

# The Role of Local Communities in Ecotourism Development: A Bibliometric Analysis of Participation and Empowerment

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## ABSTRACT

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This study utilizes VOSviewer, a tool for constructing and visualizing bibliometric networks, to analyze the landscape of research within ecotourism and community development. Through a series of visualizations, we identified thematic clusters that encapsulate key focus areas such as community development, conservation efforts, economic impacts, and the integration of local culture and wisdom into sustainable tourism strategies. Our analysis further reveals how research trends have evolved from foundational to more specialized topics, particularly noting a marked focus on marine ecotourism and capacity building in recent years. Additionally, author collaboration patterns were examined to identify both prominent partnerships and potential gaps in collaborative research. The visualizations also highlighted underexplored areas that present new research opportunities, particularly in assessing the economic implications of ecotourism and developing capacity-building strategies. This comprehensive examination not only maps the current state of the field but also points towards future directions for research and collaboration.

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

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## 1. INTRODUCTION

Ecotourism has increasingly been recognized as a pivotal element in sustainable development, offering a balanced approach to environmental conservation and economic opportunity for local communities [1], [2]. In regions rich in biodiversity, ecotourism not only helps preserve the natural habitats but also serves as a platform for cultural exchange and understanding [3]. The involvement of local communities in ecotourism projects has been identified as critical, as it ensures the alignment of conservation efforts with local interests and the equitable distribution of economic benefits [4]. However, the dynamics of community participation in ecotourism are complex, shaped by factors such as local governance structures, the socio-economic backdrop, and the capacity for management and entrepreneurship among local stakeholders [5].

Increasingly, scholars and practitioners emphasize the empowerment of local communities as a fundamental component of successful ecotourism models [6]. Empowerment in this context refers to the process through which communities gain control over the decisions and resources that shape their lives and environment [7]. It is believed that when local communities are actively involved and empowered, ecotourism can lead to significant improvements in their socio-economic status while ensuring the sustainability of the environment [8]. Nonetheless, the mechanisms of participation and the degree of true empowerment achieved through ecotourism initiatives remain underexplored and variably implemented across different geographical and cultural settings [9], [10].

Despite the acknowledged importance of local community participation in ecotourism, the empirical evidence on how effectively these communities is engaged and empowered is fragmented. A systematic exploration of existing research through bibliometric analysis can reveal the patterns,

trends, and gaps in the literature on this topic. Such an analysis is crucial for understanding the breadth of research conducted, identifying the most influential studies, and recognizing the areas that require further investigation. By mapping out the existing academic landscape, researchers can better understand the impact of community participation on the success of ecotourism initiatives and the extent to which these efforts lead to genuine empowerment.

While the role of local communities in ecotourism is well acknowledged in conceptual terms, there remains a significant gap in systematically understanding how participation and empowerment are actually being operationalized and measured across different studies. Many ecotourism projects claim to involve local communities, but reports of superficial engagement and minimal decision-making power are common. This gap in knowledge hinders the ability to assess the true impact of community involvement in ecotourism and to develop models that can be effectively replicated or adapted. Therefore, a comprehensive bibliometric analysis is needed to synthesize the existing research and delineate the methodologies and outcomes associated with community participation and empowerment in ecotourism.

This research aims to conduct a bibliometric analysis of the literature concerning local community participation and empowerment in ecotourism. By examining the corpus of academic publications, this study aims to identify the prevailing themes, document the frequency of various research approaches, and map the network of scholarly communications. This analysis will facilitate an understanding of the evolution of research themes over time and highlight the most influential contributions to the field.

The significance of this research lies in its potential to provide a structured and comprehensive overview of how local community participation and empowerment are addressed in ecotourism studies. By identifying key trends and gaps in the literature, this analysis will not only contribute to academic knowledge but also offer practical insights for policymakers, local community leaders, and ecotourism practitioners. The findings are expected to guide the development of more effective ecotourism models that genuinely incorporate the aspirations and needs of local communities, thereby enhancing the sustainability and impact of these initiatives.

## 2. LITERATURE REVIEW

### 2.1 *Theoretical Frameworks in Community Participation in Ecotourism*

Community participation in ecotourism has been studied through various theoretical frameworks, highlighting its multifaceted nature [11]. Key theories include stakeholder theory, which emphasizes the importance of considering the interests of all parties affected by ecotourism projects [12]. This theory supports the idea that sustainable ecotourism should balance the needs of local communities with those of tourists, businesses, and government entities [13]. Another significant framework is the social exchange theory, which posits that the participation of local communities in ecotourism is contingent upon the benefits they anticipate receiving, balanced against the costs they incur [3]. Research utilizing this theory has often focused on the socio-economic benefits to communities, such as employment opportunities and infrastructure development, as well as costs like environmental degradation and cultural disruption [14].

### 2.2 *Empowerment Through Ecotourism*

Empowerment is a critical aspect of community participation in ecotourism. Studies have explored various dimensions of empowerment, including economic empowerment, which involves increasing local financial benefits; psychological empowerment, which relates to an increase in self-esteem and confidence among community members; and political empowerment, which involves communities gaining more control over how ecotourism is managed in their area. Scholars like [15] have argued that empowerment should be viewed as a process that enables individuals and communities to take control of their circumstances and achieve their own goals, thereby contributing to the sustainability of the ecotourism initiative.

### **2.3 Models of Community Participation in Ecotourism**

Various models of community participation in ecotourism have been proposed and examined in the literature. These range from community-based ecotourism (CBET), where the community has full control and ownership of the ecotourism project, to models where the community participates as a stakeholder alongside other entities such as government and private sectors. Studies have highlighted that the level of community involvement can significantly affect the success and sustainability of ecotourism projects. For instance, [16] found that higher degrees of control and ownership by local communities correlate with better conservation outcomes and greater socio-economic benefits.

### **2.4 Challenges in Community Participation and Empowerment**

Various models of community participation in ecotourism have been proposed and examined in the literature. These range from community-based ecotourism (CBET), where the community has full control and ownership of the ecotourism project, to models where the community participates as a stakeholder alongside other entities such as government and private sectors. Studies have highlighted that the level of community involvement can significantly affect the success and sustainability of ecotourism projects. For instance, [16] found that higher degrees of control and ownership by local communities correlate with better conservation outcomes and greater socio-economic benefits.

## **3. METHODS**

This study employs a bibliometric analysis to systematically review and synthesize the literature on local community participation and empowerment in ecotourism. The primary data for this analysis will be sourced from Google Scholar, targeting articles published up to the present year. Keywords such as "ecotourism," "community participation," "local empowerment," and "sustainable tourism" will be used in various combinations to ensure a comprehensive collection of relevant literature. The retrieved publications will be subjected to inclusion and exclusion criteria based on their focus on community participation, relevance to ecotourism, and empirical research nature. Data analysis will be conducted using VOSviewer, which will facilitate the identification of publication trends, citation analysis, co-authorship networks, and thematic clusters. This methodological approach aims to map the academic landscape, identify influential studies, and highlight the evolution of key research themes in the domain of community participation and empowerment in ecotourism.

## 4. RESULTS AND DISCUSSION

### 4.1 Research Data Matriks

Table 1. Research Data Metrics

Publication years	: 1987-2024
Citation years	: 32 (1987-2024)
Paper	: 980
Citations	: 62770
Cites/year	: 1696.49
Cites/paper	: 64.05
Cites/author	: 39563.87
Papers/author	: 538.04
Author/paper	: 2.38
h-index	: 113
g-index	: 230
hI,norm	: 83
hI,annual	: 2.24
hA-index	: 35
Papers with ACC	: 1,2,5,10,20:699,561,365,211,95

Source: *Publish or Perish Output, 2024*

Table 1 presents a comprehensive set of bibliometric indicators derived from a Publish or Perish analysis of literature related to community participation and empowerment in ecotourism from 1987 to 2024. Over these 32 years, a total of 980 papers have been published, accumulating an impressive 62,770 citations, which translates to an average of approximately 1696.49 citations per year and 64.05 citations per paper. This indicates a significant impact and ongoing relevance of the research in this field. The average citations per author are extraordinarily high at 39,563.87, reflecting the collaborative nature of the field, with 538.04 papers per author and an average of 2.38 authors per paper. The h-index, a metric that assesses both the productivity and citation impact of the publications, stands at 113, suggesting that 113 papers have each been cited at least 113 times. This is complemented by a g-index of 230, indicating that the most cited papers have a profound influence. The hI,norm of 83 and the hI,annual of 2.24 further underscore the high citation impact relative to the number of years since publication. The hA-index at 35 points to a substantial number of highly cited authors within the dataset. Additionally, the distribution of papers across different citation counts shows that 699 papers have been cited at least once, and a progressively smaller number have reached higher citation thresholds, with 95 papers receiving 20 or more citations each. This data reflects the field's maturity and the depth of contributions made by researchers over nearly four decades.

## 4.2 Network Visualization

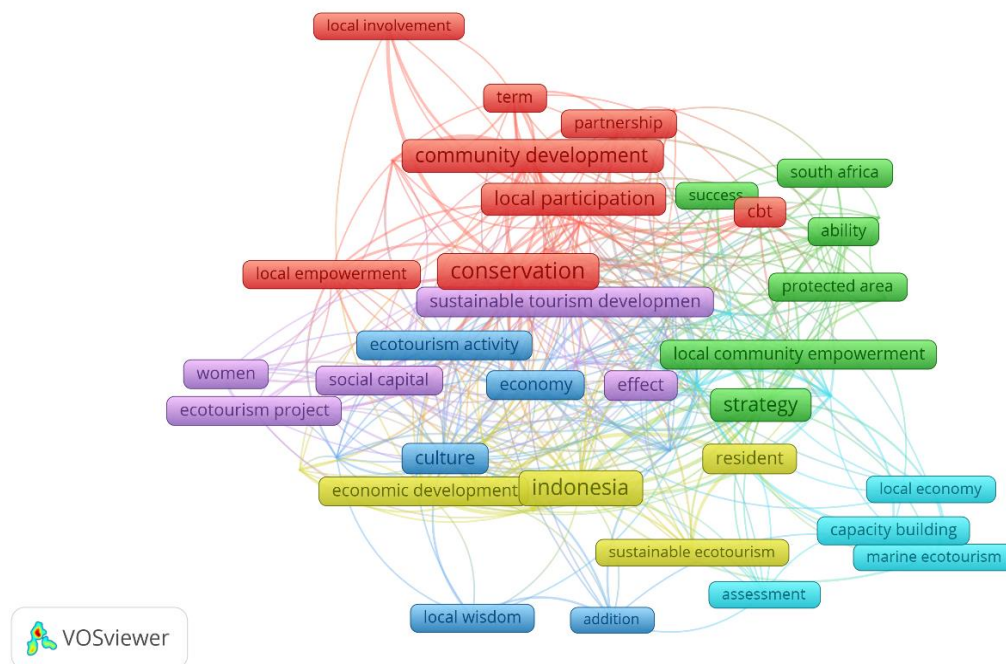


Figure 1. Network Visualization

Source: Data Analysis Result, 2024

The first visualization above is a network visualization created with VOSviewer, showing the connections and thematic clusters related to community development, conservation, and ecotourism, among other related concepts. Several clusters can be identified:

1. **Red Cluster:** This cluster appears to focus on "Community Development" and includes terms like "local involvement," "community development," "conservation," "local participation," and "local empowerment." This suggests a strong emphasis on community engagement and participation in developmental and conservation activities.
2. **Green Cluster:** The terms in this cluster revolve around the concept of "Conservation" and "Community-based Tourism (CBT)." It includes terms such as "conservation," "cbt," "protected area," and "strategy," indicating a focus on strategies for integrating conservation efforts with community-based tourism.
3. **Yellow Cluster:** This cluster is centered around "Economic Development" in Indonesia, including terms like "economic development," "Indonesia," "culture," and "local wisdom." It emphasizes the integration of local cultural elements and wisdom into broader economic development strategies.
4. **Purple Cluster:** This cluster deals with "Women and Local Development," with terms like "women," "local empowerment," and "ecotourism project." It highlights the role of women in ecotourism and local empowerment initiatives.
5. **Blue Cluster:** Focus on "Local Wisdom and Cultural Influence in Economic Activities," with terms like "local wisdom," "culture," "ecotourism activity," and "economy." This cluster might analyze how local culture and wisdom influence economic activities, particularly through ecotourism.
6. **Light Blue Cluster:** Focus on "Marine Ecotourism and Economic Capacity Building," including terms like "marine ecotourism," "capacity building," and "local economy."

This cluster seems dedicated to building economic capacity through marine ecotourism initiatives.

### 4.3 Overlay Visualization

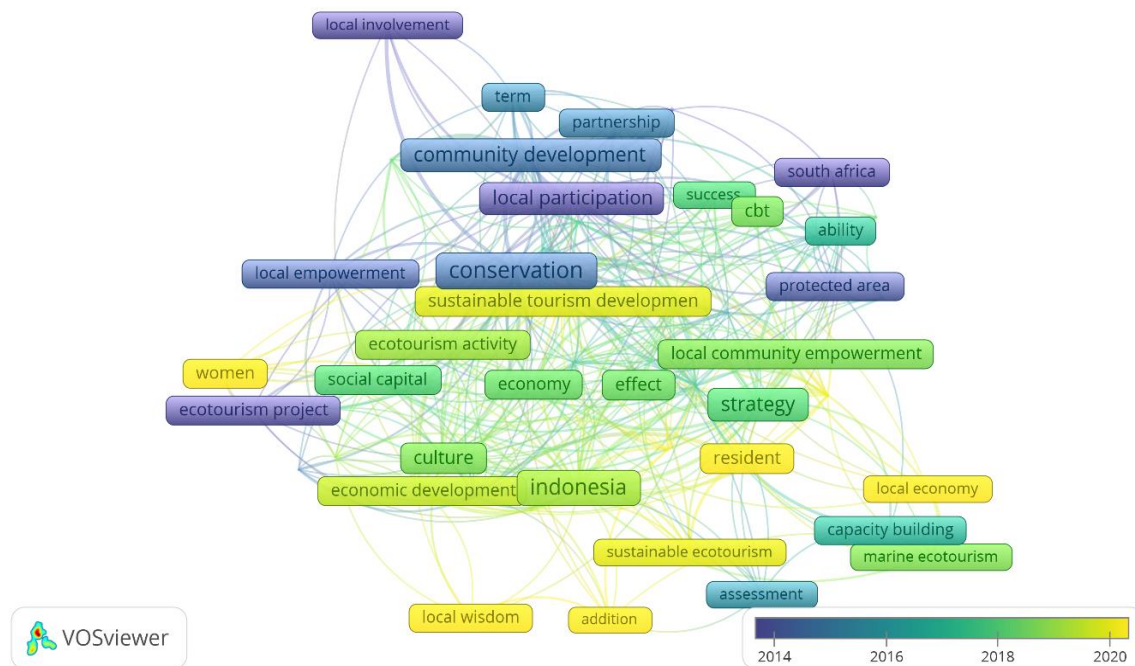


Figure 2. Overlay Visualization

Source: Data Analysis Result, 2024

In the second visualization, which includes a timeline at the bottom ranging from 2014 to 2020, the research trends by year can be analyzed based on the color gradient of the links between terms. This color gradient indicates the temporal focus of research connections between these terms over the given years.

1. Early Period (2014 - Mid-2016): The connections between terms appear to be lighter in color, indicating that in the early years, the research might have been more foundational, focusing on establishing core concepts like community development, local involvement, and conservation. There's likely a focus on establishing the groundwork of understanding the roles of local communities and conservation efforts in sustainable tourism.
2. Mid Period (Mid-2016 - 2018): The visualization shows a darker gradient during these years, suggesting an increased intensity of research. During this period, terms like "economic development," "strategy," and "sustainable tourism development" are more prominent. This might indicate a shift towards applying earlier research into more concrete strategies and frameworks, especially concerning the economic impacts and strategic planning for sustainable tourism.
3. Later Period (2018 - 2020): The connections are darkest towards the 2020 end of the timeline, indicating a recent and strong focus on specific areas like "marine ecotourism," "capacity building," and "local economy." This suggests that the later years have focused more on specialized areas of sustainable tourism, such as marine ecotourism, and practical applications in capacity building and economic enhancement at the local level.

Overall, the trend suggests a move from general foundational research on community involvement and conservation towards more focused and applied research on economic strategies and specific areas like marine ecotourism as time progresses. This transition reflects a deepening and specialization of research as foundational concepts become established, allowing for more targeted and detailed investigations into specific areas of sustainable and ecotourism development.

#### 4.4 Citation Analysis

Table 2. The Most Impactful Literatures

Citations	Authors and year	Title
2293	[17]	Limits to community participation in the tourism development process in developing countries
2208	[15]	Ecotourism and the empowerment of local communities
2033	[18]	Empowerment through photo novella: Portraits of participation
1460	[19]	Tourism for development: Empowering communities
1358	[20]	A community-based tourism model: Its conception and use
1355	[21]	Health education and community empowerment: conceptualizing and measuring perceptions of individual, organizational, and community control
1062	[22]	Social capital in biodiversity conservation and management
1004	[23]	Ecotourism: towards congruence between theory and practice
993	[24]	Parks, People and Professionals: Putting 'Participation' into Protected-Area Management
788	[25]	The application of participatory action-research in Latin America

Source: Publish or Perish Output, 2024

Table 2 identifies the most influential scholarly works in the field of community participation and empowerment in ecotourism, based on citation metrics from Publish or Perish as of 2024. The table is led by C Tosun's 2000 study on the limitations of community participation in tourism development in developing countries, which has garnered 2293 citations, indicating its critical role in shaping discussions on participatory limits in less economically developed contexts. Close behind is R Scheyvens' 1999 work, which examines ecotourism's potential for empowering local communities, with 2208 citations. This work has evidently been pivotal in linking ecotourism with community empowerment. The 1994 paper by Wang and Burris introduces an innovative method, "photo novella," for enhancing community participation, showing its broad applicability with 2033 citations. Another significant contribution by Scheyvens in 2002 further explores how tourism can aid community development, receiving 1460 citations. Okazaki's 2008 paper proposes a community-based tourism model, highlighting its practical utility with 1358 citations. The study by Israel et al. in 1994 bridges health education and community empowerment, showing interdisciplinary influence with 1355 citations. Pretty and Smith's 2004 research connects social capital with conservation efforts, accumulating 1062 citations. The works of Ross and Wall in 1999, and Pimbert and Pretty in 2013, each offer critical evaluations of ecotourism practices and participatory management in protected areas, with citations nearing 1000. Lastly, Fals-Borda's 1987 research on participatory action-research in Latin America rounds out the list, highlighting its foundational role in participatory methodologies with 788 citations.

#### 4.5 Author Visualization

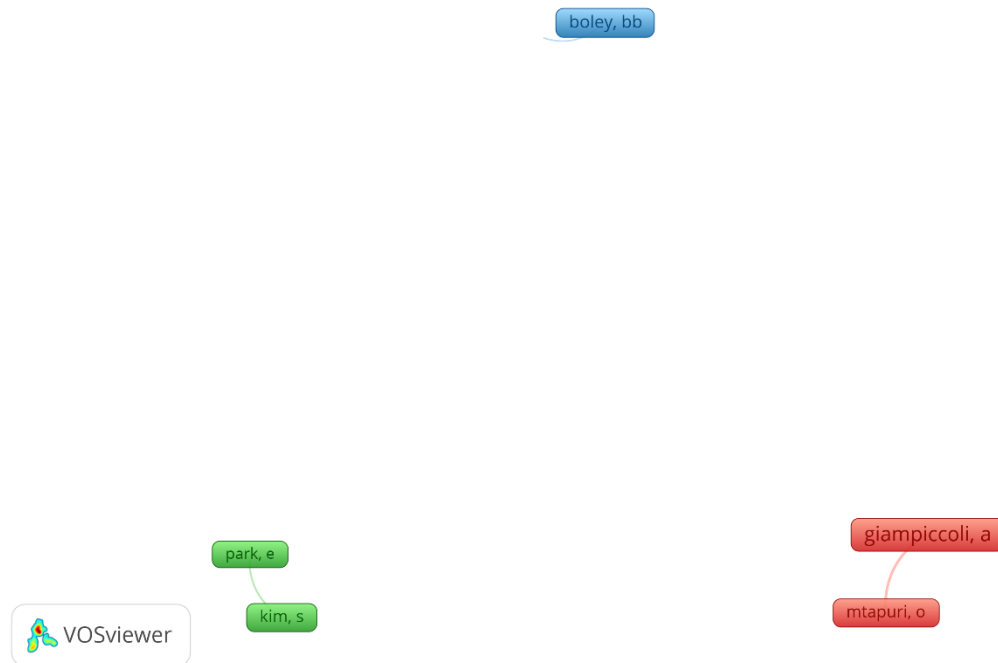


Figure 3. Author Visualization

*Source: Data Analysis Result, 2024*

The figure 3 is another VOSviewer visualization illustrating the network of author collaborations or thematic associations between researchers. The visualization shows four main nodes (representing authors): "boley, bb", "park, e", "kim, s", and a connected pair "giampiccoli, a" and "mtapuri, o". Each node's positioning and color coding could indicate different affiliations, fields of study, or contributions within a specific academic context. Notably, "giampiccoli, a" and "mtapuri, o" are connected, suggesting a collaboration or shared research interest between these two, whereas "boley, bb", "park, e", and "kim, s" are standalone, indicating no direct connections or collaborations between them and others in this visualization.



#### 4.6 Density Visualization

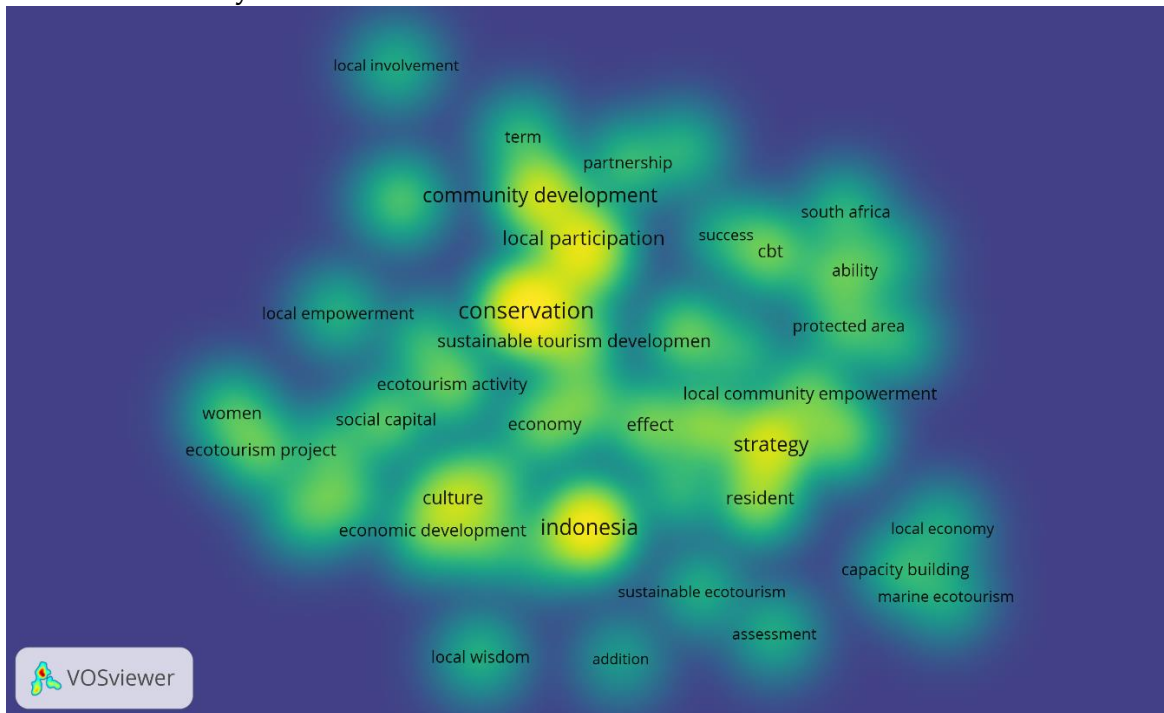


Figure 4. Density Visualization

Source: Data Analysis Result, 2024

The figure represents a density visualization map created with VOSviewer, where the intensity of the color corresponds to the density of the research topics covered in a given area. In this map, brighter areas indicate more concentrated research activity, while less bright areas suggest less research focus. From the visualization, the less bright areas, indicating potential research opportunities, appear around terms like "capacity building," "marine ecotourism," "local economy," and "assessment." These topics seem less explored compared to central themes like "community development," "conservation," and "sustainable tourism development." Potential research opportunities could involve exploring innovative strategies for capacity building in local communities, detailed assessments of ecotourism impacts, the economic effects of marine ecotourism, and the integration of local economies into broader ecotourism strategies. Investigating these less saturated areas could provide new insights into sustainable development and conservation efforts, particularly within the context of developing regions or unique ecological settings like marine environments.

#### CONCLUSION

The series of VOSviewer visualizations analyzed revealed a comprehensive landscape of thematic clusters, research trends, author collaborations, and emerging research opportunities within the field of ecotourism and community development. Thematic clusters identified included community development, conservation, economic impacts, and the role of local culture in sustainable tourism, illustrating the interconnected nature of these topics. Trends over time suggested a shift from foundational studies towards more specific and applied research, particularly in areas like marine ecotourism and local economic strategies by 2020. Author collaborations showed both individual and joint efforts, highlighting the potential for interdisciplinary work, although some researchers appeared isolated, indicating possible areas for increased collaboration. Research opportunities were pinpointed in less explored areas such as capacity building and the economic aspects of marine ecotourism, which remain underrepresented in current studies. Together, these

insights from the visualizations suggest a dynamic and evolving field with ample scope for new research initiatives and collaborative ventures that address both local and broader environmental conservation and development challenges.

## REFERENCES

- [1] T. Kiper, "Role of ecotourism in sustainable development," InTech, 2013.
- [2] A. F. Ahmad and W. M. Khalid Balisany, "Sustainable Tourism Management and Ecotourism as a Tool to Evaluate Tourism's Contribution to the Sustainable Development Goals and Local Community," *OTS Can. J.*, vol. 2, no. 5, pp. 33–45, 2023.
- [3] P. Sobhani, H. Esmailzadeh, S. M. M. Sadeghi, I. D. Wolf, and A. Deljouei, "Relationship analysis of local community participation in sustainable ecotourism development in protected areas, Iran," *Land*, vol. 11, no. 10, p. 1871, 2022.
- [4] P. Hatma Indra Jaya, A. Izudin, and R. Aditya, "The role of ecotourism in developing local communities in Indonesia," *J. Ecotourism*, vol. 23, no. 1, pp. 20–37, 2024.
- [5] D. A. Fennell, *Ecotourism*. Routledge, 2020.
- [6] M. A. Mustofa, "The role of ecotourism in the social and economic field," *Nusant. Sci. Technol. Proc.*, pp. 65–73, 2022.
- [7] J. P. Amata, "Community Participation in Ecotourism Project: A Case in Caramoan, Camarines Sur, Philippines," 2022.
- [8] N. Parakh, "Understanding the importance of ecotourism by supporting eco-design principles," *Int. J. Res. Appl. Sci. Eng. Technol.*, vol. 10, pp. 4865–4872, Jun. 2022, doi: 10.22214/ijraset.2022.45085.
- [9] W. Wiratno, S. Withaningsih, B. Gunawan, and J. Iskandar, "Ecotourism as a resource sharing strategy: Case study of community-based ecotourism at the Tangkahan Buffer Zone of Leuser National Park, Langkat District, North Sumatra, Indonesia," *Sustainability*, vol. 14, no. 6, p. 3399, 2022.
- [10] T. M. Phil, "Ecotourism: A Sustainable Development Connect to Nature and A Strategy for Balancing Economic Growth, Socio-Cultural Development and Conservation," 2022.
- [11] N. Ginting and J. Wahid, "Community Participation in Sustainable Tourism: A case study in Balige, Indonesia," *Environ. Proc. J.*, vol. 8, no. 23, pp. 239–246, 2023.
- [12] A. Iqbal, S. Ramachandran, M. L. Siow, T. Subramaniam, and K. Latiff, "Insights into the Role of Community Participation as a Tool for Local Support: A Normative Model for Competitive and Sustainable Destination Development," *Sciences (New York)*, vol. 13, no. 1, pp. 807–816, 2023.
- [13] N. K. A. Rustini, M. K. S. Budhi, N. P. W. Setyari, and N. D. Setiawina, "Development of sustainable tourism based on local community participation," *J. Econ. Financ. Manag. Stud.*, vol. 5, no. 11, pp. 3283–3286, 2022.
- [14] V. Kunjuraman, R. Hussin, and R. C. Aziz, "Community-based ecotourism as a social transformation tool for rural community: A victory or a quagmire?," *J. Outdoor Recreat. Tour.*, vol. 39, p. 100524, 2022.
- [15] R. Scheyvens, "Ecotourism and the empowerment of local communities," *Tour. Manag.*, vol. 20, no. 2, pp. 245–249, 1999.
- [16] A. Stronza and J. Gordillo, "Community views of ecotourism," *Ann. Tour. Res.*, vol. 35, no. 2, pp. 448–468, 2008.
- [17] C. Tosun, "Limits to community participation in the tourism development process in developing countries," *Tour. Manag.*, vol. 21, no. 6, pp. 613–633, 2000.
- [18] C. Wang and M. A. Burris, "Empowerment through photo novella: Portraits of participation," *Health Educ. Q.*, vol. 21, no. 2, pp. 171–186, 1994.
- [19] R. Scheyvens, *Tourism for development: Empowering communities*. Pearson Education, 2002.
- [20] E. Okazaki, "A community-based tourism model: Its conception and use," *J. Sustain. Tour.*, vol. 16, no. 5, pp. 511–529, 2008.
- [21] B. A. Israel, B. Checkoway, A. Schulz, and M. Zimmerman, "Health education and community empowerment: conceptualizing and measuring perceptions of individual, organizational, and community control," *Health Educ. Q.*, vol. 21, no. 2, pp. 149–170, 1994.
- [22] J. Pretty and D. Smith, "Social capital in biodiversity conservation and management," *Conserv. Biol.*, vol. 18, no. 3, pp. 631–638, 2004.
- [23] S. Ross and G. Wall, "Ecotourism: towards congruence between theory and practice," *Tour. Manag.*, vol. 20, no. 1, pp. 123–132, 1999.
- [24] M. P. Pimbert and J. N. Pretty, "Parks, People and Professionals: Putting 'Participation' into Protected-Area Management," in *Social change and conservation*, Routledge, 2013, pp. 297–330.
- [25] O. Fals-Borda, "The application of participatory action-research in Latin America," *Int. Sociol.*, vol. 2, no. 4, pp. 329–347, 1987.