

Ecological Tourism Development in Small Islands: Bibliometric Analysis of Ecological Resources, Community Welfare, and Community Participation in Sustainability 2019-2024

Farikhah Elida^a, Sutrisna Anggoro^b, Sapto P Putro^c,
Windi NR Wardhani^d, Kanokporn Kaewsong^e

^aFaculty of Postgraduate Universitas Diponegoro, Semarang, Indonesia

^bFaculty of Fishery, Universitas Diponegoro, Semarang Indonesia

^cFaculty of Science and Mathematics; Universitas Diponegoro, Semarang,
Indonesia

^dFaculty of Economic and Business Universitas Wahid Hasyim, Semarang,
Indonesia

^eFaculty of Forestry, Kasetsart University, Bangkok, Thailand

Corresponding email: farikhahelida@gmail.com

Abstract

This article synthesizes review studies that examine trends and challenges in ecological and sustainable tourism from 2019 to 2024, focusing on the utilization of ecological resources and community engagement in environmental protection. Relevant articles were identified using Publish or Perish and VOSviewer analyses, encompassing topics such as ecological tourism, community well-being, ecological resources, sustainable tourism, small-island tourism, and community participation in tourism. The selection process prioritized articles from reputable indexed journals to ensure credibility. An initial pool of 200 journals was reviewed, and articles were selected for analysis



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through cross-referencing. The findings identify key challenges, including ecological resource management and climate change, alongside opportunities offered by sustainable tourism, particularly in small island contexts. The analysis underscores the significance of local community involvement in tourism sustainability, demonstrating its potential to empower communities and serve cultural identities. This article offers insights into the ways sustainable tourism can enhance local well-being and support environmental protection, thereby contributing to long-term sustainability. VOSviewer analysis indicates that mangrove conservation and coastal ecosystems are central research themes, while emerging topics such as capacity, mangrove ecosystems, and mangrove ecotourism reflect recent research directions. Major concerns include environmental impacts, especially climate change, pollution, human activities, biodiversity, and sustainability. There is increasing attention to human impacts, notably micro-plastic pollution, and a shift towards ecosystem-based management.

KEYWORDS Ecological Tourism, Community Wealth, Ecological Resources, Sustainable Tourism;

Introduction

Tourism is recognized as one of the most dynamic global economic sectors, making substantial contributions to economic growth, employment, and regional development. Nevertheless, the rapid expansion of tourism has heightened concerns about environmental degradation, ecological overexploitation, and socio-cultural disruption within destination areas ¹. The

¹ P Choudhary Dan Sandep Walia, "Overtourism And Destination Reputation: An Analysis Of Stakeholders Perception.," *Our Heritage* 10, No. 67 (2019): 1463-1474.; Ove Oklevik Et Al., "Overtourism, Optimisation, And Destination Performance Indicators: A Case Study Of Activities In Fjord Norway," *Journal Of Sustainable Tourism* 27, No. 12 (2019): 1804-24, <https://doi.org/10.1080/09669582.2018.1533020>; Hugues Seraphin, Paul Sheeran, Dan Manuela Pilato, "Over-Tourism And The Fall Of Venice As A Destination," *Journal Of Destination Marketing And Management* 9, No. January (2018): 374-76, <https://doi.org/10.1016/J.Jdmm.2018.01.011>.

mounting pressure of tourism activities on natural resources has led to increased scholarly and policy focus on sustainable tourism as a means to balance economic development with environmental conservation and social equity. Sustainable tourism prioritizes the responsible management of tourism activities to reduce environmental impacts and enhance long-term socio-economic benefits for host communities.

Sustainability challenges are especially acute in small island destinations, which are widely recognized as highly vulnerable socio-ecological systems. These islands often have limited land area, fragile ecosystems, restricted carrying capacity, geographic isolation, and a high dependence on natural-resource-based economic sectors². As tourism expands in these environments, ecological degradation, waste accumulation, biodiversity loss, and resource scarcity may occur more rapidly than in larger mainland destinations³. Therefore, sustainable tourism development in small island contexts necessitates approaches that account for ecological constraints and effectively integrate conservation priorities into destination management.

Small islands worldwide experience disproportionate tourism pressures due to ecological fragility, limited carrying capacity, and a significant reliance on natural-resource-based tourism. These factors render ecological tourism particularly pertinent in island destinations across Southeast Asia, the Caribbean, the Pacific, and other coastal regions. Sustainable tourism seeks to achieve positive outcomes while minimizing the adverse effects of tourism activities⁴.

² Maria Johann Et Al., "Participation In Active Sport Tourism: Impact Assessment Of Destination Involvement And Perceived Risk," *Journal Of Sport And Tourism* 26, No. 2 (2022): 101–23, <https://doi.org/10.1080/14775085.2021.2017326>.

³ Amarulla Octavian Et Al., "Upaya Perlindungan Pesisir Dan Pulau-Pulau Kecil Pemerintah Provinsi Sumatera Barat Dari Ancaman Abrasi Dan Perubahan Iklim," *Jurnal Ilmu Lingkungan* 20, No. 2 (2 April 2022): 302–15, <https://doi.org/10.14710/Jil.20.2.302-315>.

⁴ Freya Higgins-Desbiolles, "Sustainable Tourism: Sustaining Tourism Or Something More?," *Tourism Management Perspectives* 25, No. October (2018): 157–60, <https://doi.org/10.1016/J.Tmp.2017.11.017>.

Within the broader sustainable tourism paradigm, ecological tourism has emerged as a specialized approach that prioritizes ecosystem conservation, environmental education, and responsible tourism practices. Although frequently associated with ecotourism and nature-based tourism, ecological tourism is conceptually distinguished by a stronger emphasis on maintaining ecological integrity and explicitly integrating conservation objectives into tourism development strategies, whereas ecotourism and nature-based tourism may focus more broadly on nature appreciation or outdoor recreation. Nevertheless, the sustainability of ecological tourism depends not solely on environmental protection, but also on its capacity to improve community welfare and facilitate meaningful local participation in tourism governance⁵. Ecological resources are the foundation of ecological tourism. Their long-term preservation depends on local communities receiving direct socio-economic benefits from conservation tourism. Expanding employment, encouraging entrepreneurship, and diversifying livelihoods can improve community welfare and build support for ecological tourism. Participatory governance gives locals more ownership, legitimacy, and management ability⁶. Thus, ecological tourism sustainability results from interactions among ecological resources, community welfare, and participation⁷.

⁵ Hendri Hermawan Adinugraha Et Al., "Community-Based Halal Tourism Village: Insight From Setanggor Village," *Economica: Jurnal Ekonomi Islam* 11, No. 1 (1 Juli 2020): 129–54, <https://doi.org/10.21580/Economica.2020.11.1.6819>; N Lapotulo, M Afriani, Dan IWTk Pristiwasia, "Literature Study Of Tourism Village Development Regulation Based On Local Wisdom Aspects Of The Community In Kelong Village, Bintan Coast District, Indonesia," *Asian Journal Of Management* ..., 2024, <http://ajmesc.com/index.php/ajmesc/article/view/1049>.

⁶ Kai Zhu Et Al., "Regional Sustainability: Pressures And Responses Of Tourism Economy And Ecological Environment In The Yangtze River Basin, China," *Frontiers In Ecology And Evolution* 11 (2023), <https://doi.org/10.3389/fevo.2023.1148868>.

⁷ Windi Novia Ratri Wardhani, Purnomo Purnomo, Dan Ratih Pratiwi, "Collaborative Partnerships, Religious Reputation Culture, And Digital Tourism Promotion In Support Of Halal Tourism Villages," *IQTISHADIA*

Sustainable tourism and ecotourism significantly influence the well-being of small island communities⁸. Tourism serves as a primary source of income for many small islands by enhancing residents' quality of life, generating employment opportunities, and supporting the preservation of local culture and traditions⁹. Furthermore, sustainable tourism enables small island communities to actively participate in the management of natural resources, resulting in direct community benefits¹⁰.

Community participation in sustainable tourism on small islands serves as a fundamental basis for achieving equilibrium among economic growth, environmental conservation, and cultural sustainability¹¹. Ecological tourism has become a significant strategy in developing a sustainable tourism sector, particularly on small islands with sensitive ecosystems¹². Community welfare remains a critical consideration, as tourism affects not only the environment but also the social and economic conditions of local populations¹³. Ecological tourism holds considerable potential to enhance community welfare on small islands, contingent on a strong commitment to sustainable

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- 16, No. 2 (8 Desember 2023): 265, <https://doi.org/10.21043/Iqtishadia.V16i2.24039>.
- ⁸ Ilan Kelman, "Critiques Of Island Sustainability In Tourism," *Tourism Geographies* 0, No. 0 (2019): 1–18, <https://doi.org/10.1080/14616688.2019.1619825>.
- ⁹ Kuncoro Setya Raharjo Dan Isthofaina Astuti, "PENGARUH KEPUASAN KERJA, MOTIVASI, DAN REMUNERASI TERHADAP KINERJA PEGAWAI (Studi Pada Kantor Pengadilan Negeri Yogyakarta)," N.D.
- ¹⁰ P Booth Et Al., "Entrepreneurship In Island Contexts: A Systematic Review Of The Tourism And Hospitality Literature," *International Journal Of ...*, 2020, <https://www.sciencedirect.com/science/article/pii/S0278431919312319>.
- ¹¹ Lapotulo, Afriani, Dan Pristiwasa, "Literature Study Of Tourism Village Development Regulation Based On Local Wisdom Aspects Of The Community In Kelong Village, Bintan Coast District, Indonesia."
- ¹² A L Stronza, C A Hunt, Dan ..., "Ecotourism For Conservation?," ... *And Resources*, 2019, <https://doi.org/10.1146/annurev-environ-101718-033046>.
- ¹³ M Voumard, *Promises And Pitfalls Of Ecotourism: Patterns From A Literature Review* (Rua.Ua.Es, 2019), <https://rua.ua.es/dspace/handle/10045/92911>.

resource management and active community involvement in decision-making.¹⁴

Although scholarly interest in ecological and sustainable tourism has increased, the literature remains fragmented in its analysis of the interrelationships among key factors. Most prior research has concentrated on the economic benefits of tourism development or examined ecological conservation in isolation, frequently overlooking the integrated relationships among ecological resources, local welfare outcomes, and participatory governance, particularly in small island contexts¹⁵. Additionally, studies often treat ecological tourism, community-based tourism, and sustainable island tourism as distinct areas of inquiry, thereby limiting conceptual synthesis of their collective influence on sustainability outcomes¹⁶. This fragmentation impedes the development of a comprehensive understanding of ecological tourism governance and sustainability in small island destinations.

Tourism in small island states often leads to resource pressure¹⁷, pollution, ecosystem damage¹⁸, and shifts in social

¹⁴ Panarengan Hasibuan Et Al., "Analisis Pengukuran Temperatur Udara Dengan Metode Observasi Analysis Of Air Temperature Measurements Using The Observational Method," *ABDIMAS:Jurnal Garuda Pengabdian Kepada Masyarakat* 1, No. 1 (2023): 8–15.

¹⁵ Nidia Hernández Sánchez Dan Jeroen Oskam, "A 'New Tourism Cycle' On The Canary Islands: Scenarios For Digital Transformation And Resilience Of Small And Medium Tourism Enterprises ," *Journal Of Tourism Futures* 2, No. 1 (2022).

¹⁶ D Van Rheenen Et Al., "Sport Tourism, Island Territories, And Sustainable Development: A Literature Review," *Sport Tourism, Island ...*, 2024, https://doi.org/10.1007/978-3-031-51705-1_4; Booth Et Al., "Entrepreneurship In Island Contexts: A Systematic Review Of The Tourism And Hospitality Literature."

¹⁷ Luky Adrianto Et Al., "Assessing Social-Ecological System Carrying Capacity For Urban Small Island Tourism: The Case Of Tidung Islands, Jakarta Capital Province, Indonesia," *Ocean And Coastal Management* 212 (15 Oktober 2021), <https://doi.org/10.1016/j.ocecoaman.2021.105844>.

¹⁸ Scheyvens Dan Momsen, "Tourism And Poverty Reduction: Issues For Small Island States."

and cultural structures¹⁹. However, there are few formal studies that address these consequences from both short-term and long-term perspectives²⁰. Existing literature tends to focus on macroeconomic impacts, with limited analysis of tourism's effects on local social structure, community well-being, and necessary policy changes²¹.

Tourist behaviour in ecotourism significantly affects local communities and the environment. Research indicates that ignoring local culture and environmental protection leads to negative outcomes²². Despite the appeal of natural resources, maintaining these ecosystems is challenging due to limited funding and low public awareness of ecotourism²³.

To address this gap, this study conducts a bibliometric and systematic review of ecological tourism research from 2019 to 2024. It maps thematic developments, identifies emerging, and synthesizes the relationships among ecological resources, community welfare, and community participation in small-island tourism sustainability. By combining bibliometric visualization with thematic synthesis, the study provides a comprehensive overview of the intellectual structure of ecological tourism research and suggests future directions for research, policy, and sustainable destination governance.

¹⁹ EWNA Vong, M Da Canossa Vong, Dan ..., "Sustainable Tourism Development Impact At Small Island Tourism Destination At Timor-Leste; A Systematical Literature Review," ... *And Tourism*, 2024, [Http://Skillerindonesia.Id/Index.Php/Jmet/Article/View/95](http://Skillerindonesia.Id/Index.Php/Jmet/Article/View/95).

²⁰ Hernández Sánchez Dan Jeroen Oskam, "A 'New Tourism Cycle' On The Canary Islands: Scenarios For Digital Transformation And Resilience Of Small And Medium Tourism Enterprises."

²¹ Mark P. Hampton Dan Julia Jeyacheya, "Power, Ownership And Tourism In Small Islands: Evidence From Indonesia," *World Development* 70 (1 Juni 2015): 481–95, <https://doi.org/10.1016/j.worlddev.2014.12.007>.

²² Stronza, Hunt, Dan ..., "Ecotourism For Conservation?"; Voumard, *Promises And Pitfalls Of Ecotourism: Patterns From A Literature Review*.

²³ Atikah Nurhayati, Isah Aisah, Dan Asep K Supriatna, "Model Development Of A Synergistic Sustainable Marine Ecotourism—A Case Study In Pangandaran Region, West Java Province, Indonesia," *Sustainability* 11, No. 4 (2019): 1103–14, [Www.Ijcs.Ro](http://www.ijcs.ro).

This study employs a bibliometric approach combined with thematic literature synthesis to systematically examine the development of ecological tourism research. Bibliographic data were collected from Google Scholar using the Publish or Perish software, focusing on publications from 2019 to 2024. The search utilized keywords such as “ecological tourism,” “sustainable tourism,” “small island tourism,” “community participation,” and “ecological resources.” After applying inclusion and exclusion criteria, a total of 50 articles were selected for analysis.

The data were analyzed using VOSviewer to conduct citation analysis, keyword co-occurrence, cluster mapping, and overlay visualization, supported by full-counting and association-strength normalization techniques. Subsequently, thematic analysis was applied to interpret research patterns and emerging themes, enabling both quantitative mapping of the intellectual structure and qualitative synthesis of key developments in ecological tourism research.

Result and Discussion

A. Bibliometric Performance and Publication Trends

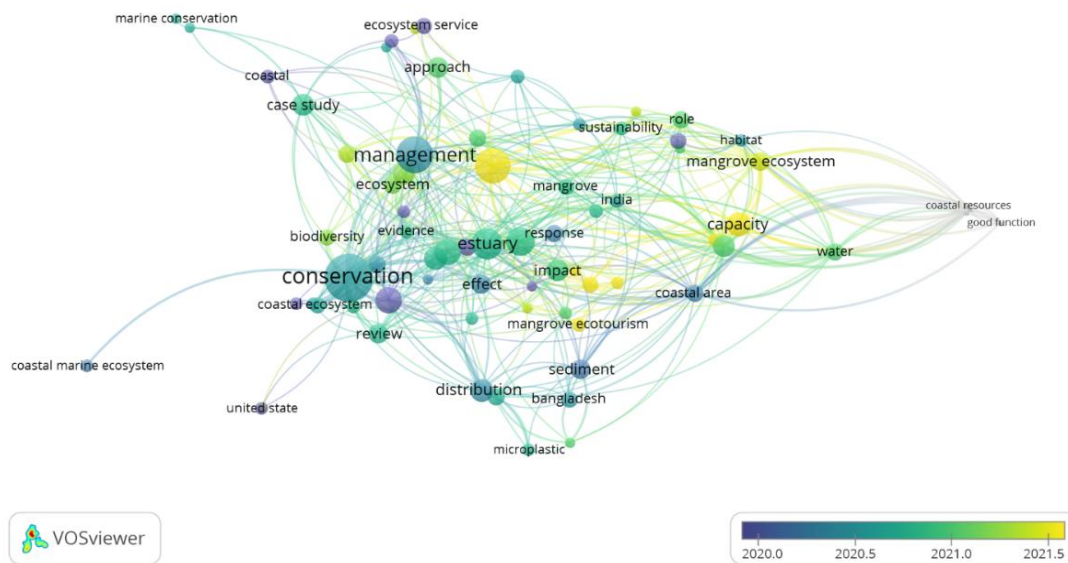
A total of 50 review articles on ecological and sustainable tourism have been published, accumulating 1,655 citations. The average number of citations per article is 33.10, while the average citations per author is 764.32. On average, each author has produced 24.88 articles. The Hirsch h-index is 21, indicating that 21 articles have received at least 21 citations. The Egghe g-index is 40, with an average citation rate of approximately 331.00 per year and an average citation age of 580.83, suggesting sustained citation activity over time. The average number of authors per article is 2.76, which reflects a high level of collaboration. Publication trends indicate that these articles appeared between 2019 and 2024, with annual citation counts fluctuating: 41 citations in 2019, 36 citations in 2020, 26 citations in 2021, dropping to 18 citations in 2022, and 9 citations recorded in 2023.

development. The red cluster focuses on management, approaches, and case studies, indicating the growing attention to ecosystem-based management strategies. Meanwhile, the blue cluster includes terms such as capacity and coastal systems, reflecting the importance of ecological resilience and coastal resource management.

These findings demonstrate that ecological tourism research is not confined to environmental studies alone, but also integrates policy, governance, and resource management perspectives, forming a holistic research framework. This research is significant due to its emphasis on ecosystem-based management, mangrove conservation, and ecosystem services. The integration of these themes demonstrates a multidisciplinary approach that encompasses environmental science, policy, and resource management. The green cluster, containing terms such as “conservation,” “biodiversity,” and “impact,” underscores the importance of preserving biodiversity within coastal ecosystems. The red cluster, which includes terms such as “management,” “approach,” and “case study,” reflects

ongoing discourse regarding ecosystem-based management strategies.

Picture 2 Overlay visualization Using VOSviewer



The overlay visualization (see Figure 2) provides insights into the temporal evolution of research themes. The analysis identifies emerging topics such as capacity development, mangrove ecosystems, and mangrove ecotourism, which indicate a shift towards adaptive and resilience-based approaches in ecological tourism.

The study underscores the significance of mangroves in delivering ecosystem services, as demonstrated by the strong association between the terms “mangrove” and “ecosystem services.” The blue cluster, which includes keywords such as “capacity” and “coast,” centres on the potential for mangrove management and ecosystem functions within coastal regions. A global perspective is evident, with keywords such as “Bangladesh,” “India,” and “United States” reflecting cross-regional research on coastal ecosystem management. This bibliometric analysis demonstrates the necessity of a

multidisciplinary approach to coastal research, integrating environmental, policy, and resource management perspectives to enhance the sustainability of coastal ecosystems.

Analysis of the displayed word map indicated that mangrove conservation is the primary focus of this research, as evidenced by the prominent terms such as "mangrove" and "conservation". The study also addresses broader coastal ecosystems, as evidenced by the frequent use of terms such as "coastal ecosystem", "estuary", and "coastal area". Furthermore, the management of mangrove ecosystems emerges as a central theme, highlighted by the presence of terms such as "management" and "approach".

Overlay visualization analysis reveals several emerging themes, including capacity, mangrove ecosystems, and mangrove ecotourism. These themes indicate a scholarly shift toward ecosystem resilience, adaptive capacity, and ecosystem-based tourism management. Recent ecological tourism scholarship increasingly moves beyond traditional conservation narratives, adopting integrative approaches that emphasize adaptive management of ecological systems under escalating environmental pressures. Furthermore, the prominence of themes related to human-induced environmental stressors, such as pollution and climate change, reflects growing recognition that ecological tourism is intrinsically linked to broader environmental governance and resilience discourses.

Recent studies increasingly emphasize ecosystem resilience, adaptive governance, and sustainability under environmental pressures such as climate change and pollution. The prominence of these themes reflects a transition from traditional conservation-focused approaches to more integrative frameworks that combine ecological protection with socio-economic considerations. This trend suggests that future research will likely focus on climate adaptation, carrying capacity

management, and ecosystem-based tourism planning as critical components of sustainable tourism development.

B.Challenges in Sustainable Tourism Development in Small Islands

A synthesis of the literature indicates that ecological tourism development in small islands encounters persistent structural and governance challenges. These challenges include limitations in waste management, vulnerability to climate impacts, inadequate law enforcement, fragmented stakeholder coordination, and a lack of context-specific policy frameworks. Collectively, these issues underscore the complexity of managing tourism within small-island socio-ecological systems, where restricted carrying capacity and institutional resources amplify sustainability risks.

Climate change represents a significant threat to small islands, primarily due to their vulnerability to sea-level rise, extreme weather events, and coastal ecosystem degradation. Concurrently, governance failures, such as inadequate regulatory enforcement and insufficient stakeholders coordination, often impede the effective implementation of sustainable tourism policies. These observations indicate that the sustainability of ecological tourism relies on both comprehensive conservation strategies and robust governance systems that support adaptive, participatory management.

Some reviews related to these challenges are as in table 2 below.

Table 2. Challenges in developing *Sustainable Tourism* in Small Islands

Author	Key Point	Results
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24	waste management	1. The number of visitors increases during peak season. 2. Many small islands lack adequate infrastructure for effective waste management, leading to environmental pollution and adversely affecting public health and local ecosystems.
25	climate change	1. Small islands are more vulnerable to environmental phenomena, including sea level rise, storms, and shifts in weather patterns. 2. Climate change poses significant risks to the natural environment and directly affects the tourism sector by diminishing destinations and disrupting the livelihoods of local communities reliant on tourism.

²⁴ A Blanton Et Al., “Ecotourism And Mangrove Conservation In Southeast Asia: Current Trends And Perspectives,” ... *Of Environmental ...*, 2024, <https://www.sciencedirect.com/science/article/pii/S0301479724015159>.

²⁵ G Y Jayasinghe Et Al., “... Review On Integrating Disaster Risk Reduction (DRR) In Sustainable Tourism (Sust): Conceptual Framework For Enhancing Resilience And Minimizing Environmental ...,” *International Journal Of ...*, 2024, <https://www.sciencedirect.com/science/article/pii/S2212420924005041>.

26	balance between tourism growth and local cultural preservation.	Increased tourism activity often results in the commodification of culture, as local traditions and practices are modified to meet market demands. Such changes may erode cultural identity and weaken the relationship between communities and their environment.
27	neglect of ecological principles	Given the accelerating degradation of the biosphere, tourism can meaningfully contribute to environmentally sustainable development only by shifting from incremental solutions to transformative change, as exemplified by concepts such as <i>degrowth</i> and planetary boundaries.
28	Existing policies are often not flexible enough to respond	Many regulations fail to consider local conditions or the unique context of small islands, resulting in negative impacts on ecosystems and communities. For instance, inadequate waste management

²⁶ N N S Astuti Et Al., "The Future Of Green Tourism In Bali: Challenges And Opportunities," ... *Sciences In Travel* ..., 2024, <https://Ojs2.Pnb.Ac.Id/Index.Php/JASTH/Article/View/2117>.

²⁷ A Chakraborty, "Can Tourism Contribute To Environmentally Sustainable Development? Arguments From An Ecological Limits Perspective," *Environment, Development And Sustainability*, 2021, <https://doi.org/10.1007/s10668-020-00987-5>.

²⁸ U Hasana, S K Swain, Dan B George, "Management Of Ecological Resources For Sustainable Tourism: A Systematic Review On Community Participation In Ecotourism Literature," ... *On Community Participation In* ..., 2022, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3948162.

	changing environmental and social dynamics.	and unsustainable land-use policies can jeopardize the natural resources that underpin tourism.
29	lack of accurate data and information to support decision making.	Insufficient research and monitoring hinder the evaluation of tourism impacts and the identification of best practices. The lack of reliable data limits policymakers' ability to develop effective, sustainable strategies.
30	Weak supervision and law enforcement	Numerous tourism destinations operate beyond existing regulations, leading to the exploitation of natural resources and environmental degradation due to the lack of stringent enforcement mechanisms.
31	lack of coordination between various stakeholders	Unclear delineation of roles and responsibilities often leads to ineffective decision-making and fragmented policy implementation, ultimately

²⁹ M Y Awang, "This Phenomenon Sustainable Competitive Advantage For Alor Island Ecotourism Development: Background Review And Literature Review," *Journal Of International Conference ...*, 2023, [Http://Ejournal.Aibpmjournals.Com/Index.Php/JICP/Article/View/2846](http://Ejournal.Aibpmjournals.Com/Index.Php/JICP/Article/View/2846).

³⁰ S Tiwari, D Marahatta, Dan H Devkota, "Aspects Of Community Participation In Eco-Tourism: A Systematic Review," *Journal Of Multidisciplinary Research ...*, 2024, [Https://Nepjol.Info/Index.Php/Jomra/Article/View/66650](https://Nepjol.Info/Index.Php/Jomra/Article/View/66650).

³¹ Z Kia, "Ecotourism In Indonesia: Local Community Involvement And The Affecting Factors," *Journal Of Governance And Public Policy*, 2021, [Https://Journal.Umy.Ac.Id/Index.Php/GPP/Article/View/10789](https://Journal.Umy.Ac.Id/Index.Php/GPP/Article/View/10789).

disadvantaging all parties involved.

Overall, these challenges require an integrated, participatory approach in which local communities, governments, and other stakeholders work together to create sustainable solutions that are responsive to the unique conditions faced by small islands. Highly cited review articles reflect current trends in ecotourism and sustainable practices, with a particular focus on the small island context.

The findings indicate that ecological tourism development in small islands faces significant structural and governance challenges. Key issues include inadequate waste management systems, vulnerability to climate change, weak law enforcement, limited institutional capacity, and poor stakeholder coordination. Small islands are particularly susceptible to environmental degradation due to their limited carrying capacity and fragile ecosystems. Increased tourism activities often lead to waste accumulation, biodiversity loss, and resource depletion. Climate change further exacerbates these challenges through sea-level rise, extreme weather events, and ecosystem disruption.

In addition, governance-related issues such as fragmented policy implementation, lack of context-specific regulations, and insufficient data availability hinder effective tourism management. Weak coordination among stakeholders also limits the success of sustainable tourism initiatives. These findings underscore the complexity of managing tourism in small-island socio-ecological systems and highlight the need for integrated and adaptive governance frameworks.

Table 3. Trends in Ecological Tourism

Author	Key Point	Results	Quote
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32	a general model of community-based tourism oriented to enhance local benefits from island tourism	This article demonstrates the significance of adopting a community-based approach to maximize economic and social benefits for local residents and emphasizes the role of community involvement in tourism destination management.	31 citations (average of 10.33 per year),
33	climate change	The article examines alternative governance arrangements within community-based tourism on small, resource-limited islands. It highlights the challenges these communities face in developing sustainable tourism and suggests that innovative governance solutions may be essential for	4 quotes (average 4.00 per year).

³² A Dłużewska Dan A Giampiccoli, "Enhancing Island Tourism's Local Benefits: A Proposed Community-Based Tourism-Oriented General Model," *Sustainable Development*, 2021, <https://doi.org/10.1002/Sd.2141>.

³³ Isye Susana Nurhasanah, Delik Hudalah, Dan Pieter Van Den Broeck, "Systematic Literature Review On Alternative Governance Arrangements For Resource Deficient Situations: Small Island Community-Based Ecotourism," *Island Studies Journal* Early Access (24 Agustus 2023), <https://doi.org/10.24043/001c.85173>.

		overcoming resource constraints.	
34	balance between tourism growth and local cultural preservation.	The article compares the economic impacts of sustainable tourism in Bali and North Sumatra, providing insights into how tourism affects local community well-being and underscoring the importance of local context in tourism development strategies.	3 quotes (average 3.00 per year)
35	neglect ecological principles	of This study addresses the dilemma between voluntarism and ecological commitment in ecotourism, emphasizing the tension between economic interests and ecological	5 quotes (average 1.00 per year).

³⁴ D R D Fretes Et Al., "Exploring The Economic Impacts Of Sustainable Tourism On Locals: A Comparative Analysis Between Bali And Nort Sumatera," ... *Of Humanities, Social ...*, 2023, [Http://Repository.Uki.Ac.Id/Id/Eprint/15230](http://Repository.Uki.Ac.Id/Id/Eprint/15230).

³⁵ Patmawati Ibrahim, Asmak Ab Rahman, Dan Siti Arni Basir, "SUSTAINABLE ECONOMIC DEVELOPMENT: CONCEPT, PRINCIPLES AND MANAGEMENT FROM ISLAMIC PERSPECTIVE," N.D.

		responsibility, a theme central to contemporary debates on sustainable tourism.	
36	Tourism Governance	1. This paper examines the role of tourism governance in promoting justice, ethics, and equity within community-based tourism. 2. Fair and ethical management practices in tourism are essential for achieving sustainability and ensuring tangible benefits for local communities.	48 citations (average 16.00 per year).

The analysis of recent literature reveals a growing emphasis on community-based tourism (CBT) as a strategic approach to sustainable ecological tourism development. CBT is widely recognized for its ability to enhance local economic benefits, strengthen social cohesion, and promote cultural preservation.

³⁶ Tek B. Dangi Dan James F. Petrick, "Augmenting The Role Of Tourism Governance In Addressing Destination Justice, Ethics, And Equity For Sustainable Community-Based Tourism," *Tourism And Hospitality* 2, No. 1 (1 Maret 2021): 15–42, <https://doi.org/10.3390/Tourhosp2010002>.

Studies consistently show that tourism development strategies that prioritize community involvement are more likely to achieve sustainable outcomes. Governance models that integrate local participation, ethical management practices, and equitable benefit distribution are increasingly emphasized in the literature. This trend also reflects a broader shift towards inclusive and participatory tourism governance, where local communities are positioned as active stakeholders rather than passive beneficiaries.

Sustainable tourism significantly contributes to local welfare by utilizing ecological resources, particularly on small islands³⁷. A sustainability-focused approach enables the optimization of natural resources, including scenic landscapes, biodiversity, and local culture, which serve as primary tourist attractions. The development of community-based tourism facilitates active local participation in resource management and utilization, thereby increasing income and reinforcing cultural and social identity³⁸. Community-managed ecotourism initiatives generate employment and business opportunities, such as homestays, handicrafts, and tour guiding, which stimulate the local economy. Furthermore, sustainable tourism promotes environmental conservation, which is essential for preserving ecological resources for future generations. Consequently, sustainable tourism provides economic advantages and enhances the quality of life of local communities, establishing itself as a fundamental component of local welfare³⁹.

³⁷ A Mandić, "Nature-Based Solutions For Sustainable Tourism Development In Protected Natural Areas: A Review," *Environment Systems And Decisions*, 2019, <https://doi.org/10.1007/S10669-019-09718-2>.

³⁸ Dangi Dan Petrick, "Augmenting The Role Of Tourism Governance In Addressing Destination Justice, Ethics, And Equity For Sustainable Community-Based Tourism."

³⁹ Scheyvens Dan Momsen, "Tourism And Poverty Reduction: Issues For Small Island States."

A key finding of this review is that ecological tourism most effectively enhances community welfare when local communities participate actively in tourism governance and resource management. The literature consistently demonstrates that ecological tourism generates employment, diversifies local livelihoods, strengthens cultural identity, and improves household welfare when communities serve as active stakeholders rather than passive recipients⁴⁰.

Community participation is essential for enhancing the legitimacy and sustainability of ecological tourism initiatives⁴¹. Participatory governance promotes local ownership, reinforces conservation commitments, and ensures that tourism development aligns with local socio-cultural values⁴². In

⁴⁰ M D Zoysa, "Forest-Based Ecotourism In Sri Lanka: A Review On State Of Governance, Livelihoods, And Forest Conservation Outcomes," *Journal Of Sustainable Forestry*, 2022, <https://doi.org/10.1080/10549811.2021.1943450>; M Harun Et Al., "Systematic Literature Reviews (Slr) Analysis On National Tourism Policy," *JOURNAL OF TOURISM ...*, 2020, <https://gaexcellence.com/index.php/jthem/article/view/1573>; V Mendoza De La Luz, *Sustainable Tourism Planning And Cross-Sector Partnerships In Small-Scale Fishing Communities: Prospects And Challenges For Viability In Ría Lagartos Biosphere ...* (Uwspace.Uwaterloo.Ca, 2021), <https://uwspace.uwaterloo.ca/handle/10012/17556>; M T Stone Dan L S Stone, "Challenges Of Community-Based Tourism In Botswana: A Review Of Literature," *Transactions Of The Royal Society Of South ...*, 2020, <https://doi.org/10.1080/0035919X.2020.1715510>.

⁴¹ Fretes Et Al., "Exploring The Economic Impacts Of Sustainable Tourism On Locals: A Comparative Analysis Between Bali And Nort Sumatera."

⁴² Dłużewska Dan Giampiccoli, "Enhancing Island Tourism's Local Benefits: A Proposed Community-Based Tourism-Oriented General Model"; N Dogra Et Al., "What Makes A Community Sustainably Developed? A Review Of 25 Years Of Sustainable Community Tourism Literature," *Community ...*, 2022, <https://doi.org/10.1080/15575330.2021.2015606>; Z A Janjua, G Krishnapillai, Dan M Rahman, "A Systematic Literature Review Of Rural Homestays And Sustainability In Tourism," *Sage Open*, 2021, <https://doi.org/10.1177/21582440211007117>; Tiwari, Marahatta, Dan Devkota, "Aspects Of Community Participation In Eco-Tourism: A Systematic Review"; Lapotulo, Afriani, Dan Pristiwasa, "Literature Study

contrast, externally driven tourism development with limited community involvement often fails to achieve equitable welfare outcomes and may result in social conflict or ecological degradation⁴³.

Collectively, these findings indicate that the long-term sustainability of ecological tourism in small islands depends on the dynamic interplay among ecological resource management, welfare generation, and participatory governance. Ecological tourism should be understood not only as an environmental conservation strategy, but also as an integrated socio-ecological governance framework that balances ecological protection with inclusive local development.

A key finding of this study is that ecological tourism contributes most effectively to community welfare when local communities actively participate in tourism governance and resource management. Active participation enhances local ownership, strengthens conservation commitment, and ensures that tourism benefits are distributed equitably. Ecological tourism has been shown to generate employment opportunities, diversify livelihoods, and reinforce cultural identity in small-island communities. Community-managed tourism initiatives, such as homestays, local guiding services, and handicraft industries, contribute directly to local economic development.

Conversely, tourism development that excludes community participation often leads to unequal benefit distribution, social conflict, and environmental degradation. Therefore, participatory governance is essential to ensure the long-term sustainability of ecological tourism. Overall, these findings highlight that ecological tourism should be understood not only

Of Tourism Village Development Regulation Based On Local Wisdom Aspects Of The Community In Kelong Village, Bintan Coast District, Indonesia.”

⁴³ Hasana, Swain, Dan George, “Management Of Ecological Resources For Sustainable Tourism: A Systematic Review On Community Participation In Ecotourism Literature.”

as an environmental conservation strategy but also as an integrated socio-ecological governance framework that balances ecological protection with community welfare and inclusive development.

Conclusion

This study presents a comprehensive bibliometric and thematic synthesis of ecological tourism research published from 2019 to 2024, with a particular focus on the interrelationships among ecological resources, community welfare, and community participation in the context of small-island tourism sustainability. The results indicate that ecological tourism scholarship remains primarily focused on environmental conservation, especially the preservation of mangrove and coastal ecosystems, while increasingly addressing adaptive capacity, ecosystem resilience, and participatory governance. The review confirms that ecological tourism is most effective for sustainable small-island development when ecological resource management is integrated with welfare generation and substantive community participation.

This study advances the sustainable tourism literature by presenting an integrated conceptualization of ecological tourism as a socio-ecological governance framework, rather than solely a conservation-based tourism model. Through synthesizing diverse literature on ecological resources, community welfare, and participatory tourism governance, the research enhances understanding of how these dimensions collectively influence sustainability outcomes in small-island tourism contexts. The findings offer policy recommendations for tourism planners and policymakers to develop ecological tourism strategies that balance environmental protection with inclusive local development.

Several limitations are present in this study. First, the analysis utilized bibliometric data obtained from Google Scholar via Publish or Perish, which may exhibit inconsistencies in

indexing quality and citation accuracy compared to curated databases such as Scopus or Web of Science. Second, the scope was limited to English-language publications from 2019 to 2024, potentially excluding earlier or non-English research. Third, while bibliometric visualization offers broad thematic mapping, it does not fully represent the contextual depth of individual empirical studies.

Future research should enhance bibliometric coverage by integrating multiple databases and extending temporal ranges to increase data-set comprehensiveness. Additional empirical studies are needed to examine the influence of governance structures, institutional capacity, and stakeholder power relations on the implementation of ecological tourism across various small-island contexts. Increased scholarly focus is also warranted on emerging topics, including climate resilience, carrying capacity management, and environmental justice within ecological tourism development.

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