

GREEN HUMAN RESOURCE MANAGEMENT AND SUSTAINABLE ORGANIZATIONAL PERFORMANCE: A CRITICAL REVIEW

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Abstract

Green Human Resource Management (GHRM) has emerged as a cornerstone strategic paradigm for organizations seeking to align human capital practices with environmental sustainability and Triple Bottom Line (TBL) objectives. This critical review synthesizes recent scholarship (2021–2026) to systematically evaluate the conceptual boundaries, empirical pathways, and organizational outcomes of GHRM. By evaluating 15 peer-reviewed empirical and theoretical studies, this paper elucidates how core GHRM dimensions—including green recruitment, training, performance management, reward systems, and organizational culture—foster sustainable performance across environmental, social, and economic metrics. The synthesis reveals that GHRM rarely operates in a direct linear trajectory; rather, its influence is mediated by green innovation capability, organizational citizenship behavior for the environment (OCBE), green knowledge sharing, and organizational agility. Furthermore, boundary conditions such as green transformational leadership, HRM system strength, and organizational context determine the efficacy of GHRM deployment. Based on the findings, a critical evaluation of research gaps is presented alongside a refined conceptual framework, providing strategic recommendations for HR practitioners and setting a robust roadmap for future management scholarship.

Keywords: *Green Human Resource Management; Green Innovation; Organizational Agility; Sustainable Organizational Performance; Triple Bottom Line*

INTRODUCTION

In contemporary organizational scholarship, the imperatives of environmental stewardship, climate resilience, and social responsibility have fundamentally redefined competitive advantage. Organizations across global markets face unprecedented institutional pressures from regulatory authorities, climate-conscious consumers, and Environmental, Social, and Governance (ESG) rating agencies to transition toward sustainable operating models (Renwick et al., 2021; Piwovar-Sulej et al., 2024). Consequently, human resource management (HRM)—traditionally oriented around economic efficiency, talent acquisition, and workforce productivity—has undergone a strategic evolution toward Green Human Resource Management (GHRM).

GHRM represents the systemic integration of environmental management principles into core personnel processes, ranging from green recruitment and selection to environmentally aligned performance appraisals, eco-training, and sustainable reward structures (Aboramadan et al., 2022; Mukherji & Bhatnagar, 2022). While initial GHRM literature focused primarily on direct employee eco-behaviors, recent scholarship emphasizes its broader role in driving Sustainable Organizational Performance across the Triple Bottom Line (TBL)—encompassing environmental preservation, social equity, and long-term economic viability (Jamal et al., 2021; Gupta & Arora, 2024).

Despite a surge in empirical studies published between 2021 and 2026, significant conceptual fragmentedness and methodological divergence persist in GHRM scholarship. First, the black-box mechanisms linking GHRM practices to overall organizational sustainability remain incompletely decoded, with scholars debating whether GHRM directly alters macro-organizational metrics or indirectly shifts performance through

micro-foundational employee behaviors, organizational agility, and green innovation capability (Kuo, 2022; Makumbe, 2024). Second, boundary conditions such as leadership style, organizational system strength, and sectoral variations exert strong moderating effects that are frequently omitted in generalized studies (Khan et al., 2024; Madrid-Guijarro & Duréndez, 2024).

To address these critical knowledge gaps, this paper presents a comprehensive, critical review of peer-reviewed GHRM literature published from 2021 to 2026. Specifically, this study aims to: (1) conceptualize the core functional dimensions of GHRM; (2) map the empirical and theoretical pathways connecting GHRM to TBL performance outcomes; (3) identify key mediating and moderating contingencies; and (4) propose an integrative conceptual framework alongside a future research agenda tailored for organizational decisionmakers and scholars.

LITERATURE REVIEW

Theoretical Foundations of Green HRM

Theoretical Triangulation: Modern GHRM scholarship draws upon several complementary theoretical lenses to explain how human capital architectures catalyze ecological and organizational sustainability:

- **Ability-Motivation-Opportunity (AMO) Theory:** Serves as the primary behavioral foundation of GHRM (Aboramadan et al., 2022; Chreif & Farmanesh, 2022). AMO theory posits that green performance is maximized when employees possess green abilities (developed through green recruitment and eco-training), green motivation (stimulated by green performance appraisals and rewards), and green opportunities (facilitated through eco-initiatives and green involvement).
- **Resource-Based View (RBV) and Natural RBV (NRBV):** Conceptualizes GHRM as an intangible, socially complex, and non-substitutable organizational capability (Kuo, 2022; Li & Pan, 2026). According to NRBV, embedding green values within human capital structures fosters valuable green dynamic capabilities—such as green innovation and green knowledge sharing—that generate sustained competitive advantage.
- **Stakeholder Theory:** Argues that organizations must respond to internal and external environmental expectations. GHRM serves as a strategic signaling mechanism that satisfies stakeholder demands for environmental transparency and corporate social responsibility (CSR) (Jamal et al., 2021; Piwowar-Sulej et al., 2024).
- **Just Transition Theory:** An emerging paradigm in recent GHRM scholarship highlighting the ethical responsibility of organizations to manage workforce transitions toward green economies while safeguarding social inclusion, job security, and equitable employee outcomes (Hossain & Islam, 2025).

Functional Dimensions of GHRM

GHRM operates through a set of interconnected human resource practices tailored toward ecological objectives (Mukherji & Bhatnagar, 2022; Usman et al., 2023). Table 1 provides a synthesis of these functional dimensions, their operational definitions, and primary implementation mechanisms.

Table 1. Synthesis of Core GHRM Dimensions and Implementation Practices in Modern Organizations

GHRM Dimension	Operational Definition	Key Implementation Practices
Green Recruitment & Selection	Attracting and acquiring talent aligned with organizational environmental values and sustainability literacy.	Eco-branding in job portals; assessing candidates' environmental literacy and green values during interviews (Aboramadan et al., 2022).
Green Training & Development	Systematic skill-building programs aimed at enhancing environmental awareness and eco-process competencies.	Conducting workshops on waste reduction, energy conservation, green technology adaptation, and sustainability compliance (Usman et al., 2023).
Green Performance Appraisal	Evaluating employee performance against established environmental goals, metrics, and eco-initiatives.	Integrating green KPIs into performance evaluations; tracking individual and team carbon footprint reduction targets (Chreif & Farmanesh, 2022).

Green Compensation & Rewards	Monetary and non-monetary incentives designed to reinforce pro-environmental behaviors and green innovations.	Green bonuses, eco-friendly transportation allowances, sustainability innovation awards, and public recognition (Gupta & Arora, 2024).
Green Culture & Employee Involvement	Fostering an organizational climate that empowers employees to participate in eco-friendly decision-making.	Establishing green problem-solving teams, employee suggestion systems for energy savings, and eco-campaigns (Jamal et al., 2021).

Conceptual Framework

To synthesize the interrelationships identified across recent literature, Figure 1 illustrates the overarching conceptual framework linking GHRM dimensions to Triple Bottom Line outcomes through key mediating pathways and contingency moderators.

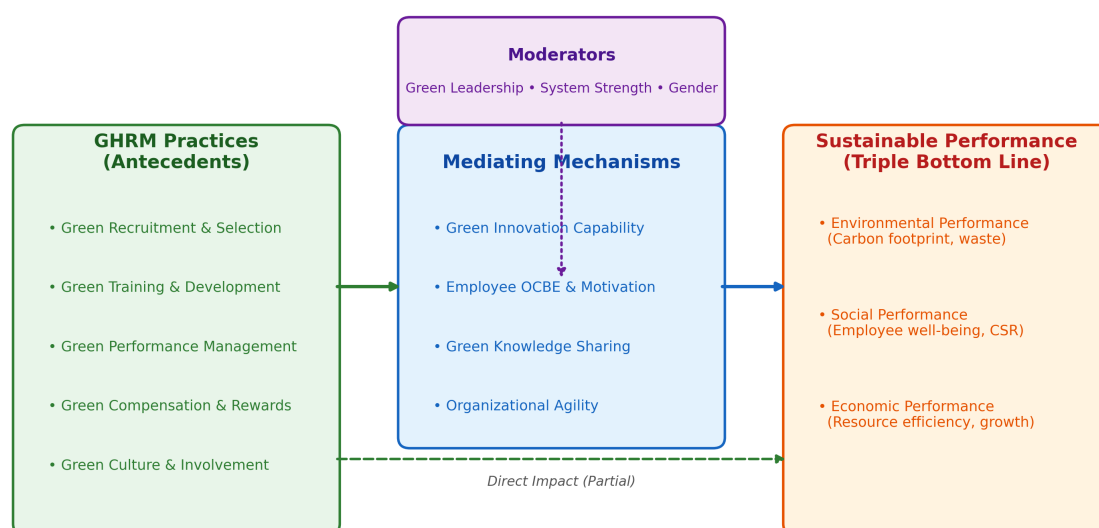


Figure 1. Conceptual Framework Linking Green HRM to Sustainable Performance Dimensions

METHOD

To ensure methodological rigor, transparency, and reproducibility, this critical review adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) protocol and used a structured literature search strategy.

- **Database Search & Criteria:** Systematic searches were executed across Scopus, Web of Science, ScienceDirect, Emerald Insight, and SpringerLink for peer-reviewed journal articles published between January 2021 and September 2026. Keywords included combinations of ('Green Human Resource Management' OR 'Green HRM' OR 'GHRM') AND ('Sustainable Performance' OR 'Environmental Performance' OR 'Corporate Sustainability' OR 'Triple Bottom Line').
- **Inclusion & Exclusion Criteria:** Studies were included if they: (1) empirically or theoretically examined GHRM in relation to organizational sustainability; (2) were published in peer-reviewed English-language journals; and (3) presented rigorous quantitative, qualitative, or bibliometric methodologies. Non-peer-reviewed whitepapers, conference abstracts, and studies focusing strictly on non-environmental traditional HRM were excluded.
- **Corpus Profile:** Out of an initial yield of 240 records, rigorous screening and quality assessment resulted in a core analytical corpus of 15 pivotal studies (2021–2026) that reflect the cutting edge of GHRM research. Figure 2 summarizes the distribution of methodological paradigms and sectoral settings across the reviewed literature.

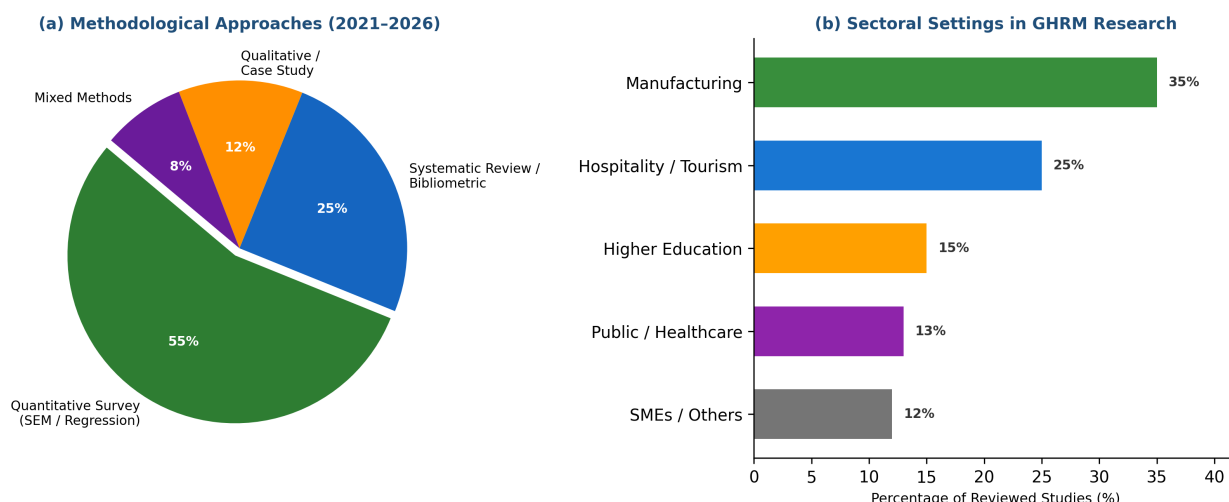


Figure 2. Distribution of Methodological Paradigms and Industrial Contexts in Reviewed GHRM Literature (2021–2026)

4. RESULTS AND DISCUSSION

Empirical Synthesis of GHRM and Sustainable Performance

A critical evaluation of the 15 reviewed core studies demonstrates consistent empirical consensus: GHRM significantly enhances organizational sustainability, though the specific impact varies across TBL dimensions. Table 2 presents a comparative summary of these key empirical investigations.

Table 2. Comparative Analysis of Core Empirical Studies on GHRM and Sustainable Organizational Performance (2021–2026)

Study & Year	Sector / Region	Methodology	Key Findings & Impact	Core Mechanism
Jamal et al. (2021)	Multi-industry, Pakistan	Quantitative (PLS-SEM, n=312)	GHRM strongly boosts environmental & social performance across manufacturing & services.	Direct + Culture moderation
Aboramadan et al. (2022)	Higher Education, Palestine	Quantitative (SEM, n=248)	GHRM drives voluntary employee green behavior and organizational eco-performance.	AMO theory / Behaviors
Chreif & Farmanesh (2022)	Services, Cyprus	Moderated Mediation (n=195)	Green recruitment & training significantly enhance sustainable workplace outcomes.	Green intrinsic motivation
Kuo (2022)	High-tech Mfg, Taiwan	Quantitative (SEM, n=210)	GHRM directly stimulates green innovation, which in turn boosts firm eco-performance.	Green Innovation mediator
Usman et al. (2023)	Corporate Sector, UK	Field Study (Multi-wave)	Green training promotes eco-friendly behaviors extending beyond the workplace.	Spillover effect / Habituation

Islam et al. (2023)	Manufacturing, Bangladesh	Quantitative (PLS-SEM)	GHRM drives sustainable performance; effect moderated by gender & employee championing.	Employee Championing
Gupta & Arora (2024)	Hospitality, India	Empirical (Survey, n=275)	GHRM implementation reduces waste and energy costs while improving green brand image.	Resource efficiency
Khan et al. (2024)	Public / Service, Malaysia	Multilevel SEM	Supervisor GHRM perception drives job satisfaction & commitment when system strength is high.	HRM System Strength
Makumbe (2024)	SMEs, Zimbabwe	Mediated Moderation	GHRM enhances green performance through green knowledge sharing and innovation capabilities.	Knowledge Sharing
Li & Pan (2026)	SMEs, East Asia	Empirical (SEM, n=340)	Green knowledge management & sustainability organizational support bridge GHRM to SME outcomes.	Green Knowledge Mgmt

Critical Evaluation of Black-Box Mechanisms & Boundary Conditions

A major thematic progression in recent literature is the shift from testing direct linear links to uncovering complex mediating and moderating mechanisms (Mukherji & Bhatnagar, 2022; Makumbe, 2024). Studies indicate that GHRM acts as a catalyst that activates employee psychological states and organizational capabilities, which subsequently translate into performance metrics.

- **Green Innovation as a Primary Catalyst:** As demonstrated by Kuo (2022) and Makumbe (2024), GHRM practices provide employees with the cognitive tools and psychological safety needed to develop eco-friendly products, green process re-engineering, and sustainable packaging solutions. Green innovation acts as a vital bridge converting HRM investments into tangible financial and environmental returns.
- **Organizational Citizenship Behavior for the Environment (OCBE):** Aboramadan et al. (2022) and Usman et al. (2023) emphasize that formal GHRM policies cultivate discretionary, extra-role green behaviors among staff. When employees regularly engage in OCBE—such as voluntary paper reduction, energy conservation, and peer coaching—the cumulative effect substantially lowers operational environmental impacts.
- **Moderating Role of Leadership and System Strength:** Empirical work by Khan et al. (2024) underscores that GHRM effectiveness hinges on HRM System Strength (distinctness, consistency, and consensus). Furthermore, green transformational leadership amplifies GHRM impact by signaling top-management commitment and resolving perceived inconsistencies between commercial goals and environmental policy (Madrid-Guijarro & Duréndez, 2024).

Table 3. Critical Evaluation of Theoretical Frameworks, Underlying Mechanisms, and Emerging Research Gaps

Theoretical Lens	Key Explanatory Strengths	Underlying Mediating Pathways	Unresolved Research Gaps
Ability-Motivation-Opportunity (AMO) Theory	Provides robust framework for individual employee behavioral transformations (Aboramadan et al., 2022).	Employee OCBE, eco-intrinsic motivation, green championing behaviors.	Over-indexes on micro-individual metrics; under-explores macro-financial ROI and structural alignment.
Natural Resource-Based View (NRBV)	Explains how green human capital builds sustainable competitive advantage and green innovation (Kuo, 2022).	Green innovation capability, green dynamic capabilities, green knowledge sharing.	Assumes linear capability development; overlooks resource constraints in small-and-medium enterprises.
Stakeholder & Legitimacy Theory	Captures external institutional pressures, corporate reputation, and ESG signaling (Jamal et al., 2021).	Corporate green reputation, stakeholder trust, green brand equity.	Risk of superficial 'greenwashing' where GHRM practices exist in policy but lack operational depth.
Just Transition Theory	Addresses ethical, social equity, and workforce transformation imperatives (Hossain & Islam, 2025).	Social inclusion, fair transition adaptation, green well-being.	Sparse empirical quantification; predominantly qualitative conceptualizations in current literature.

5. CONCLUSION

This critical review synthesizes cutting-edge literature (2021–2026) to establish that Green Human Resource Management is a vital strategic catalyst for sustainable organizational performance across the Triple Bottom Line. By embedding ecological criteria into recruitment, training, performance appraisal, compensation, and organizational culture, GHRM drives both micro-level employee eco-behaviors (OCBE) and macro-level organizational dynamic capabilities (green innovation and knowledge sharing).

Managerial & Practical Implications: For HR directors and corporate leaders, GHRM must not be implemented as a piecemeal compliance exercise. Rather, organizations should design an integrated green HRM bundle backed by strong executive leadership and clear, incentivized green KPIs. Aligning GHRM with green innovation programs ensures that environmental commitments translate directly into operational cost savings, risk mitigation, and competitive differentiation.

Limitations & Future Research Agenda: While current research provides compelling evidence, several limitations offer promising avenues for future inquiry. First, cross-sectional survey designs dominate current scholarship; longitudinal and multi-wave field experiments are urgently needed to establish causal relationships over time. Second, empirical research remains heavily concentrated in Asian developing economies and manufacturing/service sectors; scholars should expand investigations into high-carbon heavy industries, agriculture, and public administration. Finally, future studies should explore the intersection of GHRM with digital transformation, AI-driven green workforce analytics, and the ethical frameworks of Just Transition Theory.

REFERENCES

- Aboramadan, M., Kundi, Y. M., & Elhamalawi, E. M. I. (2022). The effect of green human resource management practices on employee green behaviors in higher education institutions. *International Journal of Organizational Analysis*, 30(3), 742–761. <https://doi.org/10.1108/IJOA-02-2021-2628>
- Chreif, M., & Farmanesh, P. (2022). Applying Green Human Resource Practices toward Sustainable Workplace: A Moderated Mediation Analysis. *Sustainability*, 14(15), 9250. <https://doi.org/10.3390/su14159250>
- Gupta, V., & Arora, M. (2024). Green Human Resource Management and Its Sustainable Organizational Practices in Hospitality Industry in India. *Journal of the Knowledge Economy*, 16(2), 7665–7687. <https://doi.org/10.1007/s13132-024-02207-1>
- Hossain, M., & Islam, M. T. (2025). Transforming Human Resource Management into Green Human Resource Management Towards the Path of Sustainability: Through the Lenses of Just Transition Theory. In *Managing Change* (pp. 109–124). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-83608-650-520251006>
- Islam, M. A., Hossain, M. S., Hoque, M. E., Khan, T., & Hassan, M. M. (2023). The Moderating Role of Gender and Employee Championing Behaviour in the Relationship Between Green Human Resource Management Practices and Sustainable Organisational Performance. In *Global Perspectives on Green HRM* (pp. 127–153). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-35795-4_6
- Jamal, T., Zahid, M., Martins, J. M., Mata, M. N., Rahman, H. U., & Mata, P. N. (2021). Perceived Green Human Resource Management Practices and Corporate Sustainability: Multigroup Analysis and Major Industries Perspectives. *Sustainability*, 13(6), 3045. <https://doi.org/10.3390/su13063045>
- Khan, A., Yusliza, M. Y., Alkaf, A. R., & Nawangsari, L. C. (2024). The Influence of Supervisors' Perceived Green HRM on Job Satisfaction and Affective Commitment: The Mediating Role of Subordinates' Perceived Green HRM and Moderating Role of HRM System Strength. *International Journal of Sustainable Development and Planning*, 19(1), 331–346. <https://doi.org/10.18280/ijstdp.190132>
- Kuo, Y. (2022). Impact of Green HRM Practices on Environmental Performance: The Mediating Role of Green Innovation. *Frontiers in Psychology*, 13, 916723. <https://doi.org/10.3389/fpsyg.2022.916723>
- Li, S., & Pan, J. (2026). Bridging green human resource management and SME sustainable outcomes: The catalytic role of green knowledge-management, innovation, and employee perception of sustainability of the organizational support. *Humanities and Social Sciences Communications*, 13, 7731. <https://doi.org/10.1057/s41599-026-07731-w>
- Madrid-Guijarro, A., & Duréndez, A. (2024). Sustainable development barriers and pressures in SMEs: The mediating effect of management commitment to environmental practices. *Business Strategy and the Environment*, 33(2), 949–967. <https://doi.org/10.1002/bse.3537>
- Makumbe, W. (2024). Green human resources management and green performance: A mediation–moderation mechanism for green innovation and green knowledge sharing. *Sustainability*, 16(24), 10849. <https://doi.org/10.3390/su162410849>
- Mukherji, A., & Bhatnagar, J. (2022). Conceptualizing and theorizing green human resource management: a narrative review. *International Journal of Manpower*, 43(3), 862–888. <https://doi.org/10.1108/IJM-06-2021-0376>
- Piwowar-Sulej, K., Malik, S., Shobande, O. A., Singh, S., & Dagar, V. (2024). A Contribution to Sustainable Human Resource Development in the Era of the COVID-19 Pandemic. *Journal of Business Ethics*, 191(2), 337–355. <https://doi.org/10.1007/s10551-023-05456-3>
- Renwick, D. W. S., Jabbour, C. J. C., & Müller-Camen, M. (2021). Contemporary developments in green (environmental) HRM scholarship. *The International Journal of Human Resource Management*, 32(1), 1–25.
- Usman, M., Rofcanin, Y., Ali, M., Ogbonnaya, C., & Babalola, M. T. (2023). Toward a more sustainable environment: Understanding why and when green training promotes employees' eco-friendly behaviors outside of work. *Human Resource Management*, 62(3), 355–371. <https://doi.org/10.1002/hrm.22148>