

Scientific research and emerging trends in alternative tourism and agrotourism

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ABSTRACT

Objective: To map the scientific production on alternative tourism and agrotourism in databases like Scopus and Google Scholar during the 1991-2025 period.

Design/methodology/approach: The bibliometric analysis of alternative tourism is essential to highlighting the trends and impact of this sector in both academic and practical settings. By studying scientific production, citations, and collaboration networks in this field, emerging research areas, knowledge gaps, and the most relevant topics of interest were identified. This study analyzes the scientific production on alternative tourism and agrotourism through a bibliometric approach, using tools such as VOSviewer and Scopus databases.

Results: Significant growth in publications was identified since the 1970s. Alternative tourism promotes a positive impact on local development, environmental sustainability, and the cultural strengthening of rural communities. The bibliometric analysis identified 363 publications in Scopus, demonstrating academic interest in this field. Among the topics related to alternative tourism are sustainable development, climate change, and environmental impact, highlighting the need to integrate climate change as a transversal axis in tourism policies.

Limitations on study/implications: The presence of agrotourism publications outside of Scopus limits knowing the exact value of scientific production during the 1991-2025 period.

Findings/conclusions: Alternative tourism and agrotourism are key elements for the resilience and sustainable development of natural spaces.

Keywords: agro-ecotourism, climate, rural areas.

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INTRODUCTION

The World Tourism Organization (UNWTO) conceptualizes alternative tourism as a way of traveling that includes recreational activities directed at interacting with the natural environment and cultural manifestations, seeking the preservation of environmental resources. This touristic approach is characterized by its proposal, design and execution based on sustainability criteria, positioning itself as an alternative to large-scale conventional tourism, according to what the UNWTO establishes (2024).



Alternative tourism encompasses various forms (ecotourism, agrotourism, and rural tourism) for enjoying enriching experiences in harmony with the natural and socio-cultural environment, as opposed to massive traditional tourism (Dorta and de la Caridad 2022). This type of tourism is associated with the search for less popular destinations, which are more agreeable to coexisting in daily and community life, and local cultures, fostering a greater social, environmental and economic impact. García de Fuentes and Cervera (2020) maintain that alternative tourism emerges in the decade of the 1970s and acquires great importance since the 1990s, when it reached annual growth rates of 20% globally, becoming the tourism segment of greatest growth.

As one of the modalities of alternative tourism, agrotourism has a great social and cultural importance, since it offers new opportunities for participation, decision-making, access to resources and new technologies, employment generation, diversification of sources of personal and community income, strengthening of agricultural culture, and all of this has an effect on the quality of life of people and families.

Agrotourism has been developed in Mexico as a touristic modality, integrated by fundamental components to promote sustainability and decrease poverty levels, through the implementation of initiatives that drive its development in zones that are at a disadvantage, local and indigenous communities. Some studies point to the lack of updating in the trends of the research topic and that it has experienced changes in response to contemporary socioeconomic demands (Jiménez Bulla 2019).

Bibliometry is a tool that allows exploring the current state of a field of study through the quantification of global scientific production. In this analysis, the trends in research about alternative tourism are evaluated, identifying the main themes, authors, institutions, and relevant journals, as well as the evolution in the field in recent years.

It is considered that bibliometric mapping is the most adequate research approach to synthesize the findings of studies, as described by Zupic and Cater (2015). On the other hand, the studies and publications related to the topic can be measured clearly (Cobo *et al.*, 2011), giving us a measure of the importance and relevance of the topic of study today, and detecting the main authors who are working with the topic of interest, the main collaborations between authors and countries, among other aspects. Bibliometric analysis measures the scientific production of a specific topic. This analysis is based on gathering and analyzing bibliographic information, with the aim of measuring the influence and impact of scientific publications on alternative tourism. The databases are selected by the number of journals and the theme, in addition to these databases having broad international recognition and reach (Zhu and Liu, 2020; Duque and Duque, 2022). Therefore, the objective of this study was to map the scientific production of the topic of alternative tourism and agrotourism in databases such as Scopus and Google Scholar during the 1991-2025 period.

MATERIALS AND METHODS

A documentary exploration was conducted using the Scopus platform (<http://www.elsevier.com/es-mx/solutions/scopus>). The search criterion was based on the broad catalogue of periodical publications with high impact index. The search term used was Agroturismo, without applying additional filters, with the purpose of obtaining an integral

view of agrotourism in the different thematic classifications that Scopus offers to organize contents. The time range covered from 1991 to March 26, 2025, and 308 published documents were identified. The bibliographic data were exported in CSV format including all the information available on the platform for each publication.

Through the Bibliometrix package in R 4.2.0, the following variables were analyzed: annual distribution of publications, categories of predominant documents (scientific articles, reviews, books, book chapters, brief communications, and other types of documents), disciplines with greatest productivity, temporal evolution of the most studied areas, countries with most production, most productive journals, authors with largest number of studies and citations, and articles of highest impact. The graphs of temporal production, evolution of the three main disciplines and distribution by documentary types, were generated using Sigmplot version 10.0. The visualization of networks with key terms was constructed from the keywords assigned by the authors, where the frequency determined the size of the nodes. Both the network of key terms and the network of international collaboration were developed in VOSviewer version 1.6.19. The thematic map was generated using the biblioshiny function of the Bibliometrix package in R version 4.2.0.

RESULTS AND DISCUSSION

The bibliometric analysis in the study field of agrotourism has evolved considerably, with a predominant focus on the relationship between “agrotourism” and “rural tourism”, although as pointed out by Sánchez-Oro *et al.* (2022), these concepts are not synonyms but rather represent different touristic manifestations, where “agrotourism represents a specific modality within the broad spectrum of rural tourism, characterized by its direct connection with productive agricultural activity”. This conceptual distinction is fundamental to understanding the complexity of the phenomenon and its theoretical and practical implications.

Scientific production at the global level

According to the study conducted, the temporal trends and increase in the concept of agrotourism show a field of study in clear growth, with a global annual growth rate in scientific production of 6.68%, with a modest start in the 1990s (1-2 articles/year) and sustained growth in 2000-2010 (3-8 articles/year). An important increase is seen since 2015 (10+ articles/year) and an increase in publications in recent years (2019-2025). The highest peak in production was in the years 2023 (47 articles) and 2024 (55 articles). This increase indicates that agrotourism and alternative tourism in rural ecosystems is a robust field of study, with growing importance in the academic-scientific scope.

Keywords and topics in trend

The significant presence of terms such as “Rural development”, “Sustainable development”, and the coexistence of “Agriculture” and “Tourism” in keywords reflects the interdisciplinary and multidimensional nature that this field has acquired. As described by Moral-Cuadra *et al.* (2023), “agrotourism of the 21st century has evolved toward a triple-

impact model where economic profitability is balanced with environmental conservation and social justice”. That is, a change in paradigm is foreseen which transcends the traditional view of agrotourism as a merely complementary economic activity to position it as an integral catalyst of sustainable territorial development.

Figure 1 shows the word cloud of keywords related to agrotourism, where the correlation of countries or terms can be seen such as rural areas, agricultural development, ecotourism, agrotourism, and agriculture as central words of touristic development.

The most relevant results of the bibliometric analysis were that the keywords and the main topics addressed, according to the most frequently used keywords by authors, are related to Agrotourism (with a total of 122), rural tourism (32), tourism (23), agrotourism (19), and rural development (17). At the same time, from the keywords plus (Keywords-Plus) derived from the titles of the references, the ones that stand out are tourism development (29), tourism (24), agriculture (20), rural area (18), and sustainable development (16). The coincidence between both sets of keywords shows consistency in the field approach toward topics of rural development, sustainability, and the interaction between agriculture and tourism.

In the indicator of the word “agrotourism”, it was seen that the main keywords that coincide are related to tourism development and sustainable development (Figure 2). This agrees with Martínez-González *et al.* (2023), since they suggest that recent studies demonstrate that environmental sustainability has become an intrinsic component of modern agrotourism. Providers of agrotourism services are adapting their business models not only to mitigate environmental impacts, but also to take advantage of the growing interest of tourists in experiences that combine sustainable agricultural production with practical ecological knowledge, thus creating a virtuous cycle between the offer of rural tourism and the visitor’s environmental awareness.

When it comes to the main publications found in Mexico related with the topics, the ones that stand out are sustainable development, sustainability, perception, tourism, rural

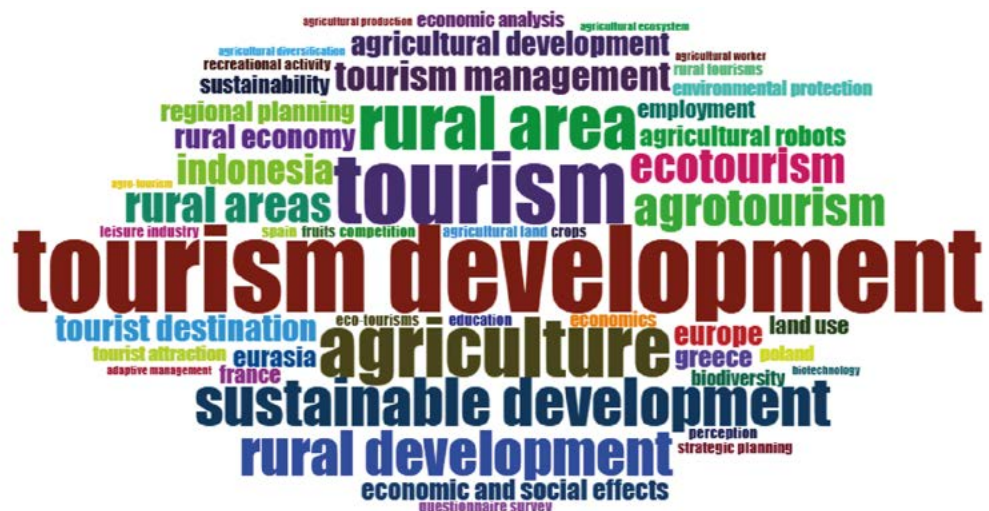


Figure 1. Word cloud of keywords related to agrotourism.

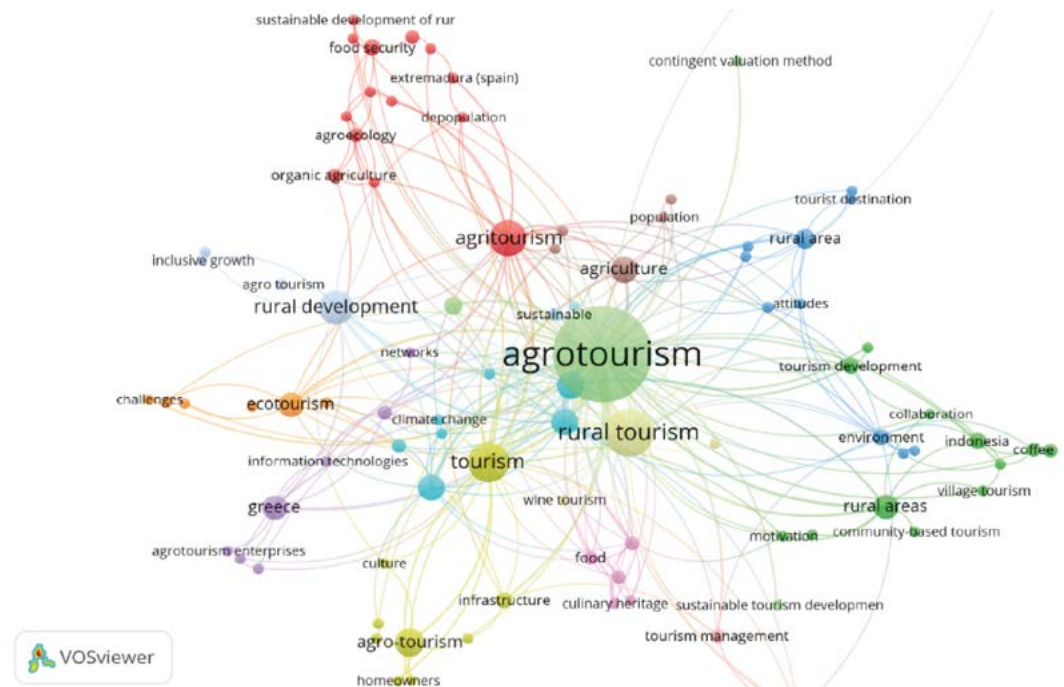


Figure 2. Network of keywords related to agrotourism.

tourism, ecotourism, tourism development, tourism management, and rural tourism where the relationship between countries and the keywords is indicated. This shows a gap of knowledge of specific topics on agrotourism, or tourism that more directed at agroecosystems and with an approach toward sustainable rural development and its socioeconomic impacts.

Collaboration between countries

Figure 3 shows the countries with highest number of publications. When the geographic distribution of the publications is analyzed, it is observed that it is distributed in a geographically uneven manner, with the highest number being from Indonesia (70 articles, 33.49%), Poland (15 articles, 7.18%), Greece (14 articles, 6.70%), Rumania (12 articles, 5.74%), and Spain (10 articles, 4.79%).

Concerning international collaboration, the general rate of international collaboration is low (9.92%). Indonesia shows the lowest international collaboration (just 7.14%), while

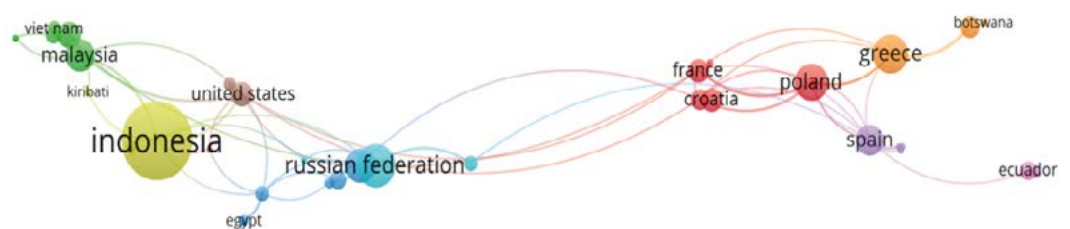


Figure 3. Roster of countries where the highest number of studies published were found.

Ecuador and Saudi Arabia show the highest rates (50%). On the other hand, it was found that the impacts per country are related with the United Kingdom, which has the highest impact from citations (106.25 citations/article), France (64.00 citations/article), and Brazil (57.00 citations/article); Indonesia also stands out, which despite its volume has low citation (2.31 citations/article). It is notable that Indonesia is the most productive country, which suggests a strong interest in the industry of agrotourism due to its contribution to the local economy.

In the academic panorama of agrotourism, researchers with different profiles of scientific impact stand out. On the one hand, authors like Sugihardjo lead in production volume with six articles, followed by a group consisting of Indonesian researchers (Lestari E., Mulyo J.H., Rusdiyana E., Setyowati R., and Widiyanto) with five publications each, integrating a productive nucleus in Southeastern Asia. This pattern contrasts with what was identified by Maroto-Martos *et al.* (2020), who mention that “scientific production on agrotourism is characterized by a marked geographic concentration in Europe and North America, with emerging research poles in Asia that are redefining the traditional balance of knowledge in this field”. However, when impact by citation is considered, a different scenario emerges where western authors like Sharpley R. (418 citations) and Love D.C. (302 citations) stand out, demonstrating what Sánchez-Sánchez and Ramírez-Hurtado (2021) describe as “a persistent gap between production volume and scientific impact, where the traditional centers of knowledge maintain hegemony in influence despite the growing geographic diversification of the research”.

When analyzing the fractioned productivity that weighs collaboration, researchers like Evgrafova L.V. (2.17), Hooper J. and Šimková E. (2.00 each) stand out, followed by

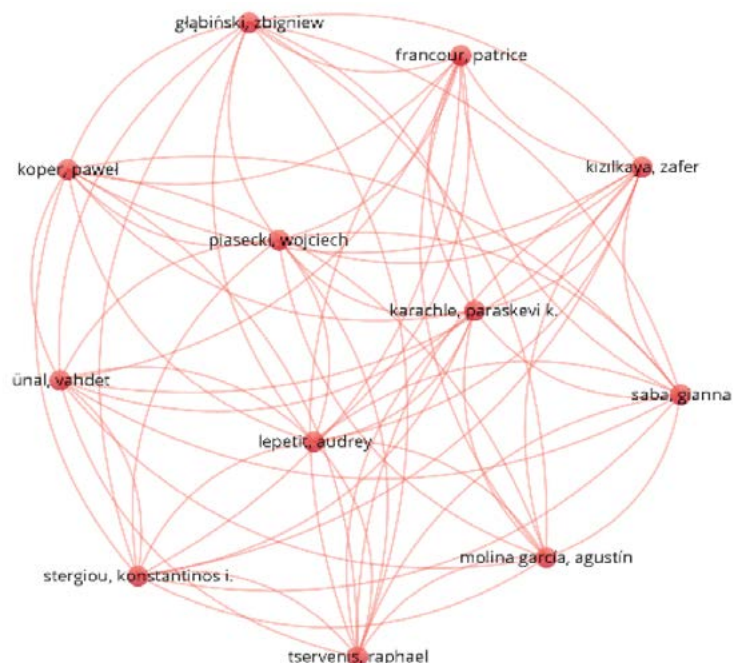


Figure 4. Roster of main authors globally.

Lakovidou O. and Kizos T. (1.83), revealing distinctive patterns of academic collaboration. This metric agrees with what was observed by Pérez-Galdós *et al.* (2022), who state that studies on agrotourism are evolving toward closer collaborative models, although selective, where researchers with high fractioned productivity tend to lead consolidated research groups with more extensive strategic collaborations. It is significant that Kizos T. appears both in fractioned productivity and in impact by citation, exemplifying what Moral-Cuadra and Orgaz-Agüera (2023) identify as “bridge researchers”, capable of combining qualitative scientific production with strategic collaboration networks, thus becoming methodological references that transcend the regional borders of knowledge and consolidating their position as integral figures in the scientific advancement of the field.

Type of documents published

The main sources of publication are: IOP Conference Series: Earth and Environmental Science (34 articles); E3S Web of Conferences (17 articles); Journal of Environmental Management and Tourism (9 articles); AIP Conference Proceedings (8 articles); Springer Proceedings in Business and Economics (8 articles). This demonstrates the importance of conferences and acts, which suggests a dynamic field with many scientific encounters where advances are shared.

The most cited articles are: Sharpley R, 2002, *Tour Manage* (418 citations); Love DC, 2015, *Aquaculture* (302 citations); Bessière J, 2013, *J Herit Tour* (121 citations); Fachinello JC, 2011, *Rev Bras Fruticultura* (114 citations); and Kizos T, 2007, *South Eur Soc Polit* (82 citations). These studies represent the theoretical and empirical pillars of the field, and it is advisable to review them to understand the foundations of agrotourism.

It is evident that the implications for this study on agrotourism and alternative tourism in tropical agroecosystems have geographical opportunity in Indonesia, which leads scientific production (tropical country), but with low impact, suggesting that there is a niche for high-quality research in tropical environments. When it comes to the gap in knowledge, it is evident that there is a disconnect between production volume and scientific impact. There are countries with more publications, although they do not necessarily have the greatest impact, indicating an area of opportunity for innovative research.

On the other hand, the multidisciplinary and interdisciplinary approach, and the variety of sources and keywords indicate it is a field that connects agriculture, tourism, sustainability and rural development, suggesting the need for integrated approaches. With the collaboration networks, a low rate of international collaboration (9.92%) is perceived, which indicates an opportunity to establish multinational research networks, especially in tropical regions.

The recommendations for research encourage reviewing the most cited articles, especially those by Sharpley R. and Bessière J., which establish important conceptual frameworks. Deeply exploring the literature from Indonesia, since it represents a third of the global production and is probably focused on tropical agroecosystems that are similar to those of interest in other tropical regions. Identifying gaps in knowledge among tropical regions that are less studied could benefit from the research. Considering international collaborations to increase the potential impact of the publications. Focusing the research on

the intersection between agrotourism, rural tourism, sustainability, and rural development, which appear as central themes in the literature. Paying attention to recent contributions (2019-2025), since they represent nearly half of all the literature in the field and contain the most current advancements.

Studies on agrotourism and alternative tourism

Various modalities of alternative tourism such as rural tourism, ecotourism and agrotourism have stood out for their contribution to the sustainable development of rural communities (Gómez and Pérez, 2023), making this form of tourism an attractive option for the promotion of the activity in communities that seek to reach a harmonious and sustained development (Salas and Luz, 2021). To take advantage of these characteristics, tourism must be understood as a strategic opportunity for the economic development of countries, considering it from the local perspective, of development, to the socioeconomic and sociocultural reality where it is inserted. In this process, a coordinated and consensual action between public and private local actors, together with the local population, is required, so that they all plan together the best way of promoting the sector; under a strategy of participatory development that places tourism as an activity that generates employment, income and development.

Agricultural rural tourism promotes the development of sustainable productive systems by representing a feasible alternative for the generation of foods that favors food security, improves economic income of peasant families, eases access to activities in the primary sector, broadens the range of available products, and stimulates regional markets. Similarly, these initiatives constitute options that promote social progress and poverty reduction through the execution of productive initiatives destined to domestic consumption, which consolidate small-scale family businesses, using appropriate agricultural methods with ecological and economically accessible technologies. Consequently, it is fundamental to foster sustainable agricultural enterprises, where ecological tourism and specifically agrotourism act as catalysts for rural growth, at the same time as they contribute to reducing the impacts of global warming and strengthening local economies.

Agrotourism represents a modality of alternative tourism that is developed in rural spaces where farming constitutes the central axis of the experience. According to Flanigan et al. (2020), agrotourism is a recreational activity that takes place in active agrarian units, where visitors participate in rural life and productive practices as a fundamental part of their experience. This definition highlights the importance of interactivity with agricultural tasks, thus differing from other forms of rural tourism where the agrarian environment can be merely scenography.

The multidimensionality of the concept has been analyzed by Barbieri *et al.* (2022), who maintain that agrotourism constitutes a strategy of economic diversification for rural communities, combining traditional agricultural production with tourism services that allow the valuation of agrarian cultural heritage. This perspective is complemented by Phillip *et al.* (2021), who establish a classification based on the level of contact with agricultural activity, distinguishing between passive observation experiences and active direct participation experiences.

Within the context of sustainability, Sgroi and Donia (2023) argue that agrotourism represents a territorial development model that balances the preservation of agricultural traditions with innovation in tourism services, fostering environmental conservation and local socioeconomic wellbeing. This view is backed by Kizos and Losifides (2024), who have documented how successful agrotourism initiatives favor the permanence of the population in rural areas, the inter-generational transmission of traditional agricultural knowledge, and the creation of value chains that benefit multiple local actors, thus establishing a direct link between agrotourism and sustainable rural development.

CONCLUSIONS

The bibliometric analysis of alternative tourism and agrotourism reveals a research field in accelerated expansion, with an annual growth rate of 6.68% and concentration of 50% of scientific production in the 2019-2025 period. In Scopus, 363 publications were identified, demonstrating the growing academic interest toward tourism modalities that integrate sustainable development, agriculture, and environmental conservation.

Alternative tourism and agrotourism are consolidated as key elements for resilience and sustainable development of rural spaces, functioning as catalysts of economic diversification that strengthen food security, facilitate the inter-generational transmission of traditional agricultural knowledge, and generate local value chains. The evidence confirms their evolution toward a triple-impact model that balances economic profitability, environmental conservation and social justice. Critical research gaps were identified: the disconnect between scientific production volume and impact (Indonesia leads with 33.49% of publications, but with low impact by citation), limited international collaboration (9.92%), and underrepresentation of specific studies in tropical agroecosystems, particularly in Latin America. This gap represents a strategic opportunity to develop high-quality research in tropical contexts, taking advantage of its biodiversity, innovative potential, and needs for climatic adaptation.

The limitations of the analysis include the bias toward high-impact publications in English, the conceptual heterogeneity in definitions of agrotourism and rural tourism, and the quantitative approach that does not evaluate real social impact in the communities. To maximize the transforming potential of agrotourism, it is fundamental to develop specific normative frameworks, international collaboration programs, transversal integration of climate change into tourism policies, and participatory methodological approaches that actively involve local communities in contexts of tropical agroecosystems.

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