GREEN LEADERSHIP: A SYSTEMATIC REVIEW AND THEORETICAL FRAMEWORK

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ABSTRACT

The climate crisis and growing sustainability pressures are pushing organizations to rethink their strategies, making leadership a central factor in their ability to adapt and transform. Leaders not only set visions and mobilize employees but also establish values that align business aims with ecological priorities. Within this context, green leadership has attracted increasing attention as an approach that combines environmental responsibility with decision-making process, promotes green innovation, and encourages pro-environmental behavior among employees. This article reviews the literature on green leadership, bringing together theoretical perspectives, conceptual themes, and research patterns. Existing studies are mostly quantitative and concentrated in Asian manufacturing, yet they consistently show benefits for innovation, employee engagement, and organizational legitimacy. Despite these findings, the field still lacks conceptual clarity, methodological variety, and geographical balance. Addressing these gaps is essential for advancing both theory and practice in green leadership phenomena. This review therefore clarifies the foundations of green leadership as a distinct area of research and identifies directions for future study and application.

KEY WORDS

CLASSIFICATION

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INTRODUCTION

The climate crisis, biodiversity loss, and ecosystem degradation are increasingly being experienced as urgent realities that reshape societies and economies across the globe [1, 2]. Expectations are being placed on organizations to reduce their environmental footprint, cut emissions, and align with the Paris agreement and the Sustainable development goals [3]. Such demands come not only from regulators but also from investors, customers, and communities, who expect sustainability to be embedded in organizational strategy rather than treated as an external obligation [2, 4].

Within this context, leadership is increasingly viewed as a crucial determinant of whether organizations are able to successfully adapt to external pressures [2]. Influence, culture-building and the ability to inspire collective action are all recognized as leadership functions that matter for ecological transformation [3, 5]. Under these circumstances, attention has been drawn to green leadership. The term is used to describe an approach in which environmental responsibility is integrated into leadership practice and where organizational priorities are connected with broader sustainability goals [3, 6]. Leaders adopting this orientation are seen as change agents who encourage creativity, strengthen employee engagement, and model behaviors that support ecological initiatives [7, 8]. Researchers agree that green leadership works only when everyday practices support it [9, 10].

Research on green leadership has grown quickly in recent years. Studies appear in management, psychology, education, and environmental sciences, each offering different views on how leadership can support sustainability [3, 11]. Yet these contributions are spread across disciplines and contexts, which makes them difficult to bring together [3]. Increasing attention is also being given to the values and awareness of leaders, since these shape not only organizational practices but also wider social change [12, 13].

Research on green leadership has mainly concentrated on its positive aspects, but there is a lack of understanding about the situations in which it arises, the stages it goes through to develop, and the environmental factors that affect its success [3, 6]. Further theoretical development and empirical research are needed to fill these gaps [4, 14].

This review draws on peer-reviewed publications issued between 2000 and 2025. The literature was identified primarily through Scopus and Web of Science by applying keywords such as "green leadership", "sustainability", and "organizational change". The chosen time frame allows the inclusion of both the earliest conceptual contributions and the most recent developments, thereby offering a comprehensive overview of the field's evolution.

THEORETICAL PERSPECTIVES ON GREEN LEADERSHIP

The rising attention to green leadership reflects both the evolution of leadership theory and the growing urgency of ecological problems [4]. The impact of leaders is most evident in their ability to motivate, inspire, and guide people toward a common goal [2]. However, more recent researchers argue that leadership also carries the responsibility to direct organizations toward environmental objectives, while at the same time responding to institutional demands and the expectations of multiple stakeholders [15, 16].

In this context, green leadership can be seen as an adaptation of existing leadership frameworks, refocused to place environmental considerations at the core of leadership strategies [17]. The conceptual framework should be defined prior to examining green leadership theoretical underpinnings. Table 1 provides a summary of the primary definitions of green leadership that have been presented in relevant academic literature.

Table 1. Overview of green leadership definitions.

Green leadership definition	Key Emphasis
Green leadership is defined as the ability of leaders to embed environmental responsibility in organizational strategy and culture [18].	Highlights the role of leaders in linking ecological values with competitive advantage [18].
Describe green leadership as a leadership approach that promotes job satisfaction through perceptions of green human resource management and psychological safety [15].	Stresses the connection between green leadership, employee well-being, and human resource management [15].
Green leadership is defined as leadership behavior that contributes to sustainable organizational performance [19].	Highlights leaders' direct impact on long-term sustainability and competitiveness [19].
Conceptualize green leadership as the ability to drive green product and process innovation by integrating environmental values into organizational decision-making [13].	This study focuses on leadership's role in fostering innovation that reduces ecological impact [13].
Views green leadership as a factor that enhances green work engagement when combined with green human resource management practices [4].	Stresses the link between leadership, human resource management, and employees' sustainable commitment [4].
Green leadership fosters sustainability in manufacturing companies through green innovation and knowledge management [20].	Connects leadership to innovation processes and organizational sustainability [20].
Green leadership is defined as leadership behavior that uses emotional intelligence to inspire employees to adopt environmentally responsible actions [21].	The role of emotional intelligence in shaping green behavior [21].
Provide a systematic review and define green leadership as an integrative style that embeds environmental values across all levels of organizational functioning [22].	This study offers a comprehensive framework for identifying the theoretical foundations of green leadership [22].
Characterize green leadership as the capacity to uphold congruence in environmental protection both internally and externally, enhance subordinates' environmental consciousness through their own leadership, and motivate employees to participate in environmental protection initiatives [23].	Highlights the dual role of leaders as environmentally responsible individuals and managers who influence and guide employees' green behaviors [23].

As shown in Table 1, some definitions emphasise moral values and ethical responsibility, others stress organizational outcomes such as innovation or legitimacy, and several highlight the leaders' capacity to inspire pro-environmental behavior. Together, these perspectives illustrate the construct's richness and underline the continuing need for conceptual clarity of green leadership theory.

The following section reviews the main theoretical foundations that explain the emergence of green leadership to place these definitions in context.

Social learning theory is an influential perspective that explains how behaviors are adopted by observing and imitating role models [24]. Green leadership is understood as a process of modelling ecological responsibility and when leaders demonstrate commitment to

sustainability, employees are more likely to internalize and reproduce these behaviors in their work [13, 25]. Leadership serves as an environmental education mechanism, where values are conveyed via observable examples and regular practice [18].

A further perspective is value-based leadership, which emphasises how leaders' moral convictions and personal beliefs shape organizational culture [26]. Leaders with strong ecological values are more likely to integrate sustainability into strategies, resist short-term pressures that conflict with environmental goals, and encourage employees to view sustainability as a shared mission [2, 14]. By doing so, values serve as a catalyst for cultural change, which transforms sustainability from an external necessity into a fundamental aspect of an organization's identity [22, 27].

The stakeholder theory offers a useful alternative perspective. Organizations are facing growing pressure from regulators, customers, investors, and communities to demonstrate environmental accountability [28]. Green leaders incorporate these expectations into their strategy, ensuring that ecological objectives are prioritized [29]. The mentioned theory suggests that leaders boost organizational legitimacy and foster trust among their stakeholders by reconciling competing interests while keeping sustainability at the forefront [30].

At an organizational level, the resource-based view attributes competitive advantage to resources that are valuable, rare, difficult to replicate and have no suitable substitutes [31]. Environmental knowledge, green intellectual capital, and leadership commitment to sustainability meet these criteria, and green leadership mobilizes them to foster innovation and differentiation [32, 33]. Therefore, leadership becomes a strategic resource that is difficult for competitors to replicate [34].

Institutional theory adds another dimension by showing how leadership responds to regulatory, normative, and cultural pressures [35]. Some leaders adapt only enough to meet minimum standards, while others anticipate future requirements and act as sustainability pioneers [22, 36]. Green leadership is a proactive force that establishes new norms and raises industry standards [23, 37].

Connections with transformational and servant leadership styles also clarify the concept. Transformational leaders motivate followers by articulating a vision, but green leaders extend this role by explicitly linking inspiration to ecological goals [38]. Servant leadership emphasises serving others, and green leadership builds on this by extending responsibility to ecosystems and future generations [39, 40]. These connections show that green leadership does not replace earlier models but adapts them to the urgent demands of sustainability [22, 23].

Taken together, these perspectives show that green leadership is best understood as an evolution of established leadership traditions enriched by an explicit ecological orientation. For clarity, the main theoretical foundations of green leadership are summarized in Table 2.

As shown in Table 2, each perspective highlights a different mechanism. Social learning emphasises role modelling, values-based leadership emphasises the role of ecological values, stakeholder theory focuses on balancing external demands, the resource-based view treats environmental knowledge as a strategic resource, and institutional theory shows how leaders respond to societal pressures. Together, these perspectives provide a comprehensive foundation for understanding how green leadership operates across organizational contexts.

Table 2. Theoretical Perspectives on Green Leadership.

Theoretical Perspective	Main Focus	Relationship with Green Leadership
Social learning theory [13, 18, 24, 25]	Focuses on how individuals acquire new behaviors by observing, imitating, and internalizing the practices of role models.	Green leadership relies on leaders who act as ecological role models. By demonstrating environmentally responsible behavior, they encourage employees to adopt pro-environmental practices and embed sustainability in everyday routines.
Value-based leadership [2, 14, 22, 26, 41]	Stresses the role of leaders' personal values, ethics, and moral convictions in shaping organizational culture and guiding collective behavior.	In green leadership, leaders' ecological values provide direction. They encourage employees to adopt sustainability as a shared goal and strengthen the organization's commitment to environmental responsibility.
Stakeholder theory [28, 29, 30, 42]	Emphasizes the need to balance organizational strategies with the expectations of diverse stakeholder groups, ensuring legitimacy and long-term success	Green leadership integrates environmental sustainability into stakeholder relations, making ecological responsibility one of the key criteria in decision-making process.
Resource based view [1, 19, 31, 34]	Argues that competitive advantage comes from resources that are valuable, rare, inimitable, and non-substitutable. It highlights the strategic importance of unique capabilities	Green leadership transforms environmental knowledge, values, and practices into strategic resources that foster innovation and create differentiation, strengthening the organization's sustainable advantage.
Institutional theory [14, 23, 35, 37]	Examines how organizations respond to regulatory, normative, and cultural pressures in order to gain legitimacy.	Green leadership allows organizations to go further than just meeting regulations. It helps them anticipate social expectations, set higher standards for sustainability, and move beyond basic compliance.
Transformational leadership [22, 23, 38]	Emphasizes inspiring and motivating employees to pursue a shared and ambitious vision, often through charisma and intellectual stimulation	Green leadership extends transformational leadership by explicitly linking inspiration and vision to ecological goals, motivating employees to commit to environmental change.
Servant leadership [23, 39, 40]	Focuses on serving others, prioritizing the well-being of individuals and communities, and fostering a culture of care.	Green leadership means that leaders see protecting ecosystems as their responsibility and put care for the environment at the center of their role.

THE CONCEPTUAL BOUNDARIES OF GREEN LEADERSHIP

Over the past decade, despite the significant interest in green leadership, its application has not developed in a consistent way. Overlapping with similar concepts is highlighted as one of the main difficulties regarding green leadership theory [6]. Researchers have generally agreed that ecological values stand at the center of the green leadership [43]. However, there is still a disagreement about its precise scope or the extent to which it intersects with sustainable, responsible, or environmental leadership [44].

Sustainable leadership model is based on the idea of the triple bottom line, which emphasises the pursuit of combining economic, social, and environmental goals [2]. Because of that, sustainable leaders are often described as well balanced with no single dimension dominating organizational decision-making process [2, 45]. Green leadership, on the other hand, has placed ecological sustainability in the pedestal and presented it as the guiding principle of leadership practice [46]. Both models rest on an ethical foundation, but with different emphasis [47]. Sustainable leaders look for balance, while green leaders see ecological responsibility as the starting point [48]. What may seem like a subtle difference in definition, in practice those differences are more visible [49]. Responsible leadership offers another comparison. It emphasises ethics and duty of leaders to consider employees, customers, investors, and society as a whole [50]. Green leadership, in contrast, places ecological concerns at the center, while responsible leadership treats the environment as one stakeholder among many [23, 50]. That means that green leadership narrows its focus in order to achieve depth, while responsible leadership broadens its scope in order to achieve balance [51].

Environmental leadership is also often mentioned alongside green leadership. It generally refers to leaders' ability to promote environmentally friendly practices, reduce ecological impacts, and integrate sustainability into organizational strategy [52, 53]. Unlike green leadership, which centers ecological responsibility as its defining principle, environmental leadership is often understood more broadly as guiding organizational change towards sustainability through pro-environmental behaviors and initiatives [54]. Table 3 provides a structured overview of these contrasts. By laying out the main similarities and differences side by side, it offers a clearer picture of how green leadership should be understood in relation to its neighboring concepts.

Table 3 shows that sustainable leadership is commonly framed as an integrative model, bringing together economic, social, and environmental organizational goals. In responsible leadership focus is on serving diverse stakeholders, in which environmental issues are treated just as one of many. On the contrary, environmental leadership is more strongly associated with compliance, formal procedures, and administrative routines in organization. Green leadership sets itself apart. It places the environment at the forefront and links ecological concerns with vision, inspiration, and cultural change [4]. It does not treat sustainability as only a matter of regulation [55]. It portrays commitment as one based on core values and presents it as a proactive approach to addressing environmental concerns [56].

A final contrast can be made between green leadership and green management. Leadership is often linked with vision, inspiration, and change, while management is associated with planning, administration, and stability [26]. Leaders who champion environmental values are frequently depicted as visionaries who motivate others and expand cultural frontiers in organization, while managers focus on operational work [23, 57]. Green managers implement sustainable policies, monitor compliance, prepare reports, and integrate these practices into everyday organizational routines [1, 57]. Both roles are important, but they serve different purposes. Leadership points to vision and change, while management ensures order and stability in organization [58, 59]. Table 4 shows the main differences between green managers and green leaders.

From this perspective, green leadership can be distinguished from all related concepts. Unlike sustainable leadership, which seeks balance, it raises ecological responsibility above all other concerns [23]. Environmental leadership usually works through organizational policies and programs, while green leadership is more about what individual leaders do to bring ecological values into practice [22]. Responsible leadership spreads attention across social, ethical, and environmental responsibilities, while green leadership narrows its emphasis and makes the environment the guiding principle [3]. Finally, green management is directed mainly at compliance, while green leadership stresses vision, inspiration, and transformation [60].

Table 3. Conceptual distinctions between green leadership and related constructs.

Concept	Main focus	Relationship with the environment	The key difference from green leadership
Sustainable leadership [2, 23, 22]	Sustainable leadership seeks to balance the economic, social, and environmental dimensions of organizational activity. This approach reflects the principle of the triple bottom line, which expands the traditional focus on profit to also include responsibility for people and the planet.	The environment is considered one of three equally important pillars, integrated with but not prioritized over social equity and economic performance.	Compared with green leadership, sustainable leadership is broader and more holistic view, while green leadership narrows its attention specifically to ecological sustainability as the primary concern.
Responsible leadership [23, 50, 51]	Responsible leadership emphasizes ethical accountability and responsiveness to diverse stakeholders. Leaders are expected to act with integrity and ensure that organizational decisions respect the interests of different groups.	Environmental issues are acknowledged but positioned as one of many responsibilities, alongside social, ethical, and governance obligations.	Green leadership differs by elevating ecological sustainability as the guiding principle, rather than treating it as just one of several stakeholder concerns.
Environmental leadership [52-54]	Environmental leadership is typically expressed through strategies, programs, and policies that promote ecological responsibility, often embedded in compliance systems and formal reporting.	The environment is primarily addressed through external accountability measures, regulatory compliance, and structured programs.	Green leadership, in contrast, highlights the personal role of leaders whose values and vision inspire cultural change and embed environmental responsibility into everyday practice.

Table 4. Comparison of Green managers and Green leaders .

Category	Green manager	Green leader
Orientation	The orientation of a green manager is primarily operational [59]. Their main responsibility is the implementation and supervision of sustainability initiatives [57]. They ensure that existing sustainability programs are carried out according to plan, focusing on procedures and compliance [1].	The orientation of a green leader is visionary and strategic [38]. Leaders in this role focus on defining the purpose, setting long-term sustainability goals, and shaping an organizational culture that embraces sustainability as a core value [49].
Approach	The approach of a green manager is largely reactive and operational [57]. Managers respond to organizational needs by executing predefined sustainability procedures and ensuring that day-to-day activities align with existing frameworks [60].	The approach of a green leader is proactive and transformation oriented [21]. Instead of merely responding to existing structures, leaders anticipate challenges, develop strategies, and actively drive organizational transformation towards sustainability [42].
Key activities	Green managers are primarily engaged in monitoring compliance and implementing policies, while at the same time working to improve internal processes in order to maintain efficiency [61]. In practice, their role is closely tied to the consistent application of sustainability standards and their incorporation into everyday organizational routines [61].	Green leaders are actively involved in driving change, bringing stakeholders together, and fostering ecological values both inside the organization and in its wider environment [17]. Their activities are directed toward inspiring and persuading others, with the ultimate goal of guiding collective efforts toward sustainable transformation [20, 62].

Table 4. Comparison of Green managers and Green leaders (continuation from p.551).

Category	Green manager	Green leader
Role in organization	At the operational level, green managers play a coordinating role by making sure that tasks are carried out, policies are respected, and sustainability initiatives move forward as intended [57].	A green leader serves as a catalyst for change and a shaper of long-term vision [6]. By inspiring and guiding employees, such leaders encourage the adoption of sustainable practices, stimulate innovation, and align organizational strategies with wider ecological and societal objectives [20, 42].
Compe-tencies	The competencies associated with green managers are largely technical and administrative in nature [57]. They typically involve a solid understanding of regulations and operational procedures, combined with an emphasis on efficiency and adherence to established sustainability standards [59].	The competencies of a green leader are primarily strategic and interpersonal [6]. They encompass visionary thinking, the capacity to influence and inspire others, and the ability to provide long-term strategic guidance that extends beyond operational boundaries [21].
Measuring success	Green managers' success is assessed through the fulfilment of defined goals, compliance with regulatory requirements, and the achievement of concrete operational results [59]. Their effectiveness is reflected in the extent to which sustainability measures are applied consistently and embedded into everyday organizational practice [60].	For green leaders, success is reflected in lasting transformations, most notably in change within organizations, the emergence of innovation, and the creation of sustainable impact over time [42]. Their effectiveness is linked more to long-term transformation than to immediate or short-lived results [20].
Source of influence	For green managers, influence is derived primarily from formal authority [61]. Their hierarchical position, reinforced by organizational rules and policies, provides the basis for enforcing compliance and coordinating activities across the operational level [59].	The influence of green leaders arises mainly from informal authority rooted in vision, charisma, and inspiration [33]. Instead of depending on formal position or administrative power, they draw on their personal capacity to motivate and inspire others [38].

Clarifying these differences is not only a theoretical matter, but it also has practical value. For researchers, clear boundaries allow results to be compared more easily, knowledge to be built, and reliable tools to be developed. For practitioners, they provide guidance for designing leadership programs, aligning human resource practices, and creating cultures that genuinely embrace sustainability. Green leadership should not be seen as just a variation of other models. It deserves recognition as a distinct and necessary approach. It highlights the role of leaders in shaping change and strengthens the ability of organizations to respond to today's environmental and climate challenges.

RESEARCH TRENDS IN GREEN LEADERSHIP

Research on green leadership has developed over the past years, following the wider debate on climate change and sustainability [13, 23]. Early contributions placed it within environmental leadership or presented it as part of sustainable leadership [12]. In that framing, leaders were often seen as decisive figures [22]. Some supported environmentally responsible practices, while others prioritized immediate financial returns [14, 63]. Although the studies are limited, the evidence is clear, ecological values rarely guide organizations unless leaders actively bring them into practice [63, 64].

Evidence suggests that green leadership is not simply about following rules [23]. Green leaders create organizational culture, encourage innovation, and motivate employees to change routines in ways that reduce ecological impact [32, 39]. In some cases, inspiration proves more

decisive than formal authority [65]. Leaders with strong environmental values and emotional intelligence are more effective in motivating others, but conviction on its own does not secure lasting change [42]. Organizational systems must reinforce it through employee recruitment, training, and incentive structures that reward ecological behavior [66]. Organizational culture may strengthen green initiatives when sustainability is taken seriously, but it can also block progress if treated only as a formality [23]. At the same time, external conditions shape the space within green leaders operate [42]. Green leadership is not simply a personal trait [14]. It develops through the interaction of leaders' convictions, organizational systems, and external pressures that together shape its strength and effectiveness [14].

Taken together, these factors determine not just the strength of green leadership, but also its effects on several levels. At the individual level, researchers have found connection between green leadership and higher employee engagement, stronger pro-environmental attitudes, and voluntary behaviors that exceed formal job requirements [4, 22]. At the organizational level, studies highlight growth in innovation and competitiveness, particularly in periods of regulatory or market change [13]. Research also points out positive correlation between ecological commitment and financial performance over time [63, 67]. Overall, these findings suggest that green leadership should be understood not only as an ethical orientation but also as a strategic asset [66].

The green leadership approach also differs across disciplines [43]. Business studies link it to competitiveness, psychology highlights behavior and values, education stresses awareness, while tourism research examines the balance between ecology and service [64]. The details vary, but the central claim remains, leadership plays a key role in embedding sustainability [2]. It also shapes how societies respond to ecological pressures [42]. International frameworks such as the Paris Agreement and the Sustainable Development Goals reinforced this by stressing the importance of turning global commitments into practical action [2, 22].

Methods used to study the topic are still uneven. Most research relies on surveys, often with structural equation modelling [23]. These studies usually report positive outcomes such as higher employee engagement, greater organizational innovation, and in some cases better financial performance [64]. Other approaches are rare. Case studies and interviews, although scarce, reveal how leaders and employees talk about ecological values in everyday work [22]. Bibliometric reviews show that certain themes keep coming up, especially green transformational leadership and organizational innovation [22]. Despite this progress, the reliance on cross-sectional designs makes green leadership appear static. Such studies capture correlations but do not explain how green leaders adapt over time or in moments of crisis [3, 14].

The lack of clear definitions still slows progress in this field. Concepts like green, sustainable, responsible, and environmental leadership are often mixed together, even though they point out different priorities. This overlap makes studies harder to compare and weakens the tools used to measure green leadership [44]. For organizations, the problem is practical as well, some programs carry the green label but mainly deal with compliance [13], while in other cases green leaders use the term green without real change in behavior [19]. Sharper definitions would help build credibility and make it easier to anchor ecological values in organizational culture [68].

Coverage of the field is also uneven. Much of the literature comes from Asia, particularly China, where studies often connect leadership to public policy and sustainability outcomes [23]. Manufacturing industry receives most attention because of its ecological footprint and significant innovation potential [13]. Tourism and hospitality are also well covered, while education is increasingly studied for its role in shaping ecological awareness [69]. In contrast, research on business organizations, civil society organizations, and less industrialized economies remains limited [14, 22].

Although existing studies highlight valuable outcomes of green leadership, the field remains constrained by several limitations. Most research relies on cross-sectional surveys, which capture only a static view of green leadership [3, 13]. Longitudinal designs would allow researchers to observe how green leaders adapt over time [22]. Another issue is the strong concentration of studies in Asia, raising concerns about wider applicability of model [3]. To address these limitations, recent studies propose integrative frameworks that link antecedents, processes, and outcomes, aiming both to strengthen theoretical coherence and to provide clearer guidance for green practice [43].

DISCUSSION AND IMPLICATIONS OF GREEN LEADERSHIP

Research on green leadership has been expanding rapidly, but the field is still in the process of defining its place within the broader study of leadership [22]. Definitions have often been blurred, methodological designs have been narrowed, and research has been concentrated in only a few contexts, particularly in Asia [23]. Because of this, results have not always been easy to compare, and cumulative knowledge has developed unevenly. The field's visibility has grown, but its foundations remain fragile [55].

Conceptual clarity has been a persistent difficulty. The term green leadership is often used interchangeably with sustainable, responsible, or environmental leadership, even though these concepts emphasise different priorities [2, 51]. Without clearer boundaries, green leadership risks being treated as overly broad and vague, which weakens theory building and creates confusion for practitioners designing and evaluating leadership programs.

Research on green leadership has been largely survey based [22]. This focus makes the green phenomenon appear static and limits understanding of how it changes under different conditions [3]. To capture its dynamic and context-dependent nature, more longitudinal and qualitative approaches are needed [23].

For organizations, the practical effects have been clear. Studies show stronger employee engagement and higher creativity where sustainability is valued [43, 56]. But effects do not arise automatically. Human resource department must ensure that employee recruitment, training, and reward systems support ecological values, while organizational culture reinforces them [69, 70]. That leads to conclusion that green leadership on its own is rarely enough, broader structures must provide support. Policy frameworks have further shaped what has been possible. Regulations, incentives, and reporting requirements must set the stage for green leadership practice [71, 72]. It has also been noted that sharing of practices across cultures and regions has provided opportunities for adaptation and has sustained global green progress [23].

Studies have shown that balancing ecological goals with other organizational priorities often involves conflicts and compromises. Ecological aims sometimes can clash with financial targets [63], and sustainability initiatives sometimes create extra pressure for employees [63]. Leaders are frequently caught between shareholders demanding quick returns and stakeholders expecting long-term ecological responsibility [2].

Recent reviews have suggested that integrative frameworks could address some of these problems [22]. By linking antecedents, processes, and outcomes, green leadership theory would provide stronger theoretical structure and more reliable guidance for researchers and practitioners. It would also clarify the conditions under which green leadership becomes transformative. In this way, it would help organizations design green leadership development strategies that align environmental, social, and financial objectives instead of treating them as competing aims. The discussion of green leadership has highlighted both notable progress and persistent limitations. Research on green leadership still needs clearer concepts, broader methods, and more diverse contexts. If these gaps are taken seriously, green leadership could become not just a topic of debate but a real driver of sustainability.

CONCLUSION

This review has shown how thinking about green leadership has moved rapidly from the margins of management studies to a position of genuine importance. At the center of this shift is the recognition that leaders often determine whether sustainability becomes a living practice or remains only a stated ambition within organizations [2]. When ecological values are consistently integrated into leadership behavior, organizations are better placed to adapt, innovate, and earn credibility in the eyes of their stakeholders [22].

Despite notable progress, the idea of green leadership has been approached from several perspectives, each contributing valuable insights into its evolution as a distinct leadership phenomenon. Some interpretations emphasize leaders' personal values and convictions, others focus on organizational systems and structures that enable sustainable practices, while another perspective highlights institutional and stakeholder pressures that shape leadership behavior. This diversity has enriched the discussion, but it has also introduced conceptual ambiguity and left open questions about the precise boundaries of the construct [23]. Viewed together, these perspectives indicate that leadership cannot be understood apart from its context. Its effectiveness depends not only on the alignment of individual values with organizational routines but also on the influence of broader social and regulatory conditions [14].

The methodological focus of the field adds further limitations. Majority of the existing evidence comes from large-scale surveys conducted in Asian manufacturing sectors. These studies have been valuable for identifying patterns, but they often capture only static snapshots and overlook how green leadership develops and adapts over time [3]. Greater use of longitudinal and qualitative methods, as well as comparative studies across industries and regions, would provide a more dynamic and balanced understanding. In particular, expanding research into underexplored contexts could reveal how cultural, institutional, and policy differences shape the practice of green leadership [22].

For practice, the implications are demanding but clear. Organizations that wish to embed sustainability cannot rely only on public commitments, they must integrate ecological values into everyday processes [9]. This requires that human resource departments support green aims through recruitment, training, and incentives, while organizational culture reinforces them on a daily basis [66]. Without such alignment, leadership risks being dismissed as symbolic. External conditions are equally important. Policy frameworks, regulations, and incentives create space in which green leaders can act with credibility and consistency [71].

Looking ahead, the main challenge is not simply to list what is missing, but to connect antecedents, processes, and outcomes into an integrative green framework. Research that traces how leaders' values and behaviors interact with organizational systems and external pressures can strengthen theory and provide practical guidance [23, 43]. Interdisciplinary perspectives that combine management, psychology, and environmental science could further enrich this agenda [22].

Ultimately, green leadership should be recognized not as a variation of existing models but as a distinct and essential approach. It represents a vital capability for combining resilience with responsibility in response to ecological change. By linking vision and values with innovation, legitimacy, and cultural transformation, green leadership can move from a promising idea to a practical force that equips organizations to respond credibly and effectively to current sustainability challenges [42].

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