



Green Human Resource Management in Organizations: Conceptual Foundations, Practices and Future Pathways

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ABSTRACT

This article aims to synthesize and critically analyze the existing body of literature on Green Human Resource Management (GHRM), with particular emphasis on its conceptual foundations, core practices, theoretical underpinnings, organizational outcomes, and emerging research directions. As organizations increasingly integrate environmental sustainability into their strategic agendas, there is a growing need to consolidate fragmented scholarly discussions into a coherent framework. This study seeks to clarify the evolution, scope, and strategic relevance of GHRM within contemporary organizational contexts. The study adopts a systematic secondary data-based content analysis approach. A comprehensive review of peer-reviewed journal articles, academic books, institutional reports, and policy documents related to GHRM was conducted. The collected literature was subjected to thematic coding and conceptual categorization to identify dominant themes, theoretical perspectives, implementation practices, and research gaps. This qualitative synthesis enables the identification of patterns, inconsistencies, and emerging trends in the development of GHRM scholarship. The analysis indicates that GHRM has evolved from a compliance-oriented environmental management approach to a strategically embedded sustainability-driven HR paradigm. Core practices consistently identified in the literature include green recruitment and selection, environmental training and development, green performance management systems, sustainability-linked compensation and rewards, and employee engagement in environmental initiatives. The findings further suggest that theoretical foundations such as the Resource-Based View, Institutional Theory, Stakeholder Theory, and the Ability-Motivation-Opportunity framework significantly inform GHRM research. However, notable gaps persist, particularly in the development of standardized measurement frameworks, contextual adaptation in developing economies, and the integration of digital transformation and green HR analytics. This article contributes to the field by consolidating dispersed research into an integrated conceptual framework that links drivers, practices, and outcomes of GHRM. It advances theoretical clarity and offers practical and scholarly pathways for future research, thereby positioning GHRM as a strategic imperative for sustainable organizational development.

Keyword: Green Human Resource Management (GHRM); Sustainable HRM; Environmental Sustainability; Green Practices; Organizational Sustainability; Content Analysis; Corporate Environmental Strategy; Sustainable Development

1. Introduction

1.1 Background and Context

The intensifying climate crisis, biodiversity loss, and environmental degradation have compelled governments, corporations, and civil society to reconsider traditional growth-

oriented development models. Global frameworks such as the Paris Agreement and the United Nations Sustainable Development Goals (SDGs) have heightened pressure on organizations to incorporate environmental responsibility into their strategic agendas (United Nations, 2015). In response, corporate sustainability and Environmental, Social, and Governance (ESG) frameworks have gained prominence as mechanisms to balance economic performance with environmental stewardship and social accountability (Eccles, Ioannou, & Serafeim, 2014).

Within this broader sustainability movement, organizations increasingly recognize that environmental strategies cannot be implemented effectively without employee engagement and human capital alignment. Human Resource Management (HRM), traditionally focused on recruitment, performance management, and employee development, has thus expanded toward sustainability-oriented approaches. This shift has led to the emergence of Green Human Resource Management (GHRM), which integrates environmental objectives into HR policies and practices (Renwick, Redman, & Maguire, 2013). GHRM emphasizes developing environmentally responsible behaviors among employees through green recruitment, training, performance appraisal, and reward systems (Jabbour & Santos, 2008; Tang, Chen, Jiang, Paille, & Jia, 2018).

The integration of environmental goals into HR policies reflects a strategic recognition that employees play a central role in achieving organizational sustainability. By embedding environmental values into HR systems, organizations can foster a culture of ecological responsibility and enhance long-term competitive advantage (Dumont, Shen, & Deng, 2017). Consequently, GHRM has emerged as a critical intersection between environmental management and strategic HRM.

1.2 Problem Statement

Despite the growing body of literature on GHRM, the field remains conceptually fragmented. Definitions vary widely across studies, with some focusing narrowly on environmentally friendly HR practices and others conceptualizing GHRM as a strategic sustainability framework (Renwick et al., 2013; Opatha & Arulrajah, 2014). This lack of conceptual clarity creates inconsistencies in measurement, implementation, and theoretical grounding.

Furthermore, while numerous empirical studies examine individual GHRM practices, there is limited synthesis of how these practices collectively influence organizational, environmental, and employee outcomes. Theoretical explanations also vary, drawing from the Resource-Based View, Institutional Theory, Stakeholder Theory, and the Ability–Motivation–Opportunity (AMO) framework, yet integration among these perspectives remains underdeveloped (Paillé, Chen, Boiral, & Jin, 2014).

Given these gaps, there is a need for a structured secondary data–based content analysis that systematically synthesizes existing research. Such an approach can clarify conceptual foundations, identify dominant practices, evaluate theoretical frameworks, and outline future research pathways.

1.3 Objectives of the Study

This study aims to:

Examine the conceptual foundations of Green Human Resource Management.

Identify and categorize major GHRM practices.

Analyze the theoretical frameworks underpinning GHRM adoption.

Evaluate reported organizational and employee outcomes of GHRM implementation.
Propose future research directions and practical pathways for organizations.

1.4 Research Questions

To achieve these objectives, the study addresses the following research questions:

What are the core conceptual foundations of GHRM?

What practices define effective GHRM implementation?

What theoretical perspectives explain the adoption and effectiveness of GHRM?

What research gaps and future directions emerge from existing literature?

2. Methodology: Secondary Data-Based Content Analysis

2.1 Research Design

This study adopts a qualitative systematic literature review design using a secondary data-based content analysis approach. The research synthesizes existing scholarly knowledge on Green Human Resource Management (GHRM) through thematic coding and conceptual analysis. Content analysis was employed to systematically identify recurring patterns, themes, and theoretical perspectives within the selected literature.

2.2 Data Sources

The study relies exclusively on secondary data derived from credible academic and institutional sources. These include:

Peer-reviewed journal articles on GHRM and sustainable HRM

Academic books and book chapters related to sustainability and HRM

International organizational reports (e.g., United Nations, International Labour Organization)

Scholarly databases such as Scopus, Web of Science, and Google Scholar

These sources were selected to ensure academic rigor, relevance, and comprehensiveness.

2.3 Inclusion and Exclusion Criteria

To maintain consistency and relevance, the following criteria were applied:

Inclusion Criteria:

Publications between 2005 and 2025

English-language scholarly works

Studies focusing on organizational-level Green Human Resource Management

Exclusion Criteria:

Non-scholarly or opinion-based articles

Studies unrelated to HRM practices

Research focusing solely on general environmental management without HR dimensions

2.4 Analytical Procedure

The analytical process involved four stages:

Identification of themes related to conceptual foundations, practices, theories, and outcomes of GHRM.

Categorization of practices into coherent domains such as recruitment, training, performance management, and compensation.

Comparative analysis across studies to detect similarities, differences, and research gaps.

Conceptual mapping to develop an integrated framework linking drivers, practices, and outcomes of GHRM.

2.5 Limitations of Secondary Data

As a secondary data-based study, the findings depend on the availability and quality of published literature. Potential publication bias, language restrictions, and the exclusion of unpublished or non-English research may limit comprehensiveness. Additionally, the absence of primary empirical validation restricts direct generalizability of conclusions.

3. Conceptual Foundations of Green Human Resource Management

3.1 Evolution of HRM toward Sustainability

The conceptual development of Green Human Resource Management (GHRM) can be understood through the broader evolution of Human Resource Management (HRM). Traditional HRM primarily focused on administrative efficiency, employee welfare, and compliance with labor regulations. Its core functions included recruitment, compensation, training, and performance management, largely oriented toward improving organizational productivity (Armstrong & Taylor, 2020).

With the emergence of Strategic HRM (SHRM), the focus shifted toward aligning HR practices with organizational strategy to enhance competitive advantage (Wright & McMahan, 1992). HR was no longer viewed merely as an administrative function but as a strategic partner contributing to long-term business performance.

Subsequently, increasing societal concern about environmental sustainability led to the development of Sustainable HRM, which integrates economic, social, and environmental dimensions into HR policies (Ehnert, 2009). Sustainable HRM emphasizes long-term value creation, employee well-being, and corporate social responsibility.

Building upon this foundation, Green Human Resource Management (GHRM) emerged as a specialized approach that explicitly incorporates environmental management objectives into HR functions. GHRM aligns HR practices with environmental sustainability goals, aiming to foster pro-environmental behaviors among employees and embed ecological values within organizational culture (Renwick, Redman, & Maguire, 2013).

3.2 Definition and Scope of GHRM

The literature presents varied definitions of GHRM, reflecting both narrow and broad interpretations. Renwick et al. (2013) define GHRM as the integration of environmental management into HRM practices to support sustainable use of resources within organizations. Similarly, Opatha and Arulrajah (2014) describe GHRM as policies and practices that promote sustainable resource use and encourage environmentally responsible employee behavior.

Narrow interpretations of GHRM focus primarily on specific HR functions such as green recruitment, training, performance appraisal, and reward systems designed to enhance environmental performance. In contrast, broader perspectives conceptualize GHRM as a strategic and cultural transformation process that embeds environmental sustainability across the entire employee lifecycle and organizational systems (Jabbour & Santos, 2008).

Thus, GHRM extends beyond operational adjustments and represents a systemic integration of environmental values into HR strategy, organizational culture, and employee engagement mechanisms.

3.3 Theoretical Foundations

The conceptual grounding of GHRM draws from multiple theoretical perspectives that explain why and how organizations adopt environmentally oriented HR practices.

3.3.1 Resource-Based View (RBV)

The Resource-Based View (RBV) posits that organizations achieve sustainable competitive advantage through valuable, rare, inimitable, and non-substitutable resources (Barney, 1991). From this perspective, green human capital employees equipped with environmental knowledge, skills, and commitment constitutes a strategic asset. By investing in green training and cultivating environmentally responsible behaviors, organizations can enhance environmental performance while differentiating themselves competitively (Jabbour, 2013).

3.3.2 Institutional Theory

Institutional Theory suggests that organizations adopt certain practices in response to regulatory, normative, and mimetic pressures (DiMaggio & Powell, 1983). Environmental regulations, industry standards, and societal expectations compel organizations to implement GHRM practices to maintain legitimacy. Regulatory frameworks and sustainability reporting requirements further reinforce the institutionalization of green HR initiatives.

3.3.3 Stakeholder Theory

Stakeholder Theory emphasizes that organizations are accountable not only to shareholders but also to broader stakeholders, including employees, customers, communities, and environmental groups (Freeman, 1984). GHRM reflects an organizational commitment to environmental responsibility by aligning HR policies with stakeholder expectations for sustainable business practices.

3.3.4 Social Exchange Theory

Social Exchange Theory posits that employee attitudes and behaviors are shaped by reciprocal relationships between employers and employees (Blau, 1964). When organizations demonstrate commitment to environmental sustainability through GHRM practices, employees may reciprocate by engaging in voluntary green behaviors and organizational citizenship behaviors for the environment (Dumont, Shen, & Deng, 2017).

3.3.5 Ability–Motivation–Opportunity (AMO) Framework

The Ability–Motivation–Opportunity (AMO) framework argues that employee performance depends on their abilities, motivation, and opportunities to participate (Appelbaum et al., 2000). In the context of GHRM, green training enhances employees' abilities, incentive systems strengthen motivation, and participatory environmental programs provide opportunities for green involvement. Together, these mechanisms foster pro-environmental workplace behaviors (Paillé et al., 2014).

Overall, the conceptual foundations of GHRM demonstrate its interdisciplinary nature, integrating strategic management, organizational theory, and behavioral perspectives. These theoretical lenses collectively explain the strategic relevance, institutional drivers, stakeholder pressures, and employee-level mechanisms that underpin the adoption and effectiveness of green HR practices.

4. Core Practices of Green Human Resource Management

Green Human Resource Management (GHRM) integrates environmental sustainability into traditional HR functions to promote responsible organizational behavior. Drawing from the

resource-based view (RBV) and stakeholder theory, GHRM practices help organizations develop environmentally responsible human capital, enhance ecological performance, and create long-term competitive advantage (Renwick et al., 2013; Jabbour & Santos, 2008). The following subsections outline the core practices of GHRM identified through secondary data-based content analysis of contemporary literature.

4.1 Green Job Design and Workforce Planning

Green job design involves embedding environmental responsibilities into job descriptions, roles, and competency frameworks. It ensures that sustainability becomes an integral part of everyday tasks rather than an isolated function (Renwick et al., 2013).

Environmental Roles and Responsibilities

Organizations incorporate environmental objectives into job specifications by:

Defining sustainability-related duties in job descriptions

Assigning responsibility for resource conservation and waste management

Integrating environmental compliance into managerial roles

For example, firms adopting environmental management systems such as International Organization for Standardization ISO 14001 often redesign roles to ensure environmental accountability across departments. This integration promotes shared responsibility and supports strategic environmental goals (Jabbour & Santos, 2008).

Workforce planning in GHRM also forecasts the need for sustainability experts, environmental officers, and green innovation specialists, aligning talent pipelines with long-term environmental objectives.

4.2 Green Recruitment and Selection

Green recruitment and selection focus on attracting and hiring candidates who possess environmental values, awareness, and competencies.

Attracting Environmentally Conscious Employees

Organizations increasingly communicate their sustainability commitments to attract eco-conscious applicants. Research indicates that environmentally responsible firms tend to appeal more strongly to younger generations seeking purpose-driven employment (Pham et al., 2019).

Recruitment strategies include:

Advertising sustainability initiatives in job postings

Highlighting environmental achievements in recruitment campaigns

Including environmental criteria in selection interviews

Green Employer Branding

Green employer branding positions the organization as environmentally responsible to enhance its attractiveness in the labor market. Companies such as Patagonia exemplify strong environmental employer branding by aligning corporate values with ecological activism. Such branding enhances organizational reputation and improves applicant quality (Renwick et al., 2013).

Selection processes may assess candidates' environmental values, prior involvement in sustainability initiatives, and ecological awareness through behavioral interview questions and psychometric tools.

4.3 Green Training and Development

Green training and development enhance employees' environmental knowledge, skills, and competencies necessary for sustainable operations.

Environmental Awareness Programs

Organizations conduct workshops, seminars, and e-learning modules to increase awareness of environmental challenges, climate change, and regulatory compliance. Training fosters pro-environmental behavior at the workplace (Dumont et al., 2017).

These programs may include:

Energy conservation awareness

Waste segregation practices

Sustainable procurement guidelines

Sustainability Skills Development

Beyond awareness, GHRM emphasizes technical sustainability skills such as carbon accounting, lifecycle assessment, green supply chain management, and eco-innovation. Continuous professional development ensures alignment with evolving environmental standards and technological advancements (Jabbour, 2015).

Training investments also signal top management commitment to sustainability, which strengthens employees' psychological engagement in environmental initiatives.

4.4 Green Performance Management

Green performance management integrates environmental objectives into appraisal systems to monitor and reinforce sustainable behavior.

Environmental KPIs

Environmental Key Performance Indicators (KPIs) may include:

Reduction in energy consumption

Decrease in carbon emissions

Waste minimization rates

Compliance with environmental regulations

Embedding these indicators in performance management systems ensures accountability and continuous improvement (Renwick et al., 2013).

Sustainability Metrics in Appraisal

Performance appraisal forms may incorporate sustainability criteria at individual and team levels. Managers evaluate employees' contributions to environmental initiatives, innovation in green practices, and adherence to sustainability standards. Linking appraisal systems with environmental outcomes strengthens behavioral alignment and institutionalizes sustainability (Dumont et al., 2017).

4.5 Green Compensation and Rewards

Green compensation aligns reward systems with environmental objectives to motivate sustainable behaviors.

Incentives for Eco-Friendly Behavior

Organizations may offer:

Financial bonuses tied to environmental targets

Gain-sharing schemes linked to energy savings

Subsidies for eco-friendly commuting options

Monetary incentives reinforce the importance of environmental performance and encourage proactive sustainability efforts (Jabbour & Santos, 2008).

Recognition Systems

Non-monetary rewards such as “Green Employee of the Month” awards, public recognition, and career advancement opportunities foster intrinsic motivation. Recognition programs enhance employee commitment to sustainability and strengthen organizational green culture (Renwick et al., 2013).

4.6 Green Employee Engagement and Participation

Employee involvement is critical for embedding sustainability into organizational culture.

Green Teams

Green teams are cross-functional groups responsible for identifying and implementing sustainability initiatives. These teams promote collaboration and bottom-up innovation. Many multinational corporations, including Unilever, have implemented employee-led sustainability programs that contribute to corporate environmental goals.

Employee-Driven Sustainability Initiatives

Organizations encourage suggestion schemes, participatory decision-making, and volunteer environmental activities. Research suggests that when employees perceive organizational support for environmental initiatives, they are more likely to exhibit voluntary pro-environmental behaviors (Dumont et al., 2017).

4.7 Green Workplace Practices

Green workplace practices operationalize sustainability in day-to-day activities.

Paperless Systems

Digital documentation, cloud storage, and electronic communication reduce paper consumption and administrative waste. The adoption of enterprise systems and digital HR platforms facilitates paperless HR operations, contributing to lower resource usage.

Energy Conservation

Organizations implement energy-efficient lighting, smart HVAC systems, and renewable energy sources such as solar panels. Employee awareness campaigns further reinforce energy-saving behaviors.

Waste Reduction Initiatives

Waste management programs include recycling systems, composting, and reduction of single-use plastics. Firms such as Toyota Motor Corporation have incorporated lean and green principles to minimize operational waste while improving efficiency.

Collectively, these workplace practices contribute to reduced environmental footprints and improved organizational sustainability performance.

5. Organizational Outcomes of GHRM

Green Human Resource Management (GHRM) contributes significantly to organizational sustainability by shaping environmental, economic, and employee-related outcomes. Based on a secondary data-driven content analysis of extant literature, GHRM practices are

positively associated with improved environmental performance, enhanced financial outcomes, strengthened employee attitudes and behaviors, and improved corporate reputation (Renwick et al., 2013; Dumont et al., 2017). These outcomes are discussed below.

5.1 Environmental Performance

Environmental performance represents the most direct outcome of GHRM, as green HR practices aim to embed ecological responsibility into employee behavior and organizational processes.

Carbon Footprint Reduction

GHRM contributes to reduced greenhouse gas emissions by encouraging environmentally responsible behavior at individual and organizational levels. Through green training, performance metrics, and incentive systems, employees become more aware of their carbon impact and actively participate in emission-reduction initiatives (Jabbour & Santos, 2008).

Organizations implementing integrated environmental management systems aligned with standards from the International Organization for Standardization often report measurable reductions in carbon emissions. For example, companies such as Microsoft have embedded sustainability goals into employee performance systems, contributing to their carbon-neutral and carbon-negative commitments. These outcomes reflect how HR systems can influence organization-wide environmental behavior.

Resource Efficiency

Resource efficiency including reduced energy, water, and material consumption is another significant outcome. Green training programs foster energy-conscious practices, while green performance appraisals ensure accountability for efficient resource use (Renwick et al., 2013).

Employee engagement initiatives such as green teams further enhance operational efficiencies by identifying waste reduction opportunities. As a result, organizations experience improved environmental metrics alongside operational optimization (Dumont et al., 2017).

5.2 Economic and Financial Performance

Beyond environmental gains, GHRM contributes to improved economic performance, demonstrating that sustainability and profitability are not mutually exclusive.

Cost Savings

Resource efficiency and waste reduction directly translate into financial savings. Reduced energy consumption, minimized material wastage, and optimized logistics decrease operational costs (Jabbour, 2015). Green workplace initiatives such as paperless systems and energy-efficient technologies reduce overhead expenses while supporting environmental goals.

Furthermore, employee-driven innovation in sustainability practices can lower compliance costs and reduce environmental penalties. Over time, these cost efficiencies improve financial stability and long-term viability.

Competitive Advantage

From a resource-based view (RBV), environmentally responsible human capital represents a strategic asset that is valuable, rare, and difficult to imitate (Renwick et al., 2013).

Organizations that embed sustainability into HR systems cultivate a distinctive green organizational culture that competitors may find challenging to replicate.

Companies like Patagonia have leveraged strong environmental commitments as a source of differentiation, strengthening customer loyalty and market positioning. Consequently, GHRM enhances brand equity and fosters sustainable competitive advantage (Pham et al., 2019).

5.3 Employee Outcomes

GHRM also influences employee attitudes, motivation, and behavior, creating positive psychological and behavioral outcomes.

Green Commitment

Green commitment refers to employees' psychological attachment to organizational environmental goals. When employees perceive strong environmental values embedded in HR policies, they develop higher levels of commitment to sustainability initiatives (Dumont et al., 2017).

Green training, inclusive decision-making, and supportive leadership contribute to a "psychological green climate," reinforcing employees' identification with organizational sustainability objectives.

Organizational Citizenship Behavior

GHRM fosters voluntary pro-environmental behaviors beyond formal job requirements, often conceptualized as green organizational citizenship behavior (OCB). Employees may voluntarily conserve energy, suggest eco-friendly improvements, or participate in sustainability campaigns (Pham et al., 2019).

Such discretionary behaviors strengthen environmental performance and enhance collaborative culture, illustrating how HR systems shape both formal and informal organizational conduct.

Job Satisfaction

Employees working in environmentally responsible organizations often report higher job satisfaction due to perceived alignment between personal values and organizational mission (Renwick et al., 2013). Value congruence enhances motivation, engagement, and retention, particularly among environmentally conscious employees.

Additionally, participation in sustainability initiatives can increase employees' sense of purpose and meaningfulness at work, further contributing to satisfaction and morale.

5.4 Corporate Reputation and Employer Branding

Corporate reputation is a critical intangible outcome of GHRM. Organizations recognized for sustainability leadership often enjoy enhanced stakeholder trust and legitimacy (Jabbour & Santos, 2008).

Companies such as Unilever have built strong reputations through sustainability-driven business models supported by green HR practices. Positive environmental reputation strengthens investor confidence, customer loyalty, and employer attractiveness.

Green employer branding, supported by GHRM initiatives, improves talent acquisition by attracting environmentally conscious candidates. In increasingly sustainability-oriented labor markets, strong environmental credentials function as a strategic differentiator (Pham et al., 2019).

Overall, the literature indicates that GHRM generates multidimensional organizational outcomes environmental, economic, psychological, and reputational reinforcing its strategic significance in modern organizations.

6. Challenges in Implementing GHRM

Despite the growing recognition of Green Human Resource Management (GHRM) as a strategic mechanism for achieving sustainability, its implementation remains complex and uneven across organizations. A secondary data-based content analysis of extant literature reveals that several structural, behavioral, financial, and institutional barriers hinder effective adoption. These challenges are discussed below.

6.1 Lack of Managerial Commitment

Top management commitment is widely recognized as a critical success factor for environmental management initiatives. However, many organizations struggle with limited leadership support for GHRM integration (Renwick et al., 2013). Without explicit endorsement from senior executives, green HR policies often remain symbolic rather than substantive.

Leadership commitment influences resource allocation, policy formulation, and cultural alignment. Studies indicate that environmental initiatives are more effective when sustainability is embedded in strategic vision and championed by senior management (Jabbour & Santos, 2008). In the absence of such commitment, green HR practices may lack authority, coordination, and long-term continuity.

Moreover, environmental responsibilities may be delegated solely to compliance departments rather than integrated across HR systems, limiting their transformative impact.

6.2 Resistance to Change

Organizational change toward sustainability frequently encounters employee and managerial resistance. GHRM often requires modifications in job roles, performance metrics, and behavioral expectations, which may create uncertainty and perceived additional workload (Dumont et al., 2017).

Employees accustomed to traditional HR systems may resist green performance appraisals or sustainability-linked incentives, particularly if environmental goals are perceived as peripheral to core business objectives. Resistance may also stem from limited environmental awareness, skepticism regarding corporate motives, or fear of increased accountability.

Change management theories emphasize that communication, participation, and training are essential to overcoming resistance (Jackson et al., 2011). Without inclusive engagement strategies, GHRM implementation may face cultural inertia and behavioral barriers.

6.3 Measurement Difficulties

Measuring the effectiveness of GHRM presents methodological and operational challenges. Unlike traditional HR metrics (e.g., turnover rates, productivity), environmental outcomes are

often indirect, long-term, and influenced by multiple external variables (Renwick et al., 2013).

Organizations struggle to develop standardized environmental Key Performance Indicators (KPIs) that accurately capture employee-level contributions to sustainability. Although frameworks such as ISO 14001 from the International Organization for Standardization provide environmental management guidelines, translating these standards into measurable HR indicators remains complex.

Additionally, isolating the impact of GHRM from other sustainability initiatives complicates evaluation. This measurement ambiguity may reduce managerial confidence in the tangible benefits of GHRM, thereby limiting institutional commitment.

6.4 Short-Term Profit Orientation

A dominant short-term financial focus represents another major obstacle. Many organizations prioritize immediate profitability and shareholder returns over long-term sustainability investments (Jabbour, 2015).

GHRM practices such as green training programs, sustainability reporting systems, and eco-friendly workplace redesign often require upfront investment with benefits realized over time. Organizations driven by quarterly financial targets may perceive these investments as cost burdens rather than strategic assets.

This short-termism undermines the resource-based view (RBV) perspective, which emphasizes long-term value creation through intangible assets such as green human capital (Renwick et al., 2013). Without a long-term strategic orientation, GHRM initiatives may remain superficial or discontinued during economic downturns.

6.5 Resource Constraints (Especially SMEs and Developing Economies)

Resource limitations are particularly acute for small and medium-sized enterprises (SMEs) and organizations operating in developing economies. Implementing GHRM requires financial investment, technical expertise, training infrastructure, and managerial capacity resources that may be scarce in smaller firms (Jackson et al., 2011).

SMEs often face competing priorities such as market survival, regulatory compliance, and operational efficiency. Consequently, environmental initiatives may be deprioritized. Limited access to green technologies, sustainability consultants, and environmental knowledge further exacerbates implementation challenges.

In developing economies, institutional support mechanisms, regulatory enforcement, and environmental awareness may be less developed, creating systemic barriers to GHRM adoption (Jabbour & Santos, 2008). Cultural differences and varying stakeholder pressures also influence the pace and depth of implementation.

Synthesis of Implementation Challenges

The literature suggests that GHRM implementation is influenced by both internal organizational dynamics (leadership commitment, culture, resources) and external institutional pressures (regulations, stakeholder expectations). Addressing these challenges requires:

Strong top management advocacy
Integrated change management strategies
Robust environmental measurement systems
Long-term strategic orientation
Policy support and capacity-building, particularly for SMEs
Overcoming these barriers is essential to realizing the full strategic and sustainability potential of GHRM.

7. Emerging Trends and Future Pathways

As Green Human Resource Management (GHRM) evolves from a peripheral initiative to a strategic imperative, emerging trends indicate deeper integration with digital transformation, governance frameworks, leadership development, and global sustainability agendas. Based on secondary data-based content analysis of recent scholarly contributions, the future of GHRM lies in technological advancement, cross-disciplinary integration, and more rigorous empirical assessment (Renwick et al., 2013; Pham et al., 2019).

7.1 Digitalization and Green HR Analytics

Digital transformation is reshaping HR functions, enabling data-driven sustainability management. The integration of artificial intelligence (AI), Human Resource Information Systems (HRIS), and people analytics allows organizations to systematically track environmental performance at individual and organizational levels.

Use of AI and HRIS in Sustainability Tracking

AI-enabled HR platforms can monitor energy-saving behaviors, telecommuting patterns, paperless operations, and sustainability-related KPIs. Advanced HR analytics facilitate real-time tracking of green performance indicators and link them to appraisal and reward systems (Jabbour et al., 2018).

For example, companies such as IBM utilize AI-driven HR systems to optimize workforce planning and reduce travel-related carbon emissions through virtual collaboration technologies. Similarly, SAP integrates sustainability metrics into its enterprise resource planning systems, enabling organizations to align HR data with environmental reporting requirements.

Digitalization enhances transparency, accountability, and predictive sustainability modeling. However, it also requires data governance frameworks to ensure ethical and secure use of employee information.

7.2 Integration with ESG and Corporate Governance

Environmental, Social, and Governance (ESG) frameworks are increasingly shaping corporate strategy. GHRM is emerging as a critical mechanism for operationalizing the “E” and “S” components of ESG by embedding sustainability into workforce management systems.

Organizations adopting ESG reporting standards such as those encouraged by the United Nations Sustainable Development Goals (SDGs) are aligning HR policies with broader sustainability disclosures. Boards and governance committees now consider human capital and environmental competencies as part of risk management and long-term value creation.

The integration of GHRM with corporate governance strengthens accountability structures and enhances investor confidence. Future pathways suggest greater regulatory alignment between HR metrics and ESG performance indicators (Renwick et al., 2013).

7.3 Green Leadership and Culture Development

Leadership plays a transformative role in embedding sustainability into organizational culture. Emerging research emphasizes “green transformational leadership,” where leaders inspire pro-environmental values and model sustainable behavior (Dumont et al., 2017).

Future GHRM pathways involve:

Developing sustainability-oriented leadership competencies

Embedding environmental values in organizational mission and vision

Cultivating psychological green climate

Organizations such as Unilever demonstrate how sustainability-driven leadership can shape corporate culture and employee engagement. Green culture development ensures that sustainability is internalized rather than imposed, fostering long-term behavioral change.

7.4 Cross-Cultural and Sectoral Comparisons

GHRM practices vary significantly across cultural, institutional, and sectoral contexts. Comparative studies highlight differences between developed and developing economies, manufacturing and service industries, and public versus private sectors (Jackson et al., 2011).

Future research pathways emphasize cross-national comparisons to understand how cultural values, regulatory pressures, and stakeholder expectations influence GHRM adoption. For instance, European organizations often operate under stringent environmental regulations, whereas firms in emerging markets may face institutional voids but growing global supply chain pressures.

Sector-specific analysis is also crucial. High-emission industries (e.g., manufacturing, energy) may prioritize operational sustainability, whereas service industries may emphasize behavioral and awareness-based initiatives.

7.5 Measuring GHRM Effectiveness

Robust measurement remains central to advancing GHRM scholarship and practice.

Development of Standardized Measurement Scales

Scholars have begun developing validated scales to measure green HR practices, psychological green climate, and employee green behavior (Dumont et al., 2017). However, inconsistencies persist in operational definitions and metrics across studies.

Future pathways include:

Developing universally accepted GHRM measurement frameworks

Integrating environmental KPIs with HR balanced scorecards

Aligning HR metrics with international standards such as ISO 14001

Standardized scales will enhance comparability across studies and strengthen the empirical foundation of GHRM research (Renwick et al., 2013).

7.6 Green HRM in Developing Economies

Developing economies present unique opportunities and challenges for GHRM. Rapid industrialization, environmental degradation, and global supply chain integration increase the urgency of sustainable workforce management (Jabbour et al., 2018).

However, institutional constraints such as limited regulatory enforcement, resource shortages, and low environmental awareness may impede adoption. Future pathways include capacity-building initiatives, government incentives, and international collaboration to promote sustainable HR systems in emerging markets.

Multinational corporations operating in developing countries may also act as catalysts by transferring sustainability standards and green HR practices across borders.

7.7 Future Research Agenda

To advance theoretical and empirical understanding, future research should adopt more rigorous and diversified methodological approaches.

Longitudinal Studies

Most existing GHRM research relies on cross-sectional data, limiting causal inference. Longitudinal studies can assess how green HR practices influence environmental and organizational outcomes over time, capturing dynamic change processes (Renwick et al., 2013).

Mixed-Method Approaches

Combining quantitative surveys with qualitative interviews and case studies will provide deeper insights into contextual factors influencing GHRM effectiveness. Mixed-method research can uncover nuanced cultural and institutional dynamics often overlooked in large-scale surveys.

Micro-Level Behavioral Studies

Future studies should explore individual-level mechanisms, including motivation, identity, values alignment, and green psychological climate. Understanding how employees internalize environmental values will strengthen micro-foundational theories of GHRM (Dumont et al., 2017).

Additionally, integrating behavioral economics and organizational psychology perspectives may reveal how incentives, norms, and leadership influence sustainable behavior at work.

Concluding Perspective on Future Pathways

Emerging trends suggest that GHRM is transitioning from an operational support function to a strategic enabler of sustainable transformation. Digital analytics, ESG integration, leadership development, and global comparative research will shape the next generation of GHRM scholarship and practice. Strengthening measurement frameworks and expanding research methodologies will further solidify GHRM as a critical pillar of sustainable organizational management.

8. Proposed Conceptual Framework

Based on a secondary data-based content analysis of the Green Human Resource Management (GHRM) literature, a comprehensive conceptual framework is proposed to explain how contextual drivers influence GHRM practices, which in turn shape mediating

mechanisms and lead to multidimensional organizational outcomes. The framework integrates insights from stakeholder theory, the resource-based view (RBV), and social exchange theory (Renwick et al., 2013; Jackson et al., 2011; Dumont et al., 2017).

8.1 Conceptual Structure of the Framework

The proposed framework consists of four major components:

Drivers (Regulatory, Stakeholder, Strategic)

GHRM Practices

Mediating Mechanisms (Green Behavior, Engagement)

Outcomes (Environmental, Economic, Social)

The relationships are illustrated below.

8.3 Components of the Framework

A. Drivers of GHRM

(1) Regulatory Drivers

Environmental laws, compliance standards, and international frameworks exert coercive pressure on organizations to adopt sustainable HR systems. Standards developed by the International Organization for Standardization (e.g., ISO 14001) encourage integration of environmental management into organizational processes, including HR practices (Jabbour & Santos, 2008).

Regulatory pressure is particularly influential in highly regulated industries and developed economies.

(2) Stakeholder Drivers

Stakeholder theory posits that organizations respond to expectations from customers, employees, investors, communities, and advocacy groups. Increasing emphasis on Environmental, Social, and Governance (ESG) reporting guided by global initiatives such as the United Nations Sustainable Development Goals (SDGs) encourages organizations to embed sustainability into HR systems (Jackson et al., 2011).

Employee expectations, especially among younger generations, also function as internal stakeholder pressure promoting green employer branding and sustainable workplace practices.

(3) Strategic Drivers

From the resource-based view (RBV), environmentally oriented human capital can serve as a source of sustainable competitive advantage (Renwick et al., 2013). Organizations strategically adopt GHRM to enhance innovation, efficiency, and long-term resilience. Sustainability becomes embedded within corporate strategy rather than treated as peripheral compliance.

B. GHRM Practices

The second component includes integrated HR practices aligned with environmental objectives:

Green job design and workforce planning

Green recruitment and selection

Green training and development

Green performance management

Green compensation and rewards

Green employee engagement initiatives

Green workplace practices

These practices operationalize sustainability through formal HR systems (Renwick et al., 2013).

C. Mediating Mechanisms

The framework proposes that GHRM does not directly produce outcomes; instead, its effects are mediated by employee-level psychological and behavioral mechanisms.

(1) *Green Employee Behavior*

Green HR practices foster voluntary pro-environmental behaviors such as energy conservation, recycling, and eco-innovation. These behaviors function as a key mediating pathway between HR systems and environmental outcomes (Dumont et al., 2017).

(2) *Green Commitment and Engagement*

When employees perceive strong environmental values embedded in HR practices, they develop green commitment and psychological green climate perceptions. Social exchange theory suggests that supportive HR systems generate reciprocal pro-environmental attitudes and behaviors (Dumont et al., 2017).

Employee engagement amplifies sustainability initiatives and strengthens long-term performance outcomes.

D. Organizational Outcomes

The final stage of the framework captures multidimensional outcomes:

(1) *Environmental Outcomes*

Reduced carbon emissions

Improved resource efficiency

Waste minimization

(2) *Economic Outcomes*

Cost savings

Competitive advantage

Operational efficiency

(3) *Social Outcomes*

Enhanced employee well-being

Corporate reputation

Employer attractiveness

These outcomes reflect the “triple bottom line” approach to sustainability environmental, economic, and social performance (Renwick et al., 2013).

8.4 Theoretical Integration

The proposed framework integrates three theoretical perspectives:

Stakeholder Theory – Explains external pressures driving GHRM adoption.

Resource-Based View (RBV) – Positions green human capital as a strategic asset.

Social Exchange Theory – Explains how supportive HR practices foster employee commitment and discretionary green behavior.

By combining macro-level institutional drivers with micro-level behavioral mediators, the framework offers a multilevel understanding of how GHRM contributes to sustainable organizational performance.

8.5 Implications of the Framework

This conceptual model provides several implications:

Encourages organizations to align HR systems with ESG and sustainability strategies.

Highlights the importance of psychological mediators in achieving environmental outcomes.

Provides a foundation for empirical testing using structural equation modeling (SEM) and longitudinal research designs.

Offers a structured roadmap for integrating sustainability into HR architecture.

Future research can test moderating variables such as organizational culture, industry type, and national context to refine the model.

9. Practical Implications

Drawing on a secondary data-based content analysis of the Green Human Resource Management (GHRM) literature, several practical implications emerge for HR managers, policymakers, and organizational leaders. The evidence consistently suggests that the effectiveness of GHRM depends on strategic alignment, institutional support, and leadership commitment (Renwick et al., 2013; Jackson et al., 2011). Translating conceptual foundations into actionable strategies is essential for achieving sustainable organizational transformation.

9.1 Implications for HR Managers

HR managers play a central role in operationalizing sustainability through people management systems. The literature emphasizes two key priorities: strategic alignment and systemic integration.

Align HR Strategy with Sustainability Goals

HR managers must ensure that sustainability objectives are embedded within overall HR strategy rather than treated as peripheral initiatives. This requires aligning recruitment, training, performance management, and reward systems with organizational environmental goals (Jabbour & Santos, 2008).

Strategic alignment can be achieved by:

Integrating sustainability into workforce planning

Incorporating environmental competencies into leadership development programs

Supporting ESG objectives consistent with global frameworks promoted by the United Nations

When HR strategy reflects long-term environmental vision, sustainability becomes institutionalized rather than symbolic. Research suggests that such integration enhances both environmental performance and employee engagement (Dumont et al., 2017).

Embed Environmental Criteria in HR Systems

Embedding environmental criteria into formal HR systems strengthens accountability and consistency. HR managers should:

Include environmental responsibilities in job descriptions

Integrate green KPIs into performance appraisal systems

Link compensation and recognition systems to sustainability outcomes

Adopting environmental management standards such as ISO 14001 from the International Organization for Standardization can support systematic integration across HR processes (Jabbour, 2015).

By institutionalizing environmental metrics within HR architecture, organizations reinforce pro-environmental behavior and promote a culture of continuous improvement.

9.2 Implications for Policymakers

Public policy plays a critical role in creating an enabling environment for GHRM adoption, particularly in emerging and developing economies.

Encourage Green Workplace Regulations

Policymakers can promote GHRM through:

Environmental labor standards and workplace sustainability regulations

Tax incentives for green training and eco-friendly workplace investments

National sustainability reporting requirements

Regulatory frameworks create coercive pressures that encourage organizations to integrate environmental considerations into HR systems (Jackson et al., 2011). Additionally, government-led awareness campaigns and public-private partnerships can strengthen institutional capacity for green skill development.

Policymakers may also support small and medium-sized enterprises (SMEs) by providing financial assistance, technical training, and access to sustainability expertise. Such support reduces implementation barriers and enhances widespread adoption of green HR practices.

9.3 Implications for Organizational Leaders

Organizational leaders shape values, culture, and strategic priorities. Their commitment to sustainability significantly influences the success of GHRM initiatives.

Promote Sustainability-Driven Culture

Leadership commitment to environmental responsibility fosters a psychological green climate, encouraging employees to internalize sustainability values (Dumont et al., 2017). Leaders should:

Model environmentally responsible behavior

Communicate clear sustainability vision and goals

Encourage participatory decision-making in environmental initiatives

Transformational leadership approaches that emphasize ethical responsibility and long-term value creation strengthen sustainability-driven culture (Renwick et al., 2013).

Organizations such as Unilever demonstrate how leadership-driven sustainability strategies can enhance corporate reputation, stakeholder trust, and employee commitment. When sustainability is integrated into corporate identity and governance, GHRM practices become embedded within organizational culture.

Concluding Perspective on Practical Implications

The practical implementation of GHRM requires coordinated action across multiple levels:

HR managers must integrate sustainability into core HR systems.

Policymakers must create supportive regulatory and institutional frameworks.

Organizational leaders must champion sustainability-driven culture and long-term strategic orientation.

Collectively, these actions enhance the transformative potential of GHRM, enabling organizations to achieve environmental responsibility while sustaining economic and social performance.

10. Limitations of the Study

As this article is based on secondary data and content analysis of existing literature, several methodological and conceptual limitations must be acknowledged. Recognizing these

limitations enhances the transparency, rigor, and credibility of the study while providing direction for future empirical research (Tranfield et al., 2003; Renwick et al., 2013).

10.1 Reliance on Secondary Data

The primary limitation of this study lies in its exclusive reliance on secondary data sources, including peer-reviewed journal articles, conceptual papers, and published empirical studies. While secondary data analysis allows for comprehensive synthesis and theoretical integration, it restricts direct engagement with primary respondents or organizational contexts (Snyder, 2019).

The interpretations presented in this article are dependent on the scope, quality, and methodological rigor of existing studies. Variations in research design, measurement scales, industry contexts, and national settings may influence the consistency of findings across the reviewed literature. Consequently, the proposed conceptual framework and identified trends are derived from synthesized evidence rather than newly generated empirical data.

10.2 Publication Bias

Another limitation concerns potential publication bias in the reviewed literature. Academic journals often favor studies reporting significant or positive relationships between Green Human Resource Management (GHRM) practices and organizational outcomes, potentially underrepresenting null or contradictory findings (Jackson et al., 2011).

As a result, the literature may overstate the effectiveness of GHRM while underreporting implementation failures, contextual constraints, or unintended consequences. This bias may influence the overall tone of optimism surrounding GHRM outcomes and limit a balanced assessment of its practical challenges (Renwick et al., 2013).

Furthermore, English-language publications dominate the field, potentially excluding region-specific insights published in other languages, thereby limiting global representativeness.

10.3 Limited Generalizability

The generalizability of findings synthesized in this study may be constrained by contextual differences across industries, organizational sizes, and national cultures. Many GHRM studies have been conducted in specific sectors such as hospitality, manufacturing, or multinational corporations and in particular geographic regions (Pham et al., 2019).

Institutional environments, regulatory pressures, and cultural norms significantly shape the adoption and effectiveness of GHRM practices. For example, organizations operating under environmental standards promoted by the International Organization for Standardization may demonstrate different implementation dynamics compared to firms in less regulated environments.

Because this study synthesizes diverse contexts without conducting comparative empirical analysis, its conclusions may not fully capture sectoral or cross-cultural variations. Therefore, caution should be exercised when generalizing the proposed framework to all organizational settings.

10.4 Lack of Empirical Validation

The proposed conceptual framework developed in this article has not been empirically tested within a specific organizational sample. While it is grounded in established theoretical perspectives such as stakeholder theory, the resource-based view (RBV), and social exchange theory the relationships among drivers, GHRM practices, mediating mechanisms, and outcomes remain theoretically inferred rather than statistically validated.

Without quantitative testing (e.g., structural equation modeling) or qualitative case analysis, causal relationships cannot be definitively established. For instance, although prior studies suggest that GHRM influences green employee behavior and environmental performance (Dumont et al., 2017), the strength and direction of these relationships may vary across contexts.

Future research employing longitudinal, experimental, or mixed-method approaches would strengthen empirical validation and enhance theoretical robustness.

Concluding Reflection on Study Limitations

In summary, this study's reliance on secondary sources, potential publication bias, contextual variability, and absence of direct empirical testing represent notable limitations. However, these constraints are inherent in conceptual and review-based research designs (Tranfield et al., 2003). Despite these limitations, the study contributes by synthesizing fragmented literature, proposing an integrated conceptual framework, and identifying emerging research pathways.

Acknowledging these limitations provides a foundation for future empirical investigations that can test, refine, and expand the theoretical propositions advanced in this article.

Conclusion

This article has examined Green Human Resource Management (GHRM) through a secondary data-based content analysis, synthesizing its conceptual foundations, core practices, organizational outcomes, challenges, emerging trends, and future research directions. The conceptual evolution of GHRM reflects a broader transformation in management thought from traditional personnel administration to strategic human capital management aligned with sustainability objectives (Renwick et al., 2013; Jackson et al., 2011). Initially positioned as a supportive function to environmental management systems, GHRM has progressively evolved into an integrated strategic framework linking human resource systems with ecological responsibility.

The review demonstrates that GHRM is grounded in multiple theoretical perspectives, including stakeholder theory, the resource-based view (RBV), and social exchange theory. Stakeholder pressures arising from regulators, customers, employees, and investors have encouraged organizations to embed sustainability into workforce practices. Simultaneously, the RBV highlights green human capital as a valuable, rare, and inimitable resource capable of generating sustainable competitive advantage (Renwick et al., 2013). Social exchange mechanisms further explain how supportive green HR systems foster employee commitment and voluntary pro-environmental behavior (Dumont et al., 2017).

The strategic importance of GHRM lies in its ability to operationalize environmental sustainability through formal HR systems. By integrating green criteria into recruitment, training, performance management, compensation, and employee engagement, organizations institutionalize sustainability within daily operations. Alignment with environmental

management standards such as those developed by the International Organization for Standardization strengthens accountability and performance monitoring (Jabbour & Santos, 2008). This integration demonstrates that sustainability is not merely a corporate social responsibility (CSR) initiative but a systemic transformation embedded within organizational architecture.

Moreover, the synthesis highlights that GHRM contributes to environmental performance (e.g., carbon reduction and resource efficiency), economic outcomes (cost savings and competitive advantage), and social outcomes (employee commitment, job satisfaction, and enhanced corporate reputation). Such multidimensional benefits reinforce the view that environmental sustainability and organizational performance are mutually reinforcing rather than contradictory objectives (Pham et al., 2019).

Looking forward, the future of GHRM research and practice lies in several key directions. Greater integration with ESG reporting frameworks, digital HR analytics, and sustainability governance structures will deepen strategic alignment. Future empirical work should prioritize longitudinal designs, mixed-method approaches, and micro-level behavioral analyses to validate and refine existing conceptual models (Jackson et al., 2011). Cross-cultural and sectoral comparisons will further enhance understanding of contextual influences on GHRM effectiveness.

Importantly, the literature suggests that GHRM is transitioning from an optional, symbolic initiative to a strategic necessity. Increasing regulatory pressures, global sustainability agendas, stakeholder expectations, and climate-related risks compel organizations to integrate environmental considerations into core HR functions. In this evolving landscape, GHRM represents not only an ethical commitment but also a strategic imperative for long-term organizational resilience and competitiveness.

In conclusion, Green Human Resource Management serves as a critical bridge between environmental sustainability and human capital strategy. By embedding ecological values into HR systems, organizations can cultivate sustainable cultures, enhance performance, and contribute meaningfully to global sustainability objectives. The continued advancement of theory, measurement, and empirical validation will further solidify GHRM's position as a central pillar of sustainable organizational management.

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