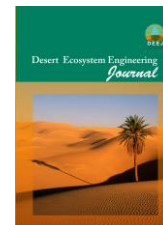




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Measuring Behavioral Tendencies of Ecotourists Using the Ecotourist Evaluation Scale (EIS): A Case Study of Maranjab Desert

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Extended Abstract

Introduction: Tourism is one of the world's most dynamic economic sectors, playing a pivotal role in the development of many societies (Lenao & Basupi, 2016; Ranasinghe et al., 2020). For its contribution to be sustainable, however, the industry must align with the principles of sustainable development (Stylidis, 2014). The pressures of mass tourism, driven by rapid urbanization and transportation, often threaten natural destinations. In response, more sustainable alternatives have emerged, among which ecotourism has gained significant prominence.

Defined by its commitment to environmental protection, cultural respect, and the preservation of natural resources, ecotourism presents a sustainable model distinct from conventional tourism (Wondirad et al., 2020). Although a relatively recent field, it has attracted scholarly attention across disciplines such as sociology, anthropology, and planning, influencing tourism policies globally (Veleshkaei et al., 2016). Over the past two decades, global interest in ecotourism has surged, with nature-based tourism now accounting for over 30% of international travel (World Tourism Organization, 2020). When systematically managed, it can generate substantial economic benefits while simultaneously supporting conservation efforts (Gitinji, 2006). The sector's growth—estimated at 10–30% annually compared to 3–4% for overall tourism—highlights its increasing importance (Jiao et al., 2013).

The ecotourism framework involves three key stakeholders: **suppliers** (local communities, resource managers, and service providers), **demanders** (the tourists themselves), and **regulators** (governmental and policy institutions) who balance resource use (Abdollahi, 2007). Understanding the **demanders**—the ecotourists—is critical. Consequently, academic research increasingly focuses on the behavioral dimensions of ecotourists to inform effective management and development strategies.

This study investigates these behavioral tendencies in the context of the Maranjab Desert, a pristine ecotourism destination in Iran known for its unique desert and mountain ecosystems. Located at 34°07' N and 51°48' E, the area has seen a notable increase in visitors, making the understanding of tourist behavior essential for sustainable management. Utilizing the Ecotourist Evaluation Scale (EIS), this research tests the following five hypotheses, positing that each dimension significantly influences ecotourists' behavioral tendencies:

1. **Awareness**
2. **Environmental Sustainability**
3. **Economic Sustainability**
4. **Socio-cultural Sustainability**
5. **Affinity with Nature**

Materials and Methods: This study adopts an applied research objective and a descriptive-survey methodology. The target population consisted of tourists visiting the Maranjab Desert during September 2022. The sample size was determined using Cochran's formula, resulting in the selection of 384 participants through a random sampling method.

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Data were collected using a structured questionnaire based on the Ecotourist Evaluation Scale (EIS). The instrument was designed to measure the five key constructs of the model: Awareness, Environmental Sustainability, Economic Sustainability, Socio-cultural Sustainability, and Affinity with Nature. The questionnaire was validated, and reliability tests confirmed acceptable internal consistency for all measured items.

Statistical analyses were performed using SPSS, SmartPLS, and LISREL software. Descriptive statistics were utilized to summarize the demographic profile of the respondents. Confirmatory Factor Analysis (CFA) was employed to assess the validity of the measurement model, and Structural Equation Modeling (SEM) was applied to test the research hypotheses regarding the relationships between the independent variables and ecotourists' behavioral tendencies.

Analysis of demographic data revealed that the majority of respondents were male (73.7%, $n=283$), while 26.3% ($n=101$) were female. The largest age cohort was 25-40 years old (38.5%, $n=148$), and the smallest was tourists over 55 years of age. In terms of educational attainment, most participants held an associate or bachelor's degree (54.7%), followed by a master's degree (38%), a doctorate (3.9%), and a high school diploma (3.4%).

The Confirmatory Factor Analysis (CFA) validated a model comprising six latent constructs (the five independent variables and the dependent variable, behavioral tendencies), measured by 34 observed indicators. All factor loadings exceeded the 0.30 threshold, demonstrating adequate correlations between the observed variables and their respective latent constructs. Furthermore, significance tests based on t-values indicated that all hypothesized relationships were statistically significant, exceeding the critical value of 1.96 at the 0.05 confidence level, thus confirming the robustness of the measurement model.

Discussion: The demographic profile of visitors to the Maranjab Desert reveals that ecotourism in this region is predominantly driven by young, highly educated individuals. This finding aligns with global ecotourism trends, where younger, educated demographics consistently show a greater propensity for adventure and nature-based travel that combines recreational and educational value.

The testing of the research hypotheses yielded significant insights into the behavioral drivers of these ecotourists:

1. **Awareness** was validated as a critical determinant of responsible behavior. Tourists who proactively sought information from guides or local communities demonstrated a stronger commitment to sustainable practices. This suggests that awareness not only equips ecotourists to make informed decisions but also fosters a deeper respect for the local environment, ultimately cultivating advocates for conservation.
2. **Environmental Sustainability** emerged as the most influential predictor of ecotourist behavior. Respondents showed a clear preference for eco-friendly accommodations, trained guides, and sustainable facilities, with a pronounced willingness to adhere to conservation protocols. This underscores that environmental protection is a primary motivation, not merely a secondary concern, for visitors to this fragile desert ecosystem.
3. **Economic Sustainability** was confirmed, as tourists recognized the importance of contributing to the local economy through purchasing handicrafts and utilizing local services. This economic participation enhances community resilience and fosters positive host-guest relationships. However, the observed variability in the level of financial engagement indicates a need for more structured and visible mechanisms to channel tourist expenditure into local enterprises.
4. **Socio-Cultural Sustainability** proved to be a significant factor, with respondents emphasizing respect for local traditions, appropriate attire, and culturally sensitive behavior. This cultural respect is fundamental to building mutual trust, reducing potential social friction, and strengthening the overall sustainability of the tourism model.
5. **Affinity with Nature** was a prominent characteristic, as tourists reported strong emotional connections to the landscape and its biodiversity. Their consistent preference for natural destinations and a demonstrated willingness to protect ecosystems strongly supports the role of biophilia—an innate human connection to nature—as a core driver of ecotourism behavior.

In conclusion, the results reinforce the interconnectedness of environmental, economic, and socio-cultural dimensions in shaping ecotourist behavior. For the Maranjab Desert—a fragile and sensitive ecosystem—these findings highlight the necessity for a holistic management strategy. Such a strategy must carefully balance growing tourist demand with the imperative for long-term environmental conservation, ensuring that the ecotourism model remains truly sustainable.

Conclusion: This study successfully applied the Ecotourist Evaluation Scale (EIS) to investigate the behavioral tendencies of ecotourists in the Maranjab Desert. The findings robustly confirm that five key dimensions—**awareness, environmental sustainability, economic participation, socio-cultural respect, and affinity with nature**—are significant determinants of ecotourist behavior in this context.

The research makes several key contributions to the field of sustainable tourism:

- It **establishes** awareness as a fundamental driver, underscoring that informed tourists are more likely to engage in sustainable practices.

- It **validates** environmental protection as the central and most powerful motivator for ecotourists, reinforcing the core ethos of the sector.
- It **highlights** the synergistic role of tourism in generating both economic resilience for host communities and fostering socio-cultural exchange.
- It **identifies** a strong affinity with nature as a critical underlying psychological factor that fuels demand for ecotourism experiences.

For policymakers and destination managers, these findings translate into clear imperatives. Tourism strategies must be designed to:

1. **Enhance Environmental Education** through interpretive programs and trained guides.
2. **Invest in Eco-Friendly Infrastructure** to minimize the ecological footprint of tourism.
3. **Create Structured Channels** for tourist spending to directly benefit local economies, such as community-based tourism enterprises and local handicraft markets.
4. **Promote Cultural Sensitivity** to ensure respectful host-guest interactions and preserve local traditions.

For the Maranjab Desert specifically, adopting a systematic and inclusive planning approach that incorporates the perspectives of local communities is paramount. This will ensure that tourism development generates tangible economic benefits while simultaneously safeguarding the fragile desert ecosystem.

Ultimately, this study affirms that the long-term sustainability of ecotourism hinges on a holistic alignment of tourist behavior, management policies, and industry operations with the interconnected principles of **ecological integrity, economic equity, and socio-cultural respect**, all nurtured by a profound human connection to the natural world.

Keywords: Ecotourism, Behavioral Tendencies, Ecotourist Evaluation Scale, Maranjab Desert.