

# Sustainability Reporting: A Bibliometric Analysis of Knowledge Clusters and Hotspots (2000–2026)

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## ABSTRACT

This study aims to map the intellectual structure, knowledge clusters, and emerging research hotspots in sustainability reporting literature through a comprehensive bibliometric analysis covering the period 2000–2026. Data were retrieved from the Scopus database using relevant keywords related to sustainability reporting, ESG, CSR disclosure, and non-financial reporting. The analysis was conducted using VOSviewer to examine keyword co-occurrence, overlay visualization, density mapping, and collaboration networks. The findings reveal that sustainability and sustainable development serve as the central themes, indicating their dominant role in shaping the research landscape. The results also show a significant shift from traditional corporate social responsibility toward ESG-oriented frameworks and governance-based reporting practices. Emerging hotspots such as circular economy, environmental management, and sustainable investments highlight the growing emphasis on impact-oriented and value-driven sustainability. Furthermore, the study identifies underexplored areas related to decision-making processes and environmental impact assessment, suggesting directions for future research. This study contributes to the literature by providing a systematic and longitudinal mapping of sustainability reporting research, offering insights for academics, policymakers, and practitioners in understanding its evolution and future trajectory.

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## 1. INTRODUCTION

Sustainability reporting has emerged as a critical component of modern corporate governance and accountability, reflecting the growing global concern over environmental degradation, social inequality, and ethical business practices. Organizations are increasingly expected to disclose not only their financial performance but also their environmental, social, and governance (ESG) impacts. This shift has been driven by stakeholders—including investors,

regulators, and society at large—who demand greater transparency and responsibility in business operations. As a result, sustainability reporting has evolved into a strategic communication tool that integrates economic, environmental, and social dimensions into corporate reporting frameworks [1].

The rapid expansion of sustainability reporting practices is closely linked to global sustainability agendas and regulatory developments. Initiatives such as the Global Reporting Initiative (GRI) and increasing

regulatory pressures have encouraged firms to adopt standardized reporting mechanisms. Over time, sustainability reporting has transitioned from a voluntary practice to a more regulated and institutionalized process in many regions. This transformation reflects the recognition that sustainability information is essential for long-term value creation and risk management. Furthermore, the integration of ESG criteria into investment decisions has reinforced the importance of sustainability disclosures in financial markets [2], [3].

From an academic perspective, sustainability reporting has gained significant attention, resulting in a substantial increase in scholarly publications over the past two decades. Bibliometric evidence indicates that research output in this field has grown exponentially, particularly since the mid-2000s, reflecting heightened academic and practical interest. This growth is attributed to the increasing relevance of sustainability issues in business strategy, policy-making, and stakeholder engagement. Scholars have explored various dimensions of sustainability reporting, including its determinants, impacts, quality, and credibility, contributing to a diverse and multidisciplinary body of knowledge [4].

Despite the growing volume of research, the intellectual structure of sustainability reporting remains complex and fragmented. Different research streams have emerged, focusing on themes such as corporate social responsibility (CSR), ESG disclosure, integrated reporting, and environmental accounting. Bibliometric studies have identified distinct knowledge clusters within the field, highlighting the interconnectedness of these themes. For instance, prior research reveals clusters related to social impact, governance mechanisms, financial implications, and environmental performance, indicating that sustainability reporting is a multifaceted and evolving domain [5].

In recent years, the focus of sustainability reporting research has expanded to include emerging topics such as digitalization, artificial intelligence, and

climate-related disclosures. These developments reflect the dynamic nature of the field and the need for continuous adaptation to new challenges and opportunities. Moreover, there is an increasing emphasis on the quality, comparability, and reliability of sustainability information, as well as the risks of greenwashing and superficial disclosures. Consequently, understanding the evolution of research trends, knowledge clusters, and emerging hotspots is essential for advancing both academic inquiry and practical implementation of sustainability reporting [4].

Although sustainability reporting research has expanded significantly, there remains a lack of comprehensive and up-to-date bibliometric analyses that systematically map the knowledge structure, thematic clusters, and emerging research hotspots over an extended period, particularly from 2000 to 2026. Existing studies often focus on limited time frames, specific regions, or particular aspects of sustainability reporting, resulting in fragmented insights and an incomplete understanding of the field's evolution. Furthermore, the rapid development of new themes—such as ESG integration, digital transformation, and regulatory changes—has created a need for updated analyses that capture current trends and future directions. Without a holistic bibliometric assessment, scholars and practitioners may face challenges in identifying key research areas, influential contributions, and gaps that require further investigation.

This study aims to conduct a comprehensive bibliometric analysis of sustainability reporting literature from 2000 to 2026 in order to map the intellectual structure, identify major knowledge clusters, and uncover emerging research hotspots.

## 2. METHODS

This study employs a bibliometric analysis approach to systematically examine the development of sustainability reporting research from 2000 to 2026. Bibliometric analysis is a quantitative method used to evaluate large volumes of academic literature

by identifying patterns, trends, and relationships within a specific research field [6]. The method is particularly suitable for mapping the intellectual structure and evolution of sustainability reporting, as it enables the identification of influential publications, authors, institutions, and thematic areas. By applying bibliometric techniques, this study aims to provide a comprehensive and objective overview of the knowledge landscape and emerging research directions in sustainability reporting.

The data for this study are collected from reputable academic databases, such as Scopus and Web of Science, which are widely recognized for their extensive coverage of peer-reviewed literature. A structured search

strategy is applied using relevant keywords, including “sustainability reporting,” “ESG disclosure,” “corporate social responsibility reporting,” and “integrated reporting.” The search is limited to publications in English and covers the period from 2000 to 2026 to capture the longitudinal development of the field. After the initial retrieval, the dataset is refined through inclusion and exclusion criteria, such as removing duplicates, non-relevant documents, and incomplete records. The final dataset consists of high-quality publications suitable for bibliometric analysis.

### 3. RESULTS AND DISCUSSION

#### 3.1 Network Visualization

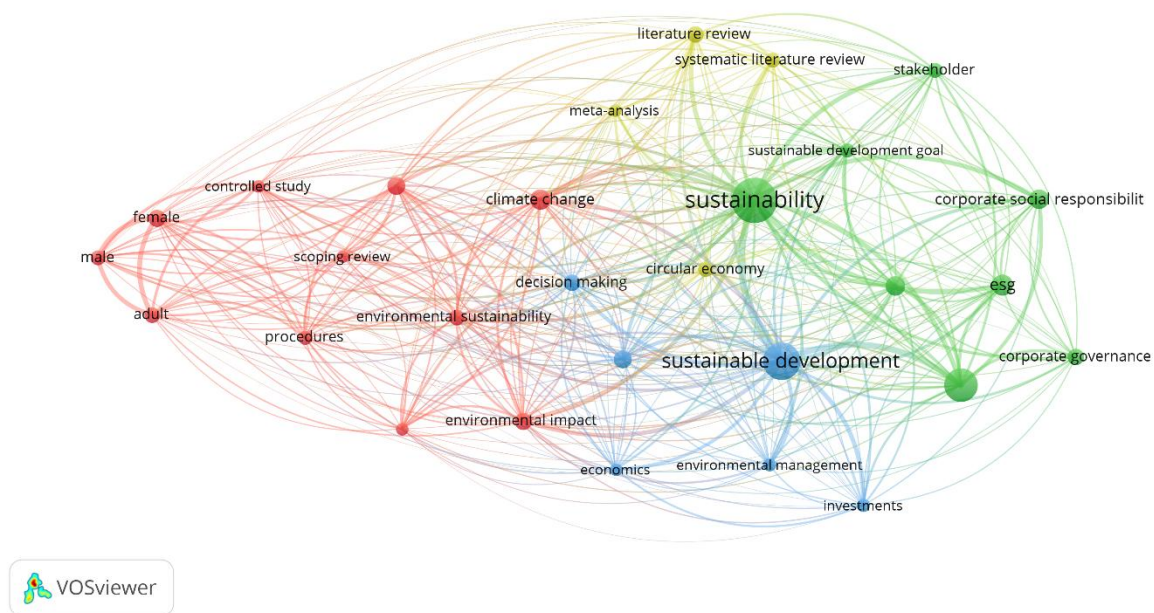


Figure 1. Network Visualization

Source: Data Analysis Result, 2026

Figure 1 reveals a structured intellectual landscape of sustainability reporting research, characterized by several distinct yet interconnected clusters. The visualization highlights how keywords are grouped based on their co-occurrence frequency, indicating thematic concentrations within the literature. The size of the nodes reflects the prominence of specific topics, while the proximity and link strength illustrate the degree of conceptual relatedness. Overall, the map suggests that

sustainability reporting research is both multidisciplinary and evolving, with strong integration across environmental, governance, and development-oriented themes.

The green cluster appears to represent the core governance and ESG-oriented discourse. Keywords such as sustainability, ESG, corporate governance, corporate social responsibility, and stakeholder dominate this cluster, indicating that a substantial portion of the literature



Provides insight into the temporal evolution of sustainability reporting research, where colors indicate the relative recency of topics (from older in blue to more recent in yellow). The map shows that earlier studies were concentrated around general and foundational terms such as corporate social responsibility, stakeholder, and demographic or methodological descriptors like male, female, and controlled study. These themes reflect the initial phase of the literature, where sustainability reporting was still closely tied to CSR discourse and exploratory empirical approaches, often lacking standardized frameworks.

As the field evolved, a transition toward more integrated and strategic themes becomes evident in the green spectrum. Keywords such as sustainability, ESG, corporate governance, and climate change indicate a shift toward formalized reporting practices and the incorporation of sustainability into corporate strategy and governance mechanisms. This stage reflects the growing influence of global standards and regulatory pressures, where sustainability

reporting is no longer voluntary but increasingly institutionalized. The strong interconnections among these terms suggest that governance, environmental concerns, and stakeholder accountability have become central pillars of contemporary research.

In the most recent phase, highlighted in yellow, the literature shows a clear movement toward forward-looking and solution-oriented topics. Keywords such as sustainable development, circular economy, environmental management, investments, and economics dominate this layer, indicating a shift from reporting practices to impact-oriented and value-driven sustainability. This suggests that current research is increasingly concerned with how sustainability reporting contributes to broader development goals, financial decision-making, and sustainable business models. The emergence of circular economy as a hotspot further underscores the integration of sustainability into systemic economic transformation, marking a new frontier in the field.

### 3.3 Citation Analysis

Table 1. Top Cited Research

| Citations | Authors and year | Title   | Source  |
|-----------|------------------|---|---|
| 2445      | [7]              | Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis                   | Accounting, Organizations and Society, 33(4-5), pp. 303-327 |
| 2150      | [8]              | Safeguarding human health in the Anthropocene epoch: Report of the Rockefeller Foundation-Lancet Commission on planetary health | Lancet, 386(10007), pp. 1973-2028                           |
| 1505      | [9]              | Sustainable operations management   | Production and Operations Management, 14(4), pp. 482-492    |
| 1361      | [10]             | Sustainable development: Meaning, history, principles, pillars, and implications for human action: Literature review            | Cogent Social Sciences, 5(1), 1653531                       |
| 1353      | [11]             | Dynamics of global forest area: Results from the FAO Global Forest Resources Assessment 2015                                    | Forest Ecology and Management, 352, pp. 9-20                |
| 1279      | [12]             | Ionic liquid processing of cellulose  | Chemical Society Reviews, 41(4), pp. 1519-1537              |

|      |      |   |   |
|------|------|---|---|
| 1194 | [13] | Determinants of sustainability reporting: A review of results, trends, theory, and opportunities in an expanding field of research                            | Journal of Cleaner Production, 59, pp. 5–21             |
| 955  | [14] | Is accounting for sustainability actually accounting for sustainability...and how would we know? An exploration of narratives of organisations and the planet | Accounting, Organizations and Society, 35(1), pp. 47–62 |
| 937  | [15] | W(h)ither Ecology? The Triple Bottom Line, the Global Reporting Initiative, and Corporate Sustainability Reporting  | Journal of Business Ethics, 118(1), pp. 13–29           |
| 913  | [16] | Scrutiny, norms, and selective disclosure: A global study of greenwashing   | Organization Science, 27(2), pp. 483–504                |

Source: Scopus, 2026

### 3.4 Density Visualization

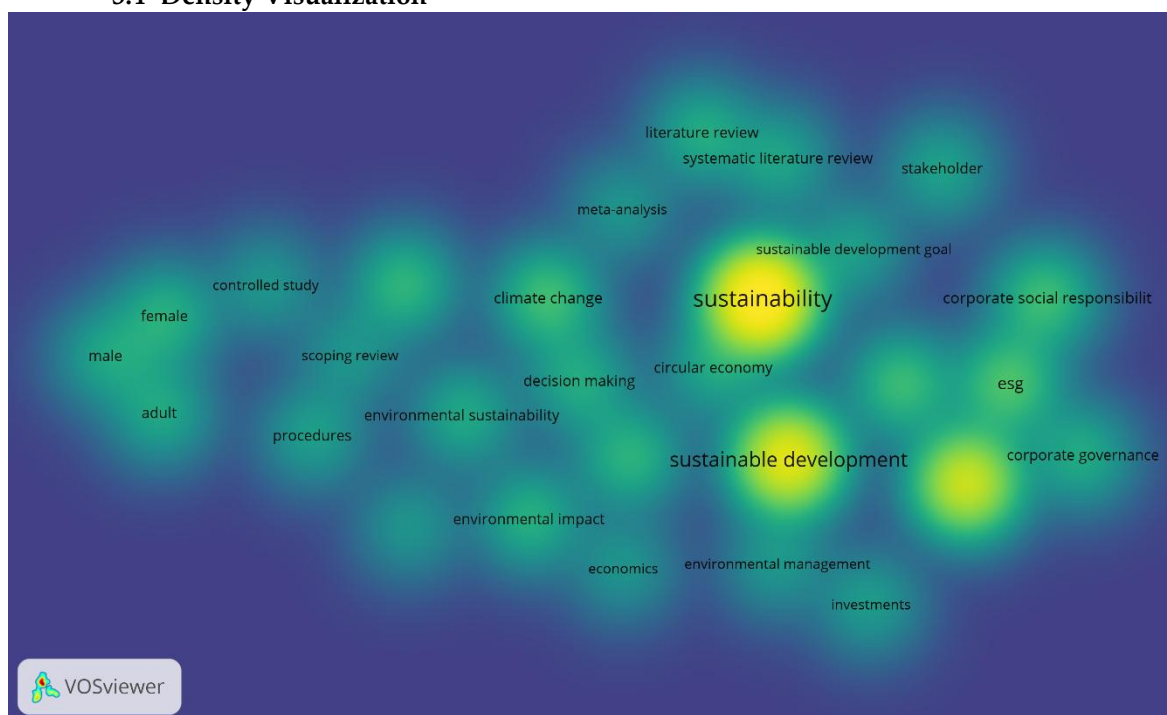


Figure 3. Density Visualization

Source: Data Analysis Result, 2026

Figure 3 highlights the intensity and concentration of research topics in sustainability reporting literature. Areas shown in bright yellow indicate the most frequently studied and highly connected keywords, with sustainability and sustainable development emerging as the central and most dominant themes. These core concepts act as the intellectual backbone of the field, linking various subtopics such as corporate governance, ESG, and corporate social responsibility. The strong density around these terms suggests that the literature has largely converged on understanding sustainability reporting as a strategic tool for

aligning corporate practices with broader development and governance objectives.

In contrast, areas with lower density (green to blue) represent less explored or emerging research areas, such as environmental impact, decision making, climate change, and methodological terms like scoping review and meta-analysis. While these topics are connected to the core themes, their relatively lower intensity indicates opportunities for further research development. Notably, the presence of circular economy and environmental management in moderately dense zones suggests growing but still expanding interest in linking sustainability reporting with

operational and systemic environmental strategies.

### 3.5 Discussions

The findings of this bibliometric analysis reveal that sustainability reporting research has evolved into a highly interconnected and multidisciplinary field, with sustainability and sustainable development serving as its central intellectual anchors. The dominance of these themes reflects the increasing alignment of corporate reporting practices with global sustainability agendas, particularly in the context of long-term value creation and accountability. From a theoretical perspective, this reinforces the relevance of stakeholder theory and legitimacy theory, where organizations disclose sustainability information to meet stakeholder expectations and maintain social legitimacy. The strong linkage between sustainability reporting and governance-related terms further indicates that reporting is no longer merely symbolic but has become an integral component of corporate strategy and institutional compliance.

The cluster and density analyses also highlight the growing prominence of ESG, corporate governance, and corporate social responsibility within the literature. This suggests a shift from traditional CSR narratives toward more structured and measurable ESG frameworks. Such a transition reflects the increasing demand for standardized, comparable, and decision-useful sustainability information, particularly among investors and regulators. In line with agency theory, sustainability reporting can be understood as a mechanism to reduce information asymmetry between management and stakeholders, especially in capital markets where non-financial disclosures are becoming critical for investment decisions. The strong density around governance-related terms further

emphasizes the role of regulatory pressure and institutional norms in shaping reporting practices globally.

Another important finding is the temporal shift toward more applied and forward-looking topics, such as circular economy, environmental management, and sustainable investments. This indicates that the literature is moving beyond disclosure practices toward understanding the real impact of sustainability initiatives on business models and economic systems. The emergence of these themes reflects the integration of sustainability reporting into operational and strategic decision-making processes. In this context, institutional theory provides a useful lens to explain how organizations adapt their reporting practices in response to evolving environmental expectations, regulatory frameworks, and industry standards. This transition also signals a broader paradigm shift from compliance-driven reporting to value-driven sustainability integration.

Despite the maturity of core themes, the analysis also identifies several underexplored or less dense areas, such as environmental impact assessment, decision-making processes, and interdisciplinary methodological approaches. These gaps suggest that while sustainability reporting has been widely studied at a conceptual and governance level, there is still limited research on how such reporting influences actual managerial decisions and environmental outcomes. Additionally, the presence of methodological terms such as systematic literature review and meta-analysis indicates a growing effort to consolidate knowledge, yet also highlights the need for more empirical and longitudinal studies. Future research could therefore focus on bridging the gap between reporting practices and real-world sustainability performance.

#### 4. CONCLUSION

This study concludes that sustainability reporting research has evolved into a mature and increasingly strategic field, characterized by the central dominance of sustainability and sustainable development themes, alongside the growing integration of ESG, corporate governance, and stakeholder-oriented perspectives. The bibliometric evidence indicates a clear transition from traditional CSR-focused discourse toward

more structured, measurable, and impact-driven reporting practices. At the same time, emerging topics such as circular economy, environmental management, and sustainable investments signal a shift toward linking reporting with real economic and environmental outcomes. Despite this progress, gaps remain in understanding the practical implications of sustainability reporting on decision-making and performance, highlighting opportunities for future research.

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