

Global trends in sustainable livelihood research (1988-2025)



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Abstract Sustainable livelihood has emerged as a key analytical and policy-oriented concept for addressing poverty, vulnerability, and sustainability challenges in developing and developed contexts alike. However, existing bibliometric studies on this field remain fragmented, often limited in temporal scope, dataset size, or depth of thematic and network analysis. This study provides a comprehensive bibliometric analysis of global research on sustainable livelihoods published between 1988 and 2025, drawing on 637 peer-reviewed articles indexed in the Scopus database. The results reveal a pronounced growth in scholarly output, particularly after 2016, indicating a transition from early poverty-oriented analyses toward a more interdisciplinary research agenda closely linked to climate change, resilience, and the Sustainable Development Goals. The United Kingdom and the United States emerge as central contributors to theoretical and methodological development, while countries in Asia and Africa play a key role in empirical research, reflecting the policy-relevant and practice-oriented nature of sustainable livelihood studies. Keyword co-occurrence analysis identifies five major research themes, with sustainable livelihood, livelihood, and sustainability forming the conceptual core of the knowledge structure. Overlay visualization further highlights a temporal shift from early emphases on poverty alleviation and rural economies toward integrated approaches focusing on livelihood diversification, livelihood capitals, resilience, and climate adaptation. This study also contributes by systematically mapping the evolution of thematic clusters and identifying emerging research frontiers, thereby providing a clearer direction for future interdisciplinary research. Despite its dynamic expansion, the field remains characterized by geographic imbalances and limited longitudinal and impact-based evidence. These findings underscore the need for more context-sensitive, comparative, and long-term empirical studies to strengthen the policy relevance and global applicability of sustainable livelihood research.

Keywords: resilience, sustainable development goals (SDGs), climate adaptation, knowledge structure

1. Introduction

In a global context increasingly shaped by climate change, resource degradation, social inequality, and socioeconomic shocks, sustainable livelihoods have emerged as a central research theme across development studies, human geography, economics, and environmental research (Albugami et al., 2024; Masri et al., 2025; Matiku et al., 2021). The concept of sustainable livelihoods extends beyond ensuring income and employment—particularly for vulnerable populations—to emphasize the long-term, balanced relationships among human well-being, natural resources, and socioeconomic institutions (Gilling et al., 2001; Rongna & Sun, 2020). Consequently, research on sustainable livelihoods has expanded significantly in scale, has diversified in analytical approaches, and has become increasingly interdisciplinary.

The origins of sustainable livelihood thinking are closely associated with the 1987 report of the World Commission on Environment and Development, which promoted the principle of balancing present development needs with long-term intergenerational sustainability (Shen et al., 2008). Although the term “sustainable livelihoods” was not explicitly used, its core principles were reinforced in the first Human Development Report published by the United Nations Development Program (UNDP) in 1990, which highlighted the intrinsic link between livelihoods, human well-being, and sustainable development (Morse, 2025). During the final decade of the twentieth century, sustainable livelihoods gained widespread attention among both international development institutions and academic communities (Caringal-Go et al., 2024; Fan et al., 2011; Rongna & Sun, 2020). Sustainable livelihoods were formally conceptualized by Chambers and Conway (1992), who emphasize three core elements: capabilities, equity, and sustainability. From this perspective, livelihoods encompass not only the means of making a living but also people’s ability to cope with, adapt to, and recover from shocks and long-term stresses (Carr, 2023; Roscher et al., 2022). Building on this foundation, the sustainable livelihoods approach was further developed by scholars and international organizations, notably Scoones (1988), Farrington et al. (2002), and Carney (1999). This approach rapidly gained institutional support, with early promotion by the International Institute for Sustainable Development in 1993, followed by the Society for International Development, the Overseas Development Institute and the United Kingdom Department for



International Development (DFID) in 2000 (Bhuiyan et al., 2012a; Donohue & Biggs, 2015). In parallel, alternative livelihood frameworks have been proposed, such as CARE International's household livelihood security framework (Bohle, 2009).

Since the introduction of the sustainable livelihoods framework by international organizations, scholarly output on sustainable livelihoods has increased rapidly, spanning diverse geographical contexts and development settings (Natarajan et al., 2022; Schermer, 2005). Research has addressed a wide range of topics, including rural livelihoods, natural resource-based livelihoods, climate change adaptation, poverty reduction, alternative livelihood development, and the linkages between livelihoods, conservation, and sustainable development (Matiku et al., 2021; Wang et al., 2016). The evolution of sustainable livelihood research has closely paralleled global development agendas, particularly the 2030 Agenda and the Sustainable Development Goals (SDGs), which emphasize integrated approaches to human well-being and ecosystem health (Connell, 2010). This alignment is reflected in the diversification of research themes, such as climate adaptation, rural development planning, natural resource management, livelihood security, and livelihood resilience, highlighting both the interdisciplinary nature and practical relevance of the field (Roscher et al., 2022). Despite substantial progress, sustainable livelihood research continues to face significant challenges. One persistent issue is the fragmentation of research efforts, marked by limited integration across disciplines and analytical scales, which constrains a comprehensive understanding of multidimensional vulnerability and the mechanisms underpinning resilience (Kumar et al., 2025). Ongoing academic debates also focus on the conceptualization and operationalization of sustainable livelihoods, particularly the balance between ecological sustainability and socioeconomic development (Habib et al., 2023). While some scholars advocate for more inclusive analytical frameworks that integrate social capital, adaptive capacity, and local context, others argue that existing models inadequately capture the spatial and temporal dynamics of livelihoods (Kumar et al., 2025; Kumar & Yadav, 2025). These limitations have, in turn, reduced the effectiveness of policy interventions aimed at achieving long-term livelihood sustainability (Majeed et al., 2025). In parallel, a growing number of bibliometric studies have attempted to map the intellectual structure and evolution of sustainable livelihood research (Cooney & Abensperg-Traun, 2013). However, these studies remain fragmented in scope and design. Some are limited to short timeframes or specific regions, while others rely on multiple heterogeneous keywords, leading to inconsistencies in dataset construction and comparability. Moreover, previous bibliometric studies rarely integrate long-term temporal analysis with science mapping techniques capable of simultaneously examining thematic evolution, international collaboration, and knowledge structures within a unified analytical framework (Cheng et al., 2025). This limitation is particularly important because sustainable livelihood research has undergone major conceptual transitions over the past three decades, shifting from rural poverty alleviation toward issues such as climate resilience, adaptive capacity, livelihood diversification, and sustainability governance. Without a systematic and longitudinal analysis, these transitions and their implications for the global configuration of the field remain only partially understood (Zhou & Tian, 2025).

Bibliometric analysis has emerged as an effective methodological tool for systematically mapping and quantifying research landscapes within specific scientific fields (Le & Nguyen, 2023). By examining indicators such as publication output, authorship networks, country collaboration, journals, keywords, and citation patterns, bibliometric approaches enable the identification of temporal trends, dominant research themes, and shifts in scholarly focus within global sustainable livelihood research (Donthu et al., 2021). Importantly, bibliometric analysis also facilitates the identification of knowledge hubs, influential scholars, and emerging research directions, thereby providing a robust evidence base for future research planning (Ellegaard & Wallin, 2015). Against this backdrop, this study addresses the above gaps by providing a long-term (1988–2025), systematic, and conceptually consistent bibliometric analysis of sustainable livelihood research based on the Scopus database and a clearly defined search strategy. Unlike previous studies, this research integrates performance analysis with advanced science mapping techniques to simultaneously examine productivity, collaboration networks, and thematic evolution. In doing so, it goes beyond a simple temporal update and offers a more comprehensive and structured understanding of the field's development. Specifically, the study aims to (i) trace the origins and evolution of the sustainable livelihood concept; (ii) assess publication output and scholarly influence across authors, institutions, and countries; (iii) identify core research themes and emerging trends; and (iv) analyze collaboration networks in sustainable livelihood research. In doing so, this paper not only systematizes the existing body of knowledge but also provides a scientific foundation for guiding future research agendas and informing sustainable livelihood policy-making in an increasingly uncertain and dynamic global context.

2. Data Collection and Research Methods

The first step in bibliometric analysis is the selection of an appropriate database, determined by its coverage, academic reliability, and capacity to provide detailed bibliographic information aligned with the research objectives (Le & Nguyen, 2023). In this study, the Scopus database was selected as the primary data source due to its extensive multidisciplinary coverage, rigorous indexing standards, and widespread acceptance in bibliometric research (Cavaggioli & Ughetto, 2019). Compared with other databases such as Web of Science or Google Scholar, Scopus provides a balanced combination of data consistency, citation tracking, and export functionality, which enhances the reliability and reproducibility of bibliometric analyses. Scopus also includes a broader range of journals from developing countries and interdisciplinary fields than Web of Science does, making it particularly suitable for sustainable livelihood research, which spans development studies, environmental science, geography, and social sciences (Le & Nguyen, 2023).

Data retrieval was conducted using a Boolean search strategy developed on the basis of established practices in previous bibliometric studies (Der Tambile et al., 2024; Khan et al., 2025; Zhang et al., 2019). To ensure methodological consistency and reproducibility, the search was performed using the query: TITLE-ABS-KEY ("sustainable livelihood"), which captures variations of the core concept across titles, abstracts, and author keywords. The initial search yielded 852 records. A multi-stage screening process was then applied to refine the dataset and ensure both relevance and academic quality. First, non-article document types (including books, book chapters, conference proceedings, editorials, and reviews) were excluded (n=141). Second, non-English publications were removed (n = 76), to maintain linguistic consistency and improve comparability across records. Although this criterion enhances analytical consistency, it may also contribute to the underrepresentation of research produced in local academic contexts where English is not the primary language of publication. Following this screening process, a final dataset of 637 articles published in 398 academic journals was obtained. All records were carefully checked to ensure data accuracy prior to analysis.

The study employed a combination of research performance analysis and science mapping techniques. Performance indicators included the number of publications, total citations, and the most productive authors and countries in sustainable livelihood research. In parallel, VOSviewer software was used to conduct network-based analyses, including keyword co-occurrence, source co-citation, author co-citation, and document co-citation analyses (Donthu et al., 2021; Ellegaard & Wallin, 2015). Bibliometric indicators were evaluated across three complementary dimensions: (i) quantitative indicators, reflecting research productivity at the author and journal levels; (ii) quality indicators, assessing the scholarly influence and impact of authors, publications, and journals; and (iii) structural indicators, capturing the relational structure and interconnectedness among research themes, countries, and scholars (Durieux & Gevenois, 2010). VOSviewer was further applied to generate two main types of visualizations: network visualization maps and overlay visualization maps. These visualizations enable the identification of thematic clusters, collaboration structures, and the temporal evolution of research trends within the sustainable livelihood field (van Eck & Waltman, 2010).

The overall methodological workflow consists of four main stages: (i) database selection and query formulation; (ii) data retrieval and initial extraction; (iii) data cleaning and screening based on predefined criteria; and (iv) bibliometric analysis and visualization. This process is summarized in Figure 1, ensuring transparency and reproducibility of the research design. Despite its strengths, the methodology has several limitations. The reliance on a single database (Scopus) may lead to incomplete coverage of relevant studies indexed elsewhere. The exclusion of non-English publications may introduce language bias, particularly in regions where sustainable livelihood research is highly localized.

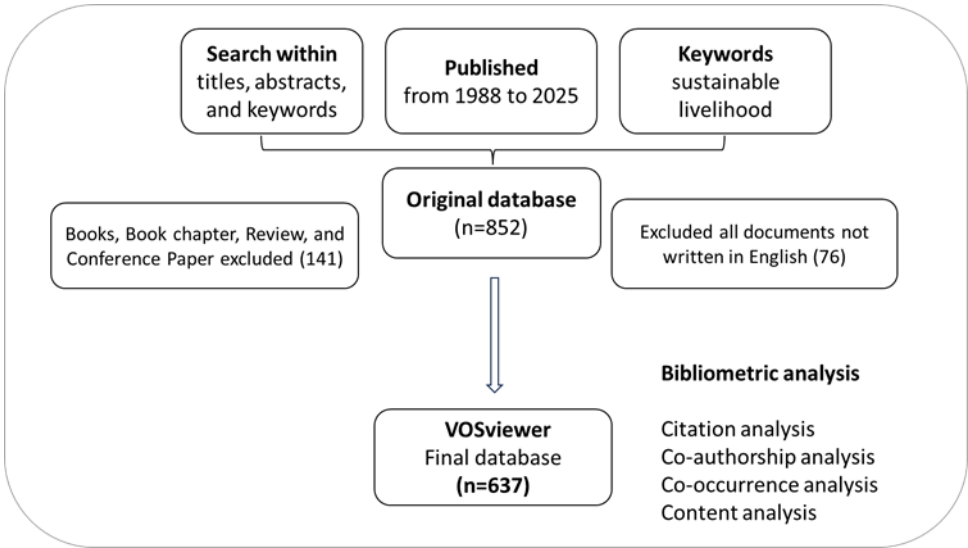


Figure 1 The process of research method.

3. Results and Discussion

3.1. Annual publications

The number of academic publications on sustainable livelihoods between 1988 and 2025 clearly increases and can be divided into three distinct phases (Figure 2). The formative phase (1988–2005) is characterized by a very limited number of publications, ranging from only one to five articles per year. This period reflects the early conceptualization of sustainable livelihoods, when the concept was still in its infancy and had not yet developed into an independent research field (De Haan, 2000). The initial development phase (2006–2015) witnessed a steady increase in scholarly output, with the number of annual publications rising to approximately 10–20 articles. This growth coincided with the wider dissemination and institutionalization



of the sustainable livelihoods framework, as well as increasing academic and policy attention to poverty reduction and rural development (Tabares et al., 2022). From 2016 to 2025, the field entered a phase of rapid expansion, with publications rising sharply - particularly after 2020 - from 21 articles (2016–2017) to a peak of 74 articles in 2025. This trend reflects the increasing relevance of sustainable livelihood research in addressing global challenges such as climate change, post-COVID-19 recovery, and the Sustainable Development Goals (Carr, 2023; Suresh et al., 2025). The post-2016 surge, in particular, suggests that sustainable livelihoods have become an integrative framework for addressing complex, interconnected global challenges, rather than remaining confined to poverty analysis alone (Natarajan et al., 2022).

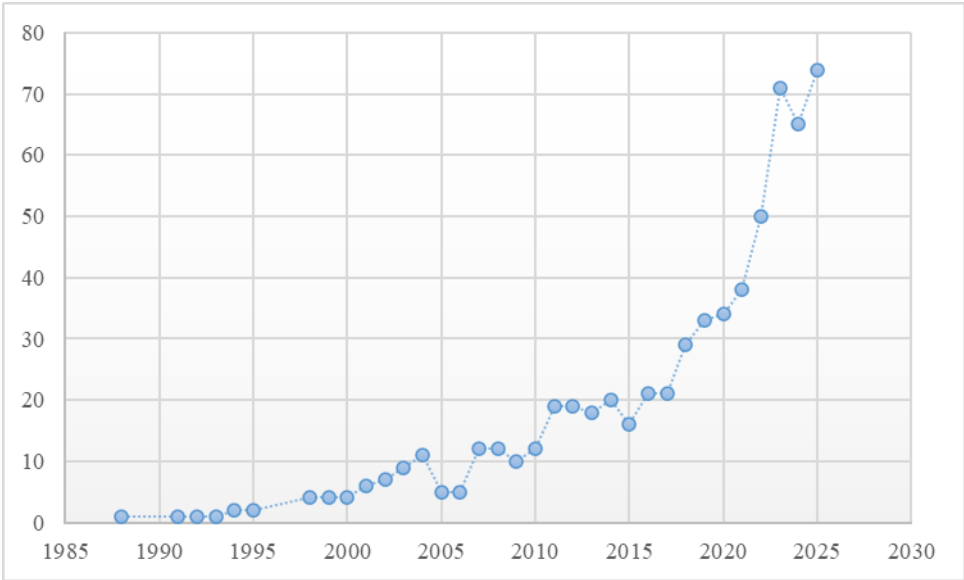


Figure 2 Number of academic articles from 1988 to 2025. *Source:* Authors’ work based on VOSviewer.

3.2. Research collaborations

Sustainable livelihood research is concentrated within a relatively small group of leading countries among the 80 nations contributing publications (Table 1). When considering both the number of articles and the number of citations, these countries can be categorized into three main groups.

Table 1 Ten countries by number of articles.

Rank	Country	Number of articles	Number of citations
1	India	106	1,354
2	China	99	2,295
3	United States	61	1,151
4	South Africa	58	563
5	United Kingdom	54	2,425
6	Malaysia	37	314
7	Indonesia	33	216
8	Australia	30	775
9	Canada	29	1,071
10	Bangladesh	23	388
...			
	Vietnam	17	275

Source: Author’s work based on VOSviewer.

First, the group of countries with high publication outputs, notably India and China, reflects strong research demand driven by pressing development challenges. These countries have large populations, substantial rural communities, and persistent issues related to poverty, livelihood insecurity, and climate vulnerability, making sustainable livelihoods a long-term research priority (Das & Mallick, 2024). The high volume of publications also reflects increasing national investment in higher education, rural development programs, and sustainability-oriented research agendas. However, despite their substantial productivity, these countries exert comparatively lower influence on the conceptual and theoretical direction of the field, suggesting that knowledge generated in emerging economies is often positioned more as empirical evidence than as a source of dominant theoretical innovation (Ma & Xu, 2025).



Second, the group of countries with high academic influence, exemplified by the United Kingdom and the United States, is distinguished by citation counts that far exceed their publication numbers. These countries play a central role in shaping theoretical frameworks, methodological approaches, and conceptual foundations—such as the sustainable livelihoods framework—resulting in research outputs with strong reference value and broad international impact (Cooney & Abensperg-Traun, 2013). This pattern reveals an asymmetry in the global knowledge system, where theoretical authority remains concentrated in a limited number of developed countries, while empirical evidence is largely generated elsewhere (Donohue & Biggs, 2015). Consequently, sustainable livelihood research reflects not only geographic diversity but also unequal relationships in knowledge production, validation, and dissemination (Vergragt et al., 2014).

Third, a group of countries where research is closely embedded in empirical contexts, including South Africa, Malaysia, Indonesia, and Bangladesh, emerges as important sites of applied and field-based studies. These countries often serve as key empirical settings for research on livelihood security, rural vulnerability, and poverty dynamics (Ahmed et al., 2009; Gumede & Ehiane, 2022). While their citation impact remains relatively lower than that of traditional academic hubs, their contributions are critical in grounding sustainable livelihood research in real-world development challenges. Importantly, these countries provide context-specific insights into community resilience, environmental adaptation, and poverty alleviation that may not be fully captured by generalized theoretical frameworks (Tectona et al., 2025). Nevertheless, their comparatively limited visibility within highly cited academic networks suggests that locally grounded knowledge and region-specific perspectives remain underrepresented in shaping mainstream theoretical debates (Figure 3).

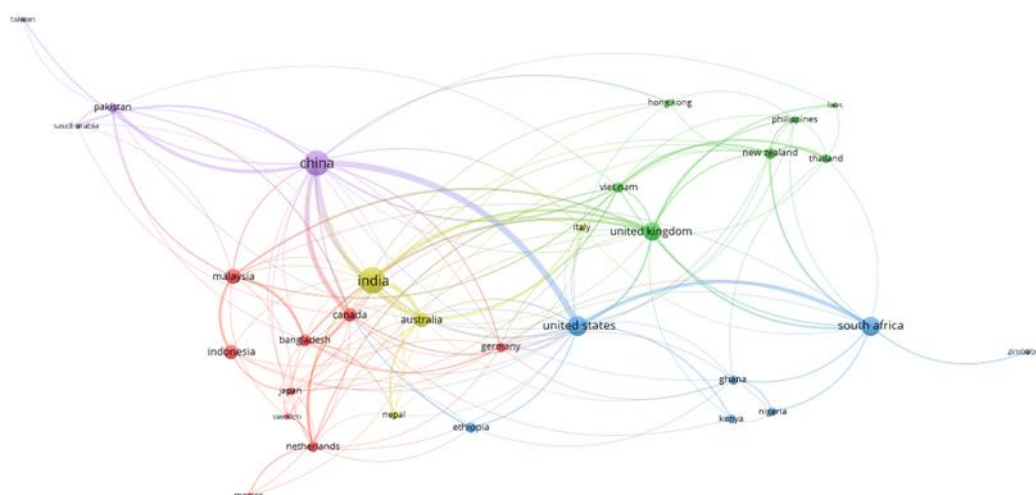


Figure 3 Co-authorship analysis among countries. *Source:* Authors' work based on VOSviewer.

3.3. Leading journals and authors

The presence of major publishers such as Elsevier, Springer Nature, Oxford University Press, and MDPI suggests that sustainable livelihood research has become firmly integrated into mainstream international academic discourse (Table 2). However, notable differences emerge between publication productivity and academic influence. Sustainability (Switzerland) leads in publication volume, reflecting the growing role of large multidisciplinary and open-access journals in rapidly disseminating sustainability-related research across diverse disciplines (Le & Nguyen, 2023). In contrast, journals such as *Ecological Indicators*, *Development*, and *Environment, Development and Sustainability* publish fewer articles but achieve substantially higher citation impact, indicating their stronger role in shaping theoretical and methodological debates within the field (Zhang et al., 2019). This divergence highlights a dual structure in sustainable livelihood research, where some journals primarily facilitate knowledge diffusion, whereas others function as key platforms for consolidating conceptual and analytical influence (Khan et al., 2025).

The relatively small number of publications per leading author (4–8 articles) indicates that sustainable livelihood research is characterized by a decentralized and collaborative scholarly structure rather than domination by a limited group of “superauthors” (Table 3). This pattern reflects the interdisciplinary and context-dependent nature of the field, which encourages diverse empirical and thematic contributions rather than highly centralized authorship networks. Among the most productive scholars, Siwar, Chamhuri Bin and collaborators emphasize sustainable livelihoods as a policy-oriented framework for poverty reduction, particularly through microfinance and Islamic microfinance models in developing-country contexts (Bhuiyan et al., 2012b). In contrast, Carr, Stuart Colin and collaborators approach livelihoods through employment, decent work, and human well-being, expanding the field beyond income-based perspectives toward broader questions of labor resilience, education, and social security under conditions of climate and socioeconomic instability (Carr, 2023; Hopner & Carr, 2024). These contrasting research agendas illustrate the conceptual diversification of the field, where sustainable livelihoods are increasingly interpreted through multiple lenses, including finance, labor systems, human development, and resilience.

Table 2 Ten journals with the greatest number of articles.

Rank	Journal Name	Publisher	SCImago Journal Rank 2024	Number of articles	Number of citations
1	Sustainability (Switzerland)	Multidisciplinary Digital Publishing Institute (MDPI)	0.688	34	548
2	Development	Company of Biologists Ltd	1.715	11	45
3	Environment, Development and Sustainability	Springer Science and Business Media B.V.	0.958	11	162
4	Community Development Journal	Oxford University Press	0.485	10	400
5	Regional Development Dialo	United Nations Centre for Regional Development	0.102	8	8
6	Ecological Indicators	Elsevier B.V.	1.959	7	576
7	Land	Multidisciplinary Digital Publishing Institute (MDPI)	0.773	7	91
8	Geojournal	Springer Nature	0.639	6	51
9	Heliyon	Elsevier	0.644	6	87
10	Mountain Research and Development	International Mountain Society	0.505	6	55

Source: Authors's work based on VOSviewer.

Table 3 Ten authors with the greatest number of articles.

Rank	Author	Affiliations	h-index	Number of articles	Number of citations
1	Siwar, Chamhuri Bin	Universiti Malaya, Malaysia	28	8	56
2	Carr, Stuart Colin	Massey University Auckland, New Zealand	19	5	44
3	Mahato, Jogeswar	Indian Institute of Management Sambalpur, India	3	5	50
4	Cui, Lizhen	Shandong University, China	44	4	65
5	Cui, Xiaoyong	University of Chinese Academy of Sciences, China	45	4	65
6	Li, Tong	The University of Queensland, Australia	17	4	65
7	Singh, Ranjay K.	ICAR - Central Soil Salinity Research Institute, Karnal, India	24	4	73
8	Shaffril, Hayrol Azril Mohamed	Universiti Putra Malaysia, Malaysia	22	4	9
9	Allison, Edward Hugh	Geologiska Institutionen, Sweden	64	4	429
10	Bhuiyan, Abul Bashar	Sunway University, Malaysia	10	4	47

Source: Authors' work based on VOSviewer.

Marked differences are also evident in academic influence among leading authors (Table 4). Geoffrey Wall, despite having relatively few publications, demonstrates exceptionally high citation impact, indicating that influential contributions often emerge from theoretically rich and sector-specific studies. His work highlights how tourism-based livelihood strategies can generate broader insights into resilience and post-disaster recovery (Su et al., 2019). Similarly, Edward Hugh Allison's research on fisheries and aquaculture in Bangladesh illustrates how sector-focused applications of the Sustainable Livelihoods Framework contribute to both theoretical refinement and policy relevance (Ahmed et al., 2010). Together, these findings suggest that high-impact scholarship in sustainable livelihood research is driven less by publication quantity than by the ability to connect localized empirical cases with broader conceptual and policy debates.

3.4. Key research themes

The keyword co-occurrence network visualized using VOSviewer provides insights into the knowledge structure and major research orientations in the field of sustainable livelihoods. In this map, the sizes of nodes and keyword labels represent their weights, corresponding to the frequency with which each keyword appears in the analyzed publications (van Eck & Waltman, 2010). Network links indicate co-occurrence relationships between keywords, with a connection between two terms suggesting that they frequently appear together within the same studies. The spatial distance between nodes reflects the strength of their association, where shorter distances indicate stronger relationships, whereas the thickness of the links

represents the intensity of co-occurrence. Different colors denote distinct keyword clusters, which correspond to major thematic groups within the research field (van Eck & Waltman, 2017). The results indicate that sustainable livelihood, livelihood, and sustainability are the three largest and most centrally positioned keywords in the network. These terms exhibit high total link strength, highlighting their core role in structuring the knowledge base of the field and their frequent co-occurrence with a wide range of other keywords. This pattern suggests that sustainable livelihood research extends beyond the analysis of specific livelihood strategies, positioning livelihoods firmly within the broader agenda of sustainable development. Accordingly, the literature integrates economic, social, and environmental dimensions, reflecting an increasingly holistic and interdisciplinary approach to understanding livelihoods in complex and dynamic contexts.

Table 4 Ten authors with the greatest number of citations.

Rank	Author	Affiliations	h-index	Number of citations	Number of articles
1	Wall, Geoffrey	University of Waterloo, Canada	54	433	3
2	Allison, Edward Hugh	Geologiska Institutionen, Sweden	64	429	4
3	Xu, Yong	Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, China	20	351	3
4	Pandey, Rajiv	Indian Council of Forestry Research and Education, India	35	293	3
5	Fahad, Shah	Xi'an Jiaotong University, China	34	167	3
6	Ahmed, Nesar	Fisheries and Oceans Canada, Canada	32	117	3
7	Muir, James F.	University of Stirling, Stirling, United Kingdom	17	117	3
8	Song, Nini	Xi'an University of Finance and Economics, China	5	89	3
9	Singh, Ranjay K.	ICAR - Central Soil Salinity Research Institute, Karnal, India	24	73	4
10	Cui, Lizhen	Shandong University, China	44	65	4

Source: Authors' work based on VOSviewer.

Identifying frequently occurring keywords is essential for revealing the dominant research themes within a field (Garrigos-Simon et al., 2018). In this study, 50 keywords with a minimum occurrence of 15 were selected for analysis (Table 5).

Table 5 Clusters and corresponding keywords.

Cluster	Keywords
Cluster 1 (13 items)	poverty, income, economics, humans, rural population, agriculture; decision making, stakeholder; environmental protection, human, conservation, conceptual framework, article
Cluster 2 (13 items)	sustainable livelihood, livelihood capital, human capital, social capital, resilience, vulnerability, climate change, sustainability, rural area, household income, adaptive management, China, livelihood
Cluster 3 (10 items)	natural resource, resource management, poverty alleviation, rural economy, strategic approach, development, Asia, Bangladesh, Eurasia, sustainable livelihood approach
Cluster 4 (9 items)	tourism, tourism development, ecotourism, community development, capacity building, Africa, South Africa, Indonesia, sustainable development
Cluster 5 (5 items)	food security, sustainable agriculture, rural development, india, sustainable livelihood framework

Source: Authors' work based on VOSviewer.

On the basis of the keyword co-occurrence network visualization, these keywords were grouped into five main clusters, each represented by a distinct color (Figure 4). Accordingly, five core research topics were identified as follows:

Theme 1. Rural Livelihoods, Poverty Dynamics, and Environmental Governance

This topic captures a body of research that focuses on poverty dynamics within rural livelihoods and examines how socioeconomic, institutional, and environmental factors jointly influence livelihood sustainability (Ngugi & Nyariki, 2005). This is evidenced by the high frequency and strong interconnections among keywords such as poverty, income, economics, rural population, and agriculture, indicating sustained scholarly attention to livelihood structures, income sources, and rural demographic characteristics (Zhou & Tian, 2025). Importantly, this cluster reveals a conceptual tension between economic growth-oriented poverty reduction and environmental sustainability objectives (Zewdu et al., 2025). While early studies prioritized income and productivity, more recent work increasingly emphasizes governance mechanisms and stakeholder participation, suggesting a gradual shift toward more balanced and negotiated development pathways (Schermer, 2005). This transition reflects a broader shift in the international literature from viewing livelihoods primarily as economic outcomes toward understanding them as negotiated socioecological processes shaped by institutions, power relations, and environmental constraints (Su et al., 2025).

Theme 2. Sustainable Livelihood Frameworks, Capitals, and Adaptive Capacity

This theme is characterized by the prominence of central keywords such as “sustainable livelihood”, “livelihood”, and “livelihood capital”, underscoring the foundational role of the sustainable livelihood framework in academic research (Pasanchay & Schott, 2021). The frequent co-occurrence of human capital and social capital with resilience, vulnerability, and climate change reflects a growing scholarly focus on adaptive capacity and livelihood resilience in the face of environmental and socioeconomic shocks (Crate, 2006; Suresh et al., 2025). In addition, keywords such as adaptive management and sustainability indicate a shift from static analytical approaches toward more dynamic perspectives that emphasize the continuous adjustment, learning, and transformation of livelihood strategies (Goswami et al., 2016). This cluster represents a key continuity in the literature, as the capital-based approach remains foundational; however, it also signals a significant shift from static asset analysis to process-oriented thinking (Wang et al., 2016).

Theme 3. Development Policies and Resource-based Livelihood Governance

This theme approaches poverty as both a target and an outcome of development processes, emphasizing natural resource governance and policy-oriented development strategies as key instruments for improving livelihoods (Ding et al., 2020; Uddin et al., 2020). This orientation is reflected in the frequent co-occurrence of keywords such as natural resource, resource management, and sustainable livelihood approach alongside poverty alleviation and development. Keywords such as rural economy and strategic approach further indicate a research focus on systemic interventions aimed at transforming rural economic structures (Amekawa, 2013). Moreover, the presence of geographically specific keywords such as “Asia” and “Bangladesh” points to a strong empirical orientation toward developing regions, where resource governance is widely regarded as a cornerstone of long-term poverty reduction strategies (Ahmed et al., 2010). This cluster illustrates how sustainable livelihood research increasingly intersects with political ecology and development governance, where questions of resource control, institutional power, and policy effectiveness become central (Cheng et al., 2025). It also reflects an important shift from localized livelihood analysis toward broader governance-oriented frameworks that connect livelihoods with state intervention, development planning, and sustainability transitions.

Theme 4. Tourism, Community Development, and Livelihood Diversity

This theme emerges from the frequent co-occurrence of keywords such as tourism, tourism development, and ecotourism, highlighting tourism as a prominent research direction in sustainable livelihood studies (Dash & Balamurugan, 2024; Woyesa & Kumar, 2021). The strong linkage between these keywords and community development and capacity building reflects the role of tourism as an alternative livelihood strategy that supports income diversification, enhances community capacity, and reduces pressure on traditional natural resources (Shen et al., 2008). In addition, the association with sustainable development and geographically oriented keywords such as Africa, South Africa, and Indonesia suggests that sustainable tourism is primarily examined within the context of developing countries (Matiku et al., 2021). Accordingly, this theme emphasizes the reciprocal relationship between tourism, community development, and livelihood diversification in local sustainable development processes (Rongna & Sun, 2020).

Theme 5. Food Security, Sustainable Agriculture, and Rural Development

This theme is defined by the concentrated occurrence of keywords such as “food security” and “sustainable agriculture”, indicating that food security and sustainable agricultural practices play a central role in rural livelihood research (Thomson, 2001). The co-occurrence of “rural development” and “sustainable livelihood framework” reflects an integrated approach in which sustainable livelihoods are viewed as a foundation for long-term food security and rural development (Tabares et al., 2022). Although smaller in size, this cluster reflects a highly coherent research stream that integrates production systems with livelihood sustainability. Its relative compactness suggests a more specialized and policy-driven agenda, where agriculture is not only an economic activity but also a critical mechanism for ensuring long-term livelihood security (Farooq et al., 2019; Haug, 1999). Its increasing prominence in recent years reflects broader global concerns regarding climate-related food insecurity, rural vulnerability, and sustainable production systems (Ahmadzai et al., 2021). At the same time, this cluster highlights a continuing tension between productivity-oriented agricultural modernization and the need for environmentally sustainable and socially inclusive rural development.

3.5. The growing trend

According to the overlay visualization analysis, the period from 2014 to 2020 represents the phase in which keywords cooccurred most frequently, indicating a substantial increase in both the volume of publications and the interconnectedness of research themes in sustainable livelihoods during this time (Figure 5).

In terms of color coding, the purple nodes represent keywords that emerged predominantly in the early stages of the research field. The high frequency of keywords such as “poverty”, “rural economy”, “poverty alleviation”, “Asia”, “Africa”, and “community development” in the initial phase reflects the foundational context and original objectives of sustainable livelihood research. During its formative period, sustainable livelihoods were primarily conceptualized as an analytical framework for

understanding poverty and rural development (Gilling et al., 2001), with a strong emphasis on identifying structural causes of poverty and designing interventions to improve living conditions for vulnerable communities (Fan et al., 2011). Asia and Africa featured prominently, as these regions experience high poverty rates and strong dependence on rural economies and have long been focal areas for international development programs (Masanjala, 2007). This early configuration reflects a problem-identification phase, where research was primarily concerned with diagnosing poverty and structural constraints rather than proposing integrated solutions (Gilling et al., 2001).

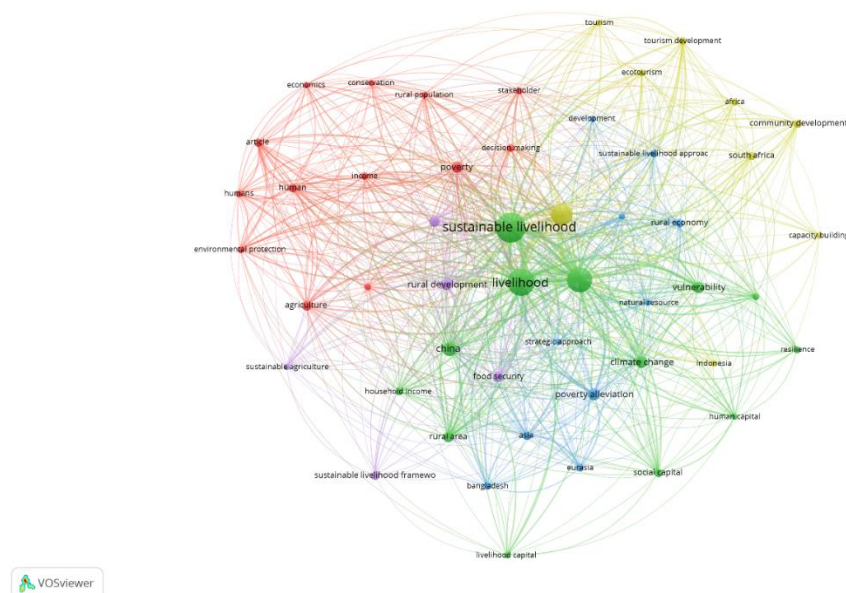


Figure 4 Network visualization of the simultaneous occurrence of keywords. *Source:* Author's work based on VOSviewer.

In contrast, the emergence of keywords such as “tourism development”, “sustainable agriculture”, “household income”, “human capital”, “livelihood capital”, “resilience”, and “climate change”, mainly in the later stages of sustainable livelihood research, signals a clear shift in scholarly focus from descriptive analyses of poverty and livelihoods toward more integrated, adaptive, and solution-oriented approaches (Masri et al., 2025; Slayi et al., 2024). As the Sustainable Livelihoods Framework became firmly established, research increasingly concentrated on livelihood diversification strategies (e.g., tourism and sustainable agriculture), outcome-oriented assessments at the household level (income and livelihood capital) (Khan et al., 2024), and the enhancement of internal capacity through human and other forms of capital (He & Li, 2025). Moreover, the growing impacts of climate change and global shocks have driven the prominence of resilience as a key concept, underscoring that sustainable livelihoods are no longer viewed solely in terms of income improvement but rather as long-term processes of adaptation and persistence under conditions of heightened risk and uncertainty (Albugami et al., 2024).

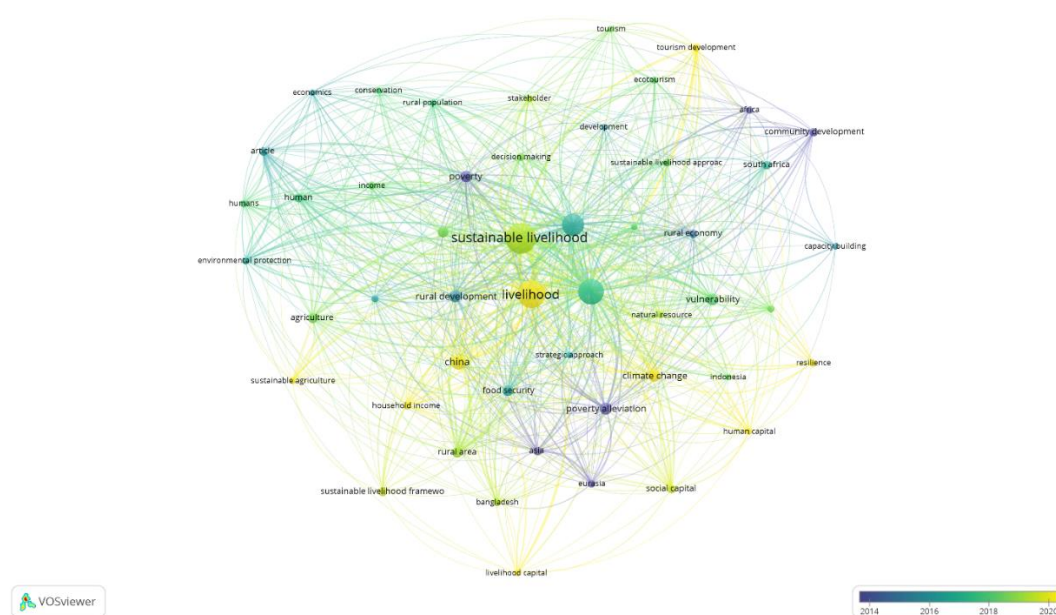


Figure 5 Keyword overlay visualization in sustainable livelihood articles. *Source:* Authors' work based on VOSviewer.

4. Conclusion

This study provides a comprehensive synthesis of the formation, evolution, and research trajectories of the sustainable livelihood field for the period of 1988–2025 through bibliometric analysis and knowledge network visualization. The results reveal pronounced growth in publication output over time, particularly after 2016, reflecting the transformation of sustainable livelihoods from a foundational concept in poverty research into a mature, interdisciplinary field closely linked to global challenges such as climate change, postpandemic recovery, and the implementation of the 2030 Agenda and the Sustainable Development Goals (SDGs).

Analyses of authors, journals, and international collaboration networks indicate that the field is highly dispersed, collaborative, and transnational. Developed countries, notably the United States and the United Kingdom, play central roles in advancing theoretical and methodological foundations, while developing countries in Asia and Africa constitute key sites for empirical research. This pattern underscores the strong practice-oriented and policy-relevant nature of sustainable livelihood studies. Influential contributions by scholars such as Wall, Allison, Carr, and Siwar further illustrate the diversity of perspectives, spanning tourism, fisheries, decent work, microfinance, and community resilience.

Five major research themes were identified, reflecting the field's deepening and diversification: (i) sustainable livelihood frameworks, capital, and adaptive capacity; (ii) sustainable livelihood frameworks, capitals, and adaptive capacity; (iii) development policies and resource-based livelihood governance; (iv) tourism, community development, and livelihood diversification; and (v) food security, sustainable agriculture, and rural development. Temporal overlay analysis highlights a clear shift from early emphasis on poverty and rural economies toward more integrated approaches that focus on livelihood diversification, livelihood capital, resilience, and climate change adaptation.

From a theoretical perspective, this study refines the understanding of sustainable livelihoods by systematically identifying the core conceptual structure (livelihood–sustainability nexus) and clarifying how key dimensions such as capital, resilience, and adaptation have evolved and become central to contemporary research. Methodologically, the study contributes a transparent and reproducible bibliometric framework that integrates performance analysis with science mapping, offering a structured approach for analyzing interdisciplinary research fields. Empirically, the findings provide a global evidence base that highlights the uneven geographical distribution of knowledge production and the concentration of theoretical development in a limited number of countries. In terms of practical and policy implications, the results suggest that future livelihood strategies should prioritize asset-based and resilience-oriented approaches, particularly in vulnerable regions where empirical research is concentrated but theoretical integration remains limited.

Overall, the findings demonstrate that sustainable livelihoods have evolved beyond a poverty-analysis tool to become a critical academic and policy platform that bridges economic, social, and environmental dimensions of development. Nevertheless, the field continues to face notable limitations, including spatial imbalances in research coverage, limited standardization in the measurement of resilience and adaptive capacity, and a shortage of longitudinal and impact-oriented empirical studies. Consequently, future research should prioritize comprehensive, interdisciplinary, and context-sensitive frameworks; strengthen international collaboration; focus on vulnerable regions and populations; and more effectively integrate theory, empirical evidence, and policy to increase the contribution of sustainable livelihood scholarship to addressing complex global sustainability challenges.

Despite its contributions, this study has several limitations. First, the dataset relies primarily on international databases and English-language publications, which may introduce bias and underrepresent locally grounded scholarship. Second, while bibliometric analysis effectively captures trends and knowledge structures, it does not assess in depth the substantive quality or real-world impacts of individual studies. Future research could address these limitations by integrating multi-database sources, incorporating non-English literature, and combining bibliometric techniques with systematic reviews or meta-analyses to enhance both analytical depth and policy relevance.

5. Declarations

5.1. Ethical considerations

Not applicable.

5.2. Use of artificial intelligence (AI)

The authors declare that no generative artificial intelligence (AI) tools were used in the preparation, analysis, or writing of this manuscript.

5.3. Conflict of interest

The authors declare that they have no conflicts of interest.

5.4. Funding

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References

- Ahmadzai, H., Tutundjian, S., & Elouafi, I. (2021). Policies for sustainable agriculture and livelihood in marginal lands: A review. *Sustainability*, 13(16), 8692. <https://doi.org/10.3390/su13168692>
- Ahmed, N., Lecouffe, C., Allison, E. H., & Muir, J. F. (2009). The sustainable livelihoods approach to the development of freshwater prawn marketing systems in southwest Bangladesh. *Aquaculture Economics & Management*, 13(3), 246–269. <https://doi.org/10.1080/13657300903156092>
- Ahmed, N., Troell, M., Allison, E. H., & Muir, J. F. (2010). Prawn postlarvae fishing in coastal Bangladesh: Challenges for sustainable livelihoods. *Marine Policy*, 34(2), 218–227. <https://doi.org/10.1016/j.marpol.2009.06.008>
- Albugami, H. F., Kaikubad Ali, M., Hossain, S., Zaffar, H., & Ahmad, N. (2024). Climate change and sustainable livelihood in South Asia: A bibliometric analysis. *Environmental and Sustainability Indicators*, 24, 100524. <https://doi.org/10.1016/j.indic.2024.100524>
- Amekawa, Y. (2013). Understanding the local reality of the adoption of sustainable practices and farmer livelihoods: The case of pummelo farming in Chaiyaphum, Northeast Thailand. *Food Security*, 5(6), 793–805. <https://doi.org/10.1007/s12571-013-0301-9>
- Bhuiyan, A. B., Siwar, C., Islam, A., & Rashid, M. (2012a). The approaches of Islamic and conventional microfinancing for poverty alleviation and sustainable livelihood. *American Journal of Applied Sciences*, 9(9), 1385–1389. <https://doi.org/10.3844/ajassp.2012.1385.1389>
- Bhuiyan, A. B., Siwar, C., Ismail, A. G., & Islam, M. A. (2012b). Microfinance and sustainable livelihood: A conceptual linkage of microfinancing approaches towards sustainable livelihood. *American Journal of Environmental Sciences*, 8(3), 328–333. <https://doi.org/10.3844/ajessp.2012.328.333>
- Bohle, H.-G. (2009). Sustainable livelihood security. In C. J. Cleveland (Ed.), *Encyclopedia of environmental management* (pp. 521–528). Springer. https://doi.org/10.1007/978-3-540-68488-6_36
- Caringal-Go, J., Carr, S., Hodgetts, D., Intraprasert, D., Maleka, M., McWha-Hermann, I., Meyer, I., Mohan, K., Nguyen, M., Noklang, S., Pham, V., Prakongpan, P., Poonpol, P., Potgieter, J., Searle, R., & Teng-Calleja, M. (2024). Work education and educational developments around sustainable livelihoods for sustainable career development and well-being. *Australian Journal of Career Development*, 33(3), 212–220. <https://doi.org/10.1177/10384162241278801>
- Carney, D. (1999). *Approaches to sustainable livelihoods for the rural poor*. Department for International Development (DFID).
- Carr, S. C. (2023). Decent work, sustainable livelihoods and climate action: Time for a clean slate? *Australian Journal of Career Development*, 32(3), 196–202. <https://doi.org/10.1177/10384162231190995>
- Caviggioli, F., & Ughetto, E. (2019). A bibliometric analysis of the research dealing with the impact of additive manufacturing on industry, business and society. *International Journal of Production Economics*, 208, 254–268. <https://doi.org/10.1016/j.ijpe.2018.11.022>
- Chambers, R., & Conway, G. (1992). *Sustainable rural livelihoods: Practical concepts for the 21st century*. Institute of Development Studies (IDS), University of Sussex.
- Cheng, L., Li, J., Ling, H., Wei, X., Mou, L., Wu, S., & Wall, G. (2025). Sustainable livelihoods following an extreme event: Post-earthquake practices of the Tibetan community in Jiuzhaigou World Heritage Site, China. *Sustainable Development*, 33(2), 1968–1988. <https://doi.org/10.1002/sd.3217>
- Connell, D. J. (2010). Sustainable livelihoods and ecosystem health: Exploring methodological relations as a source of synergy. *EcoHealth*, 7(3), 351–360. <https://doi.org/10.1007/s10393-010-0353-7>
- Cooney, R., & Abensperg-Traun, M. (2013). Raising local community voices, livelihoods and sustainable use. *Review of European, Comparative & International Environmental Law*, 22(3), 301–310. <https://doi.org/10.1111/reel.12038>
- Crate, S. A. (2006). Elder knowledge and sustainable livelihoods in post-Soviet Russia: Finding dialogue across the generations. *Arctic Anthropology*, 43(1), 40–51. <https://doi.org/10.1353/arc.2011.0030>
- Das, A., & Mallick, P. H. (2024). Exploring livelihood dependency on provisioning ecosystem services in a protected tropical forest area of eastern India: Keys to sustainable forest management. *Environment, Development and Sustainability*, 27(12), 30717–30739. <https://doi.org/10.1007/s10668-024-04933-7>
- Dash, B., & Balamurugan, G. (2024). Sustainable tourism, livelihood and coastal governance: Chilika Lake, India. *Ocean & Coastal Management*, 253, 107128. <https://doi.org/10.1016/j.ocecoaman.2024.107128>
- De Haan, L. J. (2000). Globalization, localization and sustainable livelihood. *Sociologia Ruralis*, 40(3), 339–365. <https://doi.org/10.1111/1467-9523.00152>
- Der Tambile, E., Ramachandran, V. S., Rajendrakumar, S., Remesh, M., Ramaswamy, J., & Ramesh, M. V. (2024). Rural livelihoods sustainability in South Asia and Africa: A systematic review with bibliometric analysis. *Discover Sustainability*, 5(1), 410. <https://doi.org/10.1007/s43621-024-00651-2>
- Ding, J., Wang, Z., Liu, Y., & Yu, F. (2020). Rural households' livelihood responses to industry-based poverty alleviation as a sustainable route out of poverty. *Regional Sustainability*, 1(1), 68–81. <https://doi.org/10.1016/j.regsus.2020.07.002>
- Donohue, C., & Biggs, E. (2015). Monitoring socio-environmental change for sustainable development: Developing a multidimensional livelihoods index (MLI). *Applied Geography*, 62, 391–403. <https://doi.org/10.1016/j.apgeog.2015.05.006>
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285–296. <https://doi.org/10.1016/j.jbusres.2021.04.070>
- Durieux, V., & Gevenois, P. A. (2010). Bibliometric indicators: Quality measurements of scientific publication. *Radiology*, 255(2), 342–351. <https://doi.org/10.1148/radiol.09090626>
- Ellegaard, O., & Wallin, J. A. (2015). The bibliometric analysis of scholarly production: How great is the impact? *Scientometrics*, 105(3), 1809–1831. <https://doi.org/10.1007/s11192-015-1645-z>
- Fan, J., Liang, Y., Tao, A., Sheng, K., Ma, H.-L., Xu, Y., Wang, C.-S., & Sun, W. (2011). Energy policies for sustainable livelihoods and sustainable development of poor areas in China. *Energy Policy*, 39(3), 1200–1212. <https://doi.org/10.1016/j.enpol.2010.11.048>
- Farooq, M., Rehman, A., & Pisante, M. (2019). Sustainable agriculture and food security. In *Innovations in sustainable agriculture* (pp. 3–24). Springer International Publishing. https://doi.org/10.1007/978-3-030-23169-9_1

- Farrington, J., Ramasut, T., & Walker, J. (2002). *Sustainable livelihoods approaches in urban areas: General lessons, with illustrations*. Overseas Development Institute (ODI).
- Garrigos-Simon, F. J., Narangajavana-Kaosiri, Y., & Lengua-Lengua, I. (2018). Tourism and sustainability: A bibliometric and visualization analysis. *Sustainability*, 10(6), 1976. <https://doi.org/10.3390/su10061976>
- Gilling, J., Jones, S., & Duncan, A. (2001). Sector approaches, sustainable livelihoods and rural poverty reduction. *Development Policy Review*, 19(3), 303–319. <https://doi.org/10.1111/1467-7679.00136>
- Goswami, R., Dasgupta, P., Saha, S., Venkatapuram, P., & Nandi, S. (2016). Resource integration in smallholder farms for sustainable livelihoods in developing countries. *Cogent Food & Agriculture*, 2(1), Article 1272151. <https://doi.org/10.1080/23311932.2016.1272151>
- Gumede, M., & Ehiane, S. (2022). The challenges of sustainable livelihoods through land restoration in South Africa. *Journal of Asian and African Studies*, 57(3), 391–405. <https://doi.org/10.1177/00219096211025809>
- Habib, N., Ariyawardana, A., & Aziz, A. A. (2023). The influence and impact of livelihood capitals on livelihood diversification strategies in developing countries: A systematic literature review. *Environmental Science and Pollution Research*, 30(27), 69882–69898. <https://doi.org/10.1007/s11356-023-27638-2>
- Haug, R. (1999). From integrated rural development to sustainable livelihoods: What is the role of food and agriculture? *Forum for Development Studies*, 26(2), 181–201. <https://doi.org/10.1080/08039410.1999.9666109>
- He, Y., & Li, W. (2025). The impact of livelihood capital on sustainable livelihood capacity of farmers: Evidence from Yunnan Province, China. *Applied Economics Letters*, 32(14), 2077–2082. <https://doi.org/10.1080/13504851.2024.2332536>
- Hopner, V., & Carr, S. C. (2024). ‘Careering’ – toward radicalism in radical times: Links to human security and sustainable livelihoods. *Australian Journal of Career Development*, 33(2), 121–128. <https://doi.org/10.1177/10384162241263665>
- Khan, M. A., Imran, S. A., & Sakai, S. (2024). Determinants of household income and livelihood sustainability of coastal regions: Evidence from south-western Bangladesh. *Discover Sustainability*, 5(1), 215. <https://doi.org/10.1007/s43621-024-00396-y>
- Khan, M., Ahmad, A., Yuvaraj, M., Husain, S. S., & Khan, D. (2025). A bibliometric analysis and visualization of global research on rural livelihood. *Global Knowledge, Memory and Communication*, 74(1–2), 323–345. <https://doi.org/10.1108/GKMC-10-2022-0231>
- Kumar, A., Devi, J. P., & Mohanasundari, T. (2025). Climate change impact assessment on livelihood vulnerability of tribal communities: A systematic review. *Mitigation and Adaptation Strategies for Global Change*, 30(5), 37. <https://doi.org/10.1007/s11027-025-10226-9>
- Kumar, S., & Yadav, D. (2025). A review of livelihoods pathways in emerging economies context. *Perspectives on Global Development and Technology*, 24(3–4), 466–483. <https://doi.org/10.1163/15691497-12341719>
- Le, T. A., & Nguyen, S. H. (2023). Ecotourism research progress: A bibliometric analysis (period 2002–2022) using VOSviewer software. *Turyzm/Tourism*, 33(2), 71–81. <https://doi.org/10.18778/0867-5856.33.2.06>
- Ma, S., & Xu, M. (2025). Adaptive conservation of natural resources determines the sustainable livelihood strategies of farmers in the semi-arid Loess Plateau region of China. *Regional Sustainability*, 6(4), 100244. <https://doi.org/10.1016/j.regus.2025.100244>
- Majeed, L. R., Rashid, S., Sharma, D., Majeed, L. F., & Bhat, M. A. (2025). Nature conservation and poverty alleviation through sustainable ecotourism: The case of Lolab Valley, India. *Discover Environment*, 3(1), 1. <https://doi.org/10.1007/s44274-024-00181-8>
- Masanjala, W. (2007). The poverty-HIV/AIDS nexus in Africa: A livelihood approach. *Social Science & Medicine*, 64(5), 1032–1041. <https://doi.org/10.1016/j.socscimed.2006.10.009>
- Masri, N., Hanafiah, M. H., Md Zain, N. A., & Ibrahim, M. R. (2025). Sustainable livelihood in coastal and marine tourism destinations: A systematic literature review and future research agenda. *Australian Journal of Maritime & Ocean Affairs*, 1, 1–22. <https://doi.org/10.1080/18366503.2025.2548081>
- Matiku, S. M., Zuwarimwe, J., & Tshipala, N. (2021). Sustainable tourism planning and management for sustainable livelihoods. *Development Southern Africa*, 38(4), 524–538. <https://doi.org/10.1080/0376835X.2020.1801386>
- Morse, S. (2025). Having faith in the sustainable livelihood approach: A review. *Sustainability*, 17(2), 539. <https://doi.org/10.3390/su17020539>
- Natarajan, N., Newsham, A., Rigg, J., & Suhardiman, D. (2022). A sustainable livelihoods framework for the 21st century. *World Development*, 155, 105898. <https://doi.org/10.1016/j.worlddev.2022.105898>
- Ngugi, R. K., & Nyariki, D. M. (2005). Rural livelihoods in the arid and semi-arid environments of Kenya: Sustainable alternatives and challenges. *Agriculture and Human Values*, 22(1), 65–71. <https://doi.org/10.1007/s10460-004-7231-2>
- Pasanchay, K., & Schott, C. (2021). Community-based tourism homestays’ capacity to advance the Sustainable Development Goals: A holistic sustainable livelihood perspective. *Tourism Management Perspectives*, 37, 100784. <https://doi.org/10.1016/j.tmp.2020.100784>
- Rongna, A., & Sun, J. (2020). Integration and sustainability of tourism and traditional livelihood: A rhythm analysis. *Journal of Sustainable Tourism*, 28(3), 455–474. <https://doi.org/10.1080/09669582.2019.1681437>
- Roscher, M. B., Allison, E. H., Mills, D. J., Eriksson, H., Hellebrandt, D., & Andrew, N. L. (2022). Sustainable development outcomes of livelihood diversification in small-scale fisheries. *Fish and Fisheries*, 23(4), 910–925. <https://doi.org/10.1111/faf.12662>
- Schermer, M. (2005). The impact of eco-regions in Austria on sustainable rural livelihoods. *International Journal of Agricultural Sustainability*, 3(2), 92–101. <https://doi.org/10.1080/14735903.2005.9684747>
- Scoones, I. (1988). Sustainable rural livelihoods: A framework for analysis. *IDS Working Papers*, 72.
- Shen, F., Hughey, K. F. D., & Simmons, D. G. (2008). Connecting the sustainable livelihoods approach and tourism: A review of the literature. *Journal of Hospitality and Tourism Management*, 15(1), 19–31. <https://doi.org/10.1375/jhtm.15.19>
- Slayi, M., Zhou, L., Nyambo, P., Jaja, I. F., & Muchaku, S. (2024). Communally established cattle feedlots as a sustainable livelihood option for climate change resilience and food security in sub-Saharan Africa: A systematic review. *Frontiers in Sustainable Food Systems*, 7. <https://doi.org/10.3389/fsufs.2023.1325233>
- Su, H., Zhao, X., Mu, F., & Yang, H. (2025). How labor mobility impacts farmers’ sustainable livelihoods in mountainous regions: Evidence from Qinling-Daba Mountains, China. *Chinese Geographical Science*, 35(3), 647–664. <https://doi.org/10.1007/s11769-025-1512-7>
- Su, M. M., Wall, G., & Wang, Y. (2019). Integrating tea and tourism: A sustainable livelihoods approach. *Journal of Sustainable Tourism*, 27(10), 1591–1608. <https://doi.org/10.1080/09669582.2019.1648482>
- Suresh, V., Sreejith, S. S., Vivek, S., & Bonin, S. (2025). Can farmers’ producer organisations be a sustainable livelihood program for farmers’ wellbeing in Kerala, India? *Development in Practice*, 1–15. <https://doi.org/10.1080/09614524.2025.2543357>



- Tabares, A., Londoño-Pineda, A., Cano, J. A., & Gómez-Montoya, R. (2022). Rural entrepreneurship: An analysis of current and emerging issues from the sustainable livelihood framework. *Economies*, 10(6), 142. <https://doi.org/10.3390/economies10060142>
- Tectona, I. C., Chawa, A. F., & Hidayati, B. (2025). Philosophical capital and sustainable livelihoods: A comprehensive analysis of small-scale polyculture fisheries in Medan, Indonesia. *International Journal of Environmental Impacts*, 8(3), 583–596. <https://doi.org/10.18280/ije.080316>
- Thomson, A. M. (2001). Food security and sustainable livelihoods: The policy challenge. *Development*, 44(4), 24–28. <https://doi.org/10.1057/palgrave.development.1110287>
- Uddin, S. M. N., Gutberlet, J., Ramezani, A., & Nasiruddin, S. M. (2020). Experiencing the everyday of waste pickers: A sustainable livelihoods and health assessment in Dhaka City, Bangladesh. *Journal of International Development*, 32(6), 833–853. <https://doi.org/10.1002/jid.3479>
- van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538. <https://doi.org/10.1007/s11192-009-0146-3>
- van Eck, N. J., & Waltman, L. (2017). Citation-based clustering of publications using CitNetExplorer and VOSviewer. *Scientometrics*, 111(2), 1053–1070. <https://doi.org/10.1007/s11192-017-2300-7>
- Vergragt, P., Akenji, L., & Dewick, P. (2014). Sustainable production, consumption, and livelihoods: Global and regional research perspectives. *Journal of Cleaner Production*, 63, 1–12. <https://doi.org/10.1016/j.jclepro.2013.09.028>
- Wang, J., Wang, Y., Li, S., & Qin, D. (2016). Climate adaptation, institutional change, and sustainable livelihoods of herder communities in northern Tibet. *Ecology and Society*, 21(1), art5. <https://doi.org/10.5751/ES-08170-210105>
- Woyesa, T., & Kumar, S. (2021). Potential of coffee tourism for rural development in Ethiopia: A sustainable livelihood approach. *Environment, Development and Sustainability*, 23(1), 815–832. <https://doi.org/10.1007/s10668-020-00610-7>
- Zewdu, D., Krishnan, C. M., Raj, P. P. N., Arlikatti, S., & McAleavy, T. (2025). Climate-smart innovation practices and sustainable rural livelihoods: A systematic literature review. *Technology in Society*, 82, 102914. <https://doi.org/10.1016/j.techsoc.2025.102914>
- Zhang, C., Fang, Y., Chen, X., & Congshan, T. (2019). Bibliometric analysis of trends in global sustainable livelihood research. *Sustainability*, 11(4), 1150. <https://doi.org/10.3390/su11041150>
- Zhou, W., & Tian, X. (2025). Preventing poverty recurrence in rural China: Risk shocks, household behavior, and sustainable livelihood strategies. *Sustainable Development*. <https://doi.org/10.1002/sd.70347>