

# Sustainability as a building block for tourism – future research: Tourism Agenda 2030

Sara Alonso-Muñoz, María Torrejón-Ramos, María-Sonia Medina-Salgado and Rocío González-Sánchez

## Abstract

**Purpose** – The purpose of this paper is to shed light on the state-of-the-art about sustainable tourism. Despite the significant growth of publications exploring sustainable tourism, the debate on the relationship between tourism and sustainability remains open. In addition, the sector faces the challenge of the 2030 Agenda, as the authors have not yet managed to curb environmental degradation and social disparities. This research needs to be comprehensively addressed to inform future steps and to identify sustainable tourism practices that will advance the goals of this action plan.

**Design/methodology/approach** – This study applies a mixed methodology, using a bibliometric analysis performed by VOSviewer and SciMat software of 311 articles from the Web of Science. In addition, it includes an in-depth analysis of trending research topics in the field during 2019 and 2020.

**Findings** – After 20 years of research on sustainable tourism, there is still significant dispersion of studied topics, frameworks and applications. The results show the evolution of research towards the study and measurement of sustainable change, social and cultural aspects and the development of responsible governance models.

**Research limitations/implications** – New stakeholder relationships models require a methodological and technological framework. Further progress in sustainable tourism guided by the 2030 Agenda demands the establishment of worldwide recognised measurement indicators and policy frameworks.

**Originality/value** – With a mixed methodological approach and a special focus on the sustainable development goals (SDGs), this paper provides a “state-of-the-art” update to sustainability research in tourism. The results obtained have been associated with their contribution to achieving SDGs.

**Keywords** Sustainable tourism, Bibliometric analysis, Sustainable development goals, Research trends, Agenda 2030

**Paper type** Literature review

Sara Alonso-Muñoz, María Torrejón-Ramos, María-Sonia Medina-Salgado and Rocío González-Sánchez all are based at Department of Business Administration (ADO), Applied Economics II and Fundamentals of Economic Analysis, Rey Juan Carlos University, Madrid, Spain.

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可持续性 是 旅游业 的 基石 – 未来 的 研究。2030 年 旅游 议程

## 摘要

**目的：**尽管探索可持续旅游业的出版物大幅增长，但关于旅游业和可持续性之间关系的辩论仍然没有结束。此外，该部门还面临着2030年议程的挑战，因为我们还没有设法遏制环境退化和社会差异。这项研究需要全面解决，以便为未来的步骤提供信息，并确定可持续旅游的做法，以推进本行动计划的目标。

**设计/方法/途径：**本研究采用混合方法，通过VOSviewer和SciMat软件对来自科学网的311篇文章进行文献计量分析。此外，它还包括对2019年和2020年期间该领域的趋势性研究课题的深入分析。

**研究结果：**经过20年的可持续旅游研究，所研究的课题框架和应用仍然存在很大的分散性。我们的结果显示，研究朝着研究和测量可持续变化、社会和文化方面以及发展负责任的治理模式的方向发展。

**研究的局限性/意义：**新的利益相关者关系模型需要一个方法学和技术框架。在2030年议程的指导下，可持续旅游业的进一步发展需要建立世界公认的测量指标和政策框架。

**原创性：**通过混合方法和对可持续发展目标（SDGs）的特别关注，本文为旅游业的可持续性研究提供了“最先进”的更新。获得的结果与他们为实现可持续发展目标的贡献有关。

**关键词** 可持续旅游、2030议程、文献计量分析、可持续发展目标、研究趋势  
**论文类型** 文献综述

## **Resumen**

**Objetivo :** A pesar del importante crecimiento de las publicaciones que exploran el turismo sostenible, el debate sobre la relación entre turismo y sostenibilidad sigue abierto. Además, el sector se enfrenta al reto de la Agenda 2030, ya que aún no se ha conseguido frenar la degradación medioambiental y las disparidades sociales. Esta investigación debe abordarse de forma exhaustiva para informar de los pasos futuros e identificar las prácticas de turismo sostenible que harán avanzar los objetivos de este plan de acción.

**Diseño/metodología/enfoque :** Este estudio aplica una metodología mixta, utilizando un análisis bibliométrico realizado por el software VOSviewer y SciMat con 311 artículos de la Web of Science. Además, incluye un análisis en profundidad de los temas de investigación de tendencia en el campo durante 2019 y 2020.

**Resultados :** Después de 20 años de investigación sobre el turismo sostenible, sigue habiendo una importante dispersión de los marcos temáticos estudiados y de las aplicaciones. Nuestros resultados muestran la evolución de la investigación hacia el estudio y la medición del cambio sostenible, los aspectos sociales y culturales y el desarrollo de modelos de gobernanza responsable.

**Limitaciones/implicaciones de la investigación :** Los nuevos modelos de relaciones con los grupos de interés requieren un marco metodológico y tecnológico. Los nuevos avances en el turismo sostenible guiados por la Agenda 2030 exigen el establecimiento de indicadores de medición y marcos políticos reconocidos a nivel mundial.

**Originalidad :** Con un enfoque metodológico mixto centrado especialmente en los Objetivos de Desarrollo Sostenible (ODS), este trabajo proporciona una actualización del "estado del arte" a la investigación de la sostenibilidad en el turismo. Los resultados obtenidos se han asociado con la consecución de los ODS.

**Palabras clave** turismo sostenible, Agenda 2030, análisis bibliométrico, Objetivos de Desarrollo Sostenible, tendencias de investigación

**Tipo de papel** Revisión de literatura

## **1. Introduction**

Sustainable development contemplates the need for the present development without prejudicing the development of future generations (World Commission on Environment and Development, 1987). This is an international paradigm that has informed many social phenomena, such as tourism. The seminal studies of Nash and Butler (1990) and May (1991) coined the concept of sustainable tourism by evaluating the impact of tourism on the environment. This relationship captures the effects on the preservation of biodiversity and ecosystems. Besides, it considers human well-being by balancing economic, social and environmental aspects (Ruhanen *et al.*, 2019; Pehin Dato Musa and Chin, 2022). Even so, authors such as Sharpley (2020) still recognise the value of socially and environmentally sustainable tourism, but not as sustainable development. He argues that institutions and the tourism industry should rethink new forms of production and consumption on a global scale.

Tourism is a service sector that uses high flows of natural resources, affecting communities in tourist destinations. Many of these impacts have been captured in the concept of overtourism (Lew, 2020), giving a negative connotation to tourist activity. This phenomenon has prompted the industry to search for sustainable solutions and certification systems that give them legitimacy to operate. However, the multitude of current international sustainability certifications (Spenceley, 2019) poses certain dilemmas for companies which assume the implementation of approaches such as triple bottom line (TBL) to ensure a certain degree of differentiation (Tasci, 2017). The contribution of sustainability to tourism competitiveness is a topic currently under discussion. Recent studies highlight the importance of environmental concerns as a factor of choice for travellers. This could be a competitive advantage to be considered for destinations in emerging countries (Fakfare and Wattanacharoensil, 2021). Sustainability is considered as a positive influence on tourism development, such as heritage tourism (Chong and Balasingam, 2018) or destination economic growth (Pulido-Fernández *et al.*, 2019).

However, while approaches such as TBL have brought together different activist currents to promote change, they have not succeeded in stemming degradation (Lew, 2020). There is still a need to reduce the negative environmental impacts of tourism practices. It is essential to continue reducing CO<sub>2</sub> emissions – mainly generated by transport, deforestation, scarcity and consumption of natural resources and high concentrations of waste generated – (Gross and Grimm, 2018). To be successful, the tourism industry must pursue sustainable practices by broadening the environmental perspective, following regenerative principles in production and changing consumption patterns (Antimova *et al.*, 2012; Manniche *et al.*, 2021). Increasing tourist awareness of climate change is regarded in some studies according to sustainability benchmarks (Tasci, 2017; Tasci *et al.*, 2021).

In this context, the research aims to understand the phenomenon of sustainability in tourism by relying on different conceptual frameworks. Some work argues for the importance of holistic approaches to dealing with sustainability. Because it is a complex systemic problem that cannot be tackled in a reductionist manner, Lew's (2020) proposal advocates global awareness of sustainability. This is the idea behind research that has addressed the behaviour of tourism consumers, whether relying on approaches at the individual and interpersonal level (Tasci, 2017) or at the community level, such as the social practices approach (Antimova *et al.*, 2012; Verbeek *et al.*, 2011).

Other lines of research have a more managerial approach. They use the "Resource-Based View" to explain the use of resources and capabilities to design strategies and achieve competitive differentiation of tourism destinations (Cavalcante *et al.*, 2021). However, these resources are not always owned by companies, so they must turn to their environment to obtain them. Based on the resource dependence theory, organisations are conditioned by transactions with their environment to obtain resources. In this way, the sustainable actions of organisations will be influenced by stakeholders that condition the obtaining of those resources (Damian *et al.*, 2022). From this perspective of non-isolation, the "Stakeholder Theory" considers how companies' purposes can affect their stakeholders as drivers towards sustainability, with the focus on tourists and residents, by sharing and creating value (Lüdeke-Freund and Dembek, 2017; Su and Swanson, 2017; Chong and Balasingam, 2018).

This theoretical framework has been revolutionised by the adoption in 2015 of the Agenda 2030 and the sustainable development goals (SDGs). This Agenda was designed by the United Nations as a global plan of action for people, the planet and prosperity (UNWTO, 2017). The importance of the sector in achieving the SDGs has led to the establishment of the term Tourism Agenda 2030. This reflects the contribution of tourism in the drafting of several of its goals, which can be an opportunity to achieve "new tourism". To achieve such, tourism organisations should address the development of their strategies in relation to the SDGs (Peter *et al.*, 2017). In this regards, there are two SDGs, such as SDG 11 – sustainable cities and communities – and SDG 12 – responsible consumption and production – to which tourism contributes directly. Yet it is also possible to identify indirect contributions. Tourism would foster economic growth and employment generation (SDG 8). The transition to renewable energy use and further development of recycling, reduction and reusing items (Peter *et al.*, 2017) would help to meet SDG 7 – affordable and clean energy – and SDG 13 – climate change. Achieving these goals requires the development of all dimensions of sustainability and the engagement of all stakeholders.

Efforts have been made to develop increasingly well-founded studies. Although, there is still a large body of research based on scope limited studies. Many of them are applications in one tourism subsector, destination or specific sustainable problem. This leads to wide knowledge dispersion despite the significant increase in publications. Based on the research developed over the past two decades, a comprehensive overview of more recent research is necessary to contribute to the fulfilment of the Tourism Agenda 2030.

There are recent previous bibliometric analyses (Rodríguez-López *et al.*, 2019; Cavalcante *et al.*, 2021). Their results reveal the need to jointly investigate the different variables or sustainability dimensions. However, they study sustainability related to specific concepts such as tourism in protected areas or tourism marketing. Only Ruhanen *et al.* (2019) has a general approach but reach as far as 2017, meaning it does not capture the outcomes of the most prolific years of this body of knowledge. Our study represents a step forward in providing a comprehensive overview of sustainability and tourism research, considering the most prolific years in the field and using different tools to achieve a more accurate analysis. Finally, it points out where research should be heading to be more useful for both the Academy and the tourism industry.

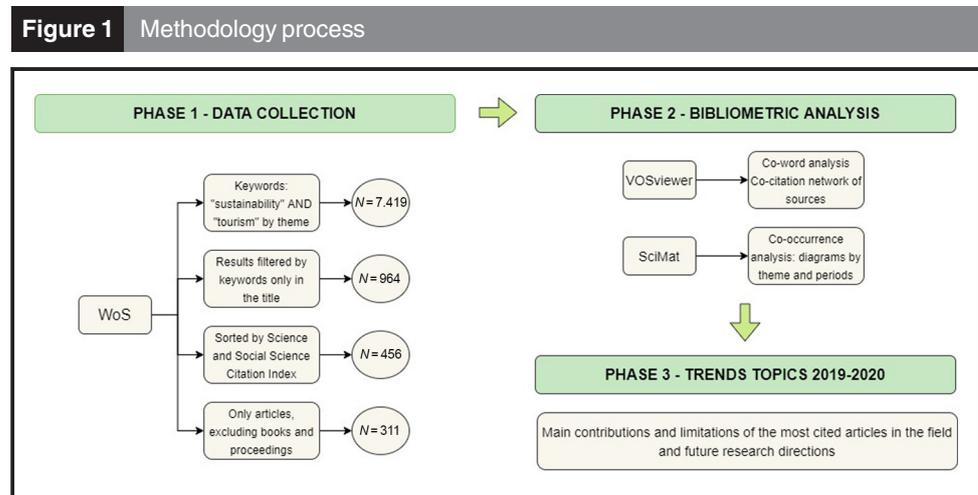
Hence, the aim is to provide a comprehensive and up-to-date overview of sustainability research in tourism. Knowing state-of-the-art sustainable tourism from a broad perspective gives a clearer picture of future lines of research that will contribute to the SDGs. The following research questions are posed:

- RQ1. How is the knowledge network in the current literature about sustainability and tourism developed?
- RQ2. Which are the research topics and patterns in the field under study?
- RQ3. What are the future research lines according to the fulfilment of the Tourism Agenda 2030 and SDGs?

The paper is divided up as follows: after the introduction, the methodology is presented in Section 2. In Section 3, the bibliometric results are displayed according to the historical number of publications, the most representative journals and the thematic organisation. Thereafter, the most influential articles and research trends during the years 2019 and 2020 are analysed in Section 4. Finally, the discussion and conclusions are presented in Section 5.

## 2. Methodology

This paper adopts a mixed methodology to comprehend the impact of sustainability on tourism research through papers that consider this topic their main issue. A bibliometric procedure is used on a set of articles from 1998 to 2021. Following that, we carried out an in-depth review of the most cited articles in the years 2019 and 2020 to identify where the latest research has been heading and new research trends. The study is divided up into three phases, as shown in Figure 1.



In the first phase, the Database chosen is Web of Science. The keywords “sustainability” and “tourism” were selected by theme, and 7,419 papers were acquired. Then filtering by title, the result was 964 papers. Selecting only Science and Social Citation Index obtained 456 results. Finally, citations from books and proceedings were excluded, resulting in a total sample of 311 articles.

The co-occurrences analysis technique match pairs of keywords to identify the relationships between items (Choi *et al.*, 2011) and is fundamental to visualise and detect emerging trends and future research (Pestana *et al.*, 2019). Hence, two software are used for co-word analysis in the second phase.

VOSviewer is frequently applied to display scientific maps of the co-word analysis (Cavalcante *et al.*, 2021), so it was implemented first to get a general overview of the most demanded topics. In the VOSviewer output, the clusters' size displays the strength of the concept (frequency) and the clusters' network the relationship between co-occurrent terms.

SciMat is also commonly applied to construct scientific maps and visualise the development of the scientific area under investigation (Cobo *et al.*, 2012). In contrast to VOSviewer, it enables visualisation of the evolution of the analysis field and provides a classification of the thematic networks identified in a specific period of analysis. It was applied next. The SciMat thematic networks are drawn following two criteria: density and centrality. Density is used to measure the internal strength of the network, and centrality is used to measure the degree of network interaction. Accordingly, themes are classified into motor themes with strong centrality and high density; basic and transversal themes that are not well developed but valuable for the research; emerging or disappearing themes that present low centrality and density; and the more developed but isolated themes, with internal strong links but external links weak (Cobo *et al.*, 2012).

In the third phase, an analysis of the most cited articles between the years 2019 and 2020 was performed, outlining the dominant research trends and limitations and how they are playing a role in supporting or hindering the achievement of the SDGs.

### 3. Results

#### 3.1 Historical number of publications

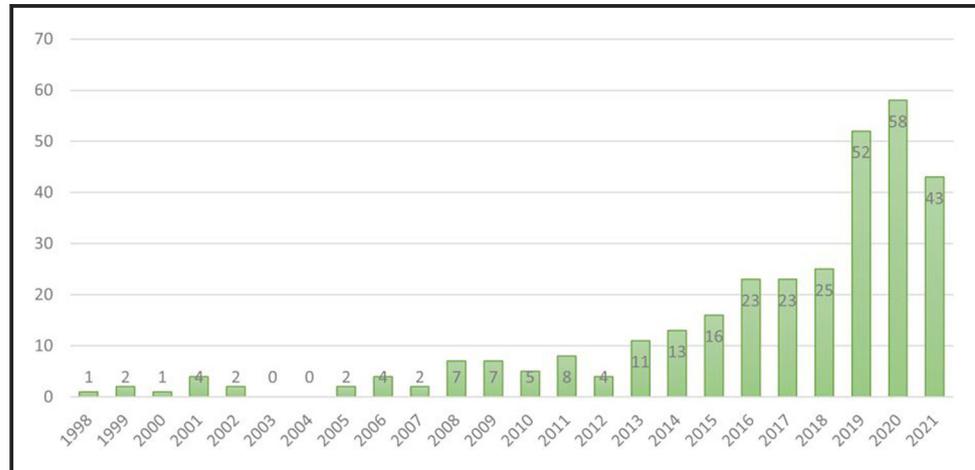
Examining the evolution of publications in the research topic shows academic attention. Figure 2 displays the number of publications in the field of sustainability and tourism from 1998 up to May 2021. From the 1990s to 2015, the publication of articles is very scarce. This is beginning to reverse, due to increased awareness of sustainability, driven mainly by the publication of the Agenda 2030 for Sustainable Development. Highlighting the period between the years 2019–2020 as the most prolific, showing a growing concern in this aspect.

#### 3.2 Representative journals in the field

Referent journals in sustainable tourism focus on hospitality, leisure, sport and tourism as a research area. As can be seen in Table 1, *Tourism Review* (22 and 4) is among the top 20 journals in terms of influence and productivity in the field.

#### 3.3 Thematic organisation in the field

Analysing VOSviewer results shows that from the total of 1,673 keywords, 40 meet the threshold, considering 8 as the minimum number of occurrences of a keyword. Figure 3 displays the different clusters whose themes will be analysed below. The cluster “models of responsibility” in red analyses models or frameworks for action and factors related to responsible governance. The green cluster “study and measurement of change” gather

**Figure 2** Historical evolution of publications in the field**Table 1** Journals by number of citations

Journal	JCR 2021	Documents	Citations
<i>Tourism Management</i>	12.879	18	1642
<i>Journal of Sustainable Tourism</i>	9.470	60	1506
<i>Sustainability</i>	3.889	90	728
<i>Journal of Cleaner Production</i>	11.072	8	325
<i>Ecological Indicators</i>	6.263	5	217
<i>Tourism Economics</i>	4.582	6	156
<i>Current Issues in Tourism</i>	7.578	11	150
<i>International Journal of Tourism Research</i>	4.737	6	137
<i>Tourism Management Perspectives</i>	7.608	5	91
<i>Tourism Geographies</i>	11.355	7	86
<i>Journal of Travel Research</i>	8.933	3	64
<i>Journal of Hospitality Leisure Sport &amp; Tourism Education</i>	2.628	2	33
<i>Marine Policy</i>	4.315	2	27
<i>International Journal of Sustainable Development and World Ecology</i>	4.870	2	24
<i>Environmental Science and Pollution Research</i>	5.190	2	23
<i>Tourism Review</i>	7.689	4	22
<i>International Journal of Contemporary Hospitality Management</i>	9.321	2	21
<i>Journal of Destination Marketing &amp; Management</i>	7.158	2	20
<i>Land Use Policy</i>	6.189	2	14
<i>Journal of Environmental Management</i>	8.910	2	13
<i>Journal of Testing and Evaluation</i>	1.333	2	8

concepts about adaptation to change, conservation and the evolution of sustainability. This cluster also considers measurement management through the formulation of sustainable indicators. The yellow cluster “social sustainability” includes the main concepts of the different stakeholder groups, such as perceptions, satisfaction or attitudes. Finally, the cluster “cultural or heritage sustainability” in blue considers concepts associated with rural tourism, destinations and heritage.

Because SciMat algorithm identifies keyword subgroups with important associations, a range of a maximum of 12 keywords and a minimum of 3 were established to spot the thematic networks. To perform the analysis, the publications were divided into three periods: period 1, 1998–2008; period 2, 2009–2015 and period 3: 2016–2021. The third



Considering motor themes, the node “environmental sustainability” indicates where the research is focused. There is a strong relationship between this node, “sustainable tourism” and “management system”, as well as other words such as “impact”, “destination”, “hotels”, “green” or “corporate social responsibility”. In the “climate change” cluster, there is a strong relationship with “efficiency”, “profitability” and “vulnerability” as key themes associated with phenomena. In terms of basic and transversal themes highlights “perceptions” cluster. Its relationship with “support” and “attitudes” is highlighted, as well as other words such as “resilience”, “issues” and “community”. The “innovation” node is also present, strongly related to words such as “companies”, “information-technology” or “system-dynamics”. In the emerging theme, “circular economy” node is presented, linked to China and Covid-19. Finally, the development theme, “energy consumption”, stands out, highlighting its relationship with “Co2-emissions”.

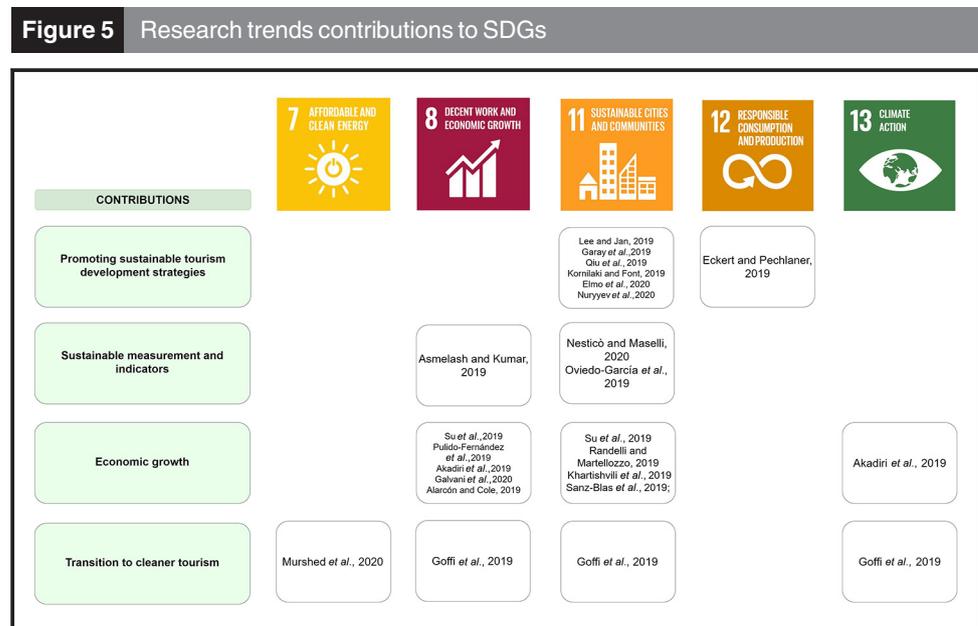
Referring to the co-word analysis carried out with VOSviewer, and its link with the SciMat results, the motor and transversal or basic themes are present. This is because VOSviewer considers the whole period, but SciMat analysis focuses on Period 3 (2016–2021). Hence, the emerging themes that appear in SciMat, such as Covid-19 or China, do not appear in VOSviewer.

### 3.4 Research trends 2019–2020

To examine research trends in sustainability and tourism, the main topics of the 20 most cited articles in the period 2019–2020, the years with the highest number of publications in the field, were analysed.

For almost five years since the publication of the Agenda 2030, only one paper (Alarcón and Cole, 2019) makes direct reference to the SDGs. However, any of these papers could contribute to the achievement of these global sustainable goals. In this sense, Figure 5 provides an initial analysis of these works based on the main contributions of these 20 research papers and how they are aligned with the SDGs.

There is evidence of research bias towards issues related to the fulfilment of SDG 11, as this is directly linked to tourism. However, the second goal, also clearly associated with tourism (SDG 12), is overlooked by research in 2020 and 2021. It is also noted that the indirect



targets (SDG's 7 and 13), linked to environmental aspects, still need more attention to aid their fulfilment. In contrast, the contribution of tourism to economic growth and the measurement of sustainability is receiving more attention.

Regarding the conceptual models, two large blocks of work can be found. Those that attempt to comprehend the relationship between tourism and environmental sustainability either considering that tourism explains sustainability (Akadiri *et al.*, 2019). Or on the contrary, that sustainability influences tourism (Pulido-Fernández *et al.*, 2019). Or even that it influences the strategies of the companies (Eckert and Pechlaner, 2019) and even in the destinations' competitiveness (Goffi *et al.*, 2019). And those that could be named "awareness-oriented". These demonstrate how the stakeholders' consciousness about sustainability determines their behaviour and has a positive effect on the achievement of sustainable tourism (Garay *et al.*, 2019; Kornilaki and Font, 2019).

There is also a group of works that could be called "community-oriented". They focus on aspects related to economic, environmental and social sustainability and its contribution to community-based or rural tourism development (Lee and Jan, 2019; Khartishvili *et al.*, 2019; Randelli and Martellozzo, 2019; Su and Swanson, 2017).

Finally, we identify those works aimed at providing indicators or systems for measuring sustainability. Whether in the form of frameworks for assessing the economic sustainability of tourism (Qiu *et al.*, 2019) or in the form of an evaluation protocol for tourism projects in a destination (Asmelash and Kumar, 2019; Nesticò and Maselli, 2020). For the shortcomings pointed out in these studies, many of them limit the study to a specific region. Therefore, it would be desirable to broaden the geographical scope to compare and gain overall findings. In addition, the lack of data makes the accuracy of the studies difficult. It is essential to expand empirical studies in this field.

#### 4. Discussion

Based on a review of the most cited articles and cluster analysis, this section provides a discussion to establish an interpretation of the results and their relationship to previous literature. State-of-the-art sustainable tourism provides information for the proposal of a research itinerary of great usefulness for both researchers and professionals. The words "Agenda 2030" and "SDGs" have not appeared in any of the clusters analysed and only in one of the most cited works of the past two years. How can this absence be interpreted? Is the Academy not highlighting the Agenda and its goals? Nevertheless, the concerns expressed in the UN action plan are shared by tourism research, as this study has shown. A driving theme focuses on reducing the sector's impact on climate change (Akadiri *et al.*, 2019) through efficient management without losing profitability (SDG 13).

One of the concerns about environmental sustainability is energy consumption, such as the impact of CO<sub>2</sub> emissions caused by transportation and accommodation (Thongdejsri and Nitivattananon, 2019). Linking research on energy eco-management and the transition to renewable energy with emission reductions is crucial for the development of sustainable transport (SDG 11). However, not all tourism transport sectors are at the same stage of development regarding the use of renewable energy. A closer look at the reasons and incentives for the less developed sectors would help to achieve the target. Are companies and passengers willing to make the necessary effort to do so? How important is the environmental impact of transport on a traveller's choice? (Gross and Grimm, 2018). In addition, entrepreneurs and managers must be capable of determining their level of sustainability. This requires the establishment of sustainable indicators (Asmelash and Kumar, 2019).

Studying how tourism and economic growth affect environmental degradation, new paradigms such as the circular economy (SDG 8) have been contemplated. A break must be made with mass consumption models, which lead to a depletion of the resources of

tourist services. The sector must be committed to service production from a perspective of regeneration and a necessary decrease. Is the sector aware of the need to abandon mass services in those types of tourism or destinations traditionally related to this production? Tourism is beneficial for the economy, but destination stakeholders must promote tourism growth in line with sustainability, addressing the negative impacts it entails (Pulido-Fernández *et al.*, 2019). This may result in a revulsive in the implementation of new economic and business models (Galvani *et al.*, 2020).

However, sustainability goes beyond environmental or economic aspects and focuses on social aspects. There is a growing interest in the development of accountability models for good governance, which requires the establishment of appropriate guidelines and regulations. The study of social sustainability focuses on the perceptions, consumption patterns and needs of new tourists (SDG 12). Besides, the development of sustainable competences of their companies depends on the attitude of managers (Kornilaki and Font, 2019; Ghoochani *et al.*, 2020). Beyond this, the impact on heritage and the host community must be considered if sustainable and long-lasting destinations are to be achieved (Lee and Jan, 2019). Stakeholders may share the development of sustainability actions, but there is a diversity of perceptions among them (Damian *et al.*, 2022). Is it possible to talk about cultural sustainability in close relation to social and environmental sustainability? The interaction between the three is essential for the sustainable development of cultural tourism or rural tourism (SDG 8).

The SDGs of the 2030 Agenda for Tourism are not isolated elements. Eventually, to fully achieve the 169 targets of this global action plan, a joint development between several goals is needed.

## 5. Conclusions and limitations

Sustainable tourism as a complex system has been studied for decades from different theoretical standpoints and different methodologies. Knowing the existing research on sustainable tourism and establishing its current contribution to the SDGs allows for directing studies towards the gaps for the fulfilment of the Tourism Agenda 2030. This bibliometric analysis sheds light on state-of-the-art research, providing useful information for researchers and professionals in the sector.

The articles published in the field show that attention has increased on scientific production since the year 2016 (*RQ1*), which coincides with the SDGs and the Agenda 2030 (United Nations, 2015). According to the journals, the most representative are Tourism Management and the Journal of Sustainable Tourism. Tourism Review has a significant contribution to make to the theory building of sustainable tourism development.

In terms of *RQ2*, among the basic but underdeveloped topics is the study of stakeholder perceptions (Damian *et al.*, 2022). Following the recent crises that have hit the sector in 2020 and 2021. It is essential to understand concepts such as adaptation to change or the development of certain community attitudes. Hence, the study of community participation is a trending topic (Lee and Jan, 2019). This requires further technological development and methodologies to model temporal behaviour in complex environments. Among the underdeveloped but growing topics are a new economic paradigm such as the circular economy (Galvani *et al.*, 2020), a new step of sustainability in the tourism industry.

Answering *RQ3*, the most cited papers have focused on three main thematic blocks. The first one attempts to delve deeper into the relationships and causes between tourism and sustainability. Shedding light on the topic of sustainable tourism is fundamental given the dispersion of concepts, theories and applications in recent decades. A second block focuses on awareness as a factor to be considered in the success of sustainable tourism practices. Finally, the role and perception of the local communities are increasingly taken into consideration.

This paper provides both theoretical and practical contributions to the scientific literature. In terms of theoretical implications, this bibliometric analysis reveals a growing research interest in the construction of theoretical models of sustainable tourism management, in line with the greater emphasis on theoretical progression evidenced by [Ruhanen et al. \(2019\)](#). However, despite the boom of the past few years, there is still conceptual dispersion and no specific theory of any relevance beyond the sustainable development paradigm. There are new currents from other areas, such as philosophy, which would facilitate the development of awareness or new habits. The incorporation of Institutional Theory or Neo-Institutionalism, for example, would facilitate the comprehension of the role those institutional contexts could play in changing the patterns of tourism production and consumption advocated by [Sharpley \(2020\)](#).

There is a risk that research remains at a level of abstraction, which makes it difficult for the sector to apply in practice. Perhaps driven by this need to make sustainability more tangible, the sector is experiencing a certification fever ([Spenceley, 2019](#)). The variety of certifications and linked regulations is generating more confusion than guidance among businesses and tourists. Recent trend publications offer indicators or tracking systems to track the level of sustainability achieved ([Asmelash and Kumar, 2019](#); [Ghoochani et al., 2020](#)). Establishing consensual indicators recognised by the sector would make it possible to know both the level of sustainable performance achieved by the company and to compare it with the sector. In terms of practical actions related to environmental sustainability, the sector requires strategic planning on energy consumption and emissions reduction. Companies and their key stakeholders need to be aware of different choices for current energy uses and the benefits associated with them ([Antimova et al., 2012](#); [Kornilaki and Font, 2019](#)). To this end, the cooperation role of public institutions with business sectors is essential. Meeting the goals of the 2030 Agenda can also be a differentiating aspect for business. But to incorporate the SDG targets into the company's strategic objectives, they require specialised guidance. While consultancies seem to have taken up this task, academia is not incorporating the 2030 Agenda among its main focuses, as shown by the clusters analysed.

Most of the limitations have to do with the need for other databases to enlarge the sample analysed. The co-occurrence analysis is inevitably subjective. Thus, it is interesting to complement the bibliometric analysis with other methodologies, such as in-depth interviews with experts or questionnaires within tourism companies. Additionally, a differentiation by sub-sectors or geographical areas is necessary to customise the application of sustainable measures or indicators.

The clustering has provided an avenue for further work on sustainability and tourism. Future research should test the effects of sustainability actions with longitudinal studies. Decision-makers and consumers need to know whether lower-impact tourism is really being achieved. This is not the only challenge. Research should also aim at breaking certain inertia of the industry to work on sustainability actions in isolation. Tourism is an essential development vehicle for destinations, but not at the expense of the environment, heritage and people. In the development of tourism strategies, economic profitability is not enough if it is not accompanied by local community benefit. Achieving socially and environmentally responsible tourism requires cooperation between policymakers, companies and tourists.

Sustainability is not a typology of tourism, and its implementation requires specificity considering the particularities of any case. In addition, the dimensions of sustainability are permeable, and effects can be established between them. To reach a holistic view of the analysed problem, researchers must consider the fact that the relationships are complex. Hence, there is a requirement for different perspectives, models, tools and actors.

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## Corresponding author

Rocío González-Sánchez can be contacted at: [rocio.gonzalez@urjc.es](mailto:rocio.gonzalez@urjc.es)

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