



Tourist Perceptions of Marine Ecotourism in the Seribu Islands, DKI JAKARTA

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ABSTRACT

Kepulauan Seribu, a district in DKI Jakarta Province, consists of 110 islands with only 11 inhabited islands. This study identifies tourist perceptions of marine ecotourism in Kepulauan Seribu using quantitative descriptive analysis through questionnaires distributed to 150 domestic tourists selected through accidental sampling. This technique in this study uses Importance Performance Analysis. The results of the study indicate that in the 5A Tourism component, tourist destinations lack adequate hotel facilities and sufficient trash bins. In the Ecotourism Sustainability Dimension component, waste disposal facilities are inadequate, and managers cannot provide accurate information about flora and fauna on Pari Island. In addition, there is a mismatch between the quality of service and the price paid by tourists, which indicates that there are things that need to be improved in tourism management and infrastructure development.

INTRODUCTION

Tourism is one of the development sectors currently being developed by the government, as tourism is considered to have a very important role in Indonesia's development, particularly as one of the regional and national income sectors. Tourism in Indonesia is one of the important economic sectors. Besides being an economic driving force, tourism is considered capable of reducing unemployment rates. In the national economy, tourism is a sector expected to increase income through foreign exchange earnings (Aliansyah & Hermawan, 2019).

Indonesia as a developing country has diverse territories, with approximately 65% of its area consisting of waters. One important coastal area is the Thousand Islands, part of DKI Jakarta Province, which consists of 110 islands—only 11 of which are inhabited, while the rest are used for recreation, conservation, and other purposes. Ecotourism is an environmentally friendly form of tourism that emphasizes nature conservation, local community empowerment, and education. This concept developed as a response to the negative impacts of conventional tourism, such as environmental damage, local cultural shifts, and reduced community roles in tourism development.

Ecotourism is regulated in Minister of Home Affairs Regulation No. 33 of 2009 as responsible nature tourism that considers education, conservation, and improving local community income. Ecotourism has become an important sector in tourism development in Indonesia, including as part of the strategy to achieve the target of 20 million tourist visits in 2019. Nature tourism, including ecotourism, is projected to contribute 35% of total visits, with details of ecological tourism (45%), marine tourism (34%), and adventure tourism (26%). The success of ecotourism is measured by the sustainability of socio-cultural, environmental, and economic aspects that align with local conditions.

The Thousand Islands was designated as a Marine National Park by the Minister of Forestry Decree No. 6310/Kpts-II/2002. The zoning designation in the Thousand Islands Marine National Park (TNKpS) was based on the Director of Forest Protection and Nature Conservation Decree No. SK.05/VI-KK/2004, which divides the TNKpS area into 4 zones: Core Zone, Protection Zone, Tourism Utilization Zone, and Settlement Zone. The Thousand Islands Marine National Park (TNKpS) is composed of small island ecosystems and shallow marine waters, consisting of archipelago clusters with 78 small islands, 86 island sandbanks, shallow sea expanses, fringing reef coral reefs, mangroves, and seagrass beds (Nurjanah et al., 2012)

LITERATURE REVIEW

Beach and Coastal Tourism Perceptions

Prayitno et al. (2021) conducted a comprehensive assessment of tourist perceptions at Ketapang Beach, revealing significant variations in visitor satisfaction across different attraction components. The study identified outbound activities and camping grounds as the highest-rated aspects from the tourist perspective, demonstrating strong appeal for adventure-based recreational offerings. Conversely, souvenir availability received the lowest perception scores, categorized as sufficient but requiring improvement. The

research highlighted critical infrastructure development needs, specifically emphasizing the necessity for main road access widening, road divider installation, and parking area expansion to enhance overall visitor experience and destination accessibility.

Natural Attraction Tourism Perceptions

Putri, G. A. A. F. A., & Tripalupi, L. E. (2022) examined tourist perceptions of Angseri Hot Springs Tourist Attraction, focusing on the relationship between natural beauty and supporting facility adequacy. Their findings emphasized that unique natural characteristics serve as primary attraction factors, while supporting facilities play crucial roles in providing accessible and comfortable visitor experiences. The study demonstrated the importance of balancing natural resource preservation with infrastructure development to optimize tourist satisfaction and destination competitiveness.

Marine Ecotourism Perceptions

Pristiwasana and Br.Ht.Gaol (2024) provided significant insights into marine ecotourism development perceptions through their investigation of Anambas Islands Regency. The research identified tourist and local community perceptions as primary indicators and benchmarks for assessing marine tourism development potential. Their findings revealed diverse community perceptions regarding tourism development within their territory, highlighting the complexity of stakeholder perspectives in destination planning. The study emphasized that Anambas Islands Regency possesses unique tourist attractions distinct from other areas in Riau Islands, suggesting competitive advantages based on distinctive natural resources and cultural characteristics.

Millennial Tourist Perceptions in Ecotourism

Sugih Setiawan Nisa Rahmaniyah Utami from Bogor Tourism College et al. (2022) contributed specialized insights into millennial tourist perceptions of ecotourism through their assessment of Situ Gede destination. The research revealed that Attraction and Ancillary Services criteria required priority development based on millennial tourist evaluations, indicating inadequate performance in these areas. The study proposed specific infrastructure enhancements, particularly cycling track additions, to increase destination appeal for millennial market segments. These findings highlight the importance of generation-specific tourism product development and the need for activity diversification in ecotourism destinations.

Religious Tourism Perceptions

Rahman et al. (2020) expanded the tourism perception literature by examining halal tourism from a cross-cultural perspective, providing evidence for the growing significance of religious considerations in destination selection. Their research demonstrated that halal tourism products and services significantly influence tourist satisfaction across diverse visitor demographics, ultimately creating loyalty intentions for future travel to Muslim-friendly

destinations. The study revealed that non-Muslim tourists increasingly consider halal tourism offerings when selecting destinations, indicating broader market acceptance and the potential for religious tourism products to attract diverse visitor segments.

METHODOLOGY

This study examines tourists' perceptions of marine ecotourism in Thousand Islands, specifically focusing on Pari Island in DKI Jakarta as the research location. The research employs a mixed-method approach utilizing both primary and secondary data sources, where primary data was obtained directly from tourists visiting Pari Island through surveys and structured interviews, while secondary data was gathered from relevant literature, journals, and official documents to provide comprehensive analytical support.

The sampling methodology employed non-probability sampling with an accidental sampling technique, determining sample size using the Hair formula which applies to Structural Equation Modeling (SEM) analysis. According to Hair et al. (2010), the minimum sample size requires 5 to 10 observations per indicator variable in the questionnaire. Respondents were selected based on specific criteria including having visited Pari Island at least once or currently vacationing there, and being at least 17 years old, which according to Hurlock (2006) represents adult age and legal maturity. Data collection incorporated multiple techniques including observation, interviews, structured questionnaire surveys, photographic documentation, and literature review, while data analysis utilized Importance-Performance Analysis (IPA), a descriptive analysis technique developed by Martilla and James in 1977 that identifies critical performance factors organizations must demonstrate to meet service user satisfaction and consumer expectations.

RESULT AND DISCUSSION

Table 1. Value of Tourist Expectations and Satisfaction in Tourist Perceptions of Marine Ecotourism in the Seribu Islands

Variable	Sub-Variable	Statement	Expectation	Satisfaction
Tourism Component	Attraction	Tourists can enjoy the beauty of sunrise and sunset	3.73	2.99
		Pari Island has beautiful seawater	3.55	3.37
		There is richness and abundance of wildlife in Pari Island	3.51	2.91
		Snorkeling and diving activities are available to enjoy the underwater beauty	3.58	2.99

	Activity	Tourists can camp on Pari Island	3.65	3.25
		Activities offered in Pari Island provide new experiences	3.64	2.98
	Accessibility	Bicycle rental is available to explore the island	3.71	3.00
		Clear and informative signage is available to guide to tourist attractions	3.45	3.35
		Accessible marine transportation to the island is available	3.36	2.95
	Accommodation	Adequate accommodation support facilities	2.46	3.42
		Accommodation is in a clean condition	2.65	3.71

		Accommodation staff are friendly and pleasant	3.17	3.08
Ecotourism Sustainability Dimension	Amenity	Trash bins are available at several strategic points around the island	2.54	3.58
		Food stalls are available for tourists	3.32	3.23
		Adequate souvenir shops are available	3.27	3.23
	Conservation	The coral reef ecosystem in Pari Island is well-preserved and diverse	3.33	3.31
		The mangrove ecosystem in Pari Island is preserved to maintain environmental balance	3.58	3.28
		Waste management in Pari Island is carried out properly to prevent environmental pollution	3.25	3.04
		Local residents of Pari Island are prioritized in recruitment	3.36	3.32

	Participation	Tourism is developed according to community decisions	3.57	3.26
		Enhancing community empowerment and local business opportunities	3.49	3.35
	Recreation and Education	Environmental education programs are provided for tourists	3.39	3.20
		Information about flora, fauna, and ecosystems in Pari Island is presented attractively and understandably	2.71	3.69
		Tourism activities are designed for enjoyment	3.72	3.28
	Economy	Prices of products and services in Pari Island match the quality offered	2.77	3.74
		Tourism development in Pari Island increases community income	3.71	3.27
		Increases regional original income	3.47	3.37
	Government	The government supports local economic empowerment through tourism activities	3.31	3.24
		Government development is aligned with the needs of the local community	3.44	3.40
		Adequate support facilities are provided by the government	3.48	3.33

Source : Data Analyzed, 2025

Based on Table 1 , it can be seen that the intersection point on the Y axis (horizontal) is 3.27, while the intersection point on the X axis (standing) is 3.34. The following are the results of the quadrants for each indicator of the four dimensions depicted in the Cartesian diagram, which can be seen in Figure 1 below: This mapping allows for a more in-depth analysis of tourist performance and expectations, making it easier to evaluate aspects of ecotourism services that need to be improved or maintained. That way, tourism management strategies can be more focused and in accordance with tourist perceptions and needs.

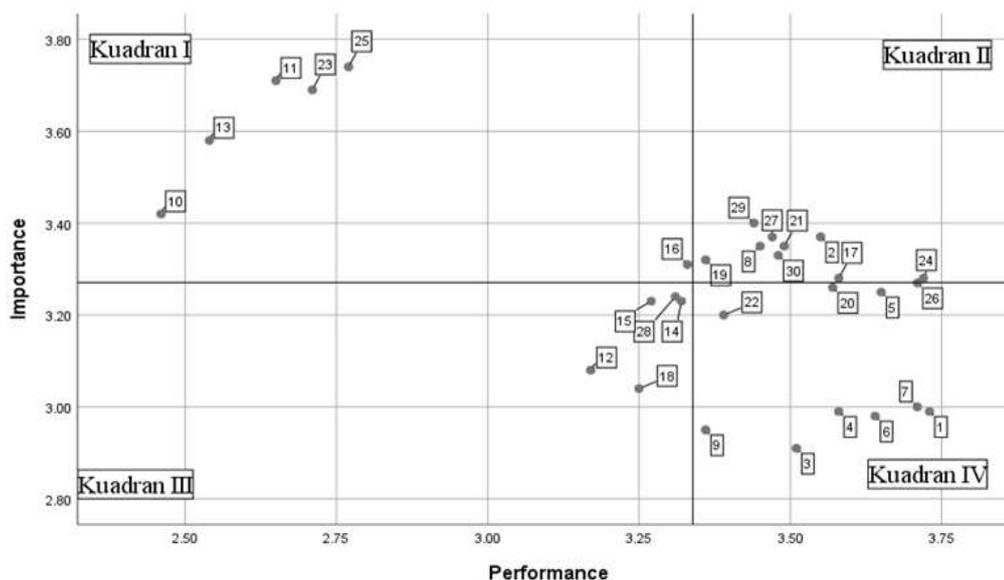


Figure 1. IPA Quadrant

Based on Picture 1 above, the Cartesian quadrant is divided into four quadrants, namely quadrant I (top priority), quadrant II (maintain achievement), quadrant III (low priority) and quadrant IV (excessive). The following is a description of each quadrant:

Quadrant I (top priority/Concentrate Here)

Quadrant I identifies six critical attributes requiring immediate attention from Thousand Islands management due to significant gaps between high importance levels perceived by tourists and low actual field performance. Adequate supporting accommodation facilities and clean accommodation conditions emerge as primary concerns, considering that accommodation represents a fundamental element in tourism experience that directly influences tourist perceptions and satisfaction toward the destination.

Environmental management aspects also demonstrate suboptimal performance, evidenced by insufficient trash bins at strategic points and poorly maintained coral reef ecosystems. These two factors not only affect destination aesthetics but also directly relate to sustainable ecotourism principles that constitute Pari Island's main attraction. Meanwhile, the unattractive and incomprehensible presentation of information about flora, fauna, and ecosystems indicates missed opportunities to provide educational value that characterizes marine ecotourism uniqueness.

The misalignment between product and service prices with offered quality emerges as the most critical finding in this quadrant, as it creates negative value perceptions in tourists' minds. This condition potentially damages destination reputation in the long term and hinders sustainable ecotourism development in Thousand Islands. Comprehensive improvements to these six attributes become strategic priorities for enhancing competitiveness and sustainability of Pari Island's marine ecotourism destination.

Quadrant II (Maintain Achievement/Keep Up The Good Work)

Quadrant II demonstrates nine attributes that have achieved optimal balance between tourist importance levels and actual field performance, indicating that current management has met tourist expectations and requires consistent maintenance. The beauty of Pari Island's seawater and availability of clear informational signage reflect success in maintaining natural attractions and adequate supporting infrastructure. Well-preserved mangrove ecosystems demonstrate management commitment to sustainable ecotourism principles, where environmental balance has been successfully maintained according to tourist expectations.

Local community empowerment aspects through priority recruitment of workers and increased community business opportunities indicate effective community-based tourism implementation. This aligns with increased local revenue and tourism activities designed to provide enjoyable experiences, creating positive tourist perceptions toward tourism development in Thousand Islands. Government support that aligns with local community needs and adequate government facility availability indicate good coordination among stakeholders in destination development.

Quadrant III (Low Priority)

Quadrant III identifies five attributes with low importance and performance levels, indicating that tourists do not have high expectations for these aspects and actual performance also remains at levels consistent with these low expectations. Pleasant and friendly accommodation staff, food stall facilities, adequate souvenir shops, proper waste management, and government support for local community economic empowerment through tourism activities demonstrate that tourists do not prioritize these aspects in their ecotourism experience. This finding provides strategic guidance for managers not to allocate excessive resources to these areas and focus more on quadrants showing high tourist expectation levels, enabling resource allocation optimization to deliver maximum impact on overall tourist satisfaction.

Quadrant IV (Excessive/Possible Overkill)

Quadrant IV reveals eleven attributes demonstrating excessive performance relative to tourist expectations, indicating potential resource misallocation where management invests significantly in areas that tourists do not prioritize highly. The abundance of natural attractions such as sunrise and sunset viewing opportunities, wildlife diversity, and comprehensive activity offerings including snorkeling, diving, camping, and cycling facilities demonstrate strong destination capabilities that exceed current tourist demand levels. This performance-expectation gap suggests that while management has successfully developed diverse tourism products, these offerings may not align with primary tourist motivations for visiting Thousand Islands.

The availability of accessible sea transportation, community-based tourism development approaches, environmental education programs, and community income enhancement initiatives reflect comprehensive destination management strategies that surpass tourist expectations. However, the low

importance ratings indicate that visitors prioritize different aspects of their ecotourism experience, particularly focusing on marine scenery and underwater ecosystem exploration rather than diverse activity portfolios or community development outcomes. This misalignment presents both challenges and opportunities for destination management.

The research findings suggest that tourists perceive Thousand Islands tourism as lacking novelty in experience provision, despite the extensive range of available activities and facilities. This paradox indicates that while management has invested in diverse tourism infrastructure and programs, these efforts have not translated into enhanced perceived value or unique experiential offerings from the tourist perspective. Strategic reconsideration of resource allocation becomes essential, where management should evaluate whether maintaining high performance levels in low-expectation areas represents optimal destination development strategy, potentially redirecting resources toward attributes that better align with tourist priorities and market demands to capture broader market segments and enhance destination competitiveness.

CONCLUSION AND RECOMMENDATIONS

This research reveals significant gaps between tourist expectations and actual performance in marine ecotourism development at Thousand Islands, particularly highlighting critical deficiencies in fundamental tourism infrastructure and sustainable ecotourism implementation. The analysis of tourism component variables demonstrates that accommodation facilities remain inadequately developed and poorly maintained, with cleanliness standards falling below tourist expectations, while waste management infrastructure, specifically the strategic placement of trash bins, proves insufficient to meet visitor needs. These findings indicate that basic tourism infrastructure development has not kept pace with destination promotion efforts, resulting in negative tourist perceptions regarding accommodation quality and environmental management practices that are essential for sustainable tourism operations.

The examination of ecotourism sustainability dimensions reveals additional challenges in information dissemination and value proposition alignment, where educational content about local flora, fauna, and ecosystems fails to meet tourist expectations for engaging and comprehensible presentation formats. Furthermore, the persistent mismatch between service quality and pricing structures creates value perception issues that undermine tourist satisfaction and destination competitiveness. These deficiencies in educational programming and price-quality alignment suggest that while Thousand Islands possesses significant natural assets for marine ecotourism development, the translation of these resources into meaningful and appropriately valued tourist experiences remains inadequate. The overall findings underscore the urgent need for comprehensive improvements in both basic tourism infrastructure and sustainable ecotourism program implementation to enhance tourist perceptions and ensure long-term destination viability in the competitive marine ecotourism market.

Suggestions

Based on the research conclusions, several strategic recommendations emerge to enhance tourist perceptions of marine ecotourism in Thousand Islands and address the identified performance gaps. The development of adequate accommodation facilities requires collaborative efforts between accommodation managers and local entrepreneurs to expand lodging capacity while maintaining quality standards that meet tourist expectations. Management should implement systematic quality assurance protocols through routine accommodation inspections, ensuring compliance with established cleanliness standards and operational requirements to prevent negative tourist perceptions. This comprehensive approach to accommodation development and maintenance will directly address the fundamental infrastructure deficiencies that currently undermine visitor satisfaction and destination reputation.

The enhancement of educational content delivery regarding local flora and fauna presents opportunities for innovative information dissemination strategies through strategic partnerships with relevant stakeholders, including environmental organizations, research institutions, and local community groups. Management can implement dual-approach information systems combining traditional physical displays through strategically placed information boards with modern digital solutions utilizing QR code technology at key tourist points throughout the islands. This integrated information delivery system will provide tourists with comprehensive, accessible, and engaging educational content about Thousand Islands' biodiversity, transforming the current information gap into a competitive advantage that enhances the ecotourism experience while supporting conservation awareness objectives. These recommendations collectively address the critical areas identified in the research while providing practical implementation pathways that can improve both tourist satisfaction and sustainable ecotourism development outcomes.

ADVANCED RESEARCH

As a continuation of the research on tourist perceptions of marine ecotourism in the Thousand Islands, the next study can focus more specifically on the environmental and socio-economic changes experienced by local island communities since the development of the marine tourism sector in the Thousand Islands. This is important because the current research does not elaborate in detail on the environmental impacts and community transformation felt by residents following the growth of marine ecotourism in the archipelago. The upcoming study aims to identify shifts in marine ecosystem health, traditional fishing practices, and local livelihood patterns resulting from interactions with tourists as well as the accompanying infrastructure development. Additionally, the research will analyze the influence of tourism activities on coral reef conservation, marine biodiversity, and the traditional maritime culture of island communities. The results are expected to serve as a basis for policy recommendations that balance marine ecotourism development with the preservation of the Thousand Islands' natural environment and local community welfare.

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