

# Bibliometric Analysis of Sustainable Destinations

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## ABSTRACT

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This bibliometric analysis explores the evolution of research on sustainable destinations within the tourism industry, focusing on key trends and emerging themes from 2000 to 2025. Sustainable tourism, with its emphasis on long-term environmental, social, and economic benefits, has gained significant academic attention, reflecting the growing awareness of sustainability challenges in the tourism sector. The study analyzes a dataset of peer-reviewed articles from the Scopus database, applying bibliometric techniques such as co-authorship, co-citation, and keyword co-occurrence networks to map the field's intellectual structure. Findings indicate that the literature on sustainable destinations is increasingly interdisciplinary, combining ecological conservation, community engagement, and responsible tourism practices. The study identifies key areas of focus, such as ecotourism, urban sustainability, and digital transformation through smart tourism technologies. It also highlights the role of sustainable destinations in advancing the United Nations Sustainable Development Goals (SDGs). The analysis provides insights into research gaps, the evolution of sustainable destination concepts, and opportunities for future interdisciplinary research to foster more integrated and resilient tourism practices.

**Keywords:** *Sustainable Tourism, Sustainable Destinations, Ecotourism, Smart Tourism, Tourism Economics, Environmental Conservation*

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## 1. INTRODUCTION

Sustainable tourism has emerged as a critical paradigm in the contemporary travel and hospitality industry, reflecting growing global awareness of environmental, social, and economic sustainability. Unlike traditional tourism, which often prioritizes short-term economic gains, sustainable tourism emphasizes long-term benefits for local communities, conservation of natural and cultural resources, and equitable economic development. In recent decades, the concept of sustainable destinations has gained prominence as destinations worldwide seek to balance tourism growth with environmental protection and social responsibility [1]. This shift has been driven by increased recognition that unsustainable tourism practices can lead to environmental degradation, cultural commodification, and socio-economic inequalities, thereby undermining the very attractiveness of the destinations themselves [2], [3].

Sustainable destinations are typically characterized by strategies that integrate ecological conservation, community involvement, and responsible visitor behavior. These destinations often employ frameworks for sustainable management, including carrying capacity assessments, eco-certification programs, and participatory governance models, to ensure that tourism activities do not compromise environmental quality or local livelihoods [4]. The growing body of literature on sustainable destinations reflects the complex and multidimensional nature of this phenomenon, encompassing environmental science, tourism studies, urban planning, and policy analysis. Bibliometric approaches can provide a structured overview of this knowledge, enabling researchers to identify key trends, influential publications, and collaborative networks that have shaped the field [4], [5].

Research on sustainable destinations has also highlighted the role of tourism in supporting the United Nations Sustainable Development Goals (SDGs). In particular, tourism has been linked

to SDG 8 (decent work and economic growth), SDG 12 (responsible consumption and production), and SDG 15 (life on land), among others. By promoting environmentally responsible practices, encouraging cultural preservation, and fostering economic inclusion, sustainable destinations contribute to a broader agenda of global sustainability. Scholars have increasingly emphasized that sustainability in tourism is not solely an environmental issue but a holistic approach that requires coordinated efforts among governments, businesses, local communities, and tourists themselves [2], [6], [7].

The concept of sustainable destinations has evolved in response to the growing threats posed by climate change, overtourism, and resource depletion. Climate-related impacts, including rising temperatures, sea-level rise, and extreme weather events, pose significant risks to tourism-dependent regions, particularly in coastal and fragile ecological zones [8], [9]. Similarly, overtourism has drawn attention to the social and environmental pressures experienced by heavily visited destinations, highlighting the need for evidence-based management strategies. In this context, bibliometric analysis serves as a powerful tool to map the trajectory of research, identify emerging themes, and uncover gaps in knowledge that can inform policy and practice.

Despite the increasing attention to sustainable destinations, research remains fragmented across disciplines and geographic regions. While some studies focus on eco-certification and green infrastructure, others examine community engagement, economic impacts, or visitor behavior. This diversity underscores the need for systematic mapping of the literature to consolidate insights, detect patterns of collaboration, and highlight influential contributions [10]. Bibliometric techniques, which analyze publication outputs, citation networks, and co-authorship patterns, offer a quantitative and visual approach to understanding how knowledge in sustainable destinations has evolved, providing a foundation for future research and evidence-based decision-making.

Although sustainable destinations are recognized as critical for balancing tourism development and environmental preservation, there remains a lack of comprehensive understanding of the research landscape in this domain. The literature is dispersed, with studies varying in methodology, focus areas, and geographic scope, making it difficult for scholars and policymakers to discern the most influential research trends, key contributors, and collaborative networks. Moreover, the absence of systematic bibliometric studies limits the ability to track the evolution of the field over time, identify emerging themes, and guide strategic research agendas. Without such synthesis, efforts to implement sustainable practices in tourism may rely on fragmented knowledge, potentially reducing their effectiveness and sustainability outcomes. The objective of this study is to conduct a bibliometric analysis of sustainable destinations to map the structure, trends, and patterns within the existing research.

## 2. METHODS

This study employs a bibliometric analysis approach to systematically examine the scientific literature on sustainable destinations. Bibliometric analysis is a quantitative method used to evaluate the structure, trends, and patterns of publications within a specific field by analyzing metadata such as authors, institutions, journals, keywords, and citations [11]. The method allows researchers to identify influential studies, collaboration networks, and emerging themes, providing a comprehensive overview of the knowledge landscape. In this research, bibliometric techniques are applied to uncover the development of the sustainable destinations domain and to guide future research directions.



are increasingly connected to urban policy and mobility systems. This suggests an expanding research agenda where cities are not only tourism spaces but also complex socio-ecological systems requiring integrated sustainability strategies. The network also shows an emerging technological and innovation-oriented dimension through terms like smart tourism, virtual reality, and innovation. Although these nodes are smaller compared to traditional sustainability themes, their links to tourism industry and destination image indicate growing scholarly attention to digital transformation in destination management. This trend reflects how technological tools are being explored to enhance visitor experience, optimize resource use, and support sustainable governance practices.

The structure of the map illustrates a multidimensional evolution of sustainable destination research, where environmental conservation, socio-economic development, urban systems, and technological innovation converge. The balanced connectivity between clusters suggests that the field is moving toward integrative frameworks rather than isolated thematic studies. Future research may further bridge these clusters by examining how smart technologies, urban planning, and community-based ecotourism collectively contribute to sustainable destination competitiveness and long-term resilience.

### 3.2 Overlay Visualization

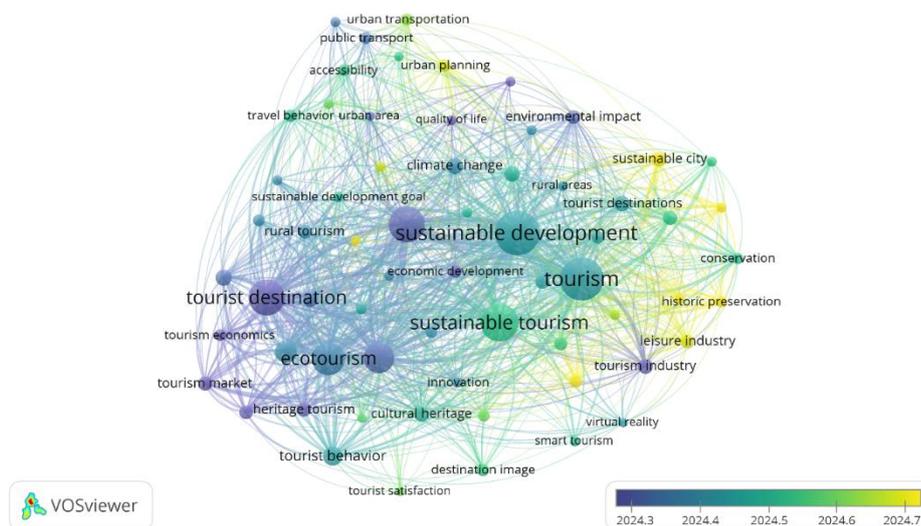


Figure 2. Overlay Visualization

Source: Data Analysis Result, 2026

Figure 2 shows the temporal evolution of research themes within sustainable destination studies, where color gradients indicate the average publication year of keywords. Earlier topics, represented in darker blue tones, include tourist destination, ecotourism, and tourism economics, suggesting that initial research in this field was largely centered on traditional tourism development and nature-based tourism concepts. These foundational themes established the core understanding of sustainable destinations by emphasizing environmental conservation, heritage value, and tourism market dynamics. As the field progressed, mid-period themes in green shades such as sustainable tourism, tourism, and sustainable development became more prominent. This shift reflects a transition toward integrated sustainability frameworks that combine environmental responsibility with economic and social dimensions. The dense connections around these terms indicate that scholars increasingly examined sustainability from a holistic perspective, linking climate change, innovation, and cultural heritage into broader discussions about destination management and policy.

More recent topics, highlighted in yellow tones, reveal emerging directions in the literature, including sustainable city, conservation, historic preservation, and aspects of the tourism industry. These newer keywords suggest a growing focus on urban sustainability, heritage protection, and governance challenges in managing tourist destinations. The presence of smart tourism and virtual reality near the more recent spectrum indicates that digital transformation and technological innovation are becoming increasingly relevant, signaling future research opportunities that integrate sustainability goals with smart destination strategies.

### 3.3 Citation Analysis

Table 1. The Most Impactful Literatures

Citations	Authors and year	Title
1067	[12]	City planning and population health: a global challenge
1032	[13]	Food, place and authenticity: Local food and the sustainable tourism experience
952	[14]	Pandemics, transformations and tourism: be careful what you wish for
639	[15]	Determinants of market competitiveness in an environmentally sustainable tourism industry
602	[16]	Sustainable tourism development and competitiveness: The systematic literature review
594	[17]	Soil health and global sustainability: Translating science into practice
564	[18]	Beyond carbon pricing: The role of banking and monetary policy in financing the transition to a low-carbon economy
539	[19]	Residents' support for tourism development: The role of residents' place image and perceived tourism impacts
509	[20]	The eco-efficiency of tourism

Source: Scopus, 2025

### 3.4 Density Visualization

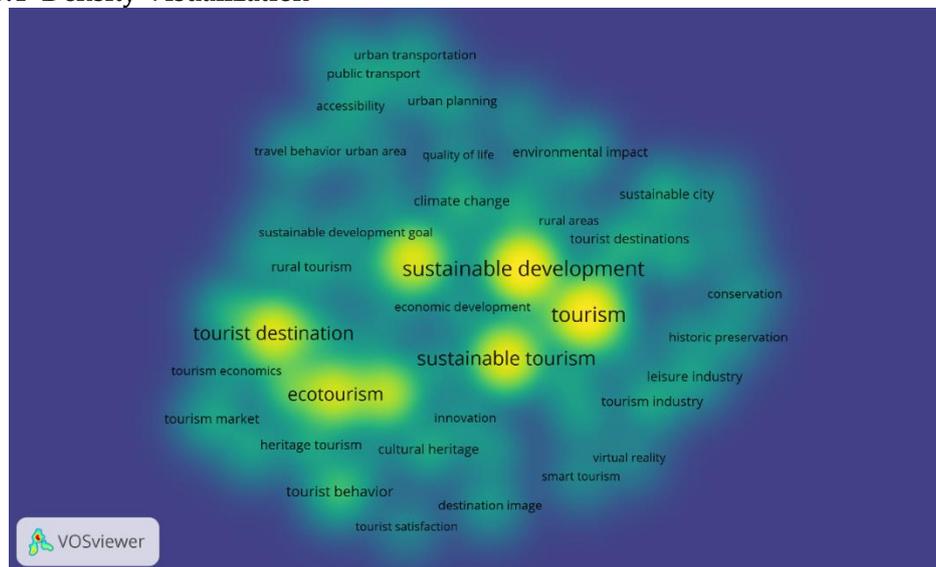


Figure 3. Density Visualization

Source: Data Analysis Result, 2026

Figure 3 highlights the most frequently studied and highly connected themes within sustainable destination research. The brightest areas concentrate around sustainable development, tourism, sustainable tourism, ecotourism, and tourist destination, indicating that these concepts

form the intellectual core of the field. Their strong density suggests that a large proportion of publications consistently integrate sustainability principles with tourism development, emphasizing environmental conservation, economic growth, and destination management as central research priorities. Surrounding these core themes are medium-density areas such as climate change, cultural heritage, innovation, and sustainable city, which reflect complementary research directions that support the evolution of sustainable destinations. The lower-density regions, including smart tourism, virtual reality, and destination image, suggest emerging but still developing topics that have not yet reached the same level of scholarly attention.

### 3.5 Co-Authorship Network

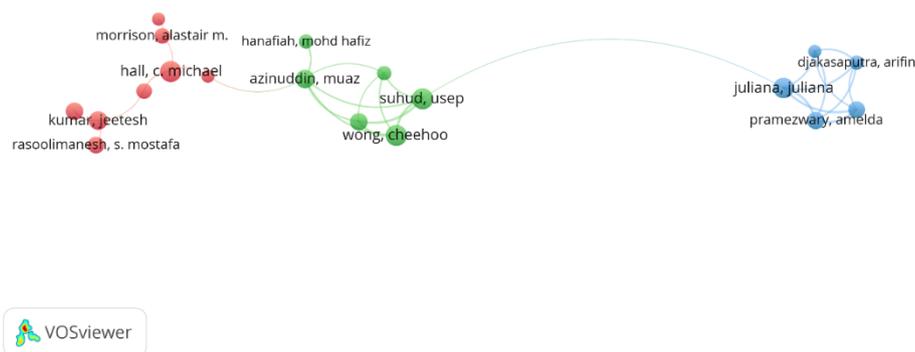


Figure 4. Author Visualization

Source: Data Analysis Result, 2026

Figure 4 illustrates several small but distinct collaboration clusters within sustainable destination research, indicating that scholarly production in this field is still relatively fragmented across research groups. One cluster connects authors such as Morrison, Hall, and Kumar, suggesting a foundation of earlier or conceptual contributions, while another cluster centered on Suhud, Azinuddin, and Wong reflects collaborative work that may focus on regional or thematic development within sustainable tourism studies. A separate group involving Juliana, Djakasaputra, and Pramezwarly highlights a more localized collaboration pattern, possibly representing emerging research networks. The limited interconnections between clusters suggest that although multiple author groups contribute to the literature, cross-regional or interdisciplinary collaboration remains moderate, indicating opportunities for stronger global research integration in future sustainable destination studies.



Figure 5. Affiliation Visualization

Source: Data Analysis Result, 2026

Figure 5 shows that research on sustainable destinations is supported by several geographically dispersed academic centers, although partnerships remain relatively clustered rather than globally integrated. Institutions such as the School of Hotel and Tourism Management, Geography Research Unit Oulu, and Institute of Geographic Science form a core collaboration hub, reflecting the strong role of tourism and geography disciplines in shaping sustainability research. Meanwhile, connections involving Amity University and Universitas Pendidikan Indonesia indicate emerging cross-regional academic interactions, suggesting increasing participation from Asian institutions. Smaller clusters linked to research centers and institutes in Europe highlight specialized contributions, yet the overall structure suggests that institutional collaboration is still moderately fragmented, pointing to opportunities for stronger international research alliances to advance the sustainable destination research agenda.

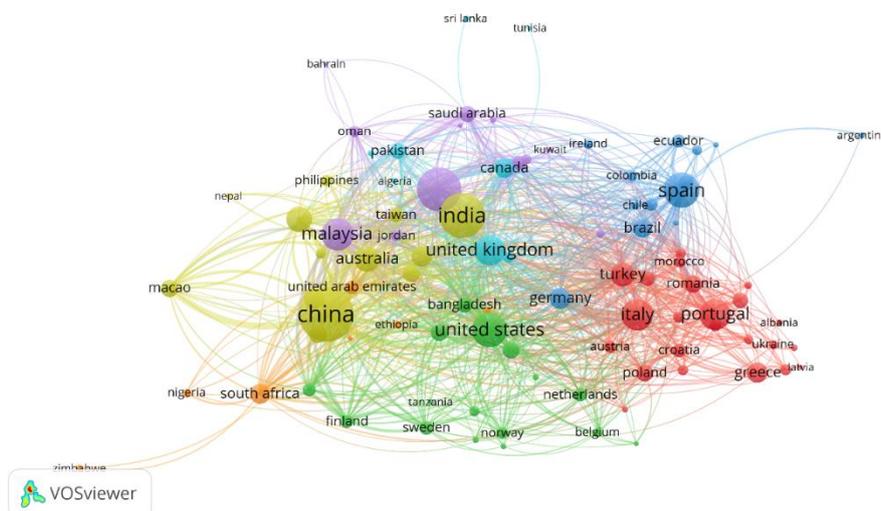


Figure 6. Country Visualization

Source: Data Analysis Result, 2026

Figure 6 reveals a highly interconnected global research landscape in sustainable destination studies, with several dominant hubs shaping international knowledge exchange. Countries such as China, India, the United Kingdom, Spain, Italy, Portugal, and the United States appear as central nodes, indicating their strong publication output and collaborative influence. European nations form a dense cluster, particularly around Portugal, Italy, Greece, and Spain, reflecting active regional partnerships in tourism sustainability research, while Asian countries including China, Malaysia, and Saudi Arabia contribute significantly to expanding the geographical scope of the field. The presence of cross-links between Europe, Asia, and North America suggests increasing internationalization, although some peripheral countries remain loosely connected, highlighting ongoing opportunities to strengthen collaboration with emerging regions to diversify perspectives on sustainable destination development.

### Discussion

One of the key findings of this analysis is the shift in research focus from traditional destination management to a more integrated sustainability framework. For example, topics such as ecotourism, urban sustainability, and digital transformation with smart tourism technologies are increasingly being discussed. This reflects the need for a more holistic approach to managing tourist destinations, one that considers not only environmental aspects but also social and economic factors. The research demonstrates how natural resource management, community engagement, and improving the quality of life through sustainable urban planning are key to developing sustainable tourism destinations.

Furthermore, the research also highlights the role of technology in sustainable destination development, particularly through the concept of smart tourism and the use of virtual reality to enhance the tourist experience. While this topic is still relatively new, it demonstrates significant potential for research that combines technology with sustainability. Technology can make destination management more efficient, enabling tourists to enjoy trips more responsibly and with less impact on the local environment and culture. However, despite the abundance of research on this topic, there is still a lack of integration of technology with broader management strategies, representing a significant opportunity for future research.

Future research should focus on developing a framework that connects technology, urban planning, and ecotourism to support the competitiveness and resilience of sustainable destinations. With stronger international collaboration involving multiple disciplines, it is hoped that research will produce more effective policies for managing sustainable destinations and supporting the overall achievement of the Sustainable Development Goals (SDGs).

### CONCLUSION

This bibliometric analysis of sustainable destinations demonstrates that the field has evolved into a multidisciplinary research domain centered on sustainable development, tourism, and ecotourism as its intellectual foundations. The findings indicate a shift from traditional destination management toward integrated sustainability frameworks that incorporate urban planning, climate change, cultural heritage, and technological innovation such as smart tourism. Collaboration patterns show growing global participation, with strong contributions from Asia and Europe, although research networks remain partially fragmented, suggesting opportunities for deeper international and cross-institutional partnerships. The literature reflects a dynamic and expanding research trajectory where future studies are likely to focus on digital transformation, urban sustainability, and collaborative governance to enhance the resilience and competitiveness of sustainable destinations.

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