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MAPPING GLOBAL RESEARCH TRENDS ON GREEN SUKUK AND BLUE SUKUK: A BIBLIOMETRIC ANALYSIS USING SCOPUS DATA AND VOSVIEWER

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ABSTRACT

This paper is a bibliometric mapping of the research trends on green sukuk and blue sukuk in the world through Scopus-indexed articles and visualized in VOSviewer. One hundred three hundred forty-four (134) documents published in 2016 through 2025 (year-to-date, as of September 2025) were reviewed in order to evaluate the rise in publications, the top-performers, institutions, countries, and direction of the field. The results show there will be a dramatic increase in the rate of scholarly interest, especially in the period of 2022–2025, and that green sukuk will become the most prevalent trend in research. The visualizations of networks and overlays show that the green sukuk, Islamic finance, sustainability, climate change, renewable energy, and the Sustainable Development Goals (SDGs) are strongly interconnected, which proves the tendency towards interdisciplinarity of the studied field. It is also analyzed that the output of the research is highly concentrated in particular countries and institutions with Indonesia as a leading country in issuing and discussing green sukuk academically. Blue sukuk, on the contrary, has a lack of bibliometric presence and is still at an early phase of practice and theoretical discussion. The present study will be useful to the literature in that it demonstrates the systematic

knowledge mapping of the field, research frontiers, and strategic potential of green and blue sukuk as new tools of the Islamic sustainable finance.

Keywords: Green Sukuk; Blue Sukuk; Bibliometric Analysis; Vosviewer; Global Research Trends

INTRODUCTION

The relationship between the Islamic finance and sustainable development has attracted great attention in the recent years. As the financial system increasingly seeks to align with environmental and social objectives, *sukuk*—as Shariah-compliant financial instruments—have demonstrated substantial potential in supporting the sustainability agenda. In this context, green sukuk and blue sukuk have become new tools that are explicitly aimed at funding projects to make the environment sustainable and resilient to climate. Whereas green sukuk targets to finance climate change mitigation by financing projects, blue sukuk targets to finance the blue economy which includes marine and coastal resources as an extension of the wider ecological stewardship.

Green sukuk have increased in research, especially between 2016 and 2022, with researchers investigating models, opportunities, challenges, and research implications (Alam et al., 2023). The global market has seen notable issuances, especially in Malaysia and Indonesia, which are recognized as pioneers in this field (Haque & Meo, 2024; Keshminder et al., 2019). Nevertheless, challenges remain, including market performance in the post-pandemic era, government and investor commitments, and efficient market management to enhance viability (Abdullah & Keshminder, 2022). Additional issues are clearness in definition, awareness by the public and measurement frameworks that are standardized (Shalhoob, 2023). Even in the face of these obstacles, there is empirical evidence that green sukuk has a positive relationship with economic growth, social development, and financial performance (Bin-Armia & Riana, 2023). In addition, a so-called greenium when a lower yield is offered to investors on green sukuk serves to signify their price-effectiveness in funding green projects (Pirgaip & Arslan-Ayaydin, 2024).

Blue sukuk, by contrast, is in its infancy, and innovative structures are tested, most especially in Indonesia (Musari, 2025). This tool is aimed at combating climate change and funding of the blue economy as the scheme of Islamic blended finance can finance marine conservation and sustainable fisheries. Experts point to the possibility of combining blue sukuk and green sukuk to facilitate sustainable development that is maritime-oriented, particularly

in such nations as Malaysia and Indonesia (Ishom et al., 2025). But, the political, theological and institutional factors are still limiting to its implementation. As an example, comparative analyses of cash waqf-based sukuk to projects in the blue economy show opportunities and contextual issues across jurisdictions (Ishom et al., 2025).

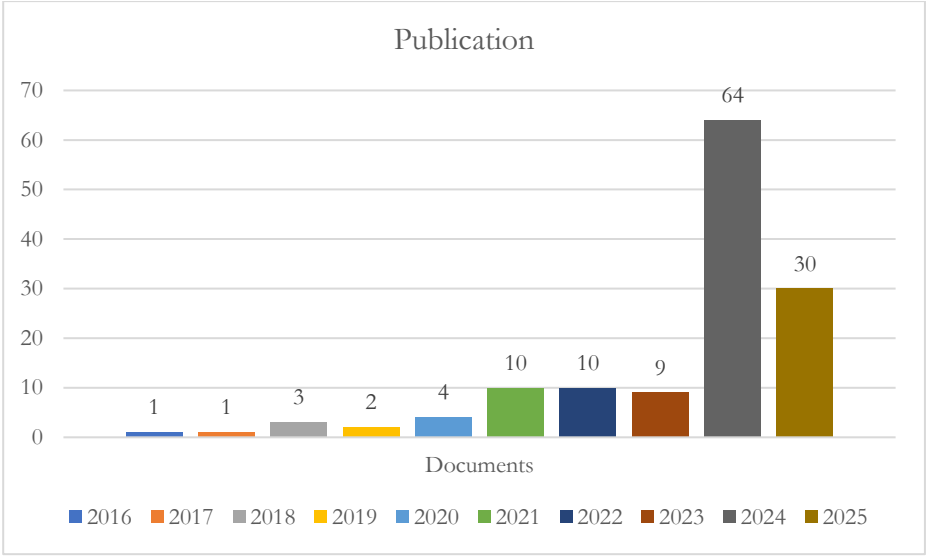

Figure 1: Graph of The Increase in The Number of Green Sukuk and Blue Sukuk Publications (2016-2025) by the Source Scopus Database

The graph shows an upward trend in publications on green sukuk and blue sukuk during the period 2016–2025 based on Scopus data. Initial publications were still very limited in 2016–2018, with only one to two documents per year. The number of publications started to grow gradually but rather low between 2019 and 2022. There was a sharp increase in 2023 (Over 60 publications) and hence the year with the largest contribution to research. This positive trend continued in 2024 with around 30 documents, although it showed a decline compared to the previous year. The ongoing data for 2025 continues to show a fairly high initial contribution, indicating the potential for further increases until the end of the year. Overall, this graph confirms that academic studies on green sukuk and blue sukuk are experiencing rapid growth, especially in the last two years, in line with the increasing global attention to sustainable finance.

The bibliometric analysis of green sukuk and blue sukuk reveals significant trends in Islamic finance, particularly in the context of sustainable development. Owing to the Scopus data and VOSviewer, the analysis visualizes the output of researchers and identifies the growing popularity of these tools as the means of environmental sustainability and economic development. The study of green sukuk has come into an upsurge, especially following 2016, which is indicative of a movement towards sustainable finance worldwide (Araminta et al., 2022; Ela, 2019). Such countries like Malaysia and the USA have joined the list of significant contributors, both in the sphere of research and in terms of international cooperation (Judijanto et al., 2024). Key target areas are the role that the green sukuk can play in aiding the Sustainable Development Goals (SDGs) and how it can be used to finance renewable energy projects (YAZICIOĞLU & BAŞTAN TÖKE, 2022). Additionally, the green sukuk has become a financing instrument of green projects, following in the steps of the booming growth of the green bonds (Zhang et al., 2022). Conversely, blue sukuk is an emerging and underutilized void, but it is increasingly being examined as a source of funding marine and water-related initiatives, which is more nuanced to sustainability in finance.

The bibliometric analysis highlights a research gap in blue sukuk studies, which is critical to establishing its role in sustainable investment (Mashari et al., 2023; Mohamad et al., 2023). As the world is paying closer attention to the sustainability of oceans, the future of blue sukuk grows tremendously, which needs to be supported by a stricter academic investigation (Xue et al., 2023). In spite of such promising developments, a number of issues still remain. In the case of green sukuk, the regulatory frameworks, low awareness among people, and market uncertainties after the pandemic are still pressing issues (Araminta et al., 2022). It is therefore the call of policymakers to institute some favourable legal and tax incentives to make the market viable and more attractive to investors. On the other hand, green sukuk has been showing its resilience and growth whereas blue sukuk is still in its infancy, which makes exploring the area as a viable strategic area in sustainable financing and investment early.

Even with this bright future in sight, green and blue sukuk have structural limitations that hamper their performance in the global market. Green sukuk, though more established, never lived up to its expectations partly because there are no empirical studies revealing factors that drive issuance and strategic measures that can be adopted to go wide (Bin-Armia & Riana, 2023). In comparison, blue sukuk does not have any market maturity, or enough scholarly interest, which once again brings the necessity of an academic inquiry.

Against this background, there is currently no comprehensive bibliometric study that systematically maps the global research landscape on green sukuk and blue sukuk. The current body of scholarship is disjointed, with the body of literature on green sukuk being overwhelmingly concentrated on economic models and policy issues, whereas blue sukuk research is limited to being exploratory. In order to fill this gap, the paper will carry out a bibliometric analysis of articles indexed by Scopus during 2016-2025 and visualized in VOSviewer. The mapping of the research productivity, collaboration networks, and thematic clusters helps the study to reveal the intellectual structure of the field, define the emerging trends and demonstrate future research areas. By doing so, it does not only serve as part of the academic discussion on Islamic sustainable finance, but it also enlightens policymakers and market stakeholders interested in enhancing the introduction of green and blue sukuk into the world financial markets.

METHODS

The purpose of this study is to find and visualize articles related to Green Sukuk and Blue Sukuk.

1. Research design

This study makes use of both bibliometric analysis and bibliometric visualization. Bibliometric analysis is a quantitative technique that represents research patterns and features of a collection of publications using descriptive and evaluative method (Dupi, 2025; Dupi et al., 2025). To display a structural overview of a certain field of study, the bibliometric visualization approach is employed (Dupi & Adzimatinur, 2025; Garfield, 2009).

2. Research subject

Based on the selected keywords, 134 articles from the scopus database formed the sample for this study. The keywords for this study were TITLE-ABS-KEY ((“green sukuk” OR “blue sukuk” OR “sustainable sukuk” OR “Islamic green finance” OR “Islamic sustainable finance”)) AND PUBYEAR > 2015 AND PUBYEAR < 2026 . Most of these publications were articles. Data for 2025 represent year-to-date publications as of September 2025.

3. Research indicators

The selected articles are from the last 10 years (2016–2025) and use the VOSviewer application with three views: network visualization, overlap

visualization, and density visualization. Indicators can be found by looking at the overall strength of the connections between the items displayed, both in terms of the number of publications and citations.

4. Research procedure

In the case of Green Sukuk and Blue Sukuk, the information obtained by the researchers over the last 10 years (2016-2025) was selected according to the Scopus database. All publication data collected in this field, including author bibliographies, countries, institutions, journals, and events with author keywords, were analyzed, visualized, and evaluated in this study using VOSviewer software(Oyewola & Dada, 2022; Sovacool et al., 2022; van Eck & Waltman, 2010, 2017). VOSviewer software is used to create network representations of frequently used phrases in a field. VOSviewer is a popular and very useful tool for bibliometric analysis(Shah et al., 2020). VOSviewer is not only used to create network visualizations but also to analyze the evolution of a field by analyzing frequently used phrases(Huang et al., 2022). According to Tianji Huang, (Dewi et al., 2021)there are 5 stages of research in bibliometric analysis as follows.

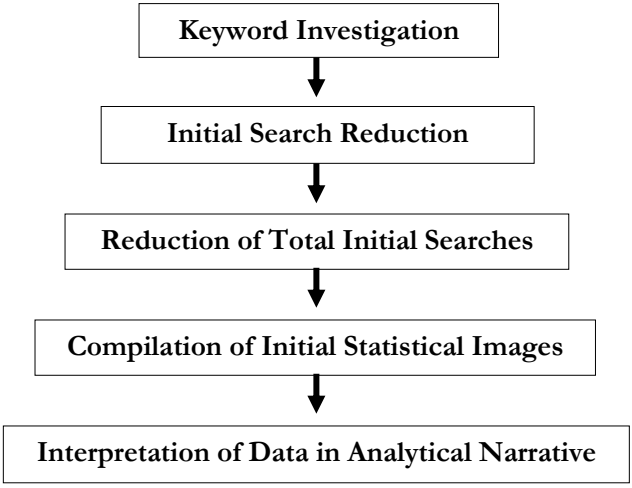

Figure 2: Phases of The Method of Bibliometric Analysis

The bibliometric analysis approach consists of five steps, as shown in the figure above. The first stage is Keyword Investigation, where before collecting data, researchers determine keywords focused on TITLE-ABS-KEY ("green sukuk" OR "blue sukuk" OR "sustainable sukuk" OR "Islamic green

finance" OR "Islamic sustainable finance") AND PUBYEAR > 2015 AND PUBYEAR < 2026. In addition, the process of grouping or clustering searches that only focus on predefined keywords is known as the "Initial Search Reduction" stage. In this step, researchers are going to find the appropriate publications found in Scopus database by inputting these keywords.

The third stage is Reduction of Total Initial Searches, it entails choosing every search result by hand. At this point, researchers determined the threshold based on the demands of the study using the VOSviewer program. After that, the fourth stage is Compilation of Initial Statistical Images, which is the process of grouping data as a topic description. During this procedure, visualization results on bibliographic pairings of nations, organizations, journals, publications, and authors are compiled, along with the co-occurrence of author keywords. The last stage is Interpretation of Data in Analytical Narrative, This provides an explanation of the study's conclusions derived from the selecting process. VOSviewer is used to understand the data, and the visualization that is produced shows the data as a variable map associated with the study keywords. The results of this visualization also provide insight into further development opportunities in Green Sukuk and Blue Sukuk research.

Researchers used the following keywords, and 134 publications on Green Sukuk and Blue Sukuk were first found in the Scopus database: (("green sukuk" OR "blue sukuk" OR "sustainable sukuk" OR "Islamic green finance" OR "Islamic sustainable finance") AND PUBYEAR > 2015 AND PUBYEAR < 2026 AND (Islam OR Muslim). There were 134 articles after the researchers filtered them based on the years 2016–2025 and Publication Type, specifically articles in the Scopus database. As shown in the following table:

Table 1: Number and percentage of Green Sukuk and Blue Sukuk publications (2016-2025)

No	Year	Documents	Percentage (%)
1	2025	30	22,39
2	2024	64	47,76
3	2023	9	6,72
4	2022	10	7,46
5	2021	10	7,46
6	2020	4	2,99
7	2019	2	1,49
8	2018	3	2,24

9	2017	1	0,75
10	2016	1	0,75
Total		134	100

Source: Scopus

This table shows a very important and strategic development in the literature on green sukuk and blue sukuk. With a total of 134 publications in the period 2016–2025, it is clear that this topic has experienced exponential growth, especially since 2021. The year 2024 was the peak with almost half of all publications (47.76%), indicating a surge in global academic and practical interest in this financial instrument. The year 2025 also shows a strong trend with a contribution of 22.39%, although this data is still preliminary. Prior to 2020, publications were very limited, indicating that green sukuk and blue sukuk are relatively new and still developing areas of research. A steep increase in the numbers of publications in the last five years indicates that the world is increasingly recognising the role of Sharia-based instruments in aiding the sustainability agenda, in relation to climate change mitigation and development of blue economy.

RESULT AND DISCUSSION

The researcher presents the analysis's findings using a deductive approach. In order for readers to follow the information from general to more specific information, the results of bibliometric analysis are presented in a deductive manner, or starting from general findings to more specific findings. Examples of this include country bibliographic pairs, Institute bibliographic pairs, journal bibliographic pairs, publication bibliographic pairs, author bibliographic pairs, and co-occurrence of author keywords (Dupi & Husaen, 2025; Dupi & Milah, 2025; Karakus et al., 2019).

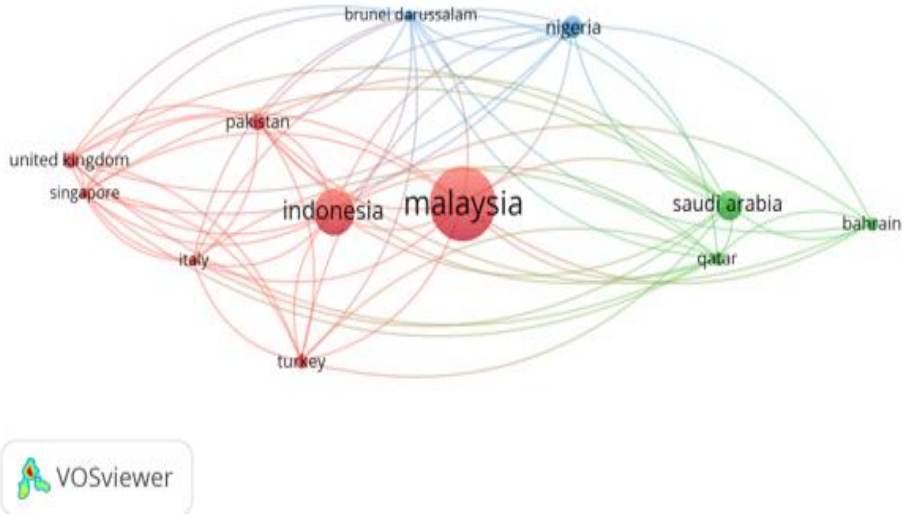

Figure 3: Network Visualization of Country Bibliographic Pairs

Country Bibliography Pair

The image above, which shows a visualization of the network, displays bibliographic pairs between countries. At this stage, we used criteria whereby a country must have at least 4 publications and 10 citations. Of the 32 countries, 12 countries met these criteria. With a total link strength of 886, 246 citations, and 64 publications, Malaysia leads the world in overall link strength. In second place is Indonesia with a total link strength of 680, 277 citations, and 32 publications. In addition, to display other countries, researchers will sort them as follows: the first number is the total link strength, the second number is the number of citations, and the third number is the number of publications. These countries are: Saudi Arabia (334, 68, 17), Pakistan (263, 44, 8), Nigeria (236, 17, 11), Brunei Darussalam (211, 28, 4), Turkey (191, 17, 6), Qatar (172, 14, 6), Italy (136, 76, 4), Bahrain (132, 10, 6), United Kingdom (120, 307, 7), Singapore (73, 252, 4).

Cluster analysis shows that research on green sukuk and blue sukuk is divided into three main collaboration groups. Cluster 1 comprises seven countries (Indonesia, Italy, Malaysia, Pakistan, Singapore, Turkey and the United Kingdom) which reflects a wide and diverse international research network with Malaysia and Indonesia at the centre of the stage as major drivers. Cluster 2 includes three countries, namely Bahrain, Qatar, and Saudi Arabia, indicating strong regional collaboration in the Gulf region with a focus on the development

of sustainability-based Islamic finance. Meanwhile, Cluster 3 consists of two countries, namely Brunei Darussalam and Nigeria, which, although relatively small, show active involvement in expanding their contribution to this topic. This clustering pattern confirms that green sukuk and blue sukuk research is not only centered in Southeast Asia but also involves the Middle East, Africa, and Europe, with great potential to strengthen global collaboration networks in the future.

Institution Bibliography Pair

Illustration 4 shows institutional bibliographies with overlay visualization. Researchers used a threshold at this stage, whereby the minimum number of publications from an institution was four publications that had been cited by at least three sources. Of the 167 institutions, only seven met this threshold. Researchers ranked institutions based on total link strength, with the International Islamic University Malaysia ranking first with 161 total link strength, 35 citations, and 23 publications. This was followed by Universiti Teknologi MARA, Shah Alam, Malaysia with 102 total link strength, 116 citations, and 12 publications.

The first number is the total link strength, the second number is the number of citations and the third number is the number of publications, Universitas Airlangga, Surabaya, Indonesia (44, 71, 4), INCEIF University, Kuala Lumpur, Malaysia (33, 3, 4), University of Bahrain, Zallaq, Bahrain (24, 10, 4), Islamic Economics Institute, King Abdulaziz University, Jeddah, Saudi Arabia (4, 12, 5).

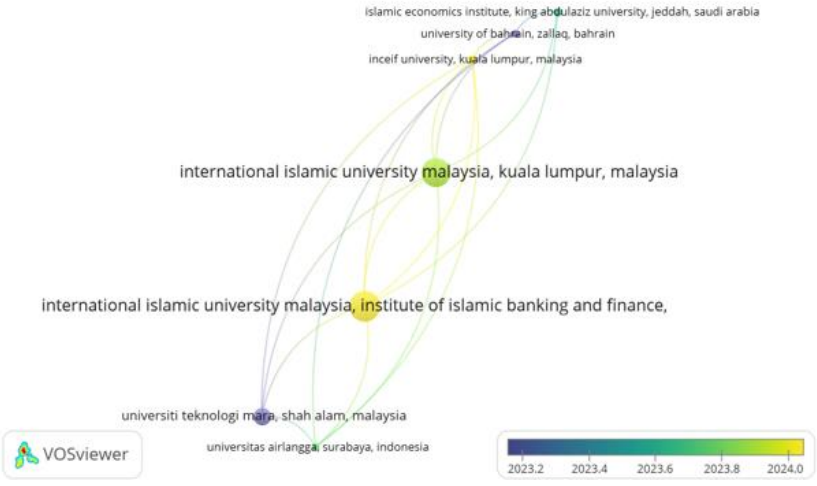

Figure 4: Visualization of Overlays on Institution Bibliographic Pairs

The image shows a visualization of the bibliographic collaboration between institutions researching the topics of green sukuk and blue sukuk. It can be seen that the International Islamic University Malaysia (IIUM), both through its main campus and the Institute of Islamic Banking and Finance, is the center of the research network with strong connections to various other universities. Significant connections are also seen with Universiti Teknologi MARA (UiTM), Airlangga University in Surabaya, INCEIF University Kuala Lumpur, the University of Bahrain, and the Islamic Economics Institute, King Abdulaziz University Jeddah. The colors on the map indicate the temporal development of research, with the most recent connections tending to appear in the 2023–2024 period. This confirms that Malaysia, particularly IIUM, plays a dominant role in connecting global institutions and leading research collaboration in the field of green and blue sukuk.

Journal Bibliography Pair

Illustration 5 shows a pair of journal bibliographies with density visualization. The density of a journal is indicated by its yellow color. The more relevant articles in a journal, the more intense the yellow color becomes. At this stage, researchers used a threshold, stating that a journal must have at least 2 articles that have received at least 13 citations. Of the 46 journals, only 8 journals met this threshold. The researchers ranked the journals based on total link strength, with Environmental Economics ranking highest with 26 total link strength, 47 citations, and 2 publications, followed in order by the Journal of Islamic Accounting and Business Research (19, 29, 3), the Journal of Islamic Marketing (18, 13, 2), Journal of Risk and Financial Management (13, 16, 2), International Journal of Energy Economics and Policy (6, 45, 3), Economics, Law, and Institutions in Asia Pacific (5, 19, 2), IOP Conference Series: Earth and Environmental Science (3, 29, 3), Journal of Sustainable Finance and Investment (0, 198, 2).

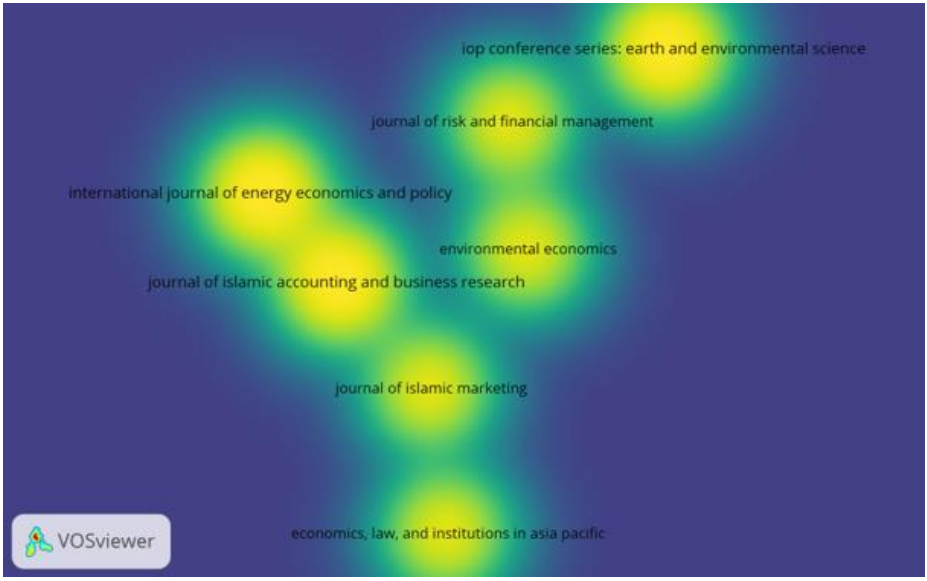

Figure 5: Visualization of Density Against Journal Bibliography Pairs

The image shows a visualization of density for journal bibliographic pairs using VOSviewer, where the yellow areas indicate a higher concentration of connectivity. It can be seen that IOP Conference Series: Earth and Environmental Science, Journal of Risk and Financial Management, and Environmental Economics have high intensity, indicating a significant role in shaping citation networks related to economics, finance, and environmental issues. On the other hand, the International Journal of Energy Economics and Policy and the Journal of Islamic Accounting and Business Research also stand out, indicating close links in energy and Islamic accounting research. Furthermore, the Journal of Islamic Marketing and Economics, Law and Institutions in Asia Pacific are rank bottom, in terms of their significant, albeit more limited contribution to the themes of Islamic marketing and institutional economics in the Asia Pacific. Overall, this density map illustrates the close interconnection between journals in three main clusters, namely environment and finance, energy and Islamic accounting, and Islamic marketing and institutional economics.

Bibliographic pairs of publications

Illustration 6, which displays a network visualization, shows bibliographic pairs from publications. At this stage, researchers use a threshold, meaning that an article must have at least 14 citations. Of the 134 publications, only 18

publications met the threshold. Setia (2021) ranks first with a total link strength of 15 and 16 citations, followed by Delle Foglie (2024) with a total link strength of 14 and 24 citations, then in order, Ulfah (2024) (13, 15), Alam (2023) (9, 31), Ibrahim (2020) (9, 14), Raeni (2022) (6, 16), Keshminder (2022) (4, 34), Liu (2021) (4, 83), Abdullah (2022) (3, 35), Alam (2016) (1, 42), Raimi (2024) (0, 15), Faisal (2023) (0, 23), Narayan (2022) (0, 24), Suroso (2022) (0.40), Azhgaliyeva (2020) (0.163), Keshminder (2019) (0.16), Siswantoro (2018) (0.16), Morea (2017) (0.40).

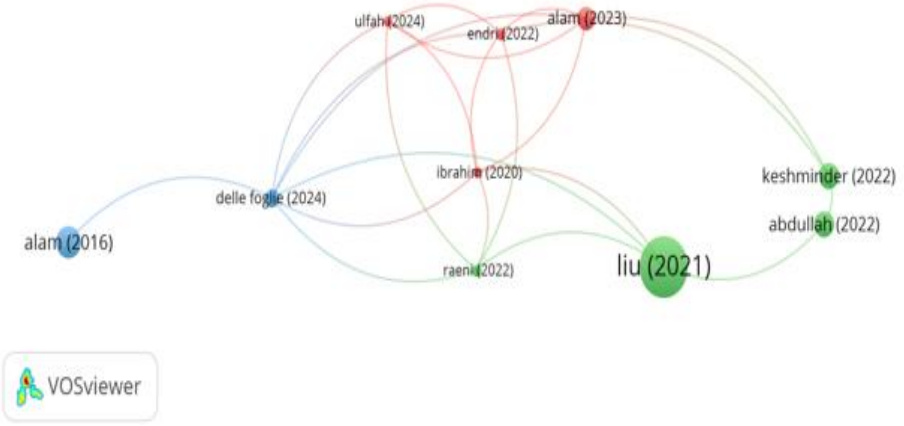

Figure 6: Network Visualization of Publication Bibliographic Pairs

The image shows a visualization of the bibliographic publication network using VOSviewer, which shows the relationships between documents based on shared citations. As can be observed, the node size of Liu (2021) is the biggest, which means that the number of citations and network links is considerable. Several other strongly interconnected documents are Alam (2023), Endri (2022), Ulfah (2024), Ibrahim (2020), and Raeni (2022), which form a red cluster and indicate thematic proximity in their studies. Meanwhile, the blue lines unite Alam (2016) and Delle Foglie (2024), meaning that there are pioneer works that bridge the other studies. Conversely, Keshminder (2022) and Abdullah (2022) fall within the green group with Liu (2021) indicating the similarity of their research focus on some areas. In general, this map demonstrates that there are three major clusters of interconnected research, and Liu (2021) becomes the center of connectivity, which confirms his status as a valuable source of information in the literature network.

Grouping of 10 documents into three main clusters based on bibliographic connections. Cluster 1 consists of Alam (2023), Endri (2022),

Ibrahim (2020), and Ulfah (2024), which describe a research network with relatively similar focuses that reinforce each other. Cluster 2 contains Abdullah (2022), Keshminder (2022), Liu (2021), and Raeni (2022), which implies that they are thematically proximate, in particular, in accounting, energy, and policy-related studies. Meanwhile, Cluster 3 contains only two documents, namely Alam (2016) and Delle Foglie (2024), which, although fewer in number, play an important role as a link to newer research. Overall, this division shows that the publication network is divided into three research groups with strong connections within each cluster, while also demonstrating continuity between older and more recent research.

Author's bibliographic pairing

Illustration 7, which shows an overlay view, displays bibliographic pairs for authors. This analysis stipulates that an author must have at least 4 published documents, with a minimum number of citations of 0. Of the total 302 authors identified in the database, only 8 authors met these criteria, with Hassan, Rusni Bt ranking first with a minimum number of publications, a total link strength of 31, 8 citations, and 13 publications. In second place is Mohd Yusoff, Syarah Syahira with a total link strength of 28, 0 citations, and 4 publications, followed by Mohd Zain, Nor Razinah (11, 2, 4), Zakariyah, Habeebullah (10, 1, 4), Keshminder, J. S. (9, 109, 4), Haron, Razali Bin (8, 15, 13), Musari, Khairunnisa (3, 17, 4), Billah, Mohd Ma Sum (0, 12, 4).

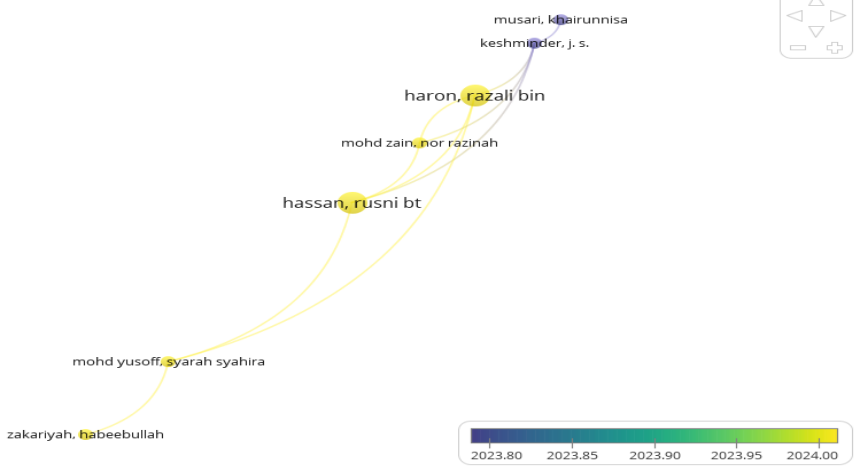

Figure 7: Visualization of Overlay on Author Bibliographic Pairs

The image shows a visualization of the interconnectedness between authors based on bibliographic pairs. Larger nodes such as Hassan, Rusni Bt and

Haron, Razali Bin indicate a central position with strong publication contributions and connectivity, while other authors such as Mohd Zain, Nor Razinah, Mohd Yusoff, Syarah Syahira, and Zakariyah, Habeebullah form a supporting network connected to the research center. Yellow to green colors indicate more recent publications (around 2023–2024), while blue colors indicate earlier publications. Musari, Khairunnisa, and Keshminder, J. S., among other authors, are on the darker side of the net showing their input in the old times. Overall, this map shows strong collaboration around Hassan and Haron, as well as ongoing research developments through 2024.

Co-occurrence of keywords from Authors

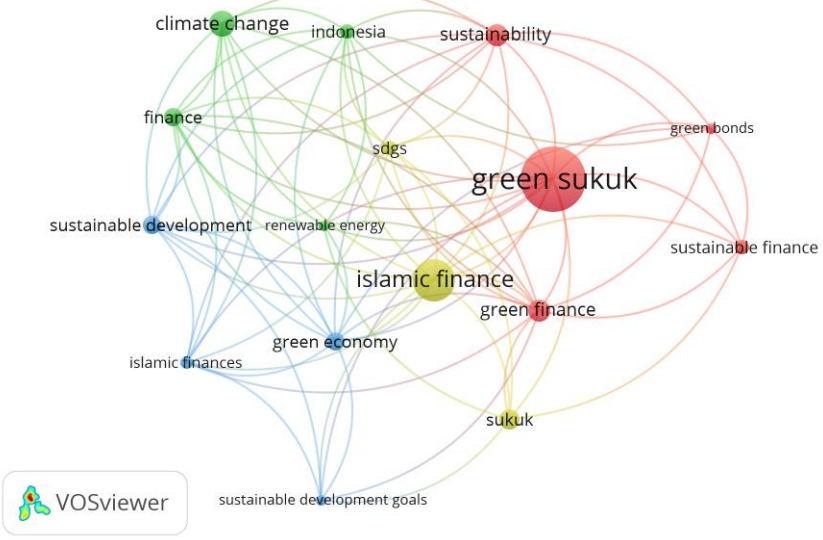

Figure 8: Network Visualization of Co-Occurrence of Author Keywords

The following image shows a visualization of the network of co-occurrences of author keywords. At this stage, researchers used a threshold, meaning that there must be at least 4 simultaneous occurrences. Of the 332 keywords, 16 keywords met the threshold. Green sukuk ranks first with 35 occurrences and a total link strength of 52, followed by the keyword Islamic finance with 21 occurrences and a total link strength of 42, then the keyword Finance with 8 occurrences and a total link strength of 26, and so on, written in the order of keyword (total link strength, occurrences), namely: Green finance (25, 10), Sustainability (24, 10), Sustainable development (23, 8), Climate change (22, 12), Green economy (22, 8), Islamic finances (22, 5), Indonesia (17, 6),

SDGs (14, 6), Sukuk (11, 9), Sustainable finance (10, 6), Green bonds (10, 4), Sustainable development goals (9, 4), Renewable energy (8, 4).

Visualization of the key word co-occurrence network reveals that the central theme of the literature is green sukuk with powerful relations to the issue of sustainability, green bonds, and sustainable finance. This topic does not stand alone, but is closely intertwined with Islamic finance, which emphasizes the integration of sharia financial principles with the sustainability agenda. The formation of several clusters confirms the multidimensional nature of green sukuk research: clusters that highlight the relationship with climate change, Indonesia, and SDGs; clusters that focus on sukuk, green finance, and Islamic finance; and clusters that emphasize the link with renewable energy, green economy, and sustainable development. This pattern of interconnection shows that green sukuk research is interdisciplinary, situated at the intersection of Islamic finance, sustainable development, and global policy. In that way, green sukuk should not be perceived as a mere Islamic financial tool but as a key tool to contribute to the green energy transition and Sustainable Development Goals.

Based on the results of keyword clustering, it appears that research on green sukuk is divided into four main clusters that complement each other. The first cluster focuses on issues of green bonds, green finance, sustainability, and sustainable finance, which confirms the close relationship between this sharia instrument and the global green finance agenda. The second cluster highlights contextual and applicative aspects through the keywords climate change, finance, Indonesia, and renewable energy, which show the important role of green sukuk in supporting energy transition and climate change mitigation, particularly in Indonesia. The third cluster relates to the dimension of development, such as green economy, sustainable development, and sustainable development goals, which show the orientation of green sukuk as a strategic instrument in realizing the sustainable development agenda. In the meantime, the fourth cluster is devoted to Islamic finance, sukuk, and SDGs, which concerns the combination of Islamic finance concepts and the objectives of global development. Overall, this mapping indicates that green sukuk research is multidimensional, connecting aspects of Islamic finance, sustainability, and global and national development policies.

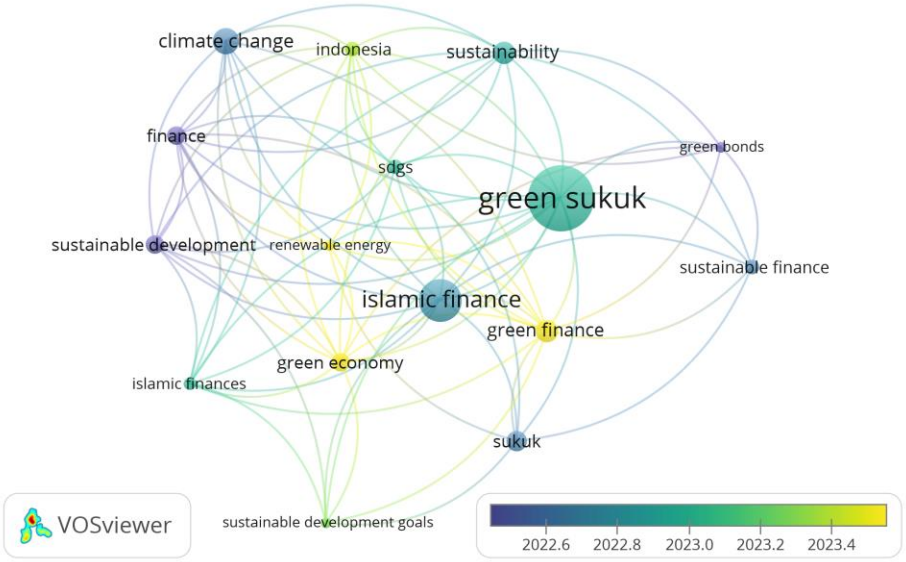

Figure 9: Visualization of Overlay Against Co-Occurrence of Author Keywords

This overlay visualization image shows the temporal development of research related to green sukuk and associated keywords. Dark blue to purple colors represent keywords that appeared earlier (around 2022), such as finance, climate change, and sustainable development, indicating that the basic issues of sustainable development and finance have been the foundation of research from the outset. Elsewhere, the keywords in green to yellow, including green sukuk, green finance, sustainability, and sustainable finance were found to be more recent (2023-2024) and represent a change in the research trajectory with regard to an integration of Islamic financial instruments with the global sustainability agenda. In addition, the strong connection between green sukuk and Islamic finance shows that current research trends are moving towards strengthening the role of Islamic instruments in supporting the green energy transition, achieving the SDGs, and developing sustainable financial markets. Thus, this map confirms that the topic of green sukuk is not only conceptually relevant but also a new frontier in Islamic finance and sustainability studies.

Limited Visibility of Blue Sukuk in the Bibliometric Structure

Though this study directly incorporates green sukuk and blue sukuk in the search term, the bibliometric results indicate a definite prevalence of green sukuk in the intellectual centre of the field. The keyword co-occurrence network, cluster formation, and density visualization reveal that the keyword green sukuk

presents as the most central and most connected one, whereas the keyword blue sukuk does not occur as a standalone cluster and high-frequency word.

Such narrow visibility does not portray a methodological flaw but constitutes the empirical reality of the field. Blue sukuk is a rather recent tool, both in practice and academic literature. Blue sukuk, in comparison with green sukuk, has seen a relatively limited amount of conceptual and exploratory literature, especially when it comes to the blue economy in general and marine sustainability, specifically.

The fact that blue sukuk does not constitute a substantial bibliometric cluster is thus a significant finding of this study. It establishes the fact that studies into Islamic sustainable finance are highly focused on green instruments, and blue sukuk is an untapped area. This is a major area that can be exploited in future studies and especially in studying the institutional structures and mechanisms, system of governance, and methods of impact assessment peculiar to blue sukuk.

In this aspect, the current research paper is not only charting the area of dominance of green sukuk but also empirically justifying the gap in research in the blue sukuk field, which underscores the need to explore more in this new area of Islamic sustainable finance.

CONCLUSION

This study maps global research trends on green sukuk and blue sukuk through a bibliometric approach based on Scopus data with the help of VOSviewer. The results of the analysis show that publications on this topic have increased significantly, especially since 2022, with the highest surge occurring in the 2024–2025 period. These findings reflect the high level of academic and practical attention to Islamic financial instruments that are oriented towards sustainability. The network visualization shows that green sukuk is a dominant keyword closely connected to the concepts of Islamic finance, sustainability, climate change, renewable energy, and SDGs, confirming the position of this research as a multidisciplinary study that links Islamic finance, sustainable development, and the global climate change mitigation agenda.

Furthermore, a bibliographic analysis of countries, institutions, journals, and authors shows that research is still concentrated in certain regions and institutions, with Indonesia occupying an important position as a pioneer in the issuance and development of green sukuk. However, the topic of blue sukuk is still relatively underdiscussed, opening up great opportunities for future research to fill this gap in the literature. Thus, this study confirms that green sukuk and

blue sukuk have significant prospects not only as innovative Sharia-based financial instruments, but also as strategic tools in supporting the transition to green energy, the blue economy, and the achievement of Sustainable Development Goals.

Bibliometric evidence used in the current study shows clearly that blue sukuk has not established a specific intellectual community yet, thus showing it as an emerging research frontier, but not a well-developed research stream.

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