



From Green Vision to Action: How Responsible Leadership Fosters Pro-Environmental Behavior

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ABSTRACT

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Environmental degradation and climate change have intensified the need to understand how leadership translates organizational sustainability commitments into concrete employee actions. This study provides a systematic bibliometric overview of research on responsible leadership and pro-environmental behavior (PEB), mapping publication trends and thematic evolution within this emerging field. Using a bibliometric research design, data were retrieved from the Scopus database on 26 November 2025, covering peer-reviewed publications published between 2010 and 2025. Based on the search query, a final dataset of 35 documents (N = 35) was obtained. Bibliometric analyses were conducted using VOSviewer, including co-authorship, keyword co-occurrence, and overlay visualization. The results show a marked increase in publications after 2021, reflecting rising scholarly interest in responsible leadership as a sustainability-oriented leadership paradigm. The literature is structured into five interrelated thematic clusters: environmental sustainability and green culture; green HRM and innovation; employee-level psychological and behavioral mechanisms; ethical and social foundations grounded in social learning theory; and leadership mechanisms emphasizing green self-efficacy and shared environmental vision. Overlay analysis indicates a thematic shift from ethics-oriented discussions toward strategic and performance-driven sustainability outcomes. By focusing explicitly on responsible leadership, this study offers leadership-specific insights relevant to leadership development, HRM practices, and organizational sustainability policy.

1. INTRODUCTION

Environmental degradation, climate change, and resource depletion present urgent global challenges that require concerted action from multiple societal actors. Organizations are pivotal in this endeavor because their operational practices and institutional values significantly influence environmental outcomes. Within organizations, pro-environmental behavior (PEB) refers to voluntary employee actions that contribute to environmental sustainability and represents a key mechanism through which organizational environmental goals are achieved [1]. Recent research shows that interest in PEB has surged, reflecting its critical importance in realizing global environmental targets such as the United Nations Sustainable Development Goals (SDGs) [1, 2].

Leadership has emerged as a central determinant of PEB [3]. Leaders shape organizational values, influence employee attitudes, and model behaviors that employees may internalize, thus fostering a green organizational climate [4]. Among leadership styles studied in the context of environmental outcomes, responsible leadership has gained prominence because it integrates ethical, stakeholder-oriented, and environmental imperatives into organizational decision-making. Responsible leaders are defined as individuals who

consider social and ecological interests alongside economic performance and who engage stakeholders in pursuit of sustainable value creation [4, 5]. By prioritizing the welfare of both internal and external stakeholders, responsible leadership aligns organizational objectives with environmental stewardship and thereby encourages employees to engage in pro-environmental practices.

Empirical studies indicate that responsible leadership positively influences employees' PEB directly and through mediating psychological and contextual mechanisms. For example, responsible leadership has been shown to increase employees' environmental awareness and low-carbon behaviors by shaping environmental consciousness and reducing environmental apathy [6]. Furthermore, research based on field data indicates that responsible leadership predicts employees' PEB and that underlying mechanisms such as perceived organizational support toward the environment and green self-efficacy play mediating roles [6]. Additional studies find that responsible leadership's influence on PEB may operate through constructs such as organizational commitment, green shared vision, and internal environmental locus of control [7, 8].

Despite this growing body of research, the literature remains scattered and has not yet been systematically mapped

using bibliometric methods to clarify intellectual foundations, publication trends, dominant themes, and emerging research fronts. Prior systematic literature reviews and bibliometric studies have explored PEB generally [1] or ethical influences on PEB [9], but an integrative bibliometric analysis that focuses on responsible leadership and PEB specifically is lacking. A comprehensive bibliometric overview can reveal the knowledge structure and developmental trajectory of this interdisciplinary field, thereby guiding future research and informing theoretical refinement.

To address this gap, this study conducts a bibliometric analysis of research on responsible leadership and PEB. By synthesizing publications indexed in major academic databases, this study aims to (1) map publication trends and influential contributions, (2) identify intellectual and thematic clusters, and (3) propose future research directions. Through this integrative lens, the present study enhances conceptual clarity and supports the advancement of sustainability leadership research.

2. LITERATURE REVIEW

2.1 Responsible leadership as a driver of sustainability

Responsible leadership has emerged as a critical leadership paradigm in response to growing societal and environmental challenges faced by contemporary organizations. Rooted in stakeholder theory and ethical leadership perspectives, responsible leadership emphasizes accountability, inclusiveness, and long-term value creation for both internal and external stakeholders [10-12]. Unlike traditional leadership models that prioritize short-term financial outcomes, responsible leadership integrates economic, social, and environmental considerations into strategic decision making, thereby aligning organizational objectives with SDGs.

Responsible leadership integrates values, ethics, and stakeholder relationships to achieve shared organizational goals. The personal dimension of this leadership style emphasizes leaders' individual attributes, including moral character, integrity, and ethical conduct. Leaders are expected to demonstrate virtues such as wisdom, justice, and temperance, which positively influence organizational commitment and performance [13]. At the organizational level, responsible leadership involves creating an ethical climate, promoting transparency, and supporting sustainable growth. Leaders are accountable for fostering long-term organizational development and sustainability [14, 15].

Recent scholarship highlights that responsible leaders play a pivotal role in shaping organizational values and norms related to environmental stewardship. By articulating a clear green vision and embedding sustainability into organizational practices, responsible leaders signal the importance of environmental responsibility to employees [5, 14]. Such leadership behaviors foster a moral and psychological climate in which employees perceive environmental engagement as both meaningful and legitimate, strengthening their motivation to act in environmentally responsible ways.

2.2 Pro-environmental behavior in organizational contexts

PEB refers to voluntary employee actions that contribute to

environmental sustainability, such as energy conservation, waste reduction, and eco-innovation beyond formal job requirements [16]. In organizational settings, PEB is increasingly recognized as a key mechanism through which corporate environmental strategies are translated into tangible outcomes [17]. Employees' willingness to engage in PEB is influenced not only by individual values but also by contextual and leadership factors.

Recent empirical studies demonstrate that leadership styles emphasizing ethics, responsibility, and sustainability significantly enhance employee PEB by fostering environmental awareness and psychological ownership [7, 18-20]. Responsible leadership, in particular, encourages employees to internalize environmental goals by emphasizing shared responsibility and stakeholder impact. This alignment between leadership values and employee behavior is critical for ensuring that organizational green visions are effectively enacted at the operational level.

2.3 Linking responsible leadership and pro-environmental behavior

The relationship between responsible leadership and PEB is increasingly examined through social exchange and social learning lenses. Responsible leaders serve as ethical role models whose decisions and behaviors signal environmental values that employees are likely to observe and emulate, fostering a climate of trust and reciprocal responsibility within the organization. When leaders demonstrate a genuine commitment to environmental stewardship and stakeholder-oriented decision-making, employees perceive fair treatment and organizational support, which cultivates trust and motivates them to reciprocate through discretionary pro-environmental actions such as voluntary workplace green behaviors and organizational citizenship for the environment [12, 18]. For example, research shows that responsible leaders are respected and trusted by employees as moral role models whose behavior prompts employees to adopt environmentally responsible practices [12]. This process of behavioral modeling and reciprocal motivation is consistent with social exchange theory, which suggests that employees respond to perceived organizational support and ethical leadership with positive, extra-role behaviors.

Recent studies suggest that responsible leadership indirectly influences PEB through mediating mechanisms such as environmental commitment, psychological empowerment, and green self-efficacy. Responsible leaders enhance employees' access to environmental job and personal resources, including perceived organizational support for environmental practices and green self-efficacy, which in turn stimulate voluntary pro-environmental actions [6, 21]. Moreover, broader leadership research indicates that psychological empowerment and related resource-based mechanisms can mediate the positive effects of sustainability-oriented leadership on employees' environmentally responsible behaviors (e.g., studies on servant and empowering leadership styles) through enhanced psychological empowerment and confidence in executing green behaviors [21-23]. These findings collectively highlight that mediating psychological processes are key to understanding how responsible leadership translates into employee PEB.

3. RESEARCH METHODS

3.1 Research design

This study adopts a bibliometric research design to systematically map, evaluate, and synthesize the scientific literature on responsible leadership and PEB. Bibliometric analysis is particularly suitable for identifying intellectual structures, thematic evolution, influential contributors [24], and emerging research fronts within a growing body of knowledge [25]. By employing quantitative techniques to analyze large volumes of bibliographic data, this approach enables an objective and comprehensive overview of how responsible leadership translates environmental vision into employee-level action.

3.2 Data source, search strategy and data screening

The bibliographic data were retrieved from the Scopus database, which is widely recognized for its extensive coverage of high-quality peer-reviewed journals in management, environmental studies, and social sciences. Scopus was selected to ensure data reliability, citation consistency, and compatibility with bibliometric software.

The bibliographic data were retrieved from the Scopus database on 26 November 2025 using the following query applied to titles, abstracts, and author keywords: TITLE-ABS-KEY (“responsible leadership” AND (“pro-environmental behavior” OR “pro-environmental behaviour”)). The search was intentionally restricted to the exact term “responsible leadership” to ensure construct clarity; conceptually related leadership styles (e.g., ethical leadership, responsible management, sustainable leadership) were excluded unless the term explicitly appeared. Inclusion criteria comprised English-language journal articles, review papers, conference papers, and book chapters published between 2010 and 26 November 2025. Editorials, notes, and studies lacking an explicit link between responsible leadership and employee-level PEB were excluded, resulting in a final dataset of 35 documents.

A total of 35 eligible documents were identified through the

search process. By document type, journal articles accounted for 28 publications (80.00%), followed by books with 2 publications (5.71%), conference papers with 2 publications (5.71%), review papers with 2 publications (5.71%), and book chapters with 1 publication (2.86%). Regarding open access status, 23 documents were available as open access (65.71%). Among these, 22 publications were classified as gold open access (62.86%), 9 as green open access (25.71%), and 1 as hybrid gold (2.86%).

3.3 Bibliometric analysis technique

The bibliometric analysis was performed using VOSviewer, a widely adopted tool for visualizing and analyzing scientific knowledge structures [26]. To capture the field’s dynamic development, a thematic evolution analysis was applied by dividing the study period into meaningful time slices. This approach illustrates how early conceptual foundations of responsible leadership have progressively evolved toward behavioral outcomes, including PEB and environmental commitment.

4. RESULTS

Regarding publication trends by year, the distribution shows a highly recent concentration of studies. One publication appeared in 2012 (2.86%), while no publications were recorded between 2013 and 2020 (0.00%). Scholarly output began to increase in 2021 with 5 publications (14.29%), followed by 3 publications in 2022 (8.57%). The number rose again in 2023 and 2024, with 5 publications each year (14.29% each). The highest volume was observed in 2025, with 16 publications accounting for 45.71% of the total dataset. This indicates a growing recognition of the need to move beyond aspirational green visions toward actionable leadership practices that promote PEB. This surge reflects heightened awareness of sustainability challenges and the increasing expectation that leaders play an active role in shaping environmentally responsible actions within organizations.

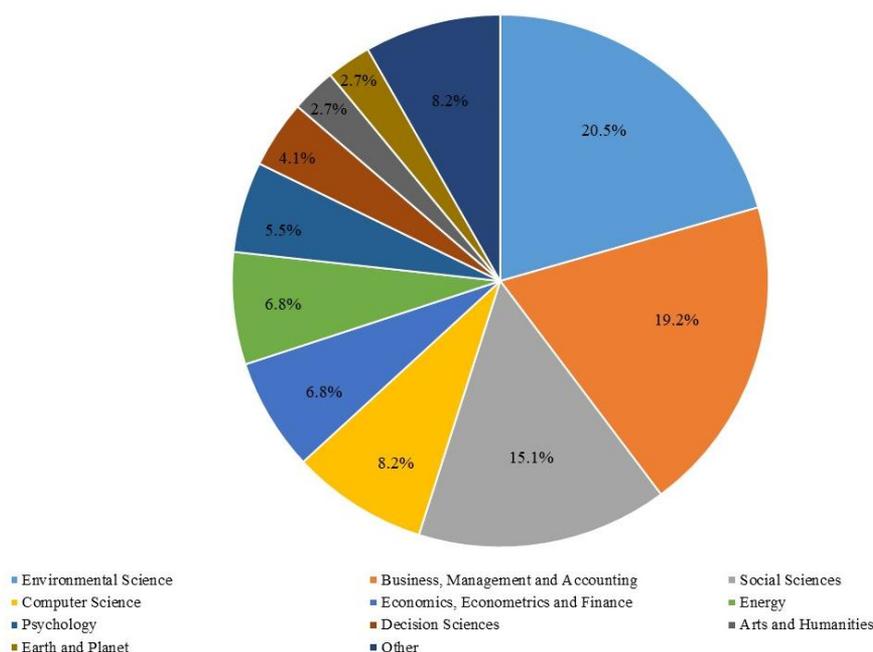


Figure 1. Documents by subject area

Related to subject area, Figure 1 indicates that the literature is distributed across multiple disciplines, reflecting the interdisciplinary nature of the topic. Environmental Science represents the largest share with 15 documents (20.5%), followed closely by Business, Management and Accounting with 14 documents (19.2%), and Social Sciences with 11 documents (15.1%). Computer Science contributes 6 documents (8.2%), while Economics, Econometrics and Finance and Energy each account for 5 documents (6.8%). Psychology is represented by 4 documents (5.5%), and Decision Sciences by 3 documents (4.1%). Smaller contributions are observed in Arts and Humanities, Earth and Planetary Sciences, and Medicine, each with 2 documents.

Agricultural and Biological Sciences, Mathematics, Multidisciplinary studies, and Physics and Astronomy each contribute 1 document. This distribution highlights that research on responsible leadership and PEB spans environmental, managerial, social, and technical perspectives.

Although the final dataset consists of 35 unique documents, the subject-area distribution is based on Scopus' multi-assignment classification, whereby a single publication may be indexed under multiple subject areas. Consequently, the reported percentages are calculated using the total number of subject-area assignments rather than the number of unique documents, which explains the apparent discrepancy.

Table 1. Top-5 most cited articles in the field

Rank	Document title	Authors	Source	Year	Citations
1	CEO environmentally responsible leadership and firm environmental innovation: A socio-psychological perspective	Wang, Y., Shen, T., Chen, Y., Carmeli, A.	Journal of Business Research, 126: 327-340	2021	90
2	Sustainable business performance: Examining the role of green HRM practices, green innovation and responsible leadership through the lens of pro-environmental behavior	Liu, R., Yue, Z., Ijaz, A., Lutfi, A., Mao, J.	Sustainability, 15(9): 7317	2023	71
3	The trickle-down effect of responsible leadership on employees' pro-environmental behaviors: Evidence from the hotel industry in China	Tian, H., Suo, D.	International Journal of Environmental Research and Public Health, 18(21): 11677	2021	36
4	Sustaining the earth: Unraveling the synergy of workplace spirituality, responsible leadership, and pro-environmental behavior in Pakistan's SMEs	Shah, S.H.A., Fahlevi, M., Jamshed, K., Aman, N., Rafiq, N., Jermsittiparsert, K., Aljuaid, M.	Psychology Research and Behavior Management, 16: 3075-3093	2023	28
5	How does globally responsible leadership promote pro-environmental behavior through green management initiatives?	Rafiq, M., Cham, T.H., Tapsir, S.H., Mansoor, A., Farrukh, M.	Journal of Global Responsibility, 15(4): 466-484	2024	21

Table 1 presents the top five most cited articles in the field of responsible leadership and PEB, highlighting the most influential scholarly contributions that have shaped this research domain. The most cited article, by Wang et al. [27], emphasizes CEO environmentally responsible leadership and its role in driving firm-level environmental innovation from a socio-psychological perspective, with 90 citations. This dominance suggests that top management leadership and psychological mechanisms are foundational themes in the literature, serving as a theoretical anchor for subsequent studies examining leadership-driven environmental outcomes. The second-ranked study, by Liu et al. [28], extends responsible leadership focus by integrating green human resource management (HRM) practices and green innovation, positioning PEB as a key explanatory mechanism for sustainable business performance.

The third and fourth articles demonstrate a shift toward

employee-level behaviors and contextual applications. Tian and Suo [29] highlighted the trickle-down effect of responsible leadership on employees' PEB within the hotel industry in China, underscoring the importance of sector-specific and cultural contexts. Similarly, Shah et al. [30] introduced complementary constructs such as workplace spirituality in SMEs, suggesting an emerging stream that combines responsible leadership with individual values and organizational climate to explain PEB.

The fifth article, published in 2024 by Rafiq et al. [5], reflects the most recent scholarly direction by examining globally responsible leadership and its influence on PEB through green management initiatives. Although its citation count is comparatively lower due to recency, its inclusion signals an expanding interest in global and strategic perspectives of responsible leadership.

Table 2. Top-4 journals in the field

Rank	Journal	Publisher	Documents	Citations	SJR 2024	Quartile
1	Sustainability Switzerland	MDPI	5	273	0.688	Q1: Geography, planning and development
2	Frontiers in Sustainability	Frontiers Media S.A.	3	3	0.647	Q2: Environmental science
3	Sustainable Futures	Elsevier	2	10	0.923	Q1: Management science and operations research
4	Frontiers in Psychology	Frontiers Media S.A.	2	13	0.872	Q2: Psychology

Table 2 highlights the top four journals that have made the most significant contributions to the literature on responsible leadership and PEB, based on publication volume, citation impact, and journal quality indicators. *Sustainability (Switzerland)* ranks first, with the highest number of published documents (five) and a substantially higher citation count (273) compared to other journals. Its Q1 ranking in Geography, Planning and Development, together with a solid SJR value of 0.688, indicates that it serves as a central outlet for high-impact research linking leadership, sustainability, and PEB. This dominance suggests that scholars frequently select this journal to disseminate integrative and policy-relevant sustainability research.

Frontiers in Sustainability occupies the second position in terms of document volume, although its citation impact remains relatively modest. Its Q2 status in Environmental Science and SJR score of 0.647 indicate that it functions as an

emerging platform for sustainability-focused leadership studies, particularly those emphasizing environmental dimensions and interdisciplinary approaches. The third-ranked journal, *Sustainable Futures*, despite publishing fewer articles, demonstrates a comparatively strong SJR score (0.923) and Q1 classification in Management Science and Operations Research. This pattern suggests that although the volume of publications is limited, the journal attracts conceptually robust and methodologically rigorous studies with high relevance to strategic management and future-oriented sustainability research.

Frontiers in Psychology ranks fourth and reflects the psychological foundations of PEB research. Its Q2 status in Psychology and moderate citation count highlight the growing recognition of individual-level mechanisms, such as attitudes, values, and motivation, in explaining how responsible leadership shapes PEB.

Table 3. Top-3 authors in the field

Rank	Authors	Affiliation	Documents	Citations	H-index
1	Maqsoom, A.	Mohammed VI Polytechnic University, Morocco	2	12	31
2	Shah, S.H.A.	Bahria University, Pakistan	2	32	13
3	Jamshed, K.	University of G. d'Annunzio Chieti and Pescara, Italy	2	32	6

Table 3 presents the top three most influential authors in the field of responsible leadership and PEB, based on publication output, citation impact, and individual scholarly influence as reflected by the h-index. This provides insight into key contributors who have shaped the intellectual development of the field across different institutional and geographical contexts.

Maqsoom, A., affiliated with Mohammed VI Polytechnic University in Morocco, ranks first in terms of citation volume, with two published documents receiving a total of 31 citations and an h-index of 12. This profile suggests that although the publication count is limited, Maqsoom's work has achieved notable visibility and influence, indicating strong resonance with ongoing debates on leadership and environmental responsibility.

Shah, S.H.A., from Bahria University in Pakistan, ranks second and demonstrates the highest citation count among the three authors, with 32 citations across two publications, alongside an h-index of 13. This combination of citation impact and h-index reflects sustained scholarly engagement and a relatively mature research trajectory, positioning Shah as a central contributor to empirical and conceptual advancements in the field. In addition, Jamshed, K., affiliated with the University of G. d'Annunzio Chieti and Pescara in Italy, occupies the third position, also with two documents and 32 citations, but a comparatively lower h-index of 6. This pattern suggests emerging but impactful contributions, particularly through collaborative research that has gained recognition within a short period.

Table 4. Top-5 affiliations and countries in the field

Rank	Affiliations	Documents	Citations	Rank	Country	Documents	Citations
1	King Faisal University	5	92	1	Pakistan	9	293
2	Southwestern University of Finance and Economics	2	161	2	Saudi Arabia	8	122
3	Applied Science Private University	2	71	3	China	7	237
4	Bahria University	2	32	4	Malaysia	7	198
5	King Saud University	2	28	5	Australia	3	12

Table 4 summarizes the top five institutional affiliations and countries contributing to research on responsible leadership and PEB, based on publication output and citation impact. The findings highlight the pivotal role of both institutional capacity and national research environments in shaping scholarly productivity and international visibility within this emerging field.

King Faisal University ranks first in terms of publication volume, with five documents accumulating 92 citations. This indicates consistent research engagement and sustained institutional focus on leadership and environmental responsibility themes, positioning the university as a key contributor to the field. In contrast, the Southwestern University of Finance and Economics records only two publications but achieves the highest citation count of 161.

This pattern suggests that although the institution's output is limited, its contributions are highly influential, likely reflecting publications in high-impact journals or studies addressing core theoretical or methodological issues within the domain.

Applied Science Private University ranks third, with two documents and 71 citations, demonstrating a balance between productivity and impact. Bahria University and King Saud University follow, each contributing two publications with more moderate citation counts, indicating emerging institutional involvement and growing scholarly recognition.

Moreover, with regard to countries' contributions to research on responsible leadership and PEB, Pakistan ranks first in terms of publication output, producing nine documents that collectively received 293 citations. This notable scholarly

impact suggests that Pakistan has emerged as a leading center for research in this domain, with its studies achieving substantial international visibility and making meaningful contributions to both theoretical advancement and practical understanding of responsible leadership and PEB.

China ranks third in publication output but demonstrates a comparatively high citation count of 237, suggesting that Chinese research in this area has achieved considerable international visibility and impact. Similarly, Malaysia, with seven documents and 198 citations, reflects a growing and influential body of work, potentially driven by increasing policy and organizational attention to sustainability and environmental responsibility in the region.

Saudi Arabia occupies the second position in terms of documents, with eight publications and 122 citations. This indicates active scholarly engagement, although the citation impact is more moderate compared to Pakistan, China, and Malaysia. Australia ranks fifth, contributing fewer publications and citations, which may reflect a more selective or emerging research focus within this specific leadership domain.

For the co-authorship analysis, authors with at least two

publications were included, applying the full counting method with association strength normalization. Figure 2 presents the resulting co-authorship network in the responsible leadership and PEB literature. The network structure reveals that Maqsoom, A. from Mohammed VI Polytechnic University, Morocco, and Aslam, I. from COMSATS University Islamabad, Pakistan, emerge as central nodes in the collaboration network. Their central positions indicate a high degree of collaborative engagement and suggest that they play a pivotal role in connecting multiple research clusters within this domain. The prominence of these authors reflects their substantial scholarly influence and their contribution to fostering international research collaboration, particularly between institutions in developing and emerging economies. At the same time, the presence of several peripheral nodes and relatively small clusters suggests that the field remains fragmented, with limited cross-cluster collaboration. This pattern indicates significant opportunities for strengthening global research partnerships and advancing more integrated knowledge development in responsible leadership and PEB research.

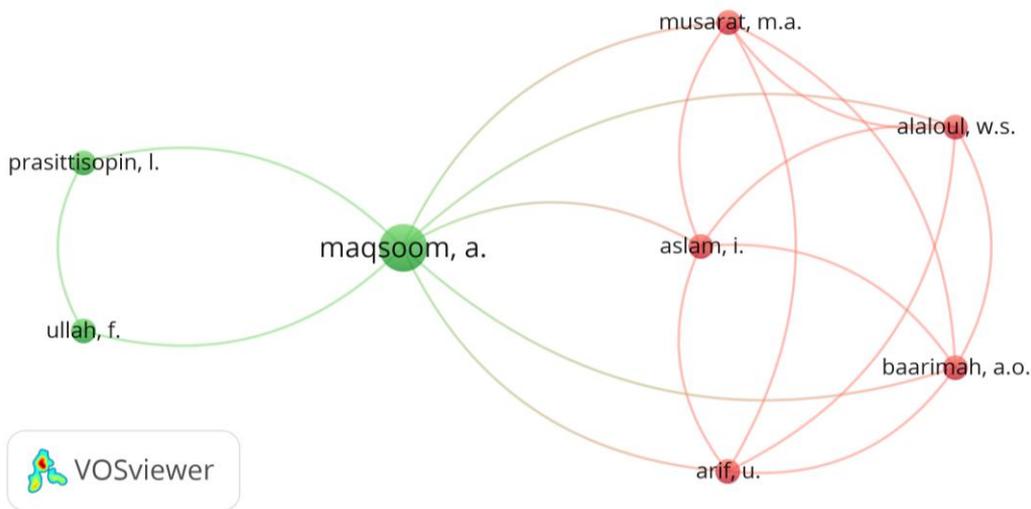


Figure 2. Co-authorship networks

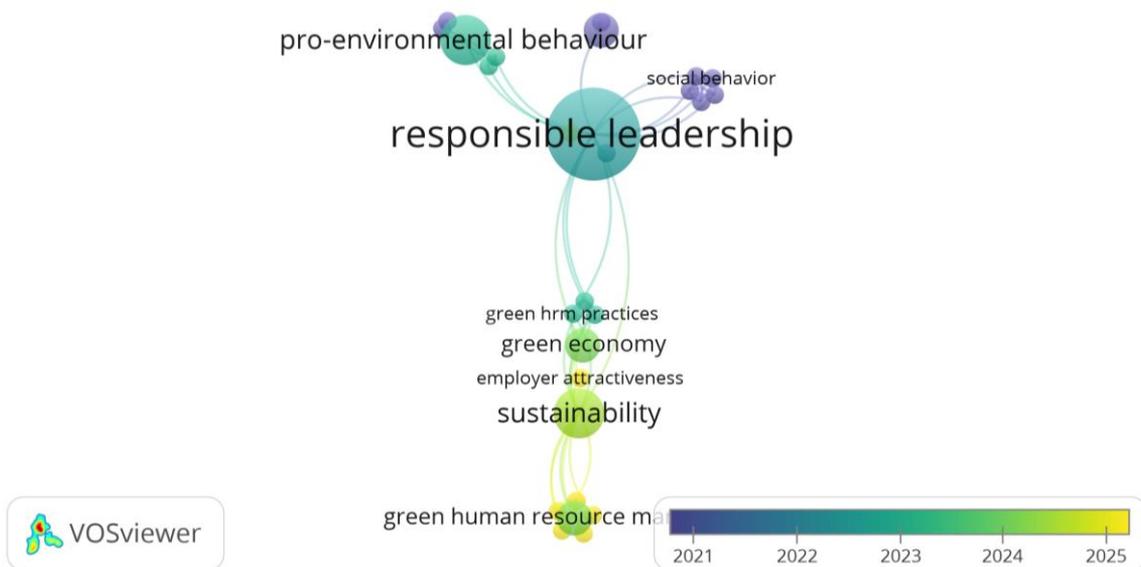


Figure 3. Overlay visualization

Figure 3 illustrates the temporal evolution of research on responsible leadership and PEB. During the 2010–2021 period, responsible leadership is primarily associated with ethics, green jobs, social behavior, and social responsibility, with social learning theory serving as a dominant theoretical lens. In the 2021–2022 phase, the focus shifts toward green management, environmental awareness, workplace spirituality, and affective commitment. Research conducted between 2022 and 2023 further extends this stream by linking responsible leadership to green self-efficacy, environmental innovation, and green shared vision. In the 2023–2024 period, the literature emphasizes broader systemic outcomes, including green culture, environmental values, environmental economics, environmental sustainability, and sustainable development.

Most recently, studies published between 2024 and 2025 highlight connections between responsible leadership and employer attractiveness, the green economy, green HRM practices, green innovation, and sustainable business performance. Contemporary studies suggest that responsible leadership enhances organizational legitimacy and attractiveness by signaling strong environmental commitment to current and prospective employees. Furthermore, by integrating green HRM systems and innovation strategies, responsible leaders contribute directly to sustainable competitive advantage and long-term business performance. This stage reflects the maturation of the field, positioning responsible leadership as a strategic driver of sustainability-oriented value creation rather than merely a moral or behavioral influence [31, 32].



Figure 4. Result of co-occurrence analysis

For the keyword co-occurrence analysis, a minimum threshold of two occurrences was applied to enhance thematic relevance and minimize noise. Figure 4 depicts the thematic structure of responsible leadership and PEB research, organized into five interrelated keyword clusters. Collectively, these clusters demonstrate that the field has evolved into a multi-level and interdisciplinary research domain that integrates economic, organizational, psychological, and ethical perspectives.

5. DISCUSSION

Cluster 1 emphasizes macro-level sustainability foundations, incorporating environmental economics, environmental sustainability, environmental values, green

culture, green HRM, and sustainable development. Recent studies argue that leadership-driven sustainability initiatives are deeply embedded within broader economic and institutional contexts, where environmental values and green organizational cultures act as enabling mechanisms for sustainable development [33, 34]. Green HRM, in particular, has been identified as a critical transmission channel through which responsible leadership translates sustainability values into daily organizational practices, reinforcing employees’ environmental awareness and long-term ecological commitment [35]. Through these mechanisms, employees are not only exposed to environmental norms but are also incentivized and evaluated based on environmentally responsible conduct. This process strengthens employees’ environmental awareness by consistently signaling the organization’s ecological priorities and fosters long-term ecological commitment by aligning individual goals with sustainability-oriented performance expectations.

Cluster 2 reflects a strategic and performance-oriented sustainability logic, linking employer attractiveness, green economy, green HRM practices, green innovation, sustainability, and sustainable business performance. Recent evidence suggests that responsible leadership enhances organizational legitimacy and employer branding by signaling strong environmental responsibility, which attracts environmentally conscious talent and fosters innovation-oriented green practices [32, 36]. This cluster supports the argument that pro-environmental initiatives are no longer viewed solely as ethical obligations but as strategic assets that contribute to sustainable competitive advantage and improved business performance.

Cluster 3 captures micro-level psychological and behavioral mechanisms, including affective commitment, environmental awareness, green management, PEB, and workplace spirituality. Empirical studies consistently show that responsible leaders influence employees’ PEB by strengthening affective commitment and enhancing environmental awareness, thereby fostering intrinsic motivation toward sustainability-oriented actions [8, 37]. The inclusion of workplace spirituality further suggests that meaningful work and value congruence play an important role in internalizing environmental responsibility, particularly in collectivist and emerging economy contexts [38].

Cluster 4 highlights the ethical and social underpinnings of responsible leadership, comprising ethics, green job, social behavior, social learning theory, and social responsibility. The thematic composition of this cluster indicates that responsible leadership research extends beyond instrumental or performance-driven perspectives, emphasizing instead the normative and relational mechanisms through which leadership influences employee behavior. This cluster aligns closely with social learning theory, which posits that employees acquire ethical and pro-environmental behavioral standards by observing leaders’ conduct and internalizing the values embedded in their decisions and interactions [12]. When leaders consistently demonstrate moral integrity and environmental accountability, they establish behavioral cues that signal what is considered appropriate and legitimate within the organization. Recent empirical studies further substantiate this mechanism, showing that responsible leaders act as moral role models who actively shape social norms and reinforce PEB through ethical consistency and socially responsible decision-making [39, 40].

Cluster 5, although smaller in size, is conceptually central,

encompassing green self-efficacy, green shared vision, and responsible leadership. Contemporary research emphasizes that responsible leadership strengthens employees' green self-efficacy by empowering them with confidence, resources, and a shared environmental vision, which directly predicts proactive PEB [6, 41]. The co-occurrence of these constructs indicates a growing scholarly focus on leadership as a catalyst that aligns individual capabilities with collective environmental goals.

6. CONCLUSION

This study provides a comprehensive bibliometric overview of the evolving body of knowledge on responsible leadership and PEB, offering valuable insights into the intellectual structure, thematic development, and future research directions of this emerging field. By systematically analyzing 35 Scopus indexed publications from 2010 to 2025 using VOSviewer, the study reveals that scholarly attention to responsible leadership and PEB has increased markedly in recent years, particularly after 2021. This surge reflects growing recognition that leadership is not only a moral or ethical concern but also a strategic driver of sustainability-oriented action within organizations.

The findings demonstrate that research on responsible leadership and PEB is highly interdisciplinary, spanning environmental science, management, social sciences, psychology, and economics. Influential studies emphasize the role of top management and ethical role modeling, while more recent work highlights employee-level psychological mechanisms such as green self-efficacy, affective commitment, and shared environmental vision. The co-occurrence and overlay analyses further show a clear thematic evolution, moving from ethics and social responsibility toward green HRM practices, innovation, employer attractiveness, and sustainable business performance. This progression indicates a maturation of the field, positioning responsible leadership as a catalyst that translates environmental vision into measurable organizational outcomes.

From a practical standpoint, the findings provide actionable guidance for organizational leaders, human resource practitioners, and policymakers. Leaders are encouraged to move beyond symbolic environmental commitments and actively embed sustainability values into daily decision-making, communication, and role modeling. By articulating a clear green vision and demonstrating ethical consistency, responsible leaders can enhance employees' environmental awareness, motivation, and confidence to engage in PEB. The results also highlight the strategic importance of aligning responsible leadership with green HRM practices, such as environmentally oriented recruitment, training, performance appraisal, and reward systems, to institutionalize PEB across the organization. Moreover, for organizations seeking sustainable competitive advantage, responsible leadership emerges as a critical lever for enhancing employer attractiveness, fostering green innovation, and improving long-term business performance. Policymakers and educators can draw on these insights to promote leadership development programs that emphasize ethical responsibility, stakeholder engagement, and environmental stewardship.

Despite its contributions, this study is subject to several limitations that should be acknowledged and addressed in future research. First, the bibliometric analysis relies

exclusively on data retrieved from the Scopus database. Although Scopus is a reputable and comprehensive source [42], relevant studies indexed in other databases such as Web of Science, Dimensions, or Google Scholar may have been omitted. Future bibliometric reviews could integrate multiple databases to enhance coverage and provide a more exhaustive representation of the responsible leadership and PEB literature. Second, the analysis is based on a relatively small sample of 35 publications. While this reflects the emerging nature of the field, it also limits the generalizability of observed patterns, particularly with respect to thematic diversity and collaboration networks. As the literature continues to expand, future studies should replicate and extend this analysis using larger datasets to validate the robustness of the identified trends and clusters. Third, this study adopts a quantitative bibliometric approach, which emphasizes publication patterns, citation structures, and keyword co-occurrences but does not capture the depth and contextual richness of empirical findings. Future research could complement bibliometric methods with systematic literature reviews, meta-analyses, or qualitative content analyses to provide deeper theoretical integration and critical evaluation of empirical evidence.

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