process and decision-making for environmental education-based beach tourist development. This strategy can increase community capacity and empowerment, ensuring that research has a direct and relevant impact on local populations.

Understanding of the environmental education-based beach tourist development model may be enhanced and expanded by taking into account present research limitations and making future research suggestions. Continued research efforts can help to produce more effective, inclusive, and contextual theories, policies, and practices for sustainable tourism, fostering positive change in the management of coastal tourism sites in Indonesia and across the world.

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