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Tourist Behavior Towards the Environment: Systematic Literature Review

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Abstract: This research presented in this literature review aims to examine tourist behavior towards the environment. The methodology employed is a Systematic Literature Review (SLR) with PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol, which includes 62 literature reviews following the preferred reporting items from The Watase Uake Research Collaboration Tools. Sources for the literature review were retrieved from several publications, including Elsevier, MDPI, Wiley, Science Direct, Springer, Sage, and Taylor & Francis. Four major aspects are the subject of this bibliometric analysis: 1) The distribution of articles on each year; 2) The number of articles that are published in each publication; 3) The distribution of articles according to the research methodologies that were utilized; and 4) The frequency of keywords that used, with a particular emphasis on those that are use the most often and those that are use less often. All the articles are categorized into various topics based on their respective categories. The themes are categorized into 1) Tourist Environmental Behavior, 2) Environmental Education and Knowledge, 3) Social and Personal Norms, 4) Others.

Keywords: *Pro-environmental behavior, tourist environmentally responsible behavior, SLR, PRISMA*

1. Introduction and Background

Sustainable Development Goals (SDGs) it is widely recognized as a set of goals put forth by the United Nations (UN), are considered as being essential for the advancement of sustainable tourism. The SDGs are intended to address global issues, among them is the sustainable environmental quality in the tourism sector. This alignment is necessary, hence that visitors to a destination are provided with the impetus to consider the merits of their decisions, and how with this holistic strategy they may select and act more responsibly while in-destination. Tourists have increased their awareness of the role they bear concerning the sustainable development of tourism, and the extent to which tourists could contribute to the economic, environmental and social sustainability of tourist destinations. It is possible to infer from that fact that tourists get informed about environmental problems, which has an impact on their attitudes and behavior towards responsible tourism practices. This consciousness has been further raised because of the COVID-19 pandemic, causing a shift in tourists' behavior toward more responsible behaviors (Eichelberger et al., 2021). This implies that companies are having to adapt to cater to the increasing demand from holidaymakers for greener solutions. The capacity of the tourist sector to protect the environment and foster sustainable development is "the role that it plays" where small tourism business already has a role in adopting sustainable business practices based on factors such as self-efficacy and situational constraints (Ernawati, 2023).

Tourists practicing ecologically sustainable behaviours, reducing waste, saving resources and supporting environmentally friendly businesses help in the protection of natural ecosystems. The perceptions held by tourists about green tourism significantly affect their attitudes and behaviors in terms of environmental preservation (Ibnou-Laaroussi et al., 2020). This positive relationship means that the more responsible the tourists are, the greater the benefit to the overall health of the ecosystem and biodiversity of the tourist destination. It is because when tourists travel, they intend to watch their surroundings. Businesses are also motivated to implement strategies that align with the tourists' expectations when considering sustainable solutions. This leads to a stronger general direction towards sustainability throughout the industry. To the extent that it affects businesses, it will stir economic consequences. This is equally relevant and crucial for potential tourists who attach significant value to the idea of sustainability: such tourists are more likely to support businesses that operate in an environmentally friendly way (Bozdaglar, 2023). These impacts could increase the income of sustainable tourism providers and motivate other businesses to adopt sustainable practices. In terms of societal perspective, proper conduct within a tourist destination promotes a social identity and responsibility shared by locals and tourists. Asmelash and Kumar (2019) established that sustainable tourism development is highly related to the satisfaction of both tourists and other local community

members. It is not uncommon for considerate tourists to contribute positively to the destinations they visit, such as promoting cultural exchange and respect between tourists and the visited local communities. As a result, the overall tourism experience can be enhanced as a result of leading to more local support for tourism-related activities.

The development of the scientific research of tourist environmentally responsible behavior (TERB) and tourist pro-environmental behavior (PEB) has resulted in substantial contributions to the understanding of antecedents that motivate sustainable behaviors in tourism. Environmental behavior plays of key role when it comes to sustainability as it encourages eco-friendly travel behaviour, supporting destination management through sustainable tourism and developing interaction with the natural environment. In this context, the educational initiatives, high-quality tourist experiences, reliable information distribution, and the use of technology can encourage tourists to behave more sustainably (Zhang et al., 2024; Gomes and Lopes, 2023; Zhang et al., 2024; Adnan et al., 2024; Dar, 2024). TERB and PEB are based on the Theory of Planned Behavior (TPB). TPB has commonly been used for explaining environmental behaviour. Azjen (1191) stated that TPB suggests that an individual performs a behavior or intends to perform a certain behavior. Three key factors affect this intention: attitude towards behavior, subjective norms, and perceived behavioral control.

Theory of TPB, TERB and PEB are often used interchangeably in research on environmental behavior. Reflecting similar concepts related to the actions and attitudes of tourists towards environmental sustainability, specifically for the theory of TERB and PEB. To promote a greater understanding of the factors affecting tourist environmental behavior, systematic literature reviews (SLR) and Preferred Reporting Items for systematic reviews and meta-analyses (PRISMA) could be applied to compile and analyze many studies focusing on TERB and PEB, which are connected to tourism-related environmental and social behavior through the Watase Uake Research Collaboration Tools.

2. Research Methodology

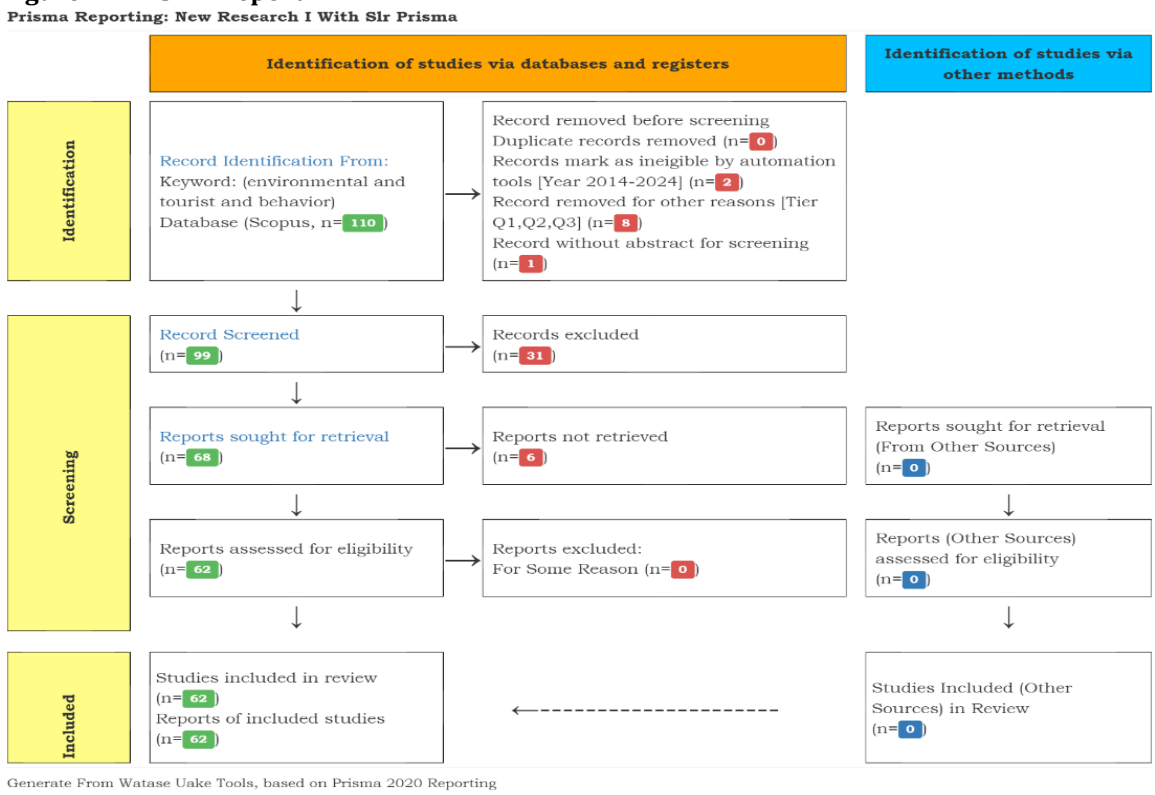
Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)

Research methodology employs the systematic literature review (SLR) method, according to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol. Watase Uake Research Collaboration Tools (watase.web.id) is the tool to obtain the PRISMA reporting framework result. There are several important steps to writing a literature review in this research: First, start with the identification step. This step involves the identification of relevant keywords such as: "environmental," "tourist" and "behavior". Searches are limited to English-language only articles and are narrowed down to a specific period, ranging from 2014 to 2024, in SCOPUS-indexed journals, amounting to rank Q1 to Q3. Publications such as Elsevier, MDPI, Wiley, Science Direct, Springer, Sage, and Taylor & Francis are among the prominent academic journals that are included in this collection.

The second step calls for an initial assessment of the titles and abstracts of the articles that have been found, to retain only those papers that satisfy the requirements for the keywords and are related to the aims of the research. At this step, irrelevant articles are not considered for inclusion. After the screening, all the papers that were chosen are examined to make certain that full-text versions are available, either for free or for a price, and that they are by the criteria that were specified during the identification step. If a paper does not satisfy these criteria, it will not be considered further.

The third step is retrieval, where full-text articles are examined in detail and then uploaded into the application with the intention of additional analysis. This is the stage when the source publication, the number of citations, and the ranking of the journal are noted for each article. The last part of the inclusion process entails gathering the articles that have been deemed suitable for inclusion after undergoing all rounds of screening and review, ensuring that they satisfy the initial identification criteria. Even though the Watase Uake program provides an extensive range of tools for organizing and analysing scientific material, the capabilities that are relevant to the PRISMA protocol are the only ones that are utilized in this research.

Figure 1: PRISMA Report



Bibliometric Analysis

The following four major aspects are the subject of this bibliometric analysis: 1) The distribution of publications on each year; 2) The number of publications that are published in each journal; 3) The distribution of publications according to the research methodologies that were utilized; and 4) The frequency of variables that used, with a particular emphasis on those that are utilized the most often and those that are utilized less often. It was shown in Table 1 that there were no articles recorded for the year 2014. This does not suggest that there were no articles that had the right keywords for that year; rather, it indicates that the articles that were discovered did not meet the criteria that were established during the phase of identification. The year 2022 was the year that had the highest number of articles, followed by the years 2023 and 2020. Between the years 2022 and 2023, a total of 14 articles were published, while the number of articles published reached 12 in 2023.

Table 1: Articles per Year

Year	Article Numbers Per Year
2014	0
2015	4
2016	1
2017	2
2018	3
2019	5
2020	9
2021	4
2022	14
2023	12
2024	8
Total	62

Note: Processed by the Author

The articles that were found in this research aren't limited to journals that relate to tourism and the environment; rather, they also include journals that are associated with a variety of fields, such as management, psychology, and business. According to the data presented in Table 2, the Journal of Sustainable Tourism is responsible for the greatest number of articles. The Journal of Business Research, Sustainability, and Current Issues in Tourism are the next three journals in the list. Research on tourist behavior in relation to the environment spans multiple disciplines, which reflects the interdisciplinary nature of the field. This distribution shows the fact that this research is conducted. In addition, the majority of the journals that are featured are Q1-ranked, which is another evidence of the high quality and significant effect of the research that is conducted in this area of research.

Table 2: Article Numbers per Journal

Journal	Article Numbers	Journal Rank
Anatolia	2	Q2
Asia Pacific Journal of Tourism Research	3	Q1
Business Strategy and Development	1	Q1
Current Issues in Tourism	7	Q1
Current Psychology	1	Q2
Environmental Management	1	Q1
Environmental Science and Pollution Research	1	Q1
Frontier in Psychology	2	Q1
Heliyon	1	Q1
International Journal of Environmental Research and Public Health	2	Q1
Journal of Business Research	8	Q1
Journal of Cleaner Production	4	Q1
Journal of Ecotourism	1	Q2
Journal of Environmental Management	2	Q1
Journal of Environmental Planning and Management	1	Q1
Journal of Hospitality Insights	1	Q3
Journal of Hospitality and Tourism Management	2	Q1
Journal of Mountain Science	1	Q2
Journal of Sustainable Tourism	10	Q1
Journal of Tourism and Cultural Change	1	Q1
Journal of Tourism Futures	1	Q1
Journal of Travel Research	1	Q1
Land	1	Q2
Psychology	1	Q3
Science of The Total Environment	2	Q1
Sustainability	8	Q1
Tourism Economics	1	Q1
Tourism Management	1	Q1
Tourism Recreation Research	1	Q1
Total	62	

Note: Processed by the Author

Subsequently, categorizing articles based on journal and journal rank, the next step is categorizing the articles by research methods: quantitative, qualitative and mixed-method. It has been determined that quantitative research methods are the methodology that is used most frequently among the 62 articles that were examined. Nevertheless, the prevalence of quantitative studies does not invalidate the existence of articles that make references to qualitative or mixed-methods research. These articles may not have been captured by the filtering

procedure that is included in the Watase Uake program. The possibility for methodological variety that extends beyond the scope of the current dataset is shown by this evidence, as is illustrated in Table 3.

Table 3: Research Method

Research Method	Articles Numbers
Quantitative	59
Qualitative	1
Mixed-Method	2

Note: Processed by the Author

To explore in depth, several key terms frequently recur in publications related to tourist behavior toward the environment between 2015 and 2024. Commonly appearing keywords include "pro-environmental behavior," "environmental behavior," "tourist behavior," "pro-environmental tourist behavior," and "environmentally responsible behavior." It can be concluded that the variables "pro-environment," "tourist behavior," "environmental," and "environmentally" are the most frequently employed. On the contrary, less commonly used keywords include "self-congruity," "destination personality," "values–identity–personal norms," "place satisfaction," and "activity participation." The infrequent use of these terms suggests that these areas remain relatively underexplored in the context of environmental behavior research.

Table 4: The most and least repeated keywords

Most Repeated	Least Repeated
Pro-environmental behavior	Self-congruity
Environmental behavior	Destination personality
Tourist behavior	Values–identity–personal norms
Pro-environmental tourist behavior	Place satisfaction
Environmentally responsible behavior	Activity participation

Note: Processed by the Author

During the process of SLR, a significant number of articles did not make it past the identification and screening stages. To clarify, this does not suggest that these articles are devoid of worth or importance; rather, the focus of this SLR is explicitly on the terms "environmental," "tourist," and "behavior" in relation to the tourism and hospitality industry. The identification of developing trends that could serve as focal points for future research is made possible by the analysis of the selected articles, which also provides a fuller understanding of the diversity of research that has been conducted in this field. Through the application of this understanding, the tourism industry will be able to generate a body of knowledge that is both more complete and diverse.

3. Results

All of the 62 detected articles are categorized into various topics based on their respective categories. The articles are categorized into: 1) Tourist Environmental Behavior; 2) Environmental Education and Knowledge; 3) Social and Personal Norms; 4) Others, with the findings displayed in Table 5.

Table 5: Article Categories

Category	Article Numbers
Tourist Environmental Behavior	35
Environment Education & Knowledge	5
Social and Personal Norms	7
Others	15
Total	62

Note: Processed by the Author

In the category of tourist environmental behavior, Li and Wu (2020) suggested exploring PEB from an altruistic perspective as well as collective action and social relationships. Their research extended and adapted research areas on this topic. Accordingly, it introduced a new method based on social capital theory as a framework for investigation into significant layers of interaction and involvement that impact the PEB of tourists. Integrating the elements of this theory and the goal of PEB toward tourists, researchers can have an in-depth understanding of the psychological drivers of tourist behavior. To portray a more comprehensive understanding of how PEB is formed, this research adopts the altruism and collective action concept for PEB that emphasizes the impacts of social interaction elements. On the other hand, the method by which social interaction elements influence REB reciprocity can be scientifically appraised through this interdisciplinary lens. Nature-based tourism applies with pleasant leisure experiences that foster environmental attitudes, biospheric values, and general and site-specific ecologically responsible actions. Tourists' environmental attitudes and behaviors will gradually become well-rooted, encouraging eco-friendly tourism, with beautiful natural landscapes and thought-provoking experiential participation (Lee & Jan, 2015). Another model of REB research, Environment Interpretation as a moderating role. Environmental interpretation is an essential aspect and a principal situational aspect affecting tourism environments. This research examines the impact of sightseeing locations and environmental interpretations on Responsible Environmental Behavior Intention (REBI). This research collected data to approximate how environmental interpretations impact between tourists' REBI and REB via the SEM-MGA approach. The data indicate environmental interpretations play a role as a moderator in this relationship. This illustrates the importance of creating an encouraging sociocultural environment for positive behavioral norms. Well-designed environmental interpretation strategies can greatly advance the tourist REB (Wang et al., 2018).

Moreover, in the category of Environmental Education and knowledge, Kim and Stepchenkova (2019) specified their research in the context of the value-attitude-behavior model to investigate the elements that influence environmentally conscious behavior and the loyalty of tourists in developed nature-based tourism destinations. The research makes use of the value-attitude-behavior model to investigate the factors affecting environmentally conscious behavior and loyal tourists. By attending to economic benefits resulting from re-visits and recommendations from tourists, there is a potentially active stimulus for investment in environmental conservation or protective work and related educational efforts for both locals and tourists which will bring about long-term development and sustainable tourism over the long run. In line with this research, recent research has also brought out the role of environmental education. Particularly interesting is the fact that the research demonstrates that the altruistic values of tourists have a considerable impact on the construction of their attitudes towards eco-tourism, which in turn contributes to a more pleasant travel experience. Environmental education is defined by its transient and dispersive nature, according to Yu, et al. (2024) their research's findings provide insight on the distinctive mechanism by which environmental education for tourists differs from that of schooling and civic education, demonstrating how fleeting environmental education in popular tourist destinations influences the tendency toward ERB by making visitors feel instantly good or bad about their actions and intentions regarding the preservation or destruction of nature.

Next category on Social & Personal Norms, sustainable growth of natural scenic locations relies on maintaining a healthy ecological environment, but existing norm-based regulations do not sufficiently address the subjective experiences of tourists when it comes to reducing their negative impact on the environment and increasing their positive impact. To promote sustainable environmental growth, beautiful sites can try to guide tourists' pro-environmental actions through both a rational planning path and an embodied emotion path, according to Cao et al. (2022). Following these categories are others from various research fields, such as destination social responsibility research (DSR). Sustainable tourism development requires DSR to minimize environmental consequences and help ecotourism communities economically and socially. Tourist attitudes and behaviors matter because they are special stakeholders in tourism destinations. Research shows that tourists spontaneously protect the environment. Stimulating tourists' spontaneous environmental protection improves the tourism environment and helps tourism management authorities boost tourists' pro-environmental behaviors (Li, Wu & Deng, 2022). The last category on others, on Meng & Choi (2015), focuses on slow tourism and the purchase of slow products or services with an emphasis on adjustments. To explain the formation of individuals' intentions to choose slow-tourism sites, the theory of planned behavior (TPB) was applied. To be more specific, the research had two essential components that investigated the roles that

individuals' authentic perception and environmental concern play in the creation of their intentions. When compared to the first TPB, the extended TPB that was presented here accounted for a greater amount of variation in intention. As a result, the additional constructions, when utilized in conjunction with the variables that are already present in the TPB, appear to be helpful in better describing the decision-making processes that individuals go through when purchasing slow-moving products or services.

4. Conclusion

As a result of this research, the findings of this research have provided a significant amount of information regarding tourist behavior and the environment. Regarding the current topic, 62 journal articles have been identified as relevant and published in the Scopus database with journal rank Q1 – Q3 between the years 2014 – 2024 using the PRISMA protocol. Systematic Literature Review (SLR) that is being used in this research not only helps to ensure that the results of the research are more objective and of higher quality, but it also helps to ensure that the choices that are being made are more advantageous when compared to the traditional literature review. Key findings in this research are 1) The highest number of relevant topic is 14 articles in year 2022; 2) Publication with most articles is in The journal of Sustainable Tourism by 10 articles; 3) Commonly using keywords include "pro-environmental behavior," "environmental behavior," "tourist behavior," "pro-environmental tourist behavior," and "environmentally responsible behavior"; 4) Articles divided by four category: Tourist Environmental Behavior, Environmental Education and Knowledge, Social and Personal Norms and Others. General theory to examine tourist behavior towards the environment based on the theory of TPB, TERB and PEB.

It is essential to acknowledge that the research being conducted here has a few challenging aspects. As an example, the limited keyword of the related topic in this research and period may have limited the scope of data collection. Every single article that is made during the research process is made using the Watase Uake application. For future research, it is possible to make use of the *publish or perish* and *VOSviewer* applications to widen the data collection and enhance bibliometric analysis.

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