

## A Bibliometric Analysis on Sustainable Tourism In 2023

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### Abstract

*Sustainable tourism refers to the type of tourism in which the environmental, social, and economic impacts of tourism are taken into account, and where relevant adjustments are made to minimize these negative consequences. In sustainable tourism, we consider the needs of travelers, but also the needs of host communities, local businesses, and nature. Sustainable tourism is a concept that aims to minimize the negative impact of tourism on the environment, society, and economy. This involves responsible use of resources, preservation of local culture and traditions, and increased economic benefits for local communities. Sustainable tourism seeks to balance the needs of tourists with the needs of destinations, ensuring that future generations can also enjoy the same attractions and experiences. It focuses on long-term sustainability, promoting practices that are environmentally friendly, socially inclusive, and economically viable. By implementing sustainable tourism practices, we can contribute to the preservation of our planet while still enjoying the beauty and diversity it has to offer. Based on network visualization the most dominant terms (often appearing) are "communities-based tourism" and "sustainable tourism". When viewed from the Overlay Visualization, the topic of "communities-based tourism" shows the latest trends in research related to "rural communities".*

**Keywords:** Bibliometric Analysis; Scientometrics; Communities-Based Tourism; Vos Viewer

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## 1. Introduction

Sustainable tourism is a concept that aims to minimize the negative impact of tourism on the environment, society, and economy. This involves responsible use of resources, preservation of local culture and traditions, and increased economic benefits for local

communities. Sustainable tourism seeks to balance the needs of tourists with the needs of destinations, ensuring that future generations can also enjoy the same attractions and experiences. It focuses on long-term sustainability, promoting practices that are environmentally friendly, socially inclusive, and economically viable. By implementing sustainable tourism practices, we can contribute to the preservation of our planet while still enjoying the beauty and diversity it has to offer.

Sustainable development is essentially aimed at seeking equitable development between generations in the present and the future. Sustainable development aims to improve people's welfare, to meet human needs and aspirations (Salim, 1990).

Sustainable tourism refers to the type of tourism in which the environmental, social, and economic impacts of tourism are taken into account, and where relevant adjustments are made to minimize these negative consequences. In sustainable tourism, we consider the needs of travelers, but also the needs of host communities, local businesses, and nature.

Sustainable tourism has been made by other researchers, The novelty of this work is unlike previous works. This work focuses on exploring VoS as a tool to present the bibliometric from existing works from Google Scholar using 23 samples that will be selected into 16 in 2018-2023. For this reason, this work presents a bibliometric analysis of sustainable tourism. In short, this work aims to contribute by presenting a bibliometric analysis of sustainable tourism models, describing matrix comparisons, presenting publication year implementation data, describing document types, describing source types, formulating and sorting the best 10 article citation data, formulating and sorting publishers' top five ranking data, formulating and sorting the top five data of dissertation topics, present visualization of topics through the use of VoS Viewer, and formulate research location data that has been presented.

### 1.1. Sustainable tourism- 1 page

The Tourism sector is believed to be a sector that can drive the regional economy and improve community welfare. Indonesia began to focus on improvement and development to improve the quality of tourism in each region so that tourism has a sustainable impact. The role of the government, community, and private sector is needed in this development.

According to UNWTO, sustainable tourism is tourism development that takes full account of present and future economic, social, and environmental impacts, by meeting the needs of tourists, the tourism industry, the environment, and local communities covering aspects of: (1) optimization of the benefits of natural resources, through the maintenance of important ecological processes and the preservation of nature and biodiversity, (2) respect for the socio-cultural authenticity of local communities, cultural preservation of local communities, preservation of cultural and traditional values, and contribution to intercultural understanding and tolerance, (3) ensure the feasibility of long-term economic business sustainability, equitable socio-economic benefits to all stakeholders, including employment opportunities, sustainable income and social services to local communities, and poverty alleviation. (Pradini, Kusumaningrum, 2023)

The development of sustainable tourism will have a positive and negative impact. This impact has a significant impact on both the State and society. Therefore, in the development of sustainable tourism, it is necessary to understand the patterns and models that will be used and developed to increase sustainable tourism.

Tourism development is currently directed to sustainable tourism development. This is

because sustainable tourism development policies are directed at the use of natural resources and the use of human resources for the long term Sharpley (2000) in Budiani, Sri Rahayu. Wahdaningrum, (2018). The country of Indonesia consists of various races, tribes, languages, and cultures so many neighboring countries want to learn and get to know more closely how Indonesian tourism is.

Sutamihardja (2004), in the concept of sustainable development, is a possible policy collision between the need to explore natural resources to combat poverty and the need to prevent environmental degradation that needs to be avoided and as far as possible can run in a balanced manner. Sustainable development also requires meeting the basic needs of the community and the existence of broad opportunities for citizens to pursue the ideal of a better life without sacrificing future generations.

## **1.2. Bibliometric Analysis - 1 page**

Bibliometric analysis methods can help researchers and practitioners to have a holistic viewpoint and move forward to the next step to provide much better products and services for customers. (Pradini, et al 2022).

The bibliometric analysis model uses research data published online on the number of authors and publications of scientific publications, as well as the following articles with citations. The analysis aims to measure the research outcomes of individual researchers and/or teams. In addition, this analysis can be used to find national and international networks of authors and map the development of multidisciplinary fields of new science and technology. The analysis also helps in determining new research trends and research topics that are rarely found before.

Bibliometrics is a science that studies the use of quantitative methods to analyze and understand information contained in scientific publications, especially in the field of information and library science. Bibliometric methods can be used to measure and evaluate the impact, efficiency, and scientific production of specific authors, journals, institutions, or research fields using bibliographic data. Thus, bibliometrics can help develop scientific strategies and policies and provide insight into relationships and trends in scientific publishing.

In addition to tourism, bibliometric analysis has also been carried out by researchers who research tourism. According to Glanzel in Sitti Husaebah Pattah, the application of bibliometric techniques is carried out for a. Identify research trends and scientific growth of a discipline. b. Identify authorship tendencies in documents on diverse subjects. c. Designing automated language processes for automatic index formation, abstraction, and automatic classification. d. Regulate the inflow of information and communication

Efforts to find research trends and also to find gaps in various research topic similarities, here use bibliometric analysis to find research gaps and trends. Based on the results of the analysis, it was found that the research trend regarding the figure of Anies Baswedan leads more to the trend of research in the field of politics and political communication. The coverage studied in the last two years is related to research on Anies Baswedan in handling COVID in DKI Jakarta.<https://journal.lspr.edu/index.php/commentate/article/view/529> (previous research in the field of sustainable tourism).

Realizing this direction requires community empowerment that supports the running of Indonesia's tourism motto. This study was conducted for one year in 2021. Aims to examine

the extent of empowerment in sustainable tourism in Indonesia with a bibliometric approach. The stages were carried out with the search stage of 15 articles and the stage of mapping topics analyzed using Vosviewer. The findings obtained show that the connectedness of community empowerment networks and sustainable tourism is connected to the network of sustainable development themes and the empowerment model carried out is still minimal, where trends related to community empowerment and tourism become newly developing research.

### **1.3. Google Scholar as a Research Data Provider**

Google Scholar is a search engine service that is very popular among academics around the world. This search engine platform makes it easy to find reference sources such as books, articles, and journals related to ongoing or ongoing research so that it can facilitate retrieval. Access EndNote software services that are integrated with several other applications such as text editing software. Google Scholar is also an internet medium that allows for certain brand positioning. For example, according to the 2017 Tetra Pak Index report, there are around 132 million Internet users in Indonesia, of which 40% are social network users, of which 85% access the Internet using mobile devices, where the majority are used to go online. shop. It also shows that brands also have access to Google Scholar.

Google Scholar features Judging from the benchmarks of education technology and mobile learning, there are several features of Google Scholar. Google Scholar is one of the easiest academic search engines to use to get free articles and is supported by many leading institutions. Google Scholar also provides links to the full text that users can access. It also allows users to use the service with their login credentials. Google Scholar provides citation and reference support for articles recently indexed by search engines.

There is a difference between Google Scholar and the usual Google search engine in that ordinary Google search engines will only provide references that tend to be broader, so they do not know the level of validity. Google Scholar will provide references that come from sources that have been tested. The benefit of having a Google Scholar and Sinta account is as a means of publication in documenting the results of their research so that it can improve the quality of researchers in entering research articles and services in accredited journals which are of course indexed by Google Scholar and Sinta as well as reputable international journals

### **1.4. VOS Viewer as a Research Tool**

VoS Viewer is an application for creating folder tags. The purpose of VOS is to place items at a low size so that the distance between two items accurately reflects the uniformity or interconnectedness of the data. VOS consists of minimizing the sum of squared distances between all weighted element pairs. The square of the distance between pairs of elements is calculated based on the similarity between elements. To avoid unnecessary solutions, where all elements have the same position, restrictions are given such that the average distance between two elements must be equal to one. Two computer programs have applied VOS mapping techniques. Both are available for free. A simple open-source program is available at [www.neesjanvaneck.nl/vos/](http://www.neesjanvaneck.nl/vos/) and a further program called VOSviewer (Van Eck and Waltman, 2010) are available on [www.vosviewer.com](http://www.vosviewer.com). Both programs use variations of the SMACOF algorithm mentioned above to reduce equation 1 to equation 2.

This study used paper publication data from various journals with research on community-based tourism. This data was collected through searches for the last 5 years, precisely in 2018-2022. From the search results, 85 published articles were obtained. Data is in

the form of several articles about community tourism. The methodological approach and the main countries studied were analyzed using Microsoft Excel 2010. The VOS viewer can display maps created using appropriate mapping techniques. Therefore, the program can be used not only to display maps created using VOS mapping techniques but also to display maps created using techniques such as multidimensional scaling. VOS Viewer works on many hardware platforms and operating systems and can be run directly from the Internet. The VOS visualization feature is useful for displaying large directory maps easily understood. There are two types of maps commonly used in bibliometric research, namely distance-based maps and graph-based maps. A distance-based map is a map where the distance between two elements reflects the strong relationship between the elements. Smaller distances often indicate a stronger relationship. In many cases, items are not evenly distributed on the map based on distance. On the one hand, this makes it easier to identify groups of related elements, but on the other hand, it sometimes makes it difficult to label all elements on the map without overlapping labels. A graph-based map is a map whose distance between two elements does not necessarily reflect the strong relationship between these elements. Instead, lines are drawn between elements to show relationships. The use of VoS Viewer in tourism research has been widely carried out according to the examples listed in bibliometric studies that use keywords in the field of tourism such as tourism, urban tourism, rural tourism, agrotourism, and others.

## 2. Research Method

### 2.1. Research Objects

This paper adopts a bibliometric analysis method consisting of five stages: Determination of keywords searched, initial search results, improvement of search results, compilation of initial data statistics, and data analysis.

In this paper, we adopt a bibliometric analysis method consisting of five stages: Determination of keywords searched, initial search results, improvement of search results, compilation of initial data statistics, and data analysis.

## 3. Results and Discussion

Part 4 describes the results of this paper review, which includes publications and citations, visualizations, authors, and networks.

### 3.1. Publications and citations

The data search results using PoP before the improvement were 200 articles from the Google Scholar database. Then after improvement by reviewing the 198 articles carefully, 198 articles were obtained that were appropriate. A comparison of the data matrix in the initial search results and the search results after improvement can be seen in Table 1

**Table 1.** Matrix Comparison

Data	Initial Search Results	Repair Search Results
Database	Google Scholar	Google Scholar
Year of Issue	2018 - 2023	2018 - 2023
Year of Citation	5	5
Number of Articles	200	198
Number of Citations	1330	1311
Citation Year per Year	1330.00	1311.00
Number of Authors per Year	2.99	3.00
H Index	18	18
G index	32	32



hI Normal	13	13
hI Annual	13.00	13.00

From Table 1 above, we found that within 5 years, namely from 2018–2023 there were 200 articles with 1330 citations and the average number of authors per year was 30 people. Furthermore, we improve or re-select the results by observing one by one article related to Sustainable Tourism. Articles obtained as many as 200 with several citations 198 citations or the average per year and the average number of authors is 3 people each year. The index of measurement of productivity or impact of works that have been published by scientists or academics (Hirsch's h-Index) is 30. Furthermore, based on the distribution of citations received by publications or researchers' articles (Egghe's g-Index) obtained as much as 1

Table 2 below presents a more detailed description of Table 1 above.

**Table 2.** Year of Publication

Year	TP	h	g
2023	198	18	32

From Table 2 above, the number of published articles found was 198, with an h-index of 18 and a g-index of 32.

**Table 3.** Document Type

Type	Sum	Percentage
<i>Article</i>	128	65,6%
<i>Conference Paper</i>	0	0
<i>Book Chapter</i>	0	0
<i>Book</i>	4	2,1%
<i>Note</i>	0	0
<i>Editorial</i>	0	0
<i>Erratum/corrigendum</i>	0	0
<i>Survey</i>	0	0
<i>Journal</i>	63	32,3%
<b>TOTAL</b>	<b>198</b>	<b>100%</b>

From Table 3 above, we present original documents derived from articles, scientific conference papers, and chapter sections in books and books. From the search results, we did not find articles in the form of conference papers, book chapters, notes, editorials, erratum, and surveys. We summarize in the description of Table 3 above that 65.6% of the total publications are articles totaling 128 journal articles. Followed by Journal with 63 articles (32.3%), 4 book section articles with a percentage of 2.1%,

**Table 4:** Source Types

Type	Sum	Percentage
<i>Journal</i>	63	32,3%
<i>Book</i>	4	2,1%
<i>Article</i>	128	65,6%
	198	100%

From Table 4 above, it can be observed that a Journal is a document that gets a value of 32.3% or a total of 63 journals, in the repository there are 128 articles with a percentage of 65.6%.followed by books with 4 books equivalent to 2.1%, Furthermore, to see the most

significant contribution in related fields, 5 articles with the highest citation value are taken. The results can be seen in Table 5.

**Tabel 5.** Top 10 cited articles

No	Cites	Authors	Title	Year	Journal Name	Publisher
1	185	H Ramkissoon	Perceived social impacts of tourism and quality-of-life: A new conceptual model	2023	Journal of Sustainable Tourism	Taylor & Francis
2	80	Á Dias, GM Silva, M Patuleia...	Developing sustainable business models: Local knowledge acquisition and tourism lifestyle entrepreneurship	2023	Sustainable Tourism	Taylor & Francis
3	72	JA Ivars-Baidal, JF Vera-Rebollo...	Sustainable tourism indicators: what's new within the smart city/destination approach?	2023	Sustainable Tourism	Taylor & Francis
4	66	HGT Olya	Towards advancing theory and methods on tourism development from residents' perspectives: Developing a framework on the pathway to impact	2023	Journal of Sustainable Tourism	Taylor & Francis
5	60	M Mowforth, I Munt	Tourism and Sustainability: Development, Globalisation and New Tourism in the	2023	Group	<a href="mailto:geography@uoguelph.ca">geography@uoguelph.ca</a>

From Table 5 above, if we look at the top 5 articles that have the most citations, we will see an article written by H Ramkissoon entitled Perceived Social Impacts of Tourism and Quality-of-life: A New Conceptual Model in the Journal of Sustainable Tourism and published by Taylor & Francis in 2023 has the most citations, which is 185, followed by an article written by Á Dias, GM Silva, M Patulei entitled Developing sustainable business models: Local

knowledge acquisition and tourism lifestyle entrepreneurship, in the journal Sustainable Tourism and published by Taylor & Francis in 2023 has the 2nd most citations, namely 80 citations. The next article was written by JA Ivars-Baidal, and JF Vera-Rebollo with the title Sustainable tourism indicators: what's new within the smart city/destination approach? in the journal, Sustainable Tourism in 2023 published by Taylor & Francis became the 3rd position with a total of 72 citations. Furthermore, in the fourth and fifth positions with the same number of citations as HGT author Olya, M Mowforth, I Munt with the title of the article Towards advancing theory and methods on tourism development from residents' perspectives: Developing a framework on the pathway to impact in the Journal of Sustainable Tourism and published by Taylor & Francis in 2023 with a total of 66 citations. Likewise, the writing of M Mowforth, I Munt with a total of 60 citations in the Group's journal was published in geography@uoguelph.ca with the same citation value with the title Tourism and Sustainability: Development, Globalisation, and New Tourism in the

Table 6. Journals ranked five years related to your dissertation topic

No	Nama Journal	Jumlah Artikel	Persentase
1	Sustainable Tourism	11	19,0%
3	Journal of Sustainable Tourism	15	25,9
2	Jurnal Of Hospitality Tourism	4	6,9%
4	Journal of Tourism	2	3,4%
5	Sustainabillity	26	44,8%
Total		58	100%

Based on Table 6, it can be seen that the Journal of Sustainability Journal is the journal that most actively publishes journals related to tourism, especially the theme "Sustainable Tourism" with a percentage value of 44.8%. followed by the Journal of Sustainable Tourism 25.9%. We took the topic "Sustainable Tourism" because there are still few other writers taking this theme. The authors then display the data according to the ranking of the relevant top publishers as presented in Table 7 below.

Table 7. Top five ranked publishers who publish articles related to your dissertation topic

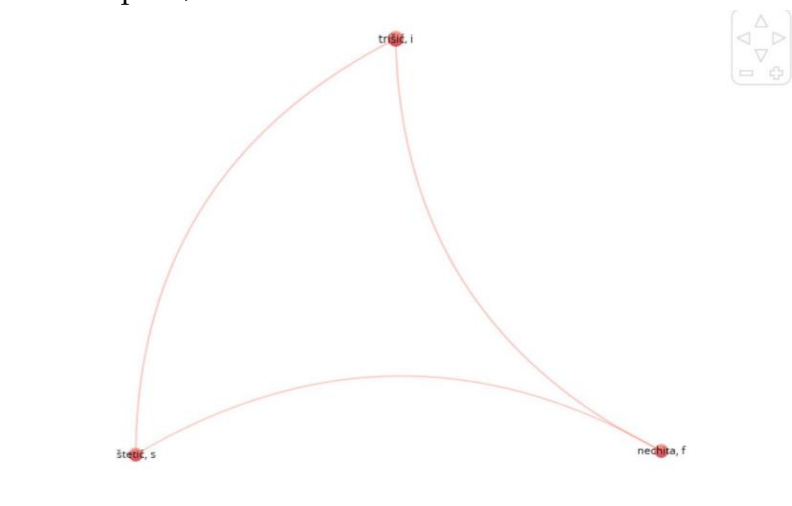
No	Penerbit	Jumlah Artikel	Persentase
1	Taylor & Francis	45	37,8%
2	Elsevier	9	7,6%
3	Mdpi	40	33,6%
4	Emerald	14	11,8%
5	Springer	11	9,2%
Total		119	100



Based on Table 7, we found 37.8% or a total of 45 articles in publications by Taylor & Francis publishers. Furthermore, it was found in the MDPI publisher in the 2nd position of 40 at 33.6%, followed by Emerald publisher at 11.8% or a total of 14 articles. Next is the publisher from Springer and Elsevier in positions 4 and 5 at 9.2% and 2.7.6%.

3.2. Visualization of topics using VOS Viewer

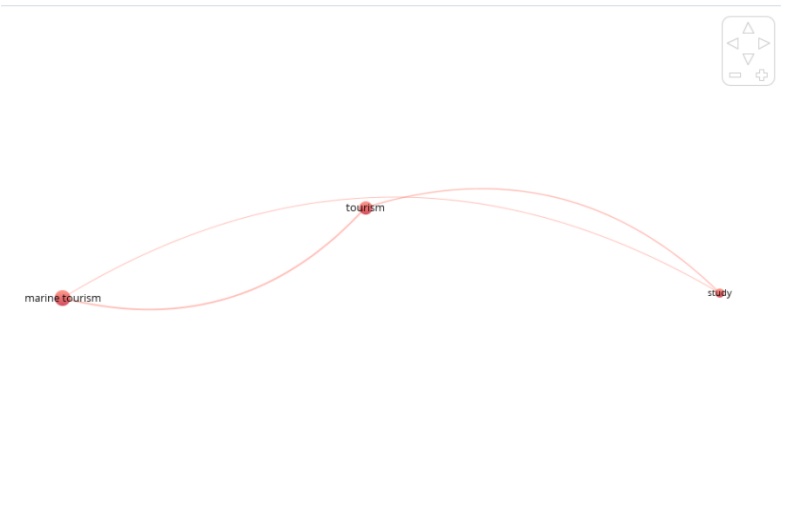
Figure 2 below shows the results of a plot with VOS Viewer to visualize the topic of a research area related to "communities-based tourism". The result is network visualization with the most dominant term (often appearing) being "community" strongly related to "rural community", as well as "part", "research" and "Indonesia".



Gambar 3. Visualisasi topik area menggunakan network visualization

3.3. Visualization of topics using VOS Viewer

Figure 2 below shows the results of the plot with VOS Viewer for visualization of the topic of the research area related to "marine tourism". The result is network visualization with the most dominant term (often appearing) as "marine tourism" closely related to "tourism", as well as "study".



Gambar 3. Visualisasi topik area menggunakan network visualization

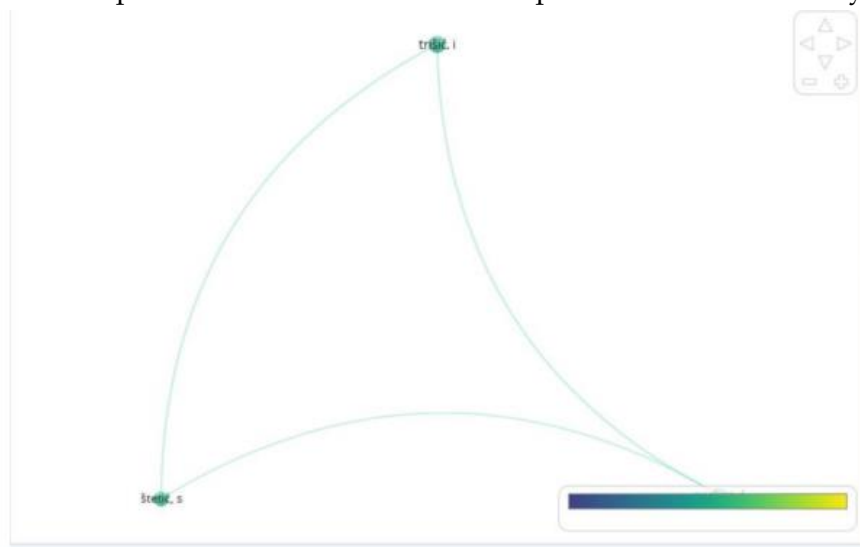
From Figure 3 above, it can be seen that the topic of "sustainable tourism" Table 8 presents keywords that represent each cluster in VOS Viewer

**Table 8.** Keywords that represent each cluster

Cluster	Items	Elemen
1	5 Item	1) Sustainability 2) Hospitality 3) Sustainable 4) Sustainable Tourism 5) Tourism
2	5 Item	1) Progress In Sustainable 2) Pandemic 3) Sustainabilliy 4) Sustainable Development 5) Sustainable Tourism Development
3	3 Item	1) Tourism 1) Case Study 2) Tourism Activity
4	2Item	1) Sustainable 2) Tourism

From Table 8 above, the number of clusters formed is 4 with each term in it Sustainability, Hospiutality, Sustainable, Tourism.

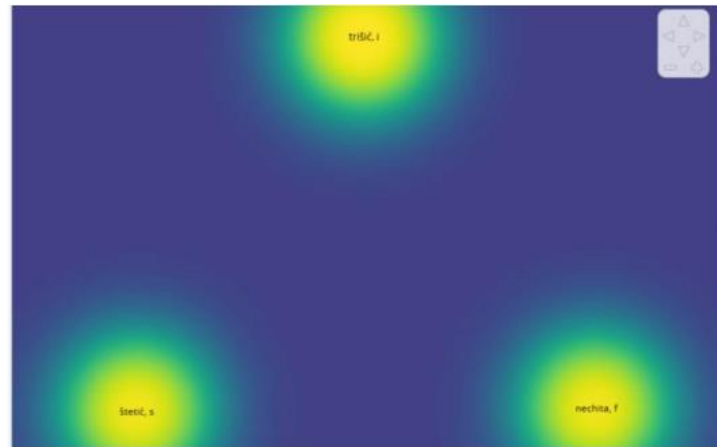
Next, Figure 4 below presents a visualization of the topic area based on overlay visualization



**Gambar 4.** Visualisai topik area menggunakan overlay visualization

From Figure 4 above, it can be seen that the related "Sustainable Tourism" topic shows the latest trends in research related to "sustainable".

Next Figure 5 shows the density (density) related to the topic under study, presented in the following figure 5:



**Gambar 5.** Visualisasi topik area menggunakan *density visualization*

### 3.4. Authors and Relationships Between Authors



**Gambar 6.** Visualisasi overlay penulis dan co-author

From Figure 6 above, the most prominent involvement between authors is Taylor & Francis. The results of this research Taylor & Francis received 185 citations. This indicates that the research has become a reference journal for other authors.

### 3.5. Research Locations and Research Domains

To find out the distribution of countries, the number of articles and research domains on the topic of Sustainable Tourism, are presented in Table 9 below:

**Table 9.** Country of research location and research domain

No	Negara	Jumlah Artikel	Domain penelitian
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1	Inggris	74	Sustainable Tourism
2	Switzerland	43	Tourism
3	Amerika Serikat	19	Sustainability Tourism
4	Germany	15	Tourism
5	Indonesia	14	Progress Sustainable
6	Belanda	11	Tourism
7	Singapura	8	Tourism
8	Rusia	3	Sustainable Hospitality
9	Spanyol	3	Tourism
10	Romaria	2	Sustainable
11	France	1	Sustainable
12	Canada	1	Tourism Hospitality
13	India	1	Tourism
14	Bali	1	Hospitality
15	Turkey	1	Tourism
Total		199	

Based on Table 9 above, the most Sustainable Tourism research locations in the UK with the Sustainable Tourism research domain The next research locations tied together 2 and 3 are in Switzerland and the United States with the Tourism & Sustainable Tourism research domain.

#### 4. Conclusion

Sustainable Tourism has been studied before. This paper has succeeded in presenting a bibliometric analysis related to Sustainable Tourism. We found that most related articles were published in scientific journals, compared to others. Related articles published in scientific journals have obtained the highest citations compared to others. Articles are also widely found in English. Based on network visualization the most dominant terms (often appearing) are "communities based tourism" and "sustainable tourism". When viewed from the Overlay Visualization, the topic "Sustainable Tourism" shows the latest trends in research related to "rural communities".

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