



The Effect Of Tourist Behavior On Sea Turtle Conservation Activities At The Serang Beach Marine Tourism Attraction

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Abstract:

Background. The growth of the ecotourism sector in coastal areas faces challenges in the form of potential anthropogenic disturbances to the sensitive sea turtle ecosystem. Referring to Law No. 32 of 2024 on the Conservation of Biological Resources and Their Ecosystems

Aims. This study aims to analyze the impact of tourist behavior on the success and effectiveness of sea turtle conservation activities in the Segoro Lestari Sea Turtle Conservation Area, a marine tourism attraction at Serang Beach, Blitar Regency.

Methods. This quantitative associative-causal study examines the relationship between tourist behavior (attitudes, compliance, and participation) and conservation activities (tourist reception, education, and hatchling release). Data collection was conducted using a census/saturation sampling technique involving 55 tourists who directly participated in conservation activities. Validity and reliability tests of the instruments yielded valid and consistent indicators (Cronbach's Alpha = 0.868).

Result. The results of the simple linear regression analysis showed a regression equation of $Y = 5.812 + 0.626X$, with a calculated t-value of 6.451 > the critical t-value (2.006) and a significance level < 0.001. These results demonstrate that tourist behavior has a positive and significant effect on the effectiveness of sea turtle conservation activities.

Conclusion. The coefficient of determination (R^2) of 0.440 indicates that the tourist behavior variable accounts for 44.0% of the variation in the success of conservation activities.

Keywords: Tourist Behavior, Sea Turtle Conservation, Segoro Lestari, Marine Tourism, Linear Regression.



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INTRODUCTION

Tourism is a rapidly growing global economic sector that makes a significant contribution to local revenue and job creation (UNWTO, 2023). However, unregulated

tourism expansion risks causing negative ecological impacts, such as waste accumulation and habitat degradation (Holden, 2017). Ecotourism offers an alternative approach that emphasizes sustainability, nature conservation, and the empowerment of local communities (TIES, 2015).

Indonesia is recognized as one of the world's mega-biodiverse countries, boasting an abundance of wildlife (BRIN, 2023). One of the rare, protected marine species is the sea turtle. In a legal context, the protection of coastal ecosystems is reinforced by Law No. 32 of 2024, which amends Law No. 5 of 1990 on the Conservation of Biological Resources and Their Ecosystems. This regulation emphasizes that the success of conservation is measured not only by the survival of species but also by the integrity of physical habitats from anthropogenic disturbances.

The Segoro Lestari Sea Turtle Conservation Area on Serang Beach, Blitar Regency, is an example of a community-based initiative (Pokmaswas) that has evolved into a specialized edutourism destination. The steadily increasing number of tourists includes both domestic and international visitors. However, the potential for physical interaction between tourists and marine life poses a threat of stress to the animals and damage to nests if not properly managed (Orams, 2016). Tourist behavior—including attitudes, compliance with standard operating procedures (SOPs), and participation in maintaining cleanliness—is a critical variable that determines the sustainability of conservation activities.

LITERATURE REVIEW

Ecotourism and Conservation

Ecotourism is viewed as an alternative approach to mass tourism, which often has negative impacts on the environment. According to The International Ecotourism Society (TIES, 2015), ecotourism emphasizes sustainability, nature conservation, and the empowerment of local communities. Weaver (2006) and Fennell (2020) assert that ecotourism serves not only as a form of recreation but also as a tool for education and conservation. In coastal areas, ecotourism is a vital instrument for safeguarding marine ecosystems vulnerable to anthropogenic disturbances.

The Importance of Sea Turtle Conservation

As a mega-biodiverse nation, Indonesia bears a significant responsibility to protect endangered species, including sea turtles. BRIN (2023) emphasizes that sea turtles serve as

indicators of marine ecosystem health. Conservation regulations are enshrined in Law No. 32 of 2024, which strengthens the protection of wildlife and their habitats. Adharani et al. (2020) highlight the urgency of community participation in sea turtle conservation, as the success of conservation efforts depends not only on government policies but also on local community involvement.

Tourist Behavior and Its Impact

Tourist behavior is a key variable in the success of conservation efforts. Orams (2016) explains that physical interactions between tourists and marine life can cause stress to animals and damage habitats if not properly managed. Lee & Jan (2021) found that environmentally friendly tourist behavior contributes significantly to the sustainability of coastal ecosystems. Attitudes, adherence to standard operating procedures (SOPs), and active participation in maintaining cleanliness are key factors in the effectiveness of conservation programs.

Community-Based Ecotourism

The Segoro Lestari Sea Turtle Conservation Area on Serang Beach is a concrete example of community-based ecotourism (Pokmaswas). Spenceley (2008) emphasizes that community-based tourism can raise environmental awareness while providing economic benefits to local residents. Eagles & McCool (2018) add that the success of ecotourism in conservation areas depends heavily on synergy among managers, tourists, and local governments.

Research Gaps

Most of the literature highlights the importance of ecotourism and conservation, but there is still limited research that quantitatively examines the relationship between tourist behavior and the effectiveness of sea turtle conservation. This study fills that gap by using simple linear regression analysis, demonstrating a positive and significant influence of tourist behavior on conservation success at Serang Beach.

METHOD

Research methods: This study employed a quantitative descriptive approach using a causal-associative method to examine the cause-and-effect relationship among variables

(Sugiyono, 2017). The research was conducted at the Segoro Lestari Sea Turtle Conservation Area, Serang Beach, Blitar, from January to March 2026.

The study population consisted of tourists directly involved in conservation activities (such as Turtle Talk and hatchling releases). Given that the target population size was relatively small—55 people—the sampling technique used was saturation sampling (census). All 55 respondents in the population were included as research subjects to avoid sampling error.

Primary data were collected using a structured questionnaire with a 1–5 Likert scale. The Tourist Behavior variable (X) was measured through the indicators of Attitude, Compliance, and Participation. The Conservation Activities variable (Y) was measured through the indicators of Tourist Acceptance, Education, and Hatchling Release. The validity of the instrument was tested using Pearson's Product-Moment correlation ($r_{table} = 0.266$ at $df = 53$, $\alpha = 0.05$), and reliability was assessed using Cronbach's Alpha (minimum 0.60). Data analysis employed simple linear regression with a t-test and the coefficient of determination R^2 .

DISCUSSION

Statistical Descriptions and Instrument Validation

The results of the descriptive statistical analysis of 55 respondents on the 16 questionnaire items showed that the mean scores ranged from 4.47 to 4.89. This indicates that the majority of respondents gave very positive ratings regarding behavioral compliance and the effectiveness of the conservation program. The total average score was 75.40 with a standard deviation of 4.817.

Butir	Mean	Std. Dev	Status Validitas ($r_{hit} > 0,266$)
P1	4,73	0,525	Valid (0,598)
P2	4,89	0,315	Valid (0,275)
P3	4,69	0,505	Valid (0,544)
P4	4,65	0,552	Valid (0,587)
P5	4,84	0,420	Valid (0,322)
P6	4,78	0,498	Valid (0,391)

Butir	Mean	Std. Dev	Status Validitas (rhit>0,266)
P7	4,71	0,658	Valid (0,493)
P8	4,73	0,489	Valid (0,517)
P9	4,78	0,417	Valid (0,620)
P10	4,64	0,522	Valid (0,536)
P11	4,75	0,480	Valid (0,474)
P12	4,62	0,593	Valid (0,741)
P13	4,82	0,389	Valid (0,569)
P14	4,47	0,766	Valid (0,549)
P15	4,76	0,429	Valid (0,394)
P16	4,55	0,603	Valid (0,444)

All 16 items of the instrument were found to be valid because the calculated r value was greater than the table r value (0.266). The reliability test yielded a Cronbach's Alpha value of 0.868 (> 0.60), indicating that the questionnaire has very high internal consistency.

Simple Linear Regression Analysis

Model	Coeff (B)	Std. Error	thit	Sig.
Konstanta (a)	5,812	4,161	1,397	0,168
Perilaku Wisatawan (X)	0,626	0,097	6,451	< 0,001

Based on the results of the analysis, the following regression equation was obtained:

$$Y = 5.812 + 0.626 X$$

Interpretation:

1. Constant (a) = 5.812: Indicates that if the tourist behavior variable is zero, the effectiveness of the initial conservation activity is 5.812 units.

2. Regression Coefficient (b) = 0.626: A positive value, meaning that every 1-unit increase in the tourist behavior score will increase the effectiveness of conservation activities by 0.626 units

Hypothesis Testing and Determinants

1. t-Test (Significance): A calculated t-value of 6.451 was obtained with a significance level of < 0.001 . The calculated t-value (6.451) is significantly greater than the critical t-value (2.006) at $\alpha = 0.05$ and $df = 53$. Therefore, H_0 is rejected and H_1 is accepted, proving that tourist behavior has a positive and significant effect on sea turtle conservation activities at Segoro Lestari.
2. Coefficient of Determination (R^2): The R^2 value of 0.440 indicates that the Tourist Behavior variable accounts for 44.0% of the variation in the effectiveness of sea turtle conservation activities. The remaining 56.0% is influenced by other factors outside the model, such as breeding facilities, local regulations, and natural conditions (Eagles et al., 2002).

CONCLUSION

The conclusion must Tourists' disciplined, environmentally friendly behavior and adherence to standard operating procedures (SOPs) made a significant contribution of 44.0% to the smooth operation and success of sea turtle conservation activities at Serang Beach ($t = 6.451$, $p < 0.001$). Recommendations: Managers are advised to clarify the visual educational materials in the breeding area. For future researchers, it is recommended to include supporting variables such as the role of tour guides and local government policies.

Implication

This study has significant theoretical and practical implications. Theoretically, these findings strengthen the ecotourism literature with empirical evidence that tourist behavior positively impacts the effectiveness of sea turtle conservation. The regression model used can serve as a reference for future research examining the relationship between tourist behavior and conservation variables at other destinations. Practically, the results underscore the importance of tourist education strategies through visual media, clear standard operating procedures (SOPs), and participatory programs such as hatchling releases. Local governments can use these findings as a basis for policies to strengthen conservation-based

ecotourism regulations while improving the quality of marine tourism destinations. Furthermore, this study has social implications, demonstrating that the involvement of local communities in ecotourism management not only enhances conservation success but also provides economic and social benefits. Thus, community-based ecotourism can serve as a model for sustainable development that balances ecological, economic, and social aspects.

Acknowledgement:

The author would like to express deep gratitude to the management of the Segoro Lestari Sea Turtle Conservation Area at Serang Beach, Blitar, for granting permission to conduct this research and for their full support during the data collection process. Thanks are also extended to the tourists who were willing to serve as respondents and participate in conservation activities. Appreciation is extended to the thesis advisor and the academic team at UPN “Veteran” East Java for their invaluable guidance, input, and mentorship throughout the research process. Last but not least, the author would like to thank family and friends for their prayers, encouragement, and moral support, which consistently strengthened the author during the preparation of this research.

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