



Green Human Resource Management: A Comprehensive Review of Evolution, Practices, and Implications in the Indian and Global Contexts

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Abstract

Green Human Resource Management (GHRM) has emerged as a vital domain linking sustainability with human resource practices. This review synthesizes the evolution of GHRM from its conceptual foundations in *Greening People* (Wehrmeyer, 1996) to its current status as a strategic enabler of corporate environmental performance. Drawing upon international and Indian scholarship, the paper categorizes key practices—green recruitment, training, performance appraisal, employee engagement, and eco-friendly organizational design—while situating them within theoretical perspectives such as the Resource-Based View, stakeholder theory, and ecological modernization. Evidence indicates that GHRM contributes to operational cost reduction, employee morale, organizational competitiveness, and broader environmental benefits including reduced carbon footprints and resource conservation. In the Indian context, Central Public Sector Enterprises (e.g., BHEL, NLC, HAL) and private corporations (e.g., Infosys, Tata Group) have adopted varied green HR initiatives, though challenges persist in the form of limited top management support, weak inter-departmental integration, and disclosure constraints. Comparative analysis highlights that while Indian organizations are progressing, they lag behind international benchmarks in integrating GHRM with measurable performance outcomes. The review identifies research gaps, notably the lack of quantifiable indicators, limited empirical studies in commerce sectors, and underexplored intersections between digital HR technologies and sustainability. It concludes that GHRM represents a strategic pathway for organizations to balance economic performance with social and environmental responsibility, and calls for deeper adoption in Indian industry alongside global best practices.

Keywords: Green Human Resource Management (GHRM), sustainability, employee engagement, organizational performance, India



1. Introduction

The term *green* in organizational research signifies a strategic commitment to environmental stewardship—minimizing ecological footprints while maintaining economic viability—by embedding sustainability into core managerial systems and employee practices. Within human resource management, this has evolved into **Green Human Resource Management (GHRM)**, defined as a set of HR policies and practices (recruitment, training, appraisal, rewards, employee involvement) aimed at developing employees' abilities and motivation to support environmental performance and to align workforce behaviour with corporate ecological strategies (Renwick, Redman, & Maguire, 2013).

The early emphasis on the people dimension of environmental management can be traced to Wehrmeyer's (1996) edited volume *Greening People*, which highlighted that employees are pivotal for implementing ecological initiatives and that HR policies such as training, communication, and incentives act as levers for sustainability. This conceptual foundation was later reinforced by scholars who demonstrated HR's "central role" in building sustainable organizations by aligning staffing, development, appraisal, and reward systems with environmental management systems (Jabbour & Santos, 2008).

Building on this, Jackson, Renwick, Jabbour, and Müller-Camen (2011) argued that HR should be considered a strategic partner in advancing corporate sustainability. Their work positioned GHRM within the broader discourse of responsible management, urging researchers to move beyond descriptive case studies toward theoretically grounded and empirically tested frameworks. Subsequent research confirmed the importance of HRM in shaping workplace green behaviour. For example, Dumont, Shen, and Deng (2017) showed that bundles of GHRM practices influence both in-role and extra-role pro-environmental behaviours through mediating mechanisms such as green psychological climate and employee green values. Similarly, Paillé, Chen, Boiral, and Jin (2014) found that HRM practices can significantly enhance organizational citizenship behaviour for the environment (OCBE), thereby improving firm-level environmental performance. More recently, Chen, Jiang, and Li (2021) provided evidence that perceived GHRM fosters workplace green behaviour through psychological green climate and green organizational identity.

Taken together, these studies demonstrate that GHRM plays a decisive role in embedding sustainability within organizations. Given mounting regulatory pressures, stakeholder expectations, and the commercial benefits of eco-efficiency, a comprehensive review is needed. The present paper therefore aims to (i) synthesize the evolution and conceptual scope of GHRM, (ii) catalog and critically evaluate key practices and their mechanisms, and (iii) identify challenges and implications for firms, with particular emphasis on commerce and industry contexts where translating green strategy into employee behaviour is essential for competitiveness (Renwick et al., 2013).

2. Literature Review on Green HRM

The foundations of Green Human Resource Management (GHRM) can be traced to Wehrmeyer's (1996) *Greening People*, which emphasized the pivotal role of employees in environmental management. Over time, scholarship moved from viewing HR as a facilitator of environmental programs to positioning it as a **strategic driver of sustainability** (Jabbour & Santos, 2008). Renwick, Redman, and Maguire (2013) advanced the concept through their integrative review, linking HR subsystems with environmental management and outlining a future research



agenda. More recent contributions, such as Opatha and Arulrajah (2014), conceptualize GHRM as the “greening” of both employees and HR policies, while Jabbar and Abid (2015) stress its measurable impact on organizational environmental performance. Theoretically, GHRM has been framed through multiple lenses: the **Resource-Based View (RBV)** conceptualizes green competencies as a form of unique human capital that confers competitive advantage (Renwick et al., 2013); **CSR and stakeholder theory** highlight its role in fulfilling organizational obligations toward multiple stakeholders (Jackson et al., 2011); and the **ecological modernization framework** underscores how HR-led eco-efficiency can reconcile sustainability with economic performance (Jabbour, 2011). In practice, GHRM encompasses a broad spectrum of initiatives: *green recruitment and selection* prioritize candidates with environmental awareness; *green training* develops competencies for energy efficiency and waste reduction; *performance appraisal* incorporates environmental indicators; *employee relations and engagement* foster green citizenship behaviours (Dumont, Shen, & Deng, 2017); and *organizational infrastructure* includes paperless offices, telecommuting, and eco-friendly workplace design (Paillé, Chen, Boiral, & Jin, 2014). These practices collectively embed sustainability into the workforce, producing outcomes such as higher employee engagement, organizational citizenship for the environment (OCBE), improved environmental performance, and enhanced competitiveness.

Table 1. Summary of GHRM: Theories, Practices, and Outcomes

Dimension	Key Elements	Representative Sources	Reported Outcomes
Evolution	From “Greening People” (1996) to HR as strategic driver of sustainability	Wehrmeyer (1996); Jabbour & Santos (2008); Renwick et al. (2013)	Recognition of HR’s central role in sustainability
Theoretical Perspectives	RBV (green human capital), CSR & stakeholder theory, Ecological modernization	Renwick et al. (2013); Jackson et al. (2011); Jabbour (2011)	Competitive advantage, stakeholder legitimacy, eco-efficiency
Green Recruitment & Selection	Hiring environmentally aware candidates; green branding	Wehrmeyer (1996); Renwick et al. (2013)	Attraction of talent aligned with sustainability values
Green Training & Development	Training in eco-practices, compliance, and innovation	Jabbour (2011)	Enhanced employee green competencies
Performance Appraisal	Environmental KPIs in evaluation	Paillé et al. (2014)	Improved pro-environmental behaviour
Employee Engagement	Green citizenship behaviours, recognition, suggestion schemes	Dumont et al. (2017)	Higher OCBE, stronger green climate
Organizational Infrastructure	Paperless offices, eco-buildings, telecommuting	Jackson et al. (2011)	Reduced costs, carbon footprint reduction

3. Importance and Benefits of GHRM

The adoption of Green Human Resource Management (GHRM) practices has been consistently associated with multiple organizational, social, and environmental benefits. At the operational level, firms adopting green practices often achieve **cost reduction and efficiency gains** by minimizing energy consumption, reducing paper usage, and implementing waste management strategies (Renwick, Redman, & Maguire, 2013). Beyond financial savings, GHRM contributes to **employee morale, job satisfaction, and retention**, since employees increasingly value working for organizations that demonstrate environmental responsibility. Paillé, Chen, Boiral, and Jin (2014) confirmed that employees exposed to green HR practices are more likely to engage in pro-environmental behaviours, which in turn foster positive work attitudes and lower turnover intentions.

From a strategic perspective, GHRM significantly strengthens **public image and employer branding**, enhancing organizational legitimacy and attracting sustainability-oriented talent (Jackson, Renwick, Jabbour, & Müller-Camen, 2011). This reputational advantage translates into improved competitiveness, as environmentally responsible firms differentiate themselves in increasingly eco-conscious markets (Jabbour & Santos, 2008). Furthermore, GHRM produces **broader social and environmental benefits** by reducing organizations' carbon footprints, conserving natural resources, and embedding a culture of environmental stewardship across the workforce (Opatha & Arulrajah, 2014). In this way, GHRM acts as a dual driver—improving firm-level performance while simultaneously contributing to global sustainability agendas.

Table 2. Importance and Benefits of GHRM

Benefit Dimension	Description	Supporting Sources
Operational Cost Reduction	Energy savings, paperless practices, efficient waste management reduce expenses.	Renwick et al. (2013)
Employee Morale & Retention	Green HR practices foster engagement, satisfaction, and lower turnover.	Paillé et al. (2014)
Public Image & Branding	Enhances organizational legitimacy, attracts sustainability-minded talent.	Jackson et al. (2011)
Competitiveness	Differentiation through eco-friendly practices strengthens market position.	Jabbour & Santos (2008)
Social & Environmental Benefits	Reduces carbon footprint, conserves resources, and builds a green culture.	Opatha & Arulrajah (2014)

4. Requirements for Effective Implementation

The successful implementation of Green Human Resource Management (GHRM) requires several organizational and employee-level preconditions that ensure sustainability initiatives translate into tangible outcomes. First, firms must develop **green competencies and skills** among their employees. These competencies include knowledge of environmental laws and policies, technical expertise in eco-friendly practices, and the ability to innovate for sustainability. Jabbour (2011) emphasized that training programs focused on energy efficiency, waste reduction, and environmental compliance are essential to build the necessary human capital for GHRM.



Second, the **attitudinal and behavioural dimensions** of employees play a critical role. Scholars highlight that cognitive (knowledge and beliefs), affective (positive feelings toward sustainability), and behavioural (action-oriented) dimensions together form the basis of pro-environmental behaviour in the workplace (Paillé et al., 2014). For example, employees who internalize green values are more likely to engage in organizational citizenship behaviours for the environment (OCBE), extending beyond formal job requirements to voluntarily support ecological initiatives (Dumont, Shen, & Deng, 2017).

Third, a **supportive organizational culture and leadership commitment** is indispensable. Top management endorsement signals legitimacy and provides resources for environmental practices, while a green-oriented organizational culture fosters collective responsibility for sustainability (Jackson, Renwick, Jabbour, & Müller-Camen, 2011). Without leadership advocacy and cultural alignment, GHRM policies may remain symbolic and fail to influence actual employee behaviour.

Finally, GHRM requires the establishment of **measurable green results** in the form of innovation, outcomes, and benchmarks. Opatha and Arulrajah (2014) argued that organizations must move beyond abstract commitments and define clear metrics such as energy saved, waste reduced, or participation rates in green initiatives. These benchmarks not only provide accountability but also allow organizations to evaluate progress and continuously refine their HR practices. In this way, measurable outcomes serve as feedback loops, reinforcing employee motivation and ensuring that GHRM remains strategically embedded within corporate sustainability agendas.

5. GHRM in the Indian Context

In India, Green Human Resource Management has gained recognition primarily through policy directives and voluntary corporate initiatives. The **Department of Public Enterprises (DPE)** has issued guidelines that integrate sustainability into Memoranda of Understanding (MoUs) with Central Public Sector Enterprises (CPSEs), making environmental performance part of organizational evaluation (Mishra, Sarkar, & Kiranmai, 2014). Empirical studies show that CPSEs such as **BHEL, NLC, NMDC, HAL, and PGCIL** have introduced green practices, including e-recruitment, teleconferencing to reduce travel, and green training programs. However, the extent of adoption varies; for instance, BHEL has consistently integrated six of eight sustainability parameters, while others lag in areas such as remote working and wellness programs (ibid.).

In the private sector, firms like **Infosys** and **Tata Group** have set benchmarks by embedding sustainability into HRM. Infosys promotes a paperless campus, cycling initiatives, and energy-efficient workplaces, while Tata has integrated environmental KPIs into employee performance appraisals (Jabbour, 2011). Despite these advances, challenges persist: **limited recognition** of GHRM compared to CSR, **lack of top management support**, **weak inter-departmental integration**, and **low disclosure levels** in sensitive sectors such as defence (Opatha & Arulrajah, 2014). These constraints highlight the need for stronger institutional frameworks and cultural shifts to mainstream GHRM across Indian commerce and industry.

6. Results and Outcomes Reported in Literature

The literature documents several **innovations** within GHRM, including eco-friendly recruitment, adoption of e-practices (e-filing, teleconferencing), and initiatives for biowaste segregation and treatment (Renwick, Redman,



& Maguire, 2013). Reported **outcomes** include reductions in energy consumption, cost savings from waste minimization, and improved goodwill through enhanced corporate image (Paillé, Chen, Boiral, & Jin, 2014). Comparative studies suggest that while Indian enterprises have made progress, particularly in IT and manufacturing sectors, the **depth of integration lags behind international benchmarks**, where GHRM is often tied directly to sustainability metrics and global reporting standards (Jackson, Renwick, Jabbour, & Müller-Camen, 2011).

7. Research Gaps and Future Directions

Despite a growing body of work, several research gaps remain. First, there is a **scarcity of empirical studies in the Indian commerce sector**, particularly in small and medium enterprises (SMEs), which form the backbone of the economy. Second, there is a **need for quantifiable performance indicators** to assess the effectiveness of GHRM practices, moving beyond descriptive accounts to measurable environmental and financial outcomes (Dumont, Shen, & Deng, 2017). Third, with the rise of digital transformation, there is potential to **integrate AI and HR analytics with sustainability goals**, allowing predictive modeling of green behaviours and automated tracking of environmental KPIs (Chen, Jiang, & Li, 2021). Finally, **cross-sectoral comparative studies** between public and private enterprises, and across national contexts, would enrich the understanding of how institutional, cultural, and industry-specific factors mediate the adoption of GHRM.

8. Conclusion

This review highlights that HRM is no longer a peripheral function but a **strategic driver of corporate sustainability**. The evolution of GHRM demonstrates how HR practices—ranging from recruitment to appraisal—can embed ecological responsibility into organizational culture and performance. Evidence from both international and Indian contexts underscores the **multi-dimensional benefits of GHRM**, including cost efficiency, employee engagement, reputational advantage, and environmental conservation. At the same time, the Indian experience reveals challenges such as weak top management support and limited integration across departments, pointing to areas requiring urgent policy and managerial attention. Ultimately, GHRM offers a pathway for organizations to balance **economic performance with social and environmental responsibility**, aligning business goals with the broader imperatives of sustainable development. For Indian commerce and industry, deeper adoption of GHRM, supported by policy frameworks and digital innovation, is essential for achieving both competitiveness and ecological stewardship in the 21st century.

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