



## SUSTAINABLE TOURISM DEVELOPMENT: A BIBLIOMETRIC ANALYSIS USING VOSVIEWER

Seher GÜLENC<sup>1\*</sup> (orcid.org/ 0000-0001-5104-583X)

<sup>1</sup>Anadolu University, Faculty of Tourism, Department of Tourism Management, Eskişehir, Türkiye

### Abstract

This study aims to delineate the progression of the concept of sustainable tourism development and the research associated with it. This study seeks to furnish academics with a systematic overview of the existing literature on sustainable tourism development by bibliometric analysis utilizing quantitative data, while also identifying trends and gaps in related research. The study analyzed the evolution of sustainable tourism development literature within the social sciences utilizing bibliometric analysis via the WOS database and employed the VOSviewer software. This tool has enabled the assessment of productivity metrics among authors, nations, and journals, in addition to analyzing keyword utilization and co-citation patterns. The bibliometric analysis of 1,680 papers reveals that, whereas initial research on sustainable tourism development emerged in 2001, a significant upward trend has been shown since 2016. The literature was predominantly influenced by the United States, China, and Australia. The notion of sustainable tourism development is predominantly debated at Texas A&M University, with the highest number of publications attributed to Igor Trisic, while the most cited works are those of Tsung Hung Lee and the Journal of Sustainable Tourism. Moreover, there is an increasing tendency in research focused on sustainable tourist development, providing a comprehensive perspective on sustainability, sustainable tourism, and sustainable development. This condition reflects a sustained interest in these subjects within academic literature.

**Keywords:** Sustainable Tourism, Sustainable Tourism Development, Bibliometric Analysis, VOSviewer

### Introduction

The tourism sector is regarded as a vital domain in the developmental policies of numerous nations. Industry officials and experts are increasingly focusing on the potential contributions of tourism to achieving sustainable development goals. The Sustainable Development Report 2024, released by the United Nations Sustainable Development Solutions Network (UNSDSN), indicates that Turkey is rated 72nd among 167 nations, with a score of 70.5 (Sachs et al., 2024). This ranking underscores the significance of multi-sectoral collaboration to enhance sustainable development outcomes. The OECD tourist Trends and Policies report highlights that the tourist sector provides economic value and significantly contributes to the attainment of sustainable development goals (OECD, 2024). The tourist sector is a complex entity that fosters economic growth while also aiding in the preservation of environmental and socio-cultural values. The amalgamation of sustainable tourism with long-term development plans emerges as a crucial study focus at both the policy and implementation levels.

The United Nations Environment Programme (UNEP) and the World Tourism Organization (UNWTO) advocate for sustainable tourism, which prioritizes the long-term preservation of environmental, cultural, and social resources, while managing these resources in consideration of future generations' needs (Bramwell and Lane, 2011). This comprehension includes not just environmental conservation but also multifaceted objectives such as social equity and the preservation of cultural heritage. Sustainable tourism development primarily focuses on enhancing awareness and assuring the active involvement of the local population in tourism endeavors (Go and Kang, 2023). Sustainable tourism development is viewed as a comprehensive approach that necessitates tourism activities to produce economic benefits while also enhancing the quality of life for local residents.

\*Corresponding author: [sehergeyik@anadolu.edu.tr](mailto:sehergeyik@anadolu.edu.tr)

DOI: 10.33083/joghat.2026.622

The literature indicates that the concepts of tourism development, sustainable tourism, and sustainable tourism development, frequently examined in conjunction, have provided distinct contributions through innovative interdisciplinary approaches, thereby enriching the discourse in this domain. The studies predominantly emphasize conceptual analyses (Rasoolimanesh et al., 2023; Streimikiene et al., 2021; Torres-Delgado and Saarinen, 2017), case studies (Eslami et al., 2018; Tanguay et al., 2013), econometric analyses (Chen et al., 2023; Tase and Lulaj, 2022; Yang et al., 2022; Si and Tang, 2024), and policy and strategy recommendations (Guo et al., 2019; Khan et al., 2021; Kuscer et al., 2024). It is important to note that bibliometric analyses concerning tourism development (Leon-Gomez et al., 2021; Kawuryan et al., 2022; Pimenta et al., 2021) and sustainable tourism (Geng et al., 2024; Kapoor and Jain, 2024; Moyle, 2020; Serrano et al., 2019; Rocio et al., 2023) are also documented in the literature. Nevertheless, there exists a paucity of research that carefully analyze the literature on sustainable tourist development.

This study seeks to ascertain the conceptual framework and developmental progression of the sustainable tourism development research domain through a comprehensive methodology. This study seeks to address the existing gap in the literature by employing bibliometric analysis via VOSviewer on the subject of sustainable tourist development. This study aimed to address the subsequent inquiries:

- What are the trends in publication regarding sustainable tourist development literature? (What is the trend in the number of publications over the years? What is the distribution of publications per country? Who are the writers, universities, and journals with the highest publication rates?)
- Which countries, authors, and publications are most frequently cited in the literature about sustainable tourist development?
- What are the thematic tendencies in the literature about sustainable tourist development?

This study's findings will inform future research in sustainable tourism development by elucidating key trends, subject clusters, and collaborative frameworks among academics. The results will enhance researchers' comprehension of the topic, inform the selection of suitable research directions, and promote the field's long-term development by emphasizing reference sources, journals, and essential concepts. This study thoroughly analyzes current trends, contributing intellectually and providing a guiding framework for industry leaders. This study identifies conceptual deficiencies in the literature to facilitate more comprehensive methods in sustainable tourism.

## **Literature Review**

### **Sustainable Tourism Development (STD)**

The pace of globalization following the Industrial Revolution has resulted in imbalances between production and consumption. This predicament has elevated the concept of sustainability, alongside economic, social, and environmental issues. The notion of sustainability pertains to establishing limits to harmonize progress instead than halting it. Although it is not feasible to ascribe the notion of sustainability to a singular occurrence, Rachel Carson's seminal work, *Silent Spring*, is regarded as one of the initial analyses to highlight environmental contamination and is recognized for its impact on the emergence of environmental movement. The paper *The Limitations to Growth* (Meadows et al., 1972) similarly asserted that unchecked resource consumption will lead to the attainment of growth limitations within a few centuries. The United Nations Conference on the Human Environment, convened in 1972, was acknowledged as a pivotal worldwide event that first articulated the notion of sustainable development, emphasizing the interrelation between environmental and developmental considerations. The concept was initially defined in the Brundtland Report, titled *Our Common Future*, published by the World Commission on Environment and Development (WCED) in 1987. It is characterized as development that satisfies present needs without jeopardizing the capacity of future generations to fulfill their own needs (WCED, 1987). Consequently, sustainability has emerged as a critical element of the global policy agenda.

Since the late 1980s, sustainable development has emerged as a prominent environmental management strategy (Doods and Butler, 2010), and in 1993, the World Tourism Organization (WTO) created the idea of Sustainable Tourism Development (STD) (Guo et al., 2019). Consequently, there has been an increasing interest in sustainability, sustainable development ideas, and practices within tourism research (Tosun, 2001). Furthermore, a significant advancement in the notion of sustainability is the discourse indicating that it extends beyond environmental considerations to include social and economic dimensions. The discussions emerged prominently following the Rio Conference (United Nations Conference on Environment and Development)

and the Agenda 21 resolutions in 1992, highlighting that sustainability must be approached through its three essential dimensions: environmental, economic, and social (Elkington, 1998).

Sustainable development is a pivotal concern for the advancement of tourism. The tourism sector has emerged as a significant element of the economy in numerous countries, owing to its interconnections with diverse industries and its acknowledgment as a comprehensive instrument for economic advancement. Tourism operations may have adverse economic, socio-cultural, and environmental effects stemming from inadequate planning and poor alignment with local values and environmental considerations (Lee et al., 2007).

The 20th century's explosive growth in tourism has made visitors, businesses, and tourism professionals more conscious of the need for sustainable tourism development. To lessen the negative effects of tourism and improve the oversight of sustainable tourism goals, the United Nations World Tourism Organization (UNWTO) declared 2017 to be the International Year of Sustainable Tourism (UNWTO, 2017; UNWTO, 2025). The necessity of integrating the economic, social, and environmental aspects of tourist growth into study, policy, and practice has been brought to light by the creation of the Sustainable growth Goals of the UN. As a result, frameworks for sustainable tourism have been established and visitor life cycles have been developed. Public sector organizations, non-governmental organizations, and private companies have expressed interest in sustainable tourism development (Yoopetch and Nimsai, 2019). The incorporation of sustainable principles within the tourism sector has been addressed in the literature. The notion of sustainable tourism, notably brought to the literature by Bramwell and Lane, has significantly influenced the formulation of policies and strategies aimed at preserving tourism resources and communities, establishing a foundational framework in tourism studies. This approach was proposed as an economic development strategy to improve local residents' quality of life, boost visitor experiences in tourist locations, and protect these destinations' environments (Bramwell and Lane, 1993; Budeanu et al., 2016; Goulding et al., 2014; Hole and Snehal, 2019). In later years, it broadened to encompass associated concepts such as STDs, sustainable tourism, ecotourism, and responsible tourism.

The recognition of sustainable development's significance for tourism has attained a status where it is regarded as the foundational paradigm of sustainable tourism (Kimura, 2011). Sustainable tourism is defined as the use of sustainable development principles within the tourism industry, highlighting the necessity for the implementation of initiatives that enhance the sector's beneficial benefits (Robinson et al., 2011). Sustainable development is seen as a pivotal method for future advancement (Tahiri and Kovaci, 2017).

**Figure 1. Conceptual Model of Sustainable Tourism Development**



**Source:** Yoopetch and Nimsai, 2019

Initiatives to include sustainable principles into tourist development have prompted numerous scholars to define sustainable tourism development (Hall et al., 2015; Kahraman, 2013). Nevertheless, a globally recognized definition has yet to be formulated in this domain. According to the most widely accepted definition in the literature, sustainable tourism development aims to meet the demands of both current visitors and host communities while also contributing to the preservation and enhancement of potential future travel destinations. This comprehension relies on safeguarding cultural values, maintaining vital ecological processes, and preserving biodiversity and life-supporting systems, while fulfilling economic, social, and aesthetic requirements (UNEP and UNWTO, 2005).

The predominant approach in the literature on sustainable tourism and its development underscores that these notions comprise three dimensions: economic, social, and ecological (Choi and Sirakaya, 2006; Figge and Hahn, 2006). In this context, the primary objectives of sustainable tourism development include enhancing

employment opportunities and generating new jobs in tourism destinations, safeguarding the natural environment, alleviating the impacts of climate change, minimizing pollution and waste, and fostering green and sustainable consumption practices (UNEP and UNWTO, 2005).

Tourists and the tourism sector significantly contribute to the sustainable development of tourism destinations. The tourism sector must advocate for sustainable consumption patterns (Zmyslony et al., 2020). Consequently, attaining sustainable tourism development necessitates the active involvement of all stakeholders, including the tourism industry, governmental bodies, non-governmental organizations, and local communities, alongside efficient policy formulation and a long-term perspective (Sutawa, 2012).

## **Methodology**

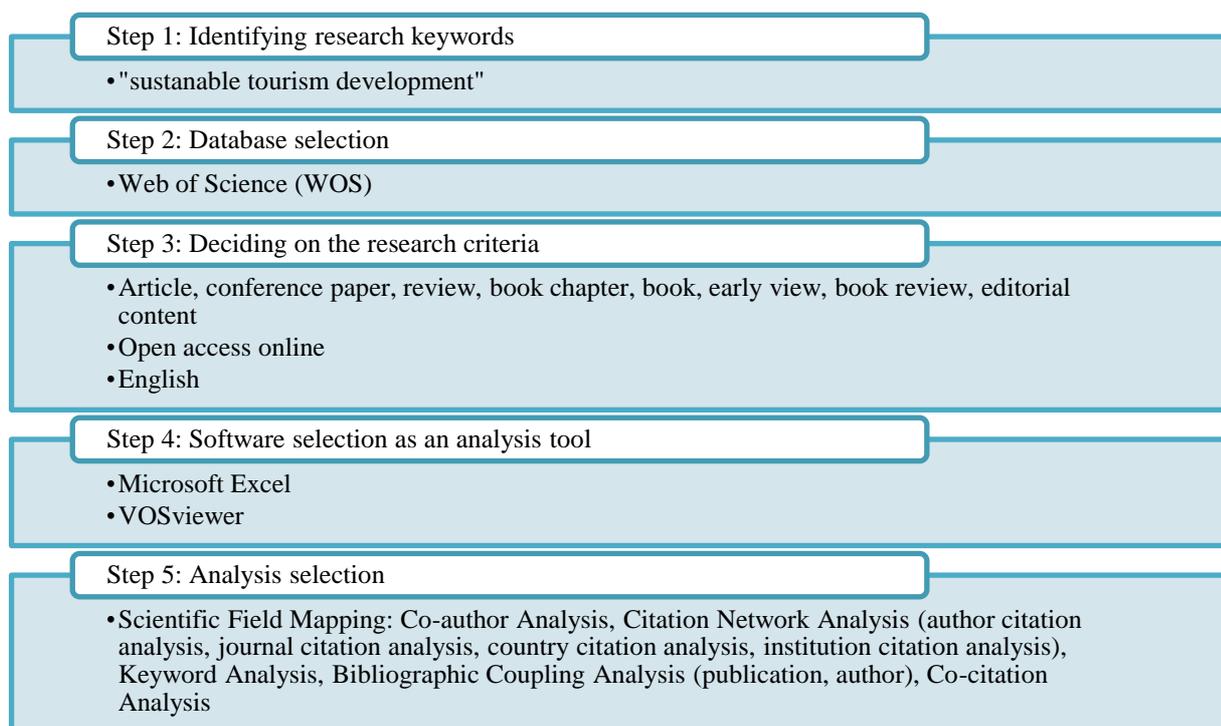
Numerous software applications, including Bibliometrics (biblioshiny), SciMat, Gephi, Bibexcel, CiteSpace, and VOSviewer, facilitate both qualitative and quantitative analysis of bibliometric data (Ramos-Rodriguez and Ruiz-Navarro, 2004). Bibliometrics, a quantitative research methodology, originated in 1922. Wyndham Hulme pioneered the concept of statistical bibliography and established the groundwork for bibliometrics. Hulme defines bibliometrics as the comprehension of scientific and technological processes via the numerical study of written documents (Hulme, 1923). Subsequently, Alan Pritchard elucidates bibliometrics as a technique that illuminates the characteristics and evolution of a discipline by quantifying and analyzing diverse components of written communication (Pritchard, 1969). Bibliometric analysis has become a crucial instrument for quantifying the scientific output of diverse elements, including studies, authors, keywords, journals, institutions, and countries within any research domain. Additionally, it makes it easier to analyze how the field's conceptual, social, and intellectual frameworks have changed throughout time based on how these components interact (Kraus et al., 2024; Mukherjee et al., 2022). In contrast to conventional methodologies, bibliometric analysis is macro-oriented and typically uncovers the structure and dynamics of a research domain. Although conventional methods provide a thorough review of a limited selection of papers, significant research in the field may be excluded from the evaluation (Lacey et al., 2011). Nonetheless, bibliometric methods enable the simultaneous analysis of numerous studies (Aria and Cuccurullo, 2017).

This study seeks to convey the findings of a bibliometric analysis of global publications about the concept of sustainable tourism development to academics comprehensively. The concept of sustainable tourism development represents a research area focused on policy and development at the intersection of tourism development and sustainability literature. Therefore, broader concepts such as "sustainable tourism" or "tourism development" were not used in the search strategy. Because the inclusion of these concepts can lead to the addition of thematically heterogeneous studies to the dataset, such as ecotourism practices, destination image, environmental impact, and tourist behavior, which are not directly related to the focus of the study. This situation can lead to conceptual dispersion in bibliometric analyzes and weaken thematic coherence. The VOSviewer software used in the bibliometric mapping process is sensitive to the conceptual integrity of the dataset. Therefore, in order to create a more homogeneous literature set and maintain the thematic consistency of the analyzes, the search query was conducted with a single concept. Additionally, VOSviewer software was preferred as the analysis tool due to its capacity to reveal the structural relationships between the examined elements thru network-based visualization and the analytical metrics it offers. Nees Jan van Eck and Ludo Waltman from Leiden University in the Netherlands developed this software application for scientific mapping analysis in 2010 (Van Eck and Waltman, 2010; Moral-Munoz et al., 2020). The software intends to illustrate the conceptual and intellectual framework, developmental trajectory, and dynamics of scientific research domains. Scientific field mapping enables the analysis and visualization of knowledge pertinent to a study domain via networks of relationships (Chen, 2017; Cobo et al., 2011; Noyons and Van Raan, 1998). This procedure employs techniques including co-author analysis, citation network analysis, co-word/co-occurrence analysis, bibliographic coupling analysis, and co-citation analysis (Zupic and Cater, 2015).

The study utilized data sourced from the Web of Science (WoS) database. WOS is among the oldest and most extensively utilized databases (Martin-Martin et al., 2018). Established in 1950 by the Institute for Scientific Information (ISI), this database offers access to datasets and citation information across 256 distinct fields. Advanced data analysis is facilitated by the establishment of search indicators and control procedures, providing complete material that includes trustworthy, high-quality studies according to publication ethics. Key arguments for utilizing the WOS database include its capacity for direct data downloads, the reduced error rate of downloaded data during analysis in software applications, its superior preference in bibliometric research, and its elevated academic reputation.

This study involved a search in the WOS database on February 1, 2025, utilizing the keyword "sustainable tourism development" with the "all fields" option, yielding 1680 publications. *Since this study focuses on the data available on the internet, no ethics committee decision is required.* Only English-language and open Access publications were included in the dataset. Publications that did not meet these criteria were excluded from the analysis. After applying the inclusion and exclusion criteria, all retrieved publications met the requirements and were included in the analysis; therefore, no studies were excluded. The acquired data was transformed into CSV format, compatible with VOSviewer bibliometric mapping software, and **visualized** using co-author, citation network, keyword, bibliographic coupling, and co-citation studies. The procedures employed in the investigation are illustrated in the subsequent flowchart (Figure 2).

**Figure 2. Methodological Process of Bibliometric Analysis**

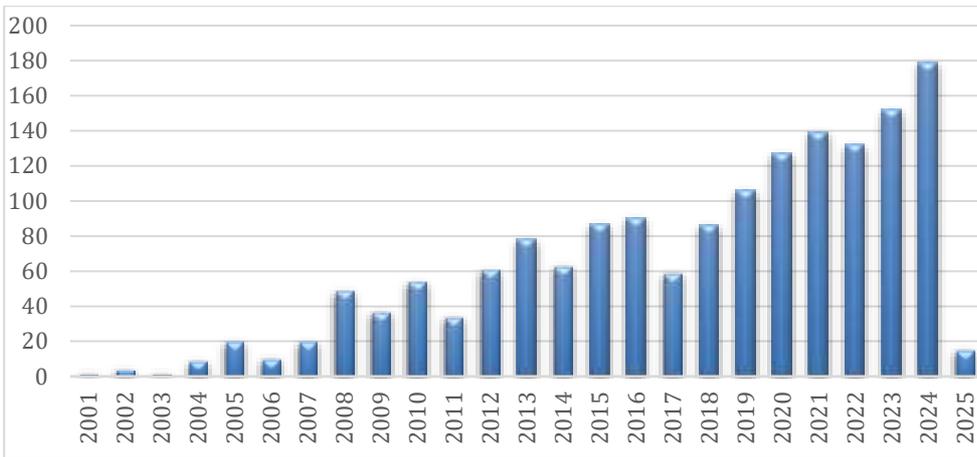


## Results

### Descriptive Analyses

This study includes works from different disciplines on the concept of sustainable tourism development, spanning the years from the oldest in 2001 to the most recent in 2025. These include 1246 journal articles, 372 conference papers, 53 book chapters, 47 early view studies, 45 review articles, 12 editorial contents, 11 book reviews, and 1 book. While research is predominantly specific to the social sciences (807), studies have also been found to be concentrated in disciplines such as ecology (503), science and technology (389), business economics (322), and public administration (72). Studies related to sustainable development goals are most associated with the goal of sustainable cities and communities (1279), while the least associated goal is peace, justice, and strong institutions (1), which is noteworthy.

**Table 1. Distribution of Publications by Year**

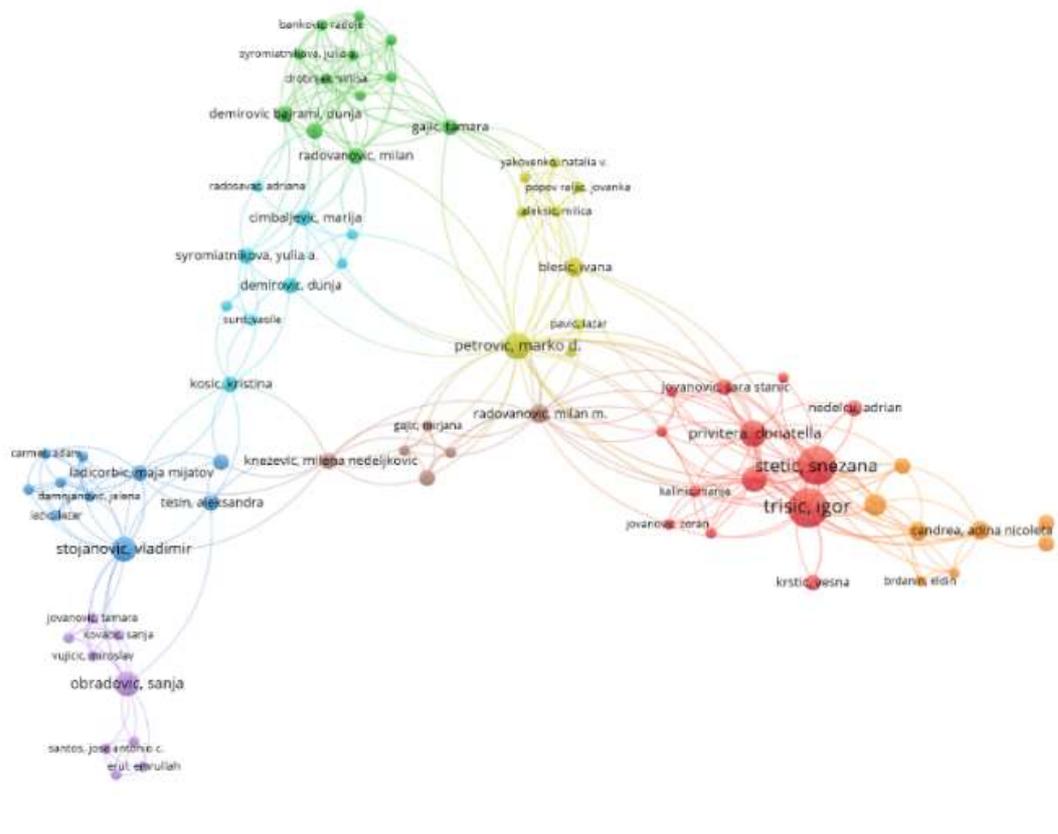


When the distribution of the publications listed in Table 1 by year is examined, it is seen that the first publication was made in 2001 (2 publications) and the most publications were made in 2024 (179 publications).

### Co-author Analysis

As a result of a co-authorship analysis conducted on 76 units of work to identify the most collaborative authors, 8 clusters, 322 connections, and a total connection strength of 388 were obtained. Accordingly, the authors with the most works are Igor Trisic (13 works, 128 citations, 51 link strength) and Snezana Stetic (12 works, 127 citations, 50 link strength). At the same time, these works are among those with the highest connection strength. These findings indicate that specific collaboration networks have formed among researchers in the literature on sustainable tourism development. It can be said that Igor Trisic and Snezana Stetic, who have particularly high connectivity, have increased academic interaction between different research clusters and have played a guiding role in the development of the field. This situation reveals that sustainable tourism development studies are shaped around specific research groups.

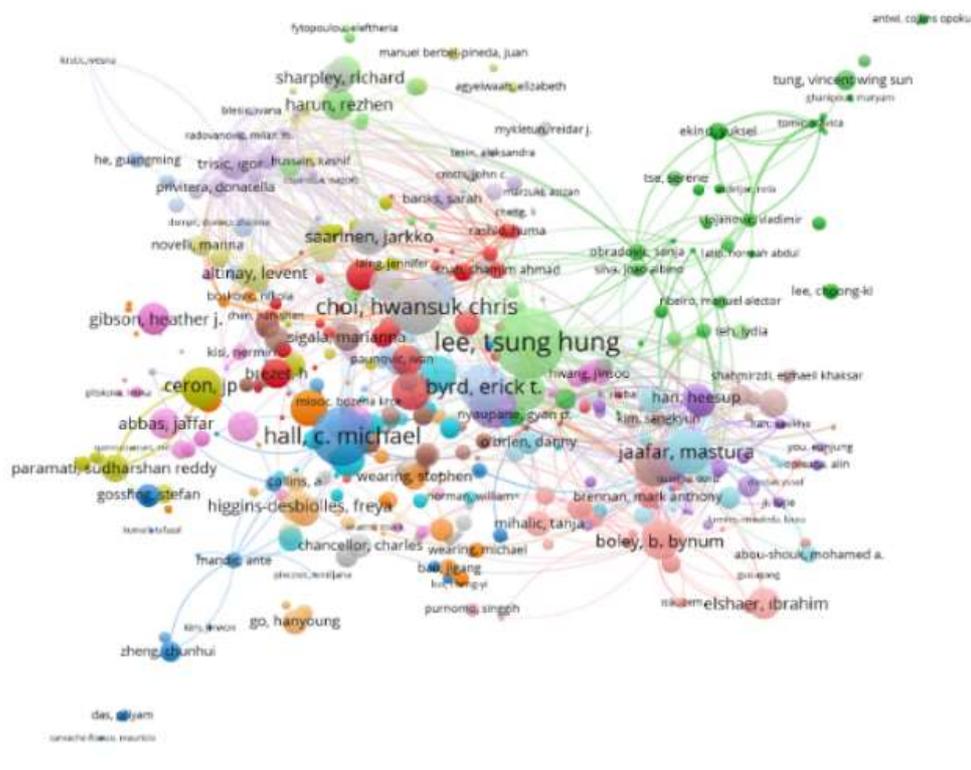
Figure 3. Network Map of Co-author Connections



### Authors Citation Analysis

The results of the authors citation analysis, conducted on 993 units identified as interconnected, yielded values of 22 clusters, 9715 links, and a total link strength of 11308. Tsung Hung Lee, with 4 works, 1056 citations, and a total link strength of 413, has been the most cited author. He is also the author with the highest total connection power. Subsequently, in order, C. Michael Hall (5 works, 720 citations, 132 link strength), Hwansuk Chris Choi and Ercan Sirakaya (1 work, 609 citations, 211 total link strength), Erick T. Byrd (4 works, 515 citations, 225 total link strength), and Dalia Streimikiene (4 works, 468 citations, 213 total link strength) followed. The results indicate that certain studies in the field of sustainable tourism development have had a substantial impact and have significantly influenced the direction of research. It has been noted that the works of authors with high citation and connection power are a significant reference source and have a significant impact on the development of research trends. It is possible to assert that these works have a significant academic presence in the literature.

Figure 4. Network Map of Authors Citation Links



When examining the network map of authors citation links, the most cited works of the top five authors are listed in Table 2, along with the years they were published, the journals they appeared in, and the titles of the articles that contributed to their citation count.

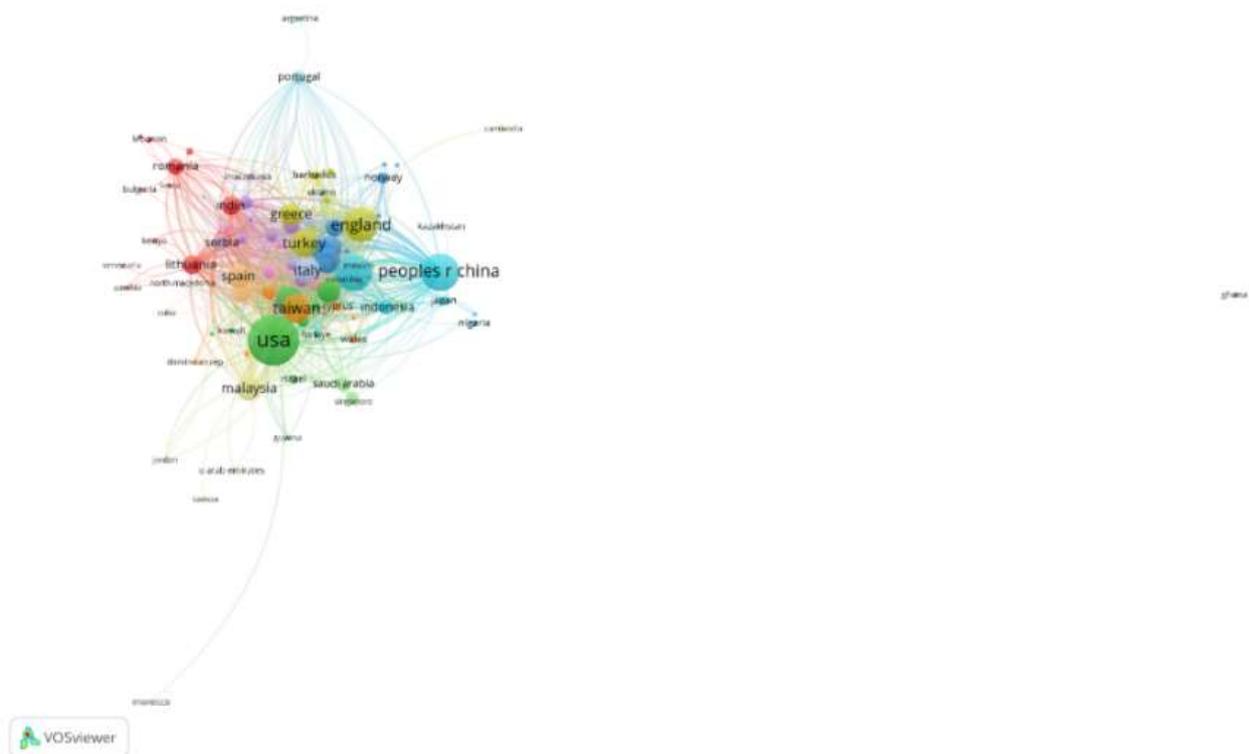
Table 2. Top 5 Most Cited Articles

No	Year	Author	Journal Name	Article Title
1.	2013	Lee, T. H.	Tourism Management	Influence analysis of community resident support for sustainable tourism development
2.	2019	Hall, C. M.	Journal of Sustainable Tourism	Constructing sustainable tourism development: The 2030 agenda and the managerial ecology of sustainable tourism
3.	2006	Choi, H. C. Sirakaya E.	Tourism Management	Sustainability indicators for managing community tourism



(1 total link power), Cambodia (1 total link power), and Uruguay (1 total link power), each with one citation. The findings suggest that countries with high citation and connectivity power have made substantial contributions to the scientific advancement of the field and are decisive in international research networks. Conversely, countries with lower citation values make a more modest contribution to the global networks of the field. This situation suggests that research on sustainable tourism development is geographically concentrated in specific countries.

**Figure 6. Network Map of Countries' Citation Links**



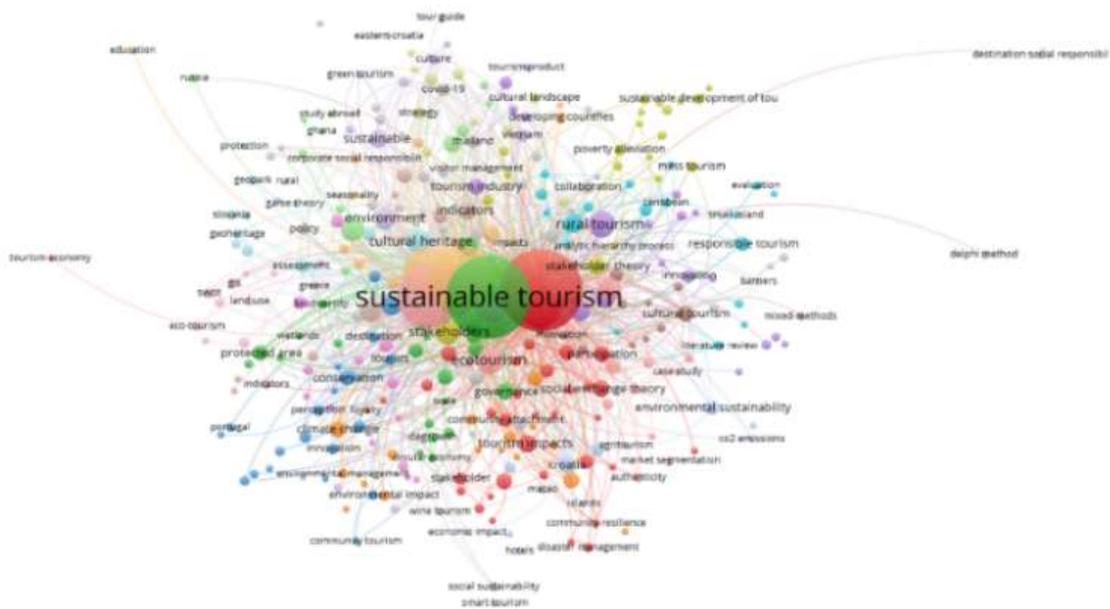
### Citation Analysis of Institutions

To reveal the citation network between institutions, an analysis was conducted on 990 related observation units, resulting in the identification of 44 clusters, 6567 link strengths, and a total link strength of 7963. The institutions that received the most citations were identified as Texas A&M University (9 works, 1146 citations, and 295 total link strength), National Yunlin University of Science & Technology (5 works, 1061 citations, and 365 total link strength), and University of Oulu (13 works, 1021 citations, and 227 total link strength). These results suggest that institutions with high citation and connectivity power are central to the academic development of the field and hold a significant position in international research networks. Furthermore, it can be asserted that these institutions are significant hubs for the generation of knowledge in the field of sustainable tourism development research.



research areas in the literature; however, it is evident that these studies primarily concentrate on the concept of sustainable tourism development.

Figure 8. Network Analysis of Keywords



jfh page 6

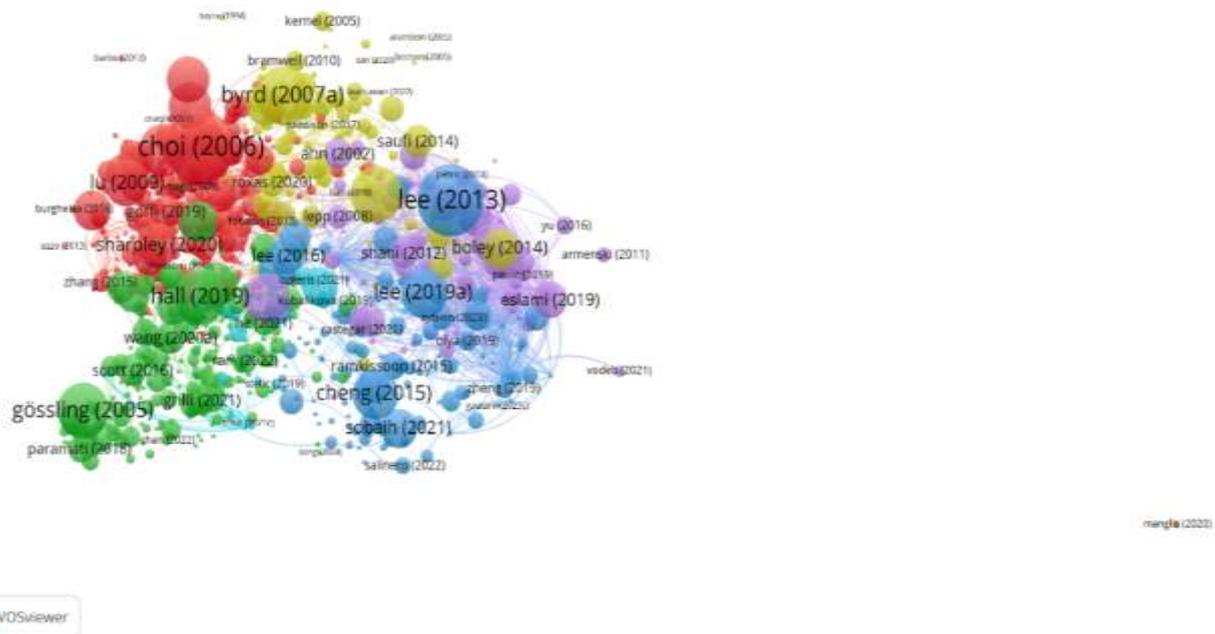


### Bibliographic Coupling Analysis of Texts

When two independent sources cite the same work, it is defined as bibliographic coupling. An analysis was conducted on 1000 units of artwork that are interconnected. Accordingly, 8 clusters, 81557 connections, and a total connection strength of 143225 were determined. The publications with the highest bibliographic match were Choi (2006) with 609 citations, Lee (2013) with 582 citations, and Byrd (2007) with 393 citations. The

most prominent works in terms of total connection strength were identified as Correia (2411), Eslami (2019), and Obradovic (2021). The results suggest that the studies conducted by Choi (2006), Lee (2013), and Byrd (2007) have high bibliographic match values, indicating that they are founded on similar sources and are organized around similar research themes in the field of sustainable tourism development. In addition, it is possible to assert that the research conducted by Correia, Eslami, and Obradovic, which possesses a high total connection strength, has established robust connections with various research clusters in the literature.

**Figure 9. Network Analysis of Bibliographic Matching of Texts**

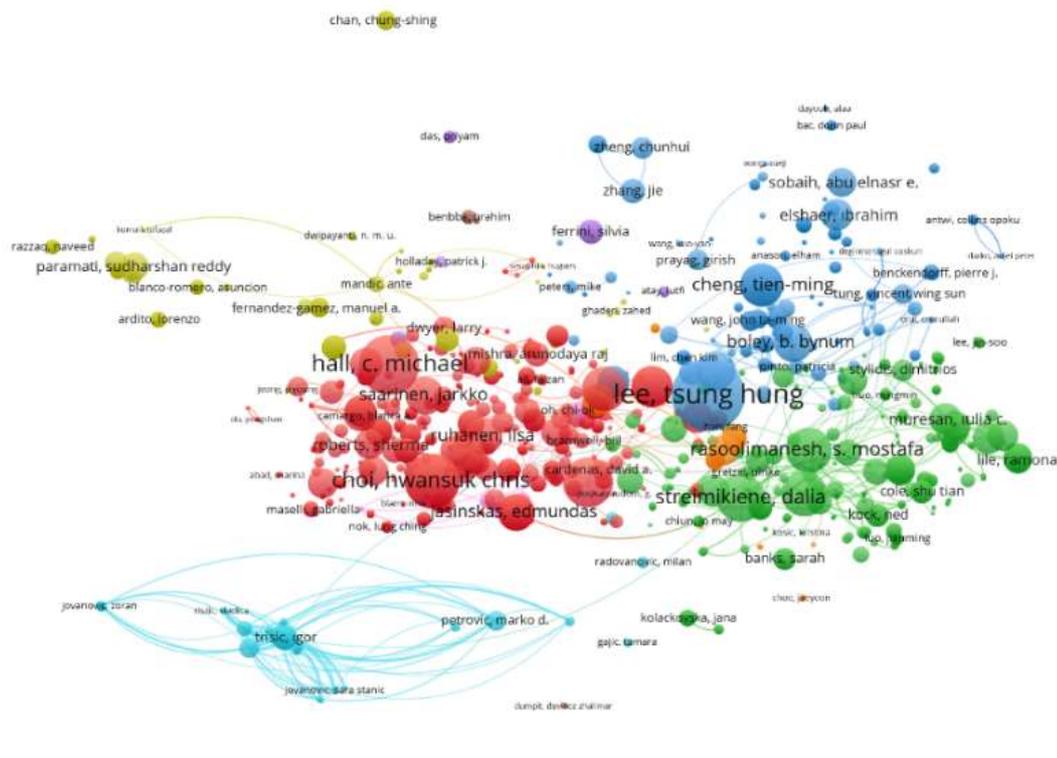


**Authors Bibliographic Coupling Analysis**

To determine the bibliographic coupling of authors, an analysis was conducted on 1000 units, resulting in 9 clusters, 293653 connections, and a total connection strength of 1187459. The authors with the most bibliographic matches were Tsung Hung Lee with 1056 citations (9118 link strength), C. Michael Hall with 720 citations (1735 link strength), and Hwansuk Chris Choi and Ercan Sarikaya with 609 citations (1056 link strength). These results suggest that certain authors' works in the literature on sustainable tourism development function as common reference points. In particular, the high bibliographic match values of Tsung Hung Lee, C. Michael Hall, and Hwansuk Chris Choi, as well as Ercan Sarikaya, suggest that these studies have benefited from similar theoretical frameworks and sources. This situation suggests that there is a robust correlation

between studies that concentrate on similar research themes in the literature of sustainable tourism development.

**Figure 10. Network Analysis of Authors Bibliographic Matching**



**Co-Citation Analysis of Authors**

Sources cited simultaneously in a publication are defined as joint citations. The analysis, for which the minimum number of citations was set at 10, was conducted on 924 units. The examination resulted in the identification of 9 clusters, 125,564 connections, and a total connection strength of 399,606. Hall, C.M. (444), Bramwell, B. (349), and Sharpley, R. (313) were identified as the most frequently co-cited authors. These



The aim of this study was to examine published works on sustainable tourism development to determine their contributions to the sustainable tourism literature, to present the basic ideas and concepts related to this field, and to make suggestions for future research. A total of 1680 studies indexed in the Web of Science database were accessed and evaluated within the framework of author, citation, keyword, and bibliographic coupling analyses.

It has been observed that studies are concentrated in the field of social sciences, followed by disciplines such as ecology, science and technology, business economics, and public administration, respectively. The multi-dimensional nature of sustainability has made it complex at a conceptual level and has attracted the interest of different disciplines in the subject. Looking at the distribution by publication type, it was found that journal articles were the most common type of publication.

When the distribution by publication year is examined, it is observed that publications on the development of sustainable tourism are most concentrated in the years 2024 (180), 2023 (155), and 2021 (155). The observed increase in the number of publications in recent years indicates that sustainable tourism development is becoming increasingly important and academic interest is growing. It was determined that the most prolific names were Trisic (14) and Stetic (13). This situation indicates that authors are shaping the literature and engaging in intensive production by exploring different dimensions in the development of sustainable tourism. The significance of capacity development strategies through international collaborations and experience exchange is underscored in this context (Bramwell and Lane, 2011). The study determined that the most cited author was Tsung Hung Lee (1056 citations). This finding indicates that he is one of the most influential figures in the field and a reference source that shapes both the theoretical and methodological framework in the field. This underscores the importance of adhering to the fundamental references in the pioneering studies of the literature in order to influence sustainable tourism practices and policy recommendations (Choi and Sirakaya, 2006).

In the distribution of publications by country, the United States (318) ranked first, and it was observed that most works were published in English (1614). This relates to the US being the leader in academic production capacity and pioneering research on sustainable tourism. This situation underscores the importance of enhancing sustainable tourism practices through international cooperation and knowledge transfer (Timur and Getz, 2009). When the citation analysis for institutions was examined, it was determined that the most citations were made to Texas A&M University. This indicates that the institution is a leading center for sustainable tourism research. Furthermore, this circumstance suggests that universities and research institutions are crucial in identifying the capacity and expertise resources that can contribute to policy development processes. In the keyword analysis, it was observed that the phrase "sustainable tourism" was at the center, followed by the phrase "sustainable tourism development." It has been determined that these two concepts are closely related to each other and form the fundamental keywords used in explaining the subject. Nevertheless, the necessity of implementing policy measures to increase the involvement of local communities in decision-making processes is underscored by the emergence of concepts such as sustainable development objectives, tourism policies, and stakeholder participation (Guo et al., 2019; Khan et al., 2021).

When examining the bibliographical matching of the texts, it was found that the studies by Choi (2006), Lee (2013), and Byrd (2007) are fundamental works that played a significant role in the development of the field and the provision of conceptual contributions. It has been shown that the works of Tsung Hung Lee, who has 1056 citations and a link strength of 9118 in author-based bibliographic matching, have created a very extensive impact network in the field's literature and are one of the most frequently cited authors. This situation is a reference for policymakers to develop research-based strategies and to determine thematic priorities in sustainable tourism planning (Kuscer et al., 2024). In the co-citation analysis, it was determined that Hall, Bramwell, and Sharpley were the most frequently cited and influential authors in the field's literature, forming the theoretical basis. Consequently, the significance of formulating strategies that are grounded in the conceptual framework of research is underscored in the development of policies and practices (Gössling et al., 2012).

To the researchers' knowledge, although there are bibliometric reviews addressing tourism development and sustainable tourism concepts, there is almost no study that subjects the concept of sustainable tourism development to such a comprehensive bibliometric review. It is observed that the concept has been addressed since 2001. In this process, the growing body of literature and the experience gained globally have further solidified the concept's importance. This study offers two main contributions to the literature. Firstly, it presents a multidimensional bibliometric mapping of the thematic and conceptual structure in the field of

sustainable tourism development, revealing the relationships between authors, institutions, countries, and keywords with a holistic approach and enabling the visualization of research trends. Secondly, the findings obtained theoretically emphasize the relationship between the policy and practice dimensions of sustainable tourism development and, unlike previous bibliometric studies, present the thematic structure, research trends, and theoretical framework of the field together. Thus, the study's findings provide a broad perspective that can offer valuable insights to researchers on sustainable tourism development. The analysis is constrained to publications within the WOS Core Collection, representing a significant limitation of the study, as it excludes national databases (e.g., Ulakbim), international databases (e.g., Scopus), and other sources lacking online accessibility.

## References

- Aria, M., & Cuccurullo, C. (2017). Bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959–975.
- Bramwell, B., & Lane, B. (1993). Sustainable tourism: An evolving global approach. *Journal of Sustainable Tourism*, 1(1), 1–5.
- Bramwell, B., & Lane, B. (2011). Critical research on the governance of tourism and sustainability. *Journal of Sustainable Tourism*, 19(4–5), 411–421.
- Budeanu, A., Miller, G., Moscardo, G., & Ooi, C. S. (2016). Sustainable tourism, progress, challenges and opportunities: An introduction. *Journal of Cleaner Production*, 111, 285–294.
- Byrd, E. T. (2007). Stakeholders in sustainable tourism development and their roles: Applying stakeholder theory to sustainable tourism development. *Tourism Review*, 62(2), 6–13.
- Chen, C. (2017). Science mapping: A systematic review of the literature. *Journal of Data and Information Science*, 2(2), 1–40. <https://doi.org/10.1515/jdis-2017-0006>
- Chen, Y., Zhang, J., & Chen, H. (2023). An economic analysis of sustainable tourism development in China. *Economic Change and Restructuring*, 56(4), 2227–2242.
- Choi, H. C., & Sirakaya, E. (2006). Sustainability indicators for managing community tourism. *Tourism Management*, 27(6), 1274–1289.
- Dodds, R., & Butler, R. (2010). Barriers to implementing sustainable tourism policy in mass tourism destinations. *Tourismos*, 5(1), 35–53.
- Elkington, J. (1998). *Cannibals with forks: The triple bottom line of 21st century business*. New Society Publishers.
- Eslami, S., Khalifah, Z., Mardani, A., & Streimikiene, D. (2018). Impact of non-economic factors on residents' support for sustainable tourism development in Langkawi Island, Malaysia. *Economics & Sociology*, 11(4), 181–197.
- Figge, F., & Hahn, T. (2006). *Sustainable value added*. In *The Sustainability Yearbook 2006* (pp. 146–164). Greenleaf Publishing.
- Geng, Y., Zhang, X., Gao, J., Yan, Y., & Chen, L. (2024). Bibliometric analysis of sustainable tourism using CiteSpace. *Technological Forecasting and Social Change*, 202, 123310.
- Go, H., & Kang, M. (2023). Metaverse tourism for sustainable tourism development: Tourism agenda 2030. *Tourism Review*, 78(2), 381–394.
- Goulding, R., Horan, E., & Tozzi, L. (2014). The importance of sustainable tourism in reversing the trend in the economic downturn and population decline of rural communities. *Pasos. Revista de Turismo y Patrimonio Cultural*, 12(3), 549–563.
- Gössling, S., Hall, C. M., Ekström, F., Engeset, A. B., & Aall, C. (2012). Transition management: A tool for implementing sustainable tourism scenarios?. *Journal of Sustainable Tourism*, 20(6), 899–916.
- Guo, Y., Jiang, J., & Li, S. (2019). A sustainable tourism policy research review. *Sustainability*, 11(11), 3187. <https://doi.org/10.3390/su11113187>
- Hall, C. M. (2019). Constructing sustainable tourism development: The 2030 agenda and the managerial ecology of sustainable tourism. *Journal of Sustainable Tourism*, 27(7), 1044–1060.

- Hall, C. M., Gössling, S., & Scott, D. (2015). *Tourism and sustainability: Principles to practice*. Routledge.
- Hole, Y. H., Khedkar, E. B., & Pawar, S. P. (2019). The significance of pilgrimage tourism to sustainable development with special reference to the Indian context. *African Journal of Hospitality, Tourism and Leisure*, 8(3), 1–12.
- Hulme, E. W. (1923). *Statistical bibliography in relation to the growth of modern civilization: Two lectures delivered in the University of Cambridge in May*, London.
- Kahraman, N. (2013). *Sürdürülebilir turizm: Kavramlar ve uygulamalar*. Ankara: Detay Yayıncılık.
- Kapoor, D., & Jain, A. (2024). Sustainable tourism and its future research directions: A bibliometric analysis of twenty-five years of research. *Tourism Review*, 79(3), 541–567.
- Kawuryan, M. W., Fathani, A. T., Purnomo, E. P., Salsabila, L., Azmi, N. A., Setiawan, D., & Fadhlurrohmah, M. I. (2022). Sustainable tourism development in Indonesia: Bibliometric review and analysis. *Indonesian Journal of Geography*, 54(1), 154–166.
- Khan, M. R., Khan, H. U. R., Lim, C. K., Tan, K. L., & Ahmed, M. F. (2021). Sustainable tourism policy, destination management and sustainable tourism development: A moderated-mediation model. *Sustainability*, 13(21), 12156. <https://doi.org/10.3390/su132112156>
- Kimura, H., & Nakajima, T. (2011). Designing persuasive applications to motivate sustainable behavior in collectivist cultures. *PsychNology Journal*, 9(1), 7–26.
- Kraus, S., Bouncken, R. B., & Yela Aránega, A. (2024). The burgeoning role of literature review articles in management research: An introduction and outlook. *Review of Managerial Science*, 18(2), 299–314.
- Kuscer, K., Peters, M., & Schönherr, S. (2024). Tourism policymaking in troubling times: Sustainability-driven challenges, implemented policies, and goals for sustainable development. *Sustainability*, 16(23), 10599. <https://doi.org/10.3390/su162310599>
- Lacey, F. M., Matheson, L., & Jesson, J. (2011). *Doing your literature review: Traditional and systematic techniques*. Sage.
- Lee, J. Y., & Song, S. H. (2007). Evaluation of groundwater quality in coastal areas: Implications for sustainable agriculture. *Environmental Geology*, 52(7), 1231–1242.
- Lee, T. H. (2013). Influence analysis of community resident support for sustainable tourism development. *Tourism Management*, 34, 37–46.
- Leon-Gomez, A., Ruiz-Palomo, D., Fernandez-Gamez, M. A., & Garcia-Revilla, M. R. (2021). Sustainable tourism development and economic growth: Bibliometric review and analysis. *Sustainability*, 13(4), 2270.
- Martin Martin, J. M., Guaita Martinez, J. M., & Salinas Fernandez, J. A. (2018). An analysis of the factors behind the citizen's attitude of rejection towards tourism in a context of overtourism and economic dependence on this activity. *Sustainability*, 10(8), 2851.
- Meadows, D. H., Meadows, D. L., Randers, J., & Behrens, W. W. (1972). *The limits to growth*. Universe Books.
- Moral-Munoz, J. A., Herrera-Viedma, E., Santisteban-Espejo, A., & Cobo, M. J. (2020). Software tools for conducting bibliometric analysis in science: An up-to-date review. *Profesional de la Información*, 29(1), e290103.
- Moyle, B., Moyle, C. L., Ruhanen, L., Weaver, D., & Hadinejad, A. (2020). Are we really progressing sustainable tourism research? A bibliometric analysis. *Journal of Sustainable Tourism*, 29(1), 106–122.
- Mukherjee, D., Lim, W. M., Kumar, S., & Donthu, N. (2022). Guidelines for advancing theory and practice through bibliometric research. *Journal of Business Research*, 148, 101–115.
- Noyons, E. C., & van Raan, A. F. (1998). Monitoring scientific developments from a dynamic perspective: Self - organized structuring to map neural network research. *Journal of the American Society for Information Science*, 49(1), 68-81.

- OECD. (2024). *OECD tourism trends and policies 2024*. OECD Publishing. <https://doi.org/10.1787/80885d8b-en>
- Pimenta, C. A. M., Ribeiro, J. C., & Remoaldo, P. C. (2021). The relationship between creative tourism and local development: A bibliometric approach for the period 2009–2019. *Tourism & Management Studies*, 17(1), 5–18.
- Pritchard, A. (1969). *Statistical bibliography: An interim bibliography*.
- Ramos - Rodriguez, A. R., & Ruiz - Navarro, J. (2004). Changes in the intellectual structure of strategic management research: A bibliometric study of the Strategic Management Journal, 1980-2000. *Strategic Management Journal*, 25(10), 981-1004.
- Rasoolimanesh, S. M., Ramakrishna, S., Hall, C. M., Esfandiar, K., & Seyfi, S. (2023). A systematic scoping review of sustainable tourism indicators in relation to the sustainable development goals. *Journal of Sustainable Tourism*, 31(7), 1497–1517.
- Robinson, J., Burch, S., Talwar, S., O'Shea, M., & Walsh, M. (2011). Envisioning sustainability: Recent progress in the use of participatory backcasting approaches for sustainability research. *Technological Forecasting and Social Change*, 78(5), 756–768.
- Rocio, H. G., Jaime, O. C., & Cinta, P. C. (2023). The role of management in sustainable tourism: A bibliometric analysis approach. *Sustainability*, 15(12), 9712.
- Sachs, J., Lafortune, G., & Fuller, G. (2024). *Sustainable development report 2024: The SDGs and the UN Summit of the Future*.
- Serrano, L., Sianes, A., & Ariza-Montes, A. (2019). Using bibliometric methods to shed light on the concept of sustainable tourism. *Sustainability*, 11(24), 6964.
- Si, X., & Tang, Z. (2024). Assessment of low-carbon tourism development from multi-aspect analysis: A case study of the Yellow River Basin, China. *Scientific Reports*, 14(1), 4600.
- Streimikiene, D., Svagzdiene, B., Jasinskis, E., & Simanavicius, A. (2021). Sustainable tourism development and competitiveness: The systematic literature review. *Sustainable Development*, 29(1), 259–271.
- Sutawa, G. K. (2012). Issues on Bali tourism development and community empowerment to support sustainable tourism development. *Procedia Economics and Finance*, 4, 413–422.
- Tahiri, A., & Kovaci, I. (2017). The theory of sustainable tourism development. *Academic Journal of Business*, 3(1), 343–349.
- Tanguay, G. A., Rajaonson, J., & Therrien, M. C. (2013). Sustainable tourism indicators: Selection criteria for policy implementation and scientific recognition. *Journal of Sustainable Tourism*, 21(6), 862–879.
- Tase, M., & Lulaj, E. (2022). The effect of perceptions on tourism: An econometric analysis of the impacts and opportunities for economic and financial development in Albania and Kosovo. *Sustainability*, 14(13), 7659.
- Tatoglu, E., Erdal, F., Ozgur, H., & Azakli, S. (2002). Resident attitudes toward tourism impacts: The case of Kusadasi in Turkey. *International Journal of Hospitality & Tourism Administration*, 3(3), 79–100.
- Timur, S., & Getz, D. (2009). Sustainable tourism development: How do destination stakeholders perceive sustainable urban tourism?. *Sustainable Development*, 17(4), 220-232.
- Torres-Delgado, A., & Saarinen, J. (2017). *Using indicators to assess sustainable tourism development: A review*. In *New research paradigms in tourism geography* (pp. 31–47).
- Tosun, C. (2001). Challenges of sustainable tourism development in the developing world: The case of Turkey. *Tourism Management*, 22(3), 289–303.
- UNEP & UNWTO. (2005). *Making tourism more sustainable – A guide for policy makers*. France and Madrid.
- UNWTO. (2013). *Tourism highlights*. Accessed March 15, 2025, from <https://www.unwto.org/doi/pdf/10.18111/9789284415427>

- UNWTO. (2017). *Tourism highlights 2017*. Accessed March 15, 2025, from <http://www2.unwto.org/publication/unwto-tourism-highlights-2017-edition-0>
- UNWTO. (2025). *Sustainable development*. Accessed March 15, 2025, from <https://www.unwto.org/sustainable-development>
- Van Eck, N., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538.
- WCED. (1987). *Our common future*. Oxford University Press.
- Yang, G., Yang, Y., Gong, G., & Gui, Q. (2022). The spatial network structure of tourism efficiency and its influencing factors in China: A social network analysis. *Sustainability*, 14(16), 9921.
- Yoopetch, C., & Nimsai, S. (2019). Science mapping the knowledge base on sustainable tourism development, 1990–2018. *Sustainability*, 11(13), 3631.
- Zmyslony, P., Leszczynski, G., Waligora, A., & Alejziak, W. (2020). The sharing economy and sustainability of urban destinations in the (over) tourism context: The social capital theory perspective. *Sustainability*, 12(6), 2310.
- Zupic, I., & Cater, T. (2015). Bibliometric methods in management and organization. *Organizational Research Methods*, 18(3), 429–472.