

AN EVOLUTION OF RESEARCH ON STAKEHOLDER ENGAGEMENT TOWARDS THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

Siti Zabedah Saidin^{1*}, Aidi Ahmi¹, Norasibah Abdul Jalil²

¹Tunku Puteri Intan Safinaz School of Accountancy, Universiti Utara Malaysia, UUM Sintok, Kedah, Malaysia.

²Faculty of Management and Economics, Universiti Pendidikan Sultan Idris (UPSI), Tanjung Malim, Perak, Malaysia.

*Corresponding author: E-mail: <u>zabedah@uum.edu.my</u>

Abstract

This study aims to examine the diverse landscape of stakeholder engagement research and its interdisciplinary nature. By exploring the diverse dimensions of this field, this research seeks to provide an in-depth understanding of the evolving trends and patterns shaping stakeholder engagement practices across various domains. Leveraging the Scopus database, a systematic analysis was conducted, encompassing a broad spectrum of publications related to stakeholder engagement. The study employed co-occurrence analysis to map the relationships and interactions between different research themes and explore the underlying connections within the field. The analysis revealed a dynamic and interconnected network of research areas, highlighting the intricate relationships between community engagement, ethical considerations, corporate social responsibility, and more. The study unveiled prominent trends and seminal works that continue to shape the discourse, emphasizing the enduring significance of stakeholder engagement across diverse disciplines and contexts. While the analysis provided a comprehensive overview of stakeholder engagement research, certain limitations, such as data source constraints, could have influenced the findings. Future research efforts may aim to address these constraints by incorporating a more extensive range of data sources to present a more holistic view of stakeholder engagement research on a global scale. This study contributes to the existing literature by offering a comprehensive understanding of stakeholder engagement research, emphasizing its interdisciplinary nature and dynamic evolution.

Keywords: Bibliometric analysis, stakeholder engagement, multidisciplinary research, sustainable development, 2030 agenda.

Introduction

In 2015, the United Nations adopted the 2030 Agenda for Sustainable Development, reflecting a global commitment to address pressing issues such as poverty, inequality, environmental degradation, and social injustice. This comprehensive agenda emphasizes the essential role of stakeholder engagement, involving actors from governments, civil society, businesses, and academia. Over recent decades, stakeholder engagement has gained increasing prominence in academic, policy, and practitioner discussions. It stands as a central pillar within the 2030 Agenda, fostering inclusivity, equity, and environmentally responsible approaches. This engagement is crucial for informed, equitable, and effective decision-making, ensuring that the voices of those affected by policies are not only heard but also integrated into solutions. Stakeholder engagement is integral to the success of the Sustainable Development Goals (SDGs), promoting inclusivity, accountability, innovation, and collaboration. It serves as a powerful catalyst for achieving the goals and shaping a better world for current and future generations. In essence, it aligns perfectly with the core principle of the SDGs, which is to build a more equitable, sustainable, and prosperous global society. Recognizing the significance of stakeholder involvement within the 2030 Agenda, this study investigates the extent of prior research on stakeholder engagement. Additionally, it examines whether the number of related studies is growing significantly in alignment with the 2030 Agenda. This study contributes to the understanding of the evolving research landscape on stakeholder engagement in line with its increasing importance in sustainable development efforts.

Literature Review

Stakeholder engagement is recognized as a critical driver of sustainable development, as evidenced by various scholarly works. In particular, Garcia-Blandon et al. (2023) explore the impact of sustainable development leadership on firm performance, emphasizing the dynamic nature of stakeholder engagement and its influence on sustainable business outcomes. This work aligns with findings from Salem et al. (2018), who investigate the effects of stakeholder integration on environmental performance, resource usage, and waste reduction, emphasizing the crucial role of stakeholders in promoting sustainability. Quan et al. (2018) further underline the significance of stakeholder engagement in the context of government-enforced green policies, revealing a positive relationship between environmental performance and economic gains, primarily influenced by.



government-controlled resources. Similarly, Lyulyov et al. (2023) establish a positive correlation between stakeholder engagement and green competitiveness, shedding light on stakeholder engagement as a fundamental driver for fostering sustainable business practices

In the digital sphere, De Luca's (2022) study examines the interplay between stakeholder engagement and social media in the context of Sustainable Development Goals (SDGs), identifying key factors that influence stakeholder engagement through the categorization of social media posts based on engagement levels. Notably, the study by García-Sánchez et al. (2023) represents a comprehensive investigation into stakeholder engagement within the framework of the 2030 Agenda for Sustainable Development. By focusing on the roles of different stakeholder groups in driving business contributions to the 2030 Agenda, the study sheds light on corporate transparency levels and prioritized stakeholder interests, providing actionable insights for optimizing relationships with key stakeholders and contributing significantly to the understanding of stakeholder engagement's role in achieving sustainable development objectives.

Moreover, various studies have applied bibliometric analyses to explore the concept of "stakeholder" in diverse contexts. For instance, Hernández-Hernández et al. (2023) conduct a comprehensive bibliometric analysis focusing on stakeholder governance and sustainability in football, offering insights into this unique domain. Similarly, Sarturi et al. (2023) undertake a bibliometric analysis of stakeholder theory in the public sector, highlighting its associations with critical themes such as participation and governance and identifying unexplored aspects. Within the realm of forest landscape restoration, Fernandes et al. (2022) reveal a research gap concerning the inclusion of local actors in the discourse. The study by Xue et al. (2020) maps the landscape of stakeholder perspective studies in construction projects, presenting a holistic understanding of the evolution within this domain. Braun et al. (2019) meticulously dissect stakeholder involvement in sustainable remediation from a risk management perspective, offering comprehensive insights into sustainable remediation strategies. Additionally, Vaz et al. (2018) provide a practical perspective by identifying indicators to assess technological capacity in Brazilian family agriculture systems, emphasizing the importance of technological evolution and its application across various scales of agricultural operations.

Esparza-Rodríguez et al. (2022) utilize bibliometric analysis to delve into the evolution of research about stakeholders, examining productivity, research approaches, and influence structures. However, their study predominantly focuses on the term "stakeholder management" and employs a search strategy involving "TITLE-ABS-KEY" with keywords "Stakeholder" and "Management," limiting the scope to "Articles" and the subject areas of Social Sciences, Business, and Economics. In contrast, this study takes a broader approach by examining the progression of research related to "stakeholder engagement," using a search strategy focused solely on "TITLE." This differentiation highlights the nuanced exploration of stakeholder-related research through bibliometric analysis, illuminating various dimensions of stakeholder involvement and interaction.

While previous studies have investigated stakeholder dynamics within specific domains, Calleo et al. (2023) offer a comprehensive scrutiny of stakeholder engagement in transportation, utilizing the Web of Science database. Their focused analysis traces the evolution of research trends specific to transportation, elucidating prominent clusters that span methodological, sustainability, and technological dimensions. By contrast, this study takes a more expansive approach by examining the evolution of research on stakeholder engagement across diverse domains, utilizing the Scopus database. Through this broader lens, this paper aims to unravel overarching patterns and dynamics that transcend specific domains, offering a comprehensive understanding of stakeholder engagement's evolution and its intrinsic ties to sustainable development objectives.

Consequently, this study aims to conduct a comprehensive bibliometric analysis to analyze stakeholder engagement literature, identify productive authors, citations, and research themes in the field, and provide insights into the multifaceted nature of stakeholder engagement research. The study is guided by the following research questions:

- 1. What is the present state of scholarship on stakeholder engagement?
- 2. Which emerging patterns and directions are evident in recent stakeholder engagement literature?
- 3. Who are the leading contributors, authors, institutions, and nations shaping progress in stakeholder engagement research?
- 4. Which journals and academic outlets serve as central platforms for influential studies on stakeholder engagement?
- 5. What seminal works have significantly influenced the trajectory and discourse of stakeholder engagement scholarship?
- 6. What fundamental themes and issues underpin the evolution and expansion of research in this domain?

Methods

The present study employs a systematic protocol for data collection through bibliometric analysis, focusing on



Stakeholder Engagement. The research comprehensively explores and assesses the scholarly output of stakeholder engagement, utilizing the Scopus database as the primary source. The search strategy is designed to ensure relevance and precision, using the keyword "stakeholder engagement" exclusively within document titles across the Scopus database. This approach ensures that the collected data are directly pertinent to the study's objectives and provides a comprehensive overview of the literature on stakeholder engagement.

Data collection

The research begins by querying the Scopus database using the predefined search string "stakeholder engagement" in the document titles. This preliminary search generates a pool of potentially relevant records, encompassing a diverse range of publications from various disciplines and research domains. Subsequently, a systematic screening process is applied to the retrieved records, with each record being carefully reviewed to assess its alignment with the stakeholder engagement topic. Records deemed irrelevant or duplicative are excluded at this stage. The inclusion criteria are preestablished to ensure the selection of records directly related to stakeholder engagement, maintaining the thematic focus of the research. This careful screening process ensures the inclusion of high-quality data, therefore reducing the risk of bias in the subsequent analysis.

Data cleaning and standardisation

The data cleaning and standardization process is indispensable in bibliometric analysis to ensure the validity and integrity of the final outcomes. OpenRefine and biblioMagika (Ahmi, 2024) are employed to rectify and synchronize disorganized data, including the refinement of author names, keywords, and affiliations. The data refinement process effectively addresses inconsistencies within the dataset, ensuring the accuracy and reliability of the subsequent analysis. All adjusted keywords are manually reviewed for accuracy post-refinement, ensuring the elimination of any errors or discrepancies.

Tools

Various tools and software are utilized to facilitate the comprehensive bibliometric investigation. Microsoft Excel is used for initial data cleaning and organization, providing a structured approach to handle and manage the large volume of retrieved data. BiblioMagika is instrumental in data cleansing, harmonization, and standardization of author, affiliation, and country data, ensuring the uniformity and coherence of the data. OpenRefine (Ahmi, 2023) is employed for the refinement and harmonization of author keywords, streamlining the analysis process and enabling a more focused examination of key trends and patterns. Additionally, VOSviewer (van Eck & Waltman, 2010) is utilized to create visual representations of the study's findings, facilitating a comprehensive and insightful interpretation of the data. The combination of these tools ensures a robust and comprehensive analysis of the stakeholder engagement literature.

Figure 1 illustrates the flow diagram depicting the search strategy, adapted from Zakaria et al. (2021) and Moher et al. (2009).



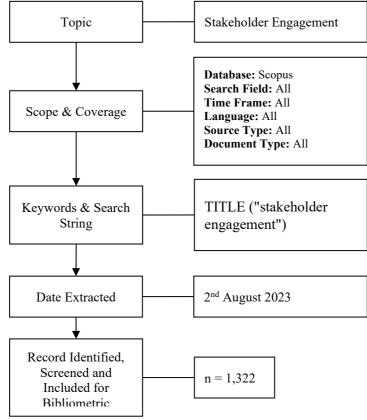


Fig. 1: Flow diagram of the search strategy

Source: Hakim et al. (2024)

Results

This section presents the results from the analysis, which is divided into eight subsections as follows:

Current landscape of stakeholder engagement research

The current landscape of stakeholder engagement research is a complex and multifaceted domain, reflecting diverse interests, methodologies, and applications. Aiming to comprehend this vast territory, this study conducted an exhaustive bibliometric analysis to explore various aspects, such as publication dynamics, document types, source platforms, linguistic diversity, and interdisciplinary connections. Table 1 encapsulates the foundational metrics of stakeholder engagement research. Spanning two decades from 2003 to 2023, the analysis uncovers a total of 1322 publications that have been cited in 1020 papers, resulting in a total of 22,156 citations. The average citation per paper stands at 16.76, while the citation per cited paper is slightly higher at 21.72. These metrics reflect a robust scholarly engagement with the field, with an average of 1107.80 citations per year.

The participation of 5927 authors, with an average authorship of 4.48 per paper, indicates a collaborative research environment. The citation per author metric (3.74) demonstrates the individual contributions toward the field's advancements. The h-index, g-index, and m-index (66, 109, and 3.14, respectively) further quantify the impact and consistency of the research in stakeholder engagement, affirming its academic significance.

 Table 1: Main Information of the Dataset

Metrics	Data
Publication Years	2003 - 2023
Total Publications	1322
Citable Year	21
Number of Contributing Authors	5927
Number of Cited Papers	1020
Total Citations	22,156
Citation per Paper	16.76
Citation per Cited Paper	21.72
Citation per Year	1107.80



Citation per Author	3.74
Author per Paper	4.48
Citation sum within h-Core	17,154
h-index	66
g-index	109
m-index	3.14

Table 2 highlights the diversity of document types within stakeholder engagement research. Articles dominate the landscape, comprising 68.61% of total publications, followed by conference papers (11.42%) and book chapters (10.29%). The presence of reviews, notes, letters, editorials, errata, and books further depicts a rich and multifaceted scholarly output. This diversification underscores the dynamism of the field, with various platforms for knowledge dissemination.

Table 2: Document Type

Document Type	Total publications	Percentage (%)
Article	907	68.61
Conference Paper	151	11.42
Book Chapter	136	10.29
Review	73	5.52
Note	21	1.59
Letter	12	0.91
Editorial	9	0.68
Erratum	9	0.68
Book	4	0.30
Total	1322	100.00

Table 3 categorizes the sources into journals (77.38%), conference proceedings (9.98%), books (8.09%), book series (4.01%), and trade journals (0.53%). The predominance of journals indicates the scholarly rigor and academic emphasis placed on stakeholder engagement research. The substantial representation of conferences and books illustrates a broad engagement with diverse academic audiences and discourses.

Table 3: Source Type

Source Type	Total publications	Percentage (%)
Journal	1023	77.38
Conference Proceeding	132	9.98
Book	107	8.09
Book Series	53	4.01
Trade Journal	7	0.53
Total	1322	100.00

With English accounting for 99.39% of total publications, Table 4 emphasizes the predominance of English as the lingua franca in stakeholder engagement research. Though other languages such as Italian, French, Spanish, Croatian, Finnish, and German are represented, they contribute minimally to the overall corpus. This concentration on English may reflect the field's global reach and pose challenges for non-English speaking scholars.

Table 4: Languages

Language	Total publications	Percentage (%)
English	1314	99.39
Italian	3	0.23
French	2	0.15
Spanish	2	0.15
Croatian	1	0.08
Finnish	1	0.08
German	1	0.08

Table 5 demonstrates the interdisciplinary nature of stakeholder engagement by depicting its presence across diverse subject areas. Social Sciences (38.28%), Business, Management and Accounting (34.95%), and Environmental Science (30.79%) emerge as the leading domains. The subsequent inclusion of Medicine, Engineering, Economics, Energy, Computer Science, and other fields reveals the extensive applicability of stakeholder engagement concepts. This interdisciplinarity attests to stakeholder engagement's universal relevance and adaptability across various academic and practical contexts.



Table 5: Sui	bject Area	
Subject Area	Total Publication	Percentage (%)
Social Sciences	506	38.28
Business, Management and Accounting	462	34.95
Environmental Science	407	30.79
Medicine	254	19.21
Engineering	154	11.65
Economics, Econometrics and Finance	136	10.29
Energy	117	8.85
Computer Science	87	6.58
Earth and Planetary Sciences	77	5.82
Agricultural and Biological Sciences	74	5.60
Arts and Humanities	53	4.01
Decision Sciences	45	3.40
Nursing	37	2.80
Mathematics	33	2.50
Psychology	29	2.19
Biochemistry, Genetics and Molecular Biology	26	1.97
Health Professions	21	1.59
Multidisciplinary	14	1.06
Chemical Engineering	13	0.98
Materials Science	10	0.76
Pharmacology, Toxicology and Pharmaceutics	10	0.76
Immunology and Microbiology	9	0.68
Physics and Astronomy	9	0.68
Neuroscience	5	0.38
Chemistry	3	0.23
Dentistry	1	0.08
Veterinary	1	0.08

Emerging trends in stakeholder engagement publications

Addressing the second research question, Table 6 delineates the emergence and development of trends in stakeholder engagement research from 2003 to 2023. The data exhibits a discernible growth pattern in several key metrics, elucidating the evolution of this field over the analyzed period. The total number of publications (TP) demonstrates a substantial increase, commencing with a single publication in 2003 and ascending to a peak of 178 in 2022. This consistent growth emphasizes the continual expansion of the research area, spotlighting the increasing significance of stakeholder engagement studies. Simultaneously, the number of contributing authors (NCA) reflects a similar upward trajectory, evolving from 4 in 2003 to 898 in 2022. This trend represents the growing interest among scholars and underscores a thriving collaborative environment within the field.

The rise in total citations (TC) and fluctuations in average citations per publication (C/P) further portray the evolving influence of the research. Notably, the C/P reached an apex of 101.89 in 2007, indicating periods of profound impact in the literature. Moreover, the pattern of citations per cited publication (C/CP) provides insights into the academic significance of individual works, with noticeable increases during the earlier years, underlining the contribution of certain pivotal research within the cited literature. The evolving indices, including the h-index, g-index, and m-index, provide robust indicators of the quality and influence of the research in stakeholder engagement. These indices capture the overall impact and maturity, with an h-index of 66, a g-index of 109, and an m-index of 3.14, reflecting a wellestablished and highly regarded body of work. It is also worth noting that the recent decrease in average citations per publication in the latest years (2021-2023) is likely attributable to the shorter time frame for those publications to accumulate citations, a common phenomenon in bibliometric studies.

Table 6: Distribution of Publications by Year

Yea	TP	NC	NC	TC	C/P	C/CP	h	g	т
r		A	P						
200	1	4	0	0	0.00	0.00	0	0	0.0
200	5	10	3	38	7.60	12.67	3	5	0.1



70L. 23, 14	0.54(2025)		LOCALIS						ILIS
Yea r	TP	NC A	NC P	TC	C/P	C/CP	h	g	m
4									5
200	6	19	5	76	12.67	15.20	5	6	0.2
5									6
200	14	32	11	387	27.64	35.18	6	14	0.3
6									3
200	9	16	6	917	101.8	152.8	4	9	0.2
7					9	3			4
200	14	41	9	540	38.57	60.00	7	14	0.4
8									4
200	18	45	15	617	34.28	41.13	1	18	0.6
9	2.2	70	22	551	22.26	22.52	0	2.5	7
201	33	72	23	771	23.36	33.52	1	27	0.9
0	22	60	21	704	25.64	27.22	3	22	3
201	22	69	21	784	35.64	37.33	1	22	0.8
1 201	43	127	38	1784	41.49	46.95	1 2	42	5 1.6
201	43	127	30	1/04	41.49	40.93	0	42	7
201	40	168	34	1159	28.98	34.09	1	34	1.4
3	40	100	34	1137	20.70	34.07	6	54	5
201	39	127	35	1394	35.74	39.83	1	37	1.7
4	3,	12,	35	1371	33.71	37.03	7	37	0
201	70	281	65	1940	27.71	29.85	2	43	2.5
5							3		6
201	67	309	54	1561	23.30	28.91	3 2	39	2.8
6							3		8
201	98	349	92	2398	24.47	26.07	2	45	3.7
7							6		1
201	97	362	86	1806	18.62	21.00	2	38	4.1
8						4=	5	• •	7
201	131	544	114	2013	15.37	17.66	2	38	5.2
9	1.50	722	120	2504	16.60	10.26	6	4.4	0
202	150	723	130	2504	16.69	19.26	2 8	44	7.0
0 202	1.45	107	120	010	5.64	6.82	8 1	19	0
202 1	145	9	120	818	3.04	0.84	4	19	4.6 7
202	178	9 898	112	545	3.06	4.87	1	17	5.5
202	1/0	070	114	J T J	3.00	7.0/	1	1 /	0
202	142	652	47	104	0.73	2.21	5	5	5.0
3	1 12	002	• /	101	0.75	2.2.	-	J	0
Tota	132	592	102	2215	16.76	21.72	6	10	3.1
1	2	7	0	6		· · · _	6	9	4

Note: TP = Total Publications; NCA = Number of Contributing Authors; NCP = Number of Cited Publications; TC = Total Citations; C/P = Citations per Publication (average); C/P = Citations per Cited P

Institutional research output

Table 7 highlights a detailed exploration of the most productive authors who have published five or more documents in the field of stakeholder engagement. The prominent scholars in the field hail from diverse countries and universities, reflecting the global reach of this research area. García-Sánchez, from the University of Salamanca in Spain, emerges as the most prolific author with 11 total publications, all cited, and an h-index of 9. Concannon, based at Tufts University School of Medicine, United States, has a significant impact with 633 total citations from 9 publications and a high average citation per cited publication of 90.43. Various other scholars from different institutions across continents have made substantial contributions, each having distinct citation patterns, reflecting different degrees of influence and research focus. The h, g, and m indices further encapsulate the academic reputation, influence, and research momentum of the individual authors, providing a comprehensive view of the leading figures in the field.

Table 7: Leading authors with five or more publications

Author	Affiliation	Cou	Т	N	Т	С	С	h	σ	m
Author	Allination	Cou		1.4		•	•	Ti.	8	m



	<u>'</u>								LUC		٧
			ntry	P	C	C	/	/			
					P		P	C P			
García-	University	of	Spai	1	1	4	4	4	9	1	1
Sánchez,	Salamanca		n	1	1	4	0	0		1	
Isabel-María						6					2
							5	5			9
							5	5			
Componen	Tufts Universi	:4	Unit	9	7	6	7	9	4	9	0
Concannon,				9	/	6			4	9	U
Thomas W.		of	ed			3	0	0			
	Medicine		State			3		•			3
			S				3	4			3
							3	3			
Kujala,	Tampere		Finla	7	6	7	1	1	3	1	0
Johanna	University		nd			2	0	2			
	,										4
							2	0			3
							9	0			,
Engamen D	I Imirranaitre	o.f	I Imit	6	6	1	2		4	7	Λ
Freeman, R.	•	of	Unit	O	O	1		2	4	/	0
Edward	Virginia		ed			7	9	9			•
			State			4					4
			S				0	0			4
							0	0			
Manetti,	University	of	Italy	6	6	3	6	6	5	6	0
Giacomo	Florence		J			7	2	2			
Giacomo	1 10101100					7		-			3
						,	8				8
								8			0
							3	3			
Vrontis,		of	Cypr	6	6	2	3	3	5	6	1
Demetris	Nicosia		us			3	8	8			
						1					2
							5	5			5
							0	0			
Eaton, Weston	University	of	Unit	5	5	5	1	1	2	6	0
		01		3	3	5 2			2	O	U
M.	Wyoming		ed			2	0	0			•
			State				•	•			6
			S				4	4			7
							0	0			
Slack,	University	of	Sout	5	5	8	1	1	4	5	0
Catherine	KwaZulu-Natal		h			1	6	6			
Camerine	11// 42/4/4 1 (4/4)		Afric			•					3
							2				6
			a					2			O
G '11 '	TT	C	3.5.1	_	_		0	0	,	_	_
Camilleri,		of	Malt	5	5	1	2	2	4	5	0
Mark Anthony	Malta		a			4	8	8			
						3					4
							6	6			4
							0	0			•
Welch, Vivian	Bruyère Resear	ch	Cana	5	4	8	1	2	3	5	0
vicion, vivian		C 11		5	7	2			3	5	U
	Institute		da			2	6	0			
							•				3
							4	5			3
							0	0			
Kaur,	University	of	Aust	5	5	1	2	2	4	5	0
Amanpreet	South Australia		ralia	-	-	4	8	8	-	-	,
			14114			3					4
						3					
							6	6			0
							0	0			
Lodhia, Sumit	University	of	Aust	5	5	1	2 8	2 8	4	5	0



3 . . 4 6 6 0 0 0

Note: TP = Total Publications; NCP = Number of Cited Publications; TC = Total Citations; C/P = Citations per Publication (average); C/CP = Citations per Cited Publication (average); h = h-index; g = g-index; m = m-index.

Institutional research output

Table 8 presents a comprehensive review of the research productivity at the institutional level, concentrating on those establishments that have generated a minimum of 10 publications. The University of California stands out with the highest number of publications at 35, accompanied by significant total citations of 505. The University of Washington, New York University, and Duke University are also prominent players, with unique patterns of citations per publication and citations per cited publication. The h, g, and m indices provide additional depth to the evaluation, offering insights into these institutions' research quality, influence, and growth. The patterns reflect a diverse landscape of research productivity, with different institutions excelling in various metrics, showcasing the multifaceted nature of stakeholder engagement studies at the institutional level.

Table 8: Leading institutions with at least ten publications

Institution	T	T	NC	C/P	\mathbf{C}/\mathbf{C}	h	\boldsymbol{g}	m
	P	C	P		P			
University of California	35	50	31	14.4	16.2	1	2	1.0
•		5		3	9	1	2	0
University of Washington	27	47	20	17.6	23.8	1	2	1.0
		6		3	0	2	1	0
New York University	18	55	12	30.9	46.4	8	1	0.5
		7		4	2		8	7
Duke University	16	26	13	16.5	20.3	7	1	0.5
-		4		0	1		6	8
University of Colorado	15	46	13	31.2	36.0	8	1	0.6
		9		7	8		5	7
University of Toronto	14	15	13	10.7	11.6	7	1	0.6
		1		9	2		2	4
University of Florida	14	15	12	10.9	12.7	6	1	0.4
-		3		3	5		2	3
McMaster University	13	16	8	12.3	20.0	4	1	0.2
		0		1	0		2	7
University of Maryland	13	74	9	5.69	8.22	4	8	0.3
								6
Michigan State University	12	17	11	14.6	16.0	6	1	0.5
		6		7	0		2	0
University of Michigan	12	13	11	11.0	12.0	6	1	0.7
-		2		0	0		1	5
University of Oxford	12	37	9	31.5	42.0	7	1	0.4
•		8		0	0		2	4
University of Pennsylvania	11	36	8	33.1	45.6	4	1	0.2
		5		8	3		1	9
University of North	11	16	9	15.2	18.6	6	1	0.5
Carolina		8		7	7		1	5
University of Minnesota	11	51	9	4.64	5.67	5	7	0.8
•								3
CSIRO	11	18	9	16.9	20.6	6	1	0.3
		6		1	7		1	5
University of Pittsburgh	10	12	10	12.3	12.3	5	1	0.6
		3		0	0		0	3
Washington University	10	23	8	23.1	28.8	5	1	0.4
-		1		0	8		0	5
Wageningen University	10	25	9	25.9	28.7	8	1	0.6
		9		0	8		0	2
University of KwaZulu-	10	13	8	13.0	16.2	5	1	0.4
Natal		0		0	5		0	5
Tampere University	10	77	8	7.70	9.63	4	8	0.5

Vol. 23, No. S4(2025)

8
LEX
LOCALIS

Institution			T	T	NC	C/P	C/C	h	g	m
			P	\mathbf{C}	P		P			
										7
University of	Texas	S	10	80	7	8.00	11.4	4	8	0.2
·							3			2
University	of	South	10	23	10	23.9	23.9	6	1	0.5
Australia				9		0	0		0	5

Note: TP = Total Publications; NCP = Number of Cited Publications; TC = Total Citations; C/P = Citations per Publication (average); C/CP = Citations per Cited Publication (average); h = h-index; g = g-index; m = m-index.

Country-wise distribution of publications

Table 9 presents the global landscape of scholarly output in stakeholder engagement, highlighting the countries that have produced 20 or more publications. The United States emerges as a dominant force, contributing an impressive 449 total publications and 7302 total citations. Following closely are the United Kingdom, Australia, Italy, and Spain, each with substantial contributions in terms of total publications and citations. The diverse array of contributing countries spanning Europe, Asia, Africa, North America, and Oceania reflects the global resonance of stakeholder engagement research. The h, g, and m indices further paint a nuanced picture of the research impact and maturity across these nations. The distribution of citations, both per publication and per cited publication, also reveals different trends and scholarly impacts across the participating countries. This geographical analysis not only underscores the universal relevance of stakeholder engagement but also illuminates the varying research cultures and emphases around the globe.

Table 9: Countries with twenty or more publications

Country	TP	TC	NCP	C/P	C/CP	h	g	m
United States	449	7302	353	16.26	20.69	40	85	2.11
United Kingdom	226	5123	184	22.67	27.84	41	71	2.05
Australia	122	2206	100	18.08	22.06	24	46	1.20
Italy	109	2576	89	23.63	28.94	26	50	1.86
Spain	88	2882	80	32.75	36.03	28	53	1.56
Canada	79	1200	62	15.19	19.35	18	34	0.95
Netherlands	54	922	43	17.07	21.44	18	30	1.00
Germany	51	1274	39	24.98	32.67	17	35	0.85
South Africa	45	502	29	11.16	17.31	12	22	0.57
China	39	584	32	14.97	18.25	14	24	1.27
France	34	581	25	17.09	23.24	12	24	0.57
Sweden	33	383	23	11.61	16.65	10	19	0.67
India	31	334	23	10.77	14.52	9	18	0.60
Switzerland	31	752	27	24.26	27.85	10	27	0.59
Belgium	24	491	21	20.46	23.38	10	22	0.91
Malaysia	24	198	17	8.25	11.65	6	14	0.43
Austria	22	356	15	16.18	23.73	8	18	0.73
Finland	22	200	18	9.09	11.11	8	14	0.42
New Zealand	21	184	14	8.76	13.14	8	13	0.47
Portugal	21	408	17	19.43	24.00	9	20	0.56
Norway	20	154	13	7.70	11.85	5	11	0.63

Note: TP = Total Publications; NCP = Number of Cited Publications; TC = Total Citations; C/P = Citations per Publication (average); C/CP = Citations per Cited Publication (average); h = h-index; g = g-index; m = m-index.

The analysis of the most productive authors, institutions, and countries in the field of stakeholder engagement provides a robust overview of the landscape of this vital area of study. The diverse contributions and the various metrics used to measure productivity and impact showcase a vibrant and complex academic community. Understanding the key players in this field allows for better collaboration, identification of research gaps, and informed decision-making for funding bodies, academic institutions, and scholars. It reflects the global resonance of stakeholder engagement, illuminating the varying research cultures, methodologies, and foci around the world. Moreover, by mapping the landscape of stakeholder engagement, this analysis helps to contextualize the field within the broader academic discourse. The metrics, trends, and patterns observed can guide future research directions, encourage cross-border collaboration, and provide insights into areas where stakeholder engagement may be further explored or applied in practice.



The examination of the fourth research question focuses on understanding the distribution of publications across different source titles pertaining to stakeholder engagement. Table 10 enumerates the source titles most engaged in publishing, providing key metrics like the total number of publications (TP), total citations (TC), and average citations per publication (C/P). The data reveals a broad spectrum of fields engaged in this area, including but not limited to social responsibility, sustainability, business ethics, environmental management, and even medical care. This diversity of disciplines indicates the interdisciplinary nature of stakeholder engagement, reflecting its pervasive relevance across various fields of study. Highly cited sources like "Corporate Social Responsibility and Environmental Management" and "Journal of Business Ethics" demonstrate a significant impact and relevance in the field, pointing to their authority and influence.

This analysis delivers a multifaceted view of the academic environment surrounding stakeholder engagement. The interdisciplinary nature of the sources highlights the universal relevance and applicability of concepts within stakeholder engagement. This variety enriches the field and encourages exploration across different disciplines.

Table 10: Leading source titles with ten or more publications

Table 10: Leading	T	N	T	С	С	h	g	m
Source Title	P	\mathbf{C}	\mathbf{C}	/P	/			
Source Title		P			\mathbf{C}			
					P			
Corporate Social Responsibility and	7	7	2	3	3	2	4	1
Environmental Management	7	0	6	3.	7.	9	9	
•			0	7	1			6
			0	7	4			1
Business Strategy and the Environment	3	3	1	2	2	1	3	1
	6	5	0	9.	9.	6	2	
			4	0	8			1
			6	6	9			4
Sustainability (Switzerland)	2	1	3	1	2	8	1	0
,	4	8	6	5.	0.		9	
			2	0	1			7
				8	1			3
Sustainable Development	1	1	3	2	2	1	1	0
	9	7	9	0.	3.	1	9	
		,	2	6	0	•		7
			_	3	6			9
Journal of Business Ethics	1	1	1	9	9	1	1	0
Journal of Business Ethics	4	3	2	ó.	7.	0	4	Ū
	-	3	6	4	3	Ü	7	5
			6	3	8			9
Journal of Environmental Management	1	1	9	7	7	1	1	0
Journal of Environmental Wanagement	3	3	2	1.	1.	1	3	U
	3	3	6	2	2	1	3	6
			U	3	3			9
Journal of Business Research	1	1	6	4	5	1	1	0
Journal of Business Research	3	2	0	6.	0.	1	3	
	3	2	9	8	7	1	3	9
			9	5	5			2
Water (Crystronland)	1	1	2	2	2	7	1	0
Water (Switzerland)	1 2	1 1	3	5.	7.	/	1 2	U
	2	1	$0 \\ 0$	3. 0	2		2	
			U		7			8
PLoS ONE	1	1	1	0		(1	8
PLOS ONE	1	1	1	1	1	6	1	0
	2	0	3	1.	3.		1	
			6	3	6			6
	1	1	2	3	0	_	1	7
Journal of Comparative Effectiveness	1	1	3	2	3	6	1	0
Research	2	0	5	9. 5	5.		2	
			4	5	4			5
	_	_	=	0	0			0
IOP Conference Series: Earth and	1	5	5	0.	1.	1	1	0
Environmental Science	1			4	0			



5 0 2

Note: TP = Total Publications; NCP = Number of Cited Publications; TC = Total Citations; C/P = Citations per Publication (average); C/CP = Citations per Cited Publication (average); h = h-index; g = g-index; m = m-index.

Highly cited documents

In responding to the fifth research question, Table 11 highlights the top 10 highly cited articles, detailing authors, titles, source titles, and the number of citations per year (C/Y). The works of Greenwood (2007) on corporate responsibility myths and Cennamo et al. (2012) on family-controlled firms' stakeholder engagement are among the most impactful, signifying a deep interest in the ethical dimensions and organizational dynamics of stakeholder relationships. Additionally, themes related to responsible leadership, social capital, and the financial returns to stakeholder engagement are well-represented. A closer look reveals a remarkable diversity of applications and contexts in stakeholder engagement, from biodiversity conservation to transportation system planning and even the societal response to COVID-19. This array of subjects affirms the versatility and broad applicability of stakeholder engagement concepts across disciplines and sectors. The cited works are also spread across various journals, including "Journal of Business Ethics," "Entrepreneurship: Theory and Practice," "Strategic Management Journal," and "Journal of General Internal Medicine," showing the field's interdisciplinary character.

Table 11: Top 10 highly cited articles

No.	Authors	Title	Source Title	Cites	Cites per Year	
1 Greenwood (2007)		Stakeholder engagement: Beyond the myth of corporate responsibility	Journal of Business Ethics	508	29.88	
2	Cennamo et al. (2012)	Socioemotional Wealth and Proactive Stakeholder Engagement: Why Family-Controlled Firms Care More About Their Stakeholders	Entrepreneurship: Theory and Practice	435	36.25	
3	Maak (2007)	Responsible leadership, stakeholder engagement, and the emergence of social capital	Journal of Business Ethics	319	18.76	
4	Prado- Lorenzo et al. (2009)	Stakeholder engagement and corporate social responsibility reporting: The ownership structure effect	Corporate Social Responsibility and Environmental Management	314	20.93	



No.	Authors	Title	Source Title	Cites	Cites per Year	
5	Henisz et al. (2014)	Spinning gold: The financial returns to stakeholder engagement	Strategic Management Journal	282	28.20	
6	Concannon et al. (2014)	A Systematic Review of Stakeholder Engagement in Comparative Effectiveness and Patient-Centered Outcomes Research	Journal of General Internal Medicine	278	27.80	
7	Concannon et al. (2012)	A new taxonomy for stakeholder engagement in patient-centered outcomes research	Journal of General Internal Medicine	269	22.42	
8	Esmail et al. (2015)	Evaluating patient and stakeholder engagement in research: Moving from theory to practice	Journal of Comparative Effectiveness Research	242	26.89	
9	Sterling et al. (2017)	Assessing the evidence for stakeholder engagement in biodiversity conservation	Biological Conservation	231	33.00	
10	Tompkins et al. (2008)	Scenario-based stakeholder engagement: Incorporating stakeholders preferences into coastal planning for climate change	Journal of Environmental Management	229	14.31	

Co-occurrence analysis of author's keywords

The co-occurrence analysis of the author's keywords in stakeholder engagement research is a critical exploration that helps identify the field's core concepts, themes, and underlying relationships. By mapping these interactions and clusters, this study can unveil significant patterns and connections between various aspects of stakeholder engagement. Figure 2, representing the network visualization based on the co-occurrence analysis of the author's keywords, offers an extensive portrayal of the intricate relationships and structures formed within stakeholder engagement research. The map reveals distinct clusters representing related concepts or areas, ranging from community engagement, patient-centered outcomes, social media involvement, ethical considerations, strategic



management, sustainable practices, corporate social responsibility, communication paradigms, and more. These clusters interact and overlap in a multidimensional aspect of stakeholder engagement, depicting how themes such as sustainability, ethics, governance, and corporate responsibility are interlinked. Additionally, the visualization may point towards emerging trends within the field, such as a growing emphasis on social media engagement, climate change adaptation, and innovative participatory research methods.

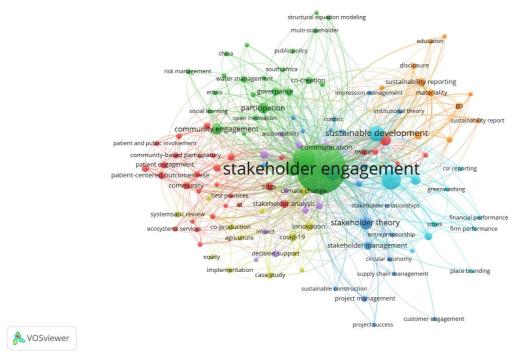


Fig. 2: Network visualization based on the co-occurrence analysis of the author's keywords

Discussion

The comprehensive analysis of stakeholder engagement research has unveiled significant insights that illuminate the multidimensional nature of this field, offering profound implications for academia, practice, and policymaking. First and foremost, the interdisciplinary character of stakeholder engagement research emerges as a central theme. Drawing contributions from diverse disciplines such as business, environmental management, healthcare, and social sciences, stakeholder engagement showcases its universal relevance and adaptability. The co-occurrence analysis further emphasizes this diversity, revealing clusters that encompass various dimensions, including social media involvement, ethical considerations, governance, and sustainability. This interconnectedness emphasizes the intricate and multifaceted nature of stakeholder engagement, highlighting the necessity for comprehensive and holistic approaches. Moreover, the analysis emphasizes the enduring relevance of seminal works and the emergence of new trends in stakeholder engagement research. Renowned contributions by scholars like Greenwood (2007), Cennamo et al. (2012), and Maak (2007) continue to shape the discourse, focusing on themes like responsible leadership, social capital, financial returns, and patient-centered outcomes research. Simultaneously, emerging trends, such as the integration of digital platforms in stakeholder engagement (Bonsón & Ratkai, 2013) and the growing emphasis on healthcare and environmental research (Concannon et al., 2014; Forsythe et al., 2016), signify the field's dynamic responsiveness to evolving societal and technological contexts.

Furthermore, the analysis highlights the practical implications and future directions of stakeholder engagement research. It underscores the pivotal role played by specific journals and conferences, such as "Corporate Social Responsibility and Environmental Management" and "Journal of Business



Ethics," in disseminating impactful research. These scholarly platforms offer essential guidance to researchers, practitioners, and policymakers navigating the ever-expanding literature, facilitating their stay abreast of the latest developments. The insights derived from co-occurrence analysis carry significant weight for both academia and practice, emphasizing the importance of collaborative, transdisciplinary approaches to stakeholder engagement. Notably, the clusters identified, ranging from digital platforms to governance, shed light on distinct facets of stakeholder relationships, providing valuable insights to inform the development of more effective engagement strategies. These insights hold the potential to enable organizations to more adeptly respond to the diverse needs and expectations of their stakeholders. In summary, the results of this comprehensive analysis offer a holistic view of stakeholder engagement research, accentuating its interdisciplinary nature, dynamic trends, and actionable implications. This deeper understanding contributes to the recognition of stakeholder engagement's significance and its capacity to drive positive transformations across various domains and disciplines within an evolving academic landscape.

Conclusion

Through a comprehensive bibliometric analysis of stakeholder engagement research, this study has provided significant insights into the diverse nature of stakeholder engagement and its implications across diverse disciplines and contexts. The findings highlight the interdisciplinary character of stakeholder engagement, emphasizing its universal relevance and adaptability across various sectors. The co-occurrence analysis of authors' keywords revealed the complex relationships and structures within stakeholder engagement research, highlighting the interconnectedness of themes such as sustainability, ethics, governance, and corporate responsibility.

By identifying the leading authors, institutions, and countries contributing to the advancements in stakeholder engagement research, this study has shed light on the important role played by various stakeholders in driving research and development in this field. The identification of seminal works and emerging trends has provided a comprehensive understanding of the evolution of stakeholder engagement literature, highlighting its continued relevance and responsiveness to societal and technological changes.

The practical implications derived from this analysis emphasize the importance of collaborative and cross-disciplinary approaches in stakeholder engagement, offering valuable insights to inform the development of more effective engagement strategies. Furthermore, the limitations identified in the study, such as data source constraints, serve as potential directions for future research, calling for the incorporation of a broader range of sources to provide a more comprehensive view of stakeholder engagement research globally.

In conclusion, this study contributes to the recognition of the significance of stakeholder engagement and its capacity to drive positive transformations across various fields of study. The comprehensive analysis of stakeholder engagement research presented here serves as a valuable resource for researchers, practitioners, and policymakers seeking to navigate the complex scope of stakeholder engagement and align their strategies with contemporary developments. This deeper understanding contributes to the ongoing dialogue surrounding effective stakeholder engagement, highlighting its importance in fostering meaningful and sustainable relationships with stakeholders.

REFERENCES

Ahmi, A. (2023). OpenRefine: An approachable tool for cleaning and harmonizing bibliographical data. 11th International Conference on Applied Science and Technology 2022 (11th ICAST 2022) AIP Conference Proceedings, 2827, 030006-1-030006-030011. https://doi.org/10.1063/5.0164724 Ahmi, A. (2024). biblioMagika. https://aidi-ahmi.com/index.php/bibliomagika Aké, K. M. H., & Boiral, O. (2022). Sustainable development and stakeholder engagement in the



agri-food sector: Exploring the nexus between biodiversity conservation and information technology. Sustainable Development. https://doi.org/10.1002/sd.2395

Blak Bernat, G., Qualharini, E. L., Castro, M. S., Barcaui, A. B., & Soares, R. R. (2023).

Sustainability in project management and project success with virtual teams: A quantitative analysis considering stakeholder engagement and knowledge management. Sustainability, 15(12), 9834. https://doi.org/10.3390/su15129834

Braun, A. B., Trentin, A. W. da S., Visentin, C., & Thomé, A. (2019). Sustainable remediation through the risk management perspective and stakeholder involvement: A systematic and bibliometric view of the literature. Environmental Pollution (Barking, Essex: 1987), 255(Pt 1), 113221. https://doi.org/10.1016/j.envpol.2019.113221

Calleo, Y., Giuffrida, N., & Pilla, F. (2023). The future of transport and stakeholders' engagement: a bibliometric analysis of the scientific literature. Transportation Research Procedia, 69, 639–646. https://doi.org/10.1016/j.trpro.2023.02.218

Cennamo, C., Berrone, P., Cruz, C., & Gomez-Mejia, L. R. (2012). Socioemotional wealth and proactive stakeholder engagement: Why family–controlled firms care more about their stakeholders. Entrepreneurship Theory and Practice, 36(6), 1153–1173. https://doi.org/10.1111/j.1540-6520.2012.00543.x

Concannon, T. W., Fuster, M., Saunders, T., Patel, K., Wong, J. B., Leslie, L. K., & Lau, J. (2014). A systematic review of stakeholder engagement in comparative effectiveness and patient-centered outcomes research. Journal of General Internal Medicine, 29(12), 1692–1701. https://doi.org/10.1007/s11606-014-2878-x

Concannon, T. W., Meissner, P., Grunbaum, J. A., McElwee, N., Guise, J.-M., Santa, J., Conway, P. H., Daudelin, D., Morrato, E. H., & Leslie, L. K. (2012). A new taxonomy for stakeholder engagement in patient-centered outcomes research. Journal of General Internal Medicine, 27(8), 985–991. https://doi.org/10.1007/s11606-012-2037-1

De Luca, F., Iaia, L., Mehmood, A., & Vrontis, D. (2022). Can social media improve stakeholder engagement and communication of Sustainable Development Goals? A cross-country analysis. Technological Forecasting and Social Change, 177(121525), 121525.

https://doi.org/10.1016/j.techfore.2022.121525

del Mar Alonso-Almeida, M., Buil-Fabregà, M., Bagur-Femenías, L., & Aznar-Alarcón, J. P. (2017). Shedding light on sustainable development and stakeholder engagement: The role of individual dynamic capabilities: The role of individual dynamic capabilities. Sustainable Development, 25(6), 625–638. https://doi.org/10.1002/sd.1682

Esmail, L., Moore, E., & Rein, A. (2015). Evaluating patient and stakeholder engagement in research: moving from theory to practice. Journal of Comparative Effectiveness Research, 4(2), 133–145. https://doi.org/10.2217/cer.14.79

Esparza-Rodríguez, S. A., García Tapia, G., & Iriarte Rivas, C. G. (2022). Stakeholder management: a bibliometric analysis to understand the evolution of the research field. Biblios Journal of

Librarianship and Information Science, 84, 32-59. https://doi.org/10.5195/biblios.2022.1026

Fernandes, A. A., Adams, C., Araujo, L. G. de, Romanelli, J. P., Santos, J. P. B., & Rodrigues, R. R. (2022). Forest landscape restoration and local stakeholders: A global bibliometric mapping analysis. Sustainability, 14(23), 16165. https://doi.org/10.3390/su142316165

Garcia-Blandon, J., Argilés-Bosch, J. M., & Ravenda, D. (2023). Leveraging stakeholder engagement for market value growth: Empirical evidence on sustainable development leadership in Europe. Sustainable Development. https://doi.org/10.1002/sd.2662

García-Sánchez, I.-M., Amor-Esteban, V., Aibar-Guzmán, C., & Aibar-Guzmán, B. (2023).

Translating the 2030 Agenda into reality through stakeholder engagement. Sustainable Development, 31(2), 941–958. https://doi.org/10.1002/sd.2431

Greenwood, M. (2007). Stakeholder engagement: Beyond the myth of corporate responsibility. Journal of Business Ethics, 74(4), 315–327. https://doi.org/10.1007/s10551-007-9509-y

Hakim, T. ., Ahmi, A., & Alam, S. (2024). A decade in blockchain: a bibliometric reflection on the



growth and interdisciplinary reach of a disruptive technology. Journal of Information and Communication Technology, 23(4), 627–665. https://doi.org/10.32890/jict2024.23.4.3 Henisz, W. J., Dorobantu, S., & Nartey, L. J. (2014). Spinning gold: The financial returns to stakeholder engagement: Financial Returns to Stakeholder Engagement. Strategic Management Journal, 35(12), 1727–1748. https://doi.org/10.1002/smj.2180

Hernández-Hernández, J. A., Londoño-Pineda, A., Cano, J. A., & Gómez-Montoya, R. (2023). Stakeholder governance and sustainability in football: A bibliometric analysis. Heliyon, 9(8), e18942. https://doi.org/10.1016/j.heliyon.2023.e18942

Lyulyov, O., Chygryn, O., Pimonenko, T., & Kwilinski, A. (2023). Stakeholders' engagement in the company's management as a driver of green competitiveness within Sustainable Development. Sustainability, 15(9), 7249. https://doi.org/10.3390/su15097249

Maak, T. (2007). Responsible leadership, stakeholder engagement, and the emergence of social capital. Journal of Business Ethics, 74(4), 329–343. https://doi.org/10.1007/s10551-007-9510-5 Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. BMJ (Clinical Research Ed.), 339(jul21 1), b2535. https://doi.org/10.1136/bmj.b2535

Prado-Lorenzo, J.-M., Gallego-Alvarez, I., & Garcia-Sanchez, I. M. (2009). Stakeholder engagement and corporate social responsibility reporting: the ownership structure effect. Corporate Social Responsibility and Environmental Management, 16(2), 94–107. https://doi.org/10.1002/csr.189 , Y., Wu, H., Li, S., & Ying, S. X. (2018). Firm sustainable development and stakeholder engagement: The role of government support. Business Strategy and the Environment, 27(8), 1145– 1158. https://doi.org/10.1002/bse.2057

Salem, M. A., Shawtari, F., Shamsudin, M. F., & Hussain, H. B. I. (2018). The consequences of integrating stakeholder engagement in sustainable development (environmental perspectives): Do stakeholders matter? Sustainable Development, 26(3), 255–268. https://doi.org/10.1002/sd.1699 Sarturi, G., Barakat, S. R., & Gomes, R. C. (2023). Stakeholder theory in the public sector domain: A bibliometric analysis and future research agenda. The Review of Policy Research. https://doi.org/10.1111/ropr.12560

Sequeira, D., & Warner, M. (2007). Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets. International Finance Corporation. www.ifc.org/stakeholderengagement

Sierra-García, L., Zorio-Grima, A., & García-Benau, M. A. (2015). Stakeholder engagement, corporate social responsibility and integrated reporting: An exploratory study: Corporate social responsibility and integrated reporting. Corporate Social Responsibility and Environmental Management, 22(5), 286–304. https://doi.org/10.1002/csr.1345

Sterling, E. J., Betley, E., Sigouin, A., Gomez, A., Toomey, A., Cullman, G., Malone, C., Pekor, A., Arengo, F., Blair, M., Filardi, C., Landrigan, K., & Porzecanski, A. L. (2017). Assessing the evidence for stakeholder engagement in biodiversity conservation. Biological Conservation, 209, 159–171. https://doi.org/10.1016/j.biocon.2017.02.008

Tompkins, E. L., Few, R., & Brown, K. (2008). Scenario-based stakeholder engagement: incorporating stakeholders preferences into coastal planning for climate change. Journal of Environmental Management, 88(4), 1580–1592. https://doi.org/10.1016/j.jenvman.2007.07.025 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 Vaz, M., Macedo, L., Soares Junior, D., & Bittencourt, J. (2018). Usefulness of technological capacity evaluation for Brazilian farmer stakeholders: A bibliometric analysis. Sustainability, 10(4), 1036. https://doi.org/10.3390/su10041036

Xue, J., Shen, G. Q., Yang, R. J., Wu, H., Li, X., Lin, X., & Xue, F. (2020). Mapping the knowledge domain of stakeholder perspective studies in construction projects: A bibliometric approach. International Journal of Project Management, 38(6), 313–326.

https://doi.org/10.1016/j.ijproman.2020.07.007



Zakaria, R., Ahmi, A., Ahmad, A. H., & Othman, Z. (2021). Worldwide melatonin research: a bibliometric analysis of the published literature between 2015 and 2019. Chronobiology International, 38(1), 27–37. https://doi.org/10.1080/07420528.2020.1838534