

Trends, Challenges, and Future Directions in Green Human Resource Management: Evidence From Emerging Economies

K R Sowmya¹, Prabha D², Mandli Vijaykumar Yadav³, S.Raja⁴, Rajapriya.M⁵, B R Spandana⁶

¹Professor, Department of Management Studies, Srm Valliammai Engineering College, Tamilnadu, India.

Email: drkr Sowmya@gmail.com

Orcid: 0000-0003-4239-2586

²Assistant Professor, School of Management, St Francis De Sales College (Autonomous), Bengaluru, India.

Email: prabhad@sfscollege.in

³Assistant Professor, Department of Business Administration, St Francis De Sales College (Autonomous), Bengaluru, India.

Email: mvijayyadav949@gmail.com

⁴Associate Professor, Department of Management, Vel Tech Rangarajan Dr. Sagunthala R&d Institute of Science and Technology, Chennai, India.

Email: ksraja22486@gmail.com

⁵Assistant Professor, Department of Management Studies, Vel Tech Rangarajan Dr. Sagunthala R&d Institute of Science and Technology, Chennai, India.

Email: rajapriya.m19@gmail.com

⁶Department of Mba, Sri Vani Institute of Management and Sciences, Andhra Pradesh, India

Email: spandanabr@gmail.com

Received: 17th Mar, 2026 | Revised: 29th Mar, 2026 | Accepted: 19th Apr, 2026 | Available Online: 5th May, 2026

ABSTRACT

Global economies increasingly emphasize sustainability, making Green Human Resource Management (GHRM) a vital contemporary practice. GHRM integrates environmental considerations into human resource policies to shape employee behavior, promote a green organizational culture, and support ecological sustainability. This review examines the evolution, implementation, and outcomes of GHRM practices in emerging economies, including India, China, Brazil, South Africa, and the Gulf countries. Using a qualitative approach and the PRISMA method, relevant studies published over the past five years were analysed. While GHRM enhances employee motivation, performance, and organizational reputation, its implementation faces challenges such as limited environmental awareness, resistance to change, and high investment requirements. Digital technologies can help overcome these barriers. The review identifies research gaps in sector-specific frameworks and regional comparisons, highlighting GHRM as a strategic enabler of sustainable development.

Keywords: Green Human Resource Management, Ghrm, Sustainable Hr Practices, Environmental Sustainability, Emerging Economies, Corporate Sustainability, Green Organizational Culture.

How to cite this article: Sowmya K R, Prabha D, Yadav M V, S.Raja, Rajapriya.M, Spandana B R., Trends, Challenges, and Future Directions in Green Human Resource Management: Evidence From Emerging Economies. *Int J Drug Deliv Technol.* 2026;16(43s): 1446-1457; Doi: 10.25258/Ijddt.16.43s.153

1. Introduction

Environmental sustainability has become the core principle of all forward thinking institution in this 21st century in response to the global move towards SDGs (Jackson et al., 2011; Sroufe, 2017). It is much more than corporate social responsibility and it has become the mandatory requirement from every involved stakes.

In this scenario, the role of human resource management is evolving. Traditional HRM is being

reimagined to respond to the sustainability agenda, leading to the emergence of Green Human Resource Management. GHRM encompasses a variety of environmentally focused HR practices, including green recruitment and selection, green training and development, performance appraisal systems with environmental metrics, sustainability-oriented compensation and benefits, and active employee involvement in ecological initiatives (Jabbour et al., 2013; Roscoe et al., 2019; Shafaei & Nejati, 2020).

Trends, Challenges, and Future Directions in Green Human Resource Management: Evidence from Emerging Economies

These practices aim to develop and nurture a green organizational culture, one that promotes eco-conscious behavior, accountability, and continuous environmental learning across all organizational levels (Zibarras & Coan, 2015).

The relevance of GHRM becomes particularly significant in emerging economies—countries that are characterized by rapid industrialization, urban expansion, rising energy demands, and relatively high levels of environmental stress (Harmer et al., 2013; Bezuidenhout, 2021). Nations such as India, China, Brazil, South Africa, and the Gulf states are confronting the dual challenge of sustaining economic development while ensuring environmental stewardship (Miah et al., 2024). Organizations operating in these economies are increasingly recognizing that environmental sustainability can no longer be treated as an external policy requirement; it must be integrated into their internal management practices, especially those related to human capital (Oliveira & Costa, 2022).

Despite the growing acknowledgment of GHRM's potential, there is limited clarity on how these practices are being implemented across sectors and regions in emerging economies. Research in this area remains fragmented, with a focus on isolated practices or case-specific analysis. Moreover, many organizations face structural, cultural, and financial barriers that hinder the full adoption of green HRM frameworks. Challenges such as lack of awareness, insufficient training infrastructure, weak regulatory enforcement, and resistance to change pose significant hurdles (Rahman & Miah, 2024).

This review aims to bridge the gap in existing literature by offering a comprehensive analysis of Green Human Resource Management practices in emerging economies. The paper explores theoretical frameworks, reviews empirical evidence, identifies contextual enablers and barriers, and examines the role of technology, leadership, and policy support in shaping the success of Green Human Resource Management (Ali & Anwar, 2021; Lee & Kim, 2024). By highlighting best practices and proposing research directions, this study contributes to the ongoing discourse on how organizations in developing regions can align their human capital strategies with global sustainability goals. Ultimately, the review argues that Green HRM is not just a managerial trend but a critical component of resilient and future-ready organizations in the Global South.

2. Defining Green Human Resource Management (GHRM)

Green Human Resource Management (GHRM) refers to the integration of environmental management principles into the traditional functions of human resource management. It involves the strategic alignment of HR policies and practices with the sustainability goals of the organization, thereby fostering a workforce that is environmentally responsible, ecologically aware, and actively engaged in advancing green initiatives. GHRM supports the transition to a sustainable business model by embedding ecological consciousness into the very fabric of organizational culture and employee behaviour. GHRM is not a standalone system but rather an extension of core HR functions that are reoriented to achieve both environmental and organizational performance. The key dimensions of GHRM include:

2.1. Green Recruitment and Selection

Recruitment is the process of attracting potential candidates for the existing vacancies. Integration of green Human Resource Management in the recruitment practices ensures candidates are recruited and selected in alignment with the organizational sustainable Developmental Goals. Digital platforms in place of printed advertisements, selecting candidates with environmental awareness, green initiatives and ethical awareness. The main focus is to hire the right candidate with sustainability goals in alignment with the organisational goals. India has implemented sustainability into job roles and recruitment assessments (Renwick et al., 2013). In China, firms located in eco-industrial parks screen applicants based on environmental ethics and compliance awareness (Jabbour et al., 2016).

2.2. Green Training and Development

Training and Development is an important HR function. The organisations must concentrate on sustainability, green initiatives and environmental regulations in its training process. The intention of these programs is to reduce wastes, preserve environment, and use energy effectively. Continuous training facilitates awareness about responsible environmental practices thereby applying the same in routine decision making. In Brazil, green training is a key requirement for ISO 14001-certified firms (Teixeira et al., 2020). In South Africa, mining firms offer joint programs on environmental health and safety to reduce negative ecological impacts (Zibarras & Coan, 2015).

2.3. Green Performance Appraisal

Trends, Challenges, and Future Directions in Green Human Resource Management: Evidence from Emerging Economies

Environmental criteria and alignment to sustainable goals in traditional performance management is the key focus of Green Performance appraisal. In contrary to the regular performance appraisal, in green performance appraisal the employees are evaluated about their environmental awareness, regulations, green initiatives taken and ethical contributions. This process motivates the employees to contribute to the environmental objectives. In the UAE, some energy and utility companies include green metrics in annual reviews, such as reductions in resource use or compliance with environmental procedures (Al-Haddad et al., 2021).

2.4. Green Rewards and Compensation

Through Green Rewards and Compensation method financial and non-financial incentives are given to motivate employees that contribute to organisations' environmental adherence in alignment with the sustainable development goals. This enables each and every employee to contribute to environmental awareness and practices. For example, in Malaysia, firms reward employees who propose successful sustainability solutions with bonuses or extra leave days (Siti-Nabiha et al., 2020). In India, some public sector units offer commuting allowances for employees who use public transportation or carpool.

2.5. Employee Involvement in Environmental Initiatives

In the democratic leadership system the employees get an opportunity to contribute to the organizational decision making activity. Green Human Resource Management motivates employees in environmental decision-making and action. This way of facilitating employees to involve in decision making enhances the employee empowerment and ownership are critical for nurturing a culture of sustainability. In Brazil, multinational corporations often involve employees in reforestation drives, school awareness programs, and sustainable packaging initiatives (Jabbour et al., 2013).

A study examines how Green Human Resource Management practices influence sustainability outcomes in emerging economies. It shows that employee cognition and behaviour directly support green performance, while ethics and stakeholder interaction affect outcomes indirectly, highlighting the need for well-designed and ethically grounded GHRM frameworks (Karthikeyan et al., 2025).

A study by (Krishnan et al., 2025) informs GHRM research by demonstrating how behavioural intentions, supportive conditions, and trust drive sustainable adoption of innovative practices in resource-constrained contexts. Using an extended UTAUT framework, it shows that intention strongly influences behaviour, which in turn enhances sustainability outcomes, underscoring the importance of institutional support, ethical guidance, and user-centred design for advancing sustainable HR practices in emerging economies.

Green Human Resource Management focuses on intersection between human capital and sustainability in emerging economies. In simple words, its integration of Green Human Resource Management in traditional Human resource Management practices. In a way it acts as a catalyst for broader organizational transformation in pursuit of sustainable development.

3. Theoretical Foundations of GHRM in Emerging Economies

Green Human Resource Management (GHRM) is underpinned by several theoretical frameworks that explain its emergence, implementation, and impact, particularly in emerging economies. These frameworks provide valuable insights into how organizations embed environmental sustainability into HR practices and how employees respond. The major frameworks identified are **Resource-Based View (RBV) that concentrates on internal capabilities, Institutional and Stakeholders concentrate on the external driving factors and finally Social exchange theory focuses on Behavioural dynamic within organizations.**

These four framework offer a all-pervasive understanding of Green Human Resource Management evolution in emerging economies.

4. Methodology

This is a qualitative study done by collecting and analyzing the related literature. The method of data collection has been discussed below:

4.1. Methods: The study was conducted using PRISMA as a qualitative method to collect the data for this investigation. To promote comprehensive and clear reporting of systematic reviews, the Preferred Reporting Items for Systematic Reviews and Meta- Analyses (PRISMA) statement was created. Since then, it has been revised (to PRISMA 2020) to take into account new developments in systematic review terminology and techniques.

Trends, Challenges, and Future Directions in Green Human Resource Management: Evidence from Emerging Economies

4.2. Identification of Database: This approach was used to select a variety of sources for the literature collection, including Scopus, Google Scholar, and Research Gate. These sources included conference papers, research papers, review articles, and more, all published as recently as possible, covering a broad spectrum of the most current research on the subject selected for this study. Literature from many different disciplines, such as science, engineering, technology, management, and the arts, is included in these resources.

4.3. Keywords Used: The facts were gathered by looking for research studies using the following keywords: “Green Human Resource Management (GHRM)”, “Sustainable HR Practices”, “Environmental Sustainability”, “Emerging Economies”, “Corporate Sustainability”, “Green Organizational Culture”. The keyword search identified a massive collection of related studies across countries in general search engine perspective.

4.4. Screening of related literature: The literature collected by the above method was screened for its utmost relevance to the study based on the content and the years of study considered were conducted between, the period 2019 to 2025. Thus, studies with irrelevant titles were omitted. This makes it vital to find the study that is actually relevant. Titles that directly addressed the study themes were identified.

4.5. Data Synthesis: The study delves totally on the review of studies done in last five years on Green Human Resource Management (GHRM), Sustainable HR Practices, Environmental Sustainability, Emerging Economies, Corporate Sustainability, and Green Organizational Culture. Efforts were taken by the researchers to classify based on key findings, gender based differences, Implications and its impacts on the society.

5. Review of GHRM Practices in Selected Emerging Economies

The adoption and implementation of Green Human Resource Management (GHRM) practices in emerging economies are shaped by unique socio-economic conditions, regulatory environments, industrial priorities, and labour market characteristics. While the strategic potential of GHRM is increasingly recognized, its translation into practice varies significantly across national

contexts. This section reviews GHRM developments in five representative emerging economies: India, China, Brazil, South Africa, and the Gulf States (UAE and neighbouring countries).

Table 5.1. Review of GHRM Practices in Selected Emerging Economies

Country	Focus Area	Key Findings
India	India has witnessed a growing interest in GHRM, particularly within large corporations in the information technology (IT), automobile, and manufacturing sectors. Companies like Infosys, Wipro, and the Tata Group have integrated GHRM into their broader corporate social responsibility (CSR) and sustainability frameworks.	Green recruitment, eco-conscious leadership development, and environmental reporting are becoming increasingly formalized, particularly in organizations with international clients or global operations.
China	The incorporation of environmental key performance indicators (KPIs) into business performance appraisals has encouraged organizations to embed green criteria in HR functions. GHRM	However, GHRM in China often remains compliance-driven rather than values-based. The implementation is largely top-down, focusing on fulfilling regulatory checklists rather than fostering deep environmental engagement among employees.

Trends, Challenges, and Future Directions in Green Human Resource Management: Evidence from Emerging Economies

	practices are increasingly visible in industries such as electronics, automotive, and textiles, particularly in eco-industrial zones.				awareness is improving, grassroots employee engagement in green initiatives remains limited, highlighting the need for stronger communication and participatory mechanisms.
Brazil	GHRM practices are gaining momentum, particularly in the agriculture, forestry, and mining sectors—the industries at the heart of both economic growth and environmental contention. The adoption of GHRM is often linked to international environmental certifications such as ISO 14001 and market demands for sustainable production.	The advancement of GHRM remains uneven, with greater uptake among multinational corporations compared to domestic SMEs, which often lack resources or awareness to implement structured green HR strategies.		UAE & Gulf	However, the expatriate-dominated workforce and prevalence of short-term employment contracts pose unique barriers to GHRM institutionalization. Employee turnover is high, and long-term environmental culture building is often deprioritized. Moreover, top-down governance models and the absence of strong labor representation may limit bottom-up engagement in sustainability efforts. Nonetheless, government incentives and leadership commitment are gradually expanding the GHRM landscape in the region.
South Africa	In South Africa, mining, energy, and heavy industries are under growing scrutiny for their environmental and social impacts.	This has pushed companies to develop green workforce strategies, including environmental training, risk assessment integration, and community sustainability initiatives. Moreover, while environmental			

Source : Review of Literature
 Review of GHRM practices discussed in Table 5.1. across emerging economies reveals both shared opportunities and context-specific constraints.

Trends, Challenges, and Future Directions in Green Human Resource Management: Evidence from Emerging Economies

While regulatory pressure and international market demands are key drivers, internal enablers such as leadership support, employee participation, and HR capacity remain critical for the success of GHRM. The diversity in adoption patterns underscores the importance of contextualizing GHRM strategies to fit local institutional, economic, and cultural dynamics.

Table 5.2. Review of Research Work on Green Human Resource

Author(s)	Focus Area	Methodology	Key Findings
Amrutha & Geetha (2020)	Systematic review of GHRM and sustainability	Literature Review	GHRM enhances environmental and social sustainability through green practices.
Renwick et al. (2020)	Strategic role of GHRM in environmental management	Theoretical Analysis	HRM influences employee behavior to support green organizational goals.
Jabbour et al.(2020)	GHRM in Brazilian industry	Case Study	GHRM linked to employee engagement and environmental compliance.
Miah et al. (2024)	GHRM adoption in South Asia	Empirical – Survey	Weak regulatory frameworks hinder full-scale GHRM adoption.
Roscoe et al.(2021)	GHRM, culture, and environme	Quantitative Survey	Green culture mediates GHRM's

	ntal performan ce		impact on environm ental performa nce.
Shafaei & Nejati (2020)	Outcomes of GHRM at individual and organizational levels	Mixed Methods	GHRM boosts job satisfaction and pro-environmental behavior.
Sharma et al (2025)	GHRM integration in emerging economies	Multi-case Study	Sectoral variations exist; leadership is critical.
Tanova et al. (2023)	Ethical dimensions of GHRM in hospitality	Qualitative Case Study	GHRM tied to ethical HR climate and service quality.
Rahman & Miah (2024)	GHRM trends in SMEs across emerging markets	Longitudinal Panel Data	SMEs show growing interest in green practices despite resource constraints.
Dhillon et al (2022)	GHRM and sustainable supply chains	Survey + Interviews	Green HRM improves eco-efficiency through workforce metrics.
Zhang et al.(2020)	Link between GHRM and green innovation in China	Structural Equation Modeling	Positive correlation between green HR practices and innovation

Trends, Challenges, and Future Directions in Green Human Resource Management: Evidence from Emerging Economies

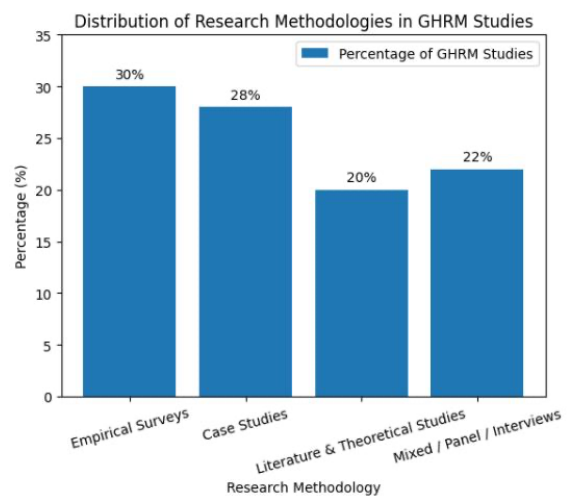
			capability .
Ali & Anwar (2021)	Green leadership and employee engagement	Quantitative Survey	Green leadership fosters stronger employee environmental involvement.
Singh & Kumar (2023)	GHRM in Indian manufacturing sector	Case Study	Effective training and reward systems improve sustainability outcomes.
Oliveira & Costa (2022)	Barriers to GHRM in Latin America	Systematic Review	Institutional voids and low awareness impede adoption of GHRM.
Lee & Kim(2024)	Technology adoption in GHRM	Empirical Survey	Digital tools enhance the scalability of green HR practices.
Ahamed Lebbe Sarifudeen, Ameera Niyas, & Ramalin gam, S. K. (2025).	This study contributes to the implementation in sustainability of leadership	Empirical Survey	Psychological green climate showed a positive direct effect on green innovation behavior and partially mediates the

			relationship between eco-centric leadership and green innovation behavior.
--	--	--	--

Source: Review of Literature

Taken together from Table 5.2, these studies underscore the evolving nature of GHRM in emerging economies. The literature converges on the importance of leadership, organizational culture, ethical orientation, and technological infrastructure as key enablers of GHRM effectiveness. However, persistent challenges—including limited regulatory oversight, financial constraints, and low environmental awareness—remain significant barriers to widespread implementation.

Figure.5.1. Methodological Trends in GHRM Research (2019–2025)



Source : Review of Collected Literature

It is found from Fig 5.1., that empirical studies and case studies are the frequently done methods to study Green Human Resource Management constituting to 30%, and 28% respectively. Literature reviews and theoretical analyses constituted around 20% mixed and advanced methods (22%). Overall, the trend points to a balanced mix of theory and practice in the evolving field of Green HRM.

6. Challenges to GHRM Implementation in Emerging Economies

Although importance of Green Human Resource Management is realised by the emerging

Trends, Challenges, and Future Directions in Green Human Resource Management: Evidence from Emerging Economies

economies, its implementation faces several barriers with respect to structure, institution and culture. Similarly, to what extent each country and each organization implements Green Human Resource Management in alignment with achievement of sustainable goals. Understanding these obstacles is critical for designing context-sensitive strategies to embed sustainability in human capital development.

6.1 Low Environmental Awareness among Employees

It is holistically evident that the environmental awareness among employees is low and steps have to be taken by the government to inculcate it as a part formal procedure like education. Lack of awareness hinders the acceptance and following of green Human resource management practices. In countries like Indonesia, Nigeria, and Vietnam, green concepts are often not part of formal education or vocational training, leading to weak baseline knowledge. As a result, employees may view sustainability as peripheral to their job roles or as management-driven compliance rather than shared responsibility (Daily et al., 2012).

6.2 Weak Regulatory Frameworks and Enforcement

Although the governments of the emerging economies have brought in new legislations for environmental awareness, its execution, compliance, monitoring is not done with ease with special reference to SMEs. In India and Brazil, since the enforcement system is weak, the execution is taken for granted by the organizations (Oliveira & Costa, 2022).

6.3 Resource Constraints, Especially in SMEs

Most of the organizations function with minimal HR infrastructure thereby demanding extra investment in training, monitoring etc. This minimal HR infrastructure is prevalent among the SMEs. In regions like Sub-Saharan Africa and South Asia, SMEs prioritize short-term financial survival over long-term sustainability. The lack of financial and technical support to implement GHRM makes it difficult for these firms to go beyond basic compliance or symbolic adoption (Rahman & Miah, 2024).

6.4 Cultural Resistance to Change

Some countries are very stringent with respect to its organizational culture and do not entertain any change in the traditional system. In such conditions it becomes a challenge to implement Green Human Resource Management. This constraint is explicitly visible in Middle Eastern and

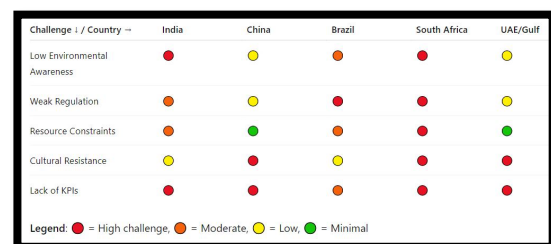
Southeast Asian countries as they do not want to go beyond their routine at any cost. Implementing Green Human Resource Management must be viewed as a shared goal without which its implementation is not easy (Tanova et al., 2023).

6.5 Lack of Metrics and KPIs for Green Performance

Quantifiable KPIs are missing and hence the organizations lack clarity among the organizations in emerging economies. Quantification facilitates alignment of the Green Human Resource Management goals with sustainable goals. due to its absence the alignment becomes a problem and leads to confusion. This technical challenge leads to ambiguity in expectations and weakens employee accountability for environmental outcomes (Dhillon et al., 2022).

Overcoming these challenges requires a multi-pronged approach involving policy support, capacity building, stakeholder engagement, and organizational commitment. Governments must strengthen enforcement mechanisms and provide incentives for green workforce development. Simultaneously, firms need to invest in employee awareness, build internal champions for GHRM, and develop scalable models for resource-constrained environments. Only through such coordinated efforts can the promise of GHRM be fully realized in the sustainability journey of emerging economies.

Fig 6.1. Representing Country-wise Green Human Resource Management Implementation and Challenges



Source : Review of Literature

The Fig 6.1.illustrates the extent of GHRM implementation and challenges across emerging economies. Countries like India and China show higher adoption levels, while Brazil, South Africa, and Gulf nations demonstrate moderate implementation with significant barriers such as low awareness, weak enforcement, and resource constraints. The visualization underscores the need for context-specific strategies in advancing GHRM.

7. Discussion

The emerging economies see a huge positivity in implementing Green Human Resource

Trends, Challenges, and Future Directions in Green Human Resource Management: Evidence from Emerging Economies

Management in place of traditional Human Resource Management. By integrating the environmental aspects in Human Resource Management practices the organisations are able to evidentially see both tangible and intangible environmental gains. However, the extent of benefit enjoyed depends on the extent to which it was implemented.

Consistent implementation of Green Human Resource Management contributes evidentially to the improvement of organizational performance. For instance, in China, firms that incorporated green KPIs into their performance management systems reported more efficient energy use and better pollution control (Zhu et al., 2013). Similarly, manufacturing companies in India and Indonesia have documented reductions in operational costs linked to green workforce training and behaviour change initiatives.

Employees tend to respond positively when organizations demonstrate genuine commitment to sustainability. GHRM initiatives—such as green awareness campaigns, participation in environmental projects, and eco-incentives—boost employees' sense of purpose, belonging, and organizational pride. In Brazil, firms with formal GHRM policies report greater employee retention and satisfaction, especially among younger workers seeking meaningful work aligned with ethical and environmental values (Jabbour et al., 2013; Singh & Kumar, 2023). Moreover, green training and participatory programs enhance motivation by involving staff in decisions that affect their work environment.

Adopting GHRM helps organizations project a progressive, responsible, and future-ready image. In emerging economies where environmental activism, social media visibility, and international scrutiny are rising, a strong green profile is essential for brand reputation and risk mitigation. Companies in the UAE and South Africa that implement visible GHRM practices—such as green certifications for staff or sustainability-linked compensation—have gained favourable media coverage, higher investor confidence, and enhanced public credibility. These reputational gains also translate into competitive advantages in attracting eco-conscious consumers and employees.

When employees work consciously with focus of contributing to sustainable goals of the organisations, the contribution of these emerging economies to global sustainable development goals

happens. The organizations that integrate environmental awareness among its employees is able to evidentially see Eco-Efficiency in form of reduction of waste, and conservation of energy. In Malaysia, for example, firms with active green teams have introduced energy-efficient technologies and digitalized monitoring systems, leading to both environmental and financial benefits (Lee & Kim, 2024). Green Human Resource Management on the whole contribute to the holistic sustainable development in organizations. To fully realize these outcomes, organizations in emerging economies must navigate structural challenges and adapt Green Human Resource Management practices to their unique operational and cultural contexts.

8. Future Research Directions

As Green Human Resource Management (GHRM) continues to gain academic and practical relevance, the field presents numerous opportunities for deeper theoretical exploration, contextual refinement, and evidence-based policymaking. Although substantial progress has been made in identifying the conceptual foundations and outcomes of GHRM, several critical research gaps persist—particularly in the context of emerging economies, where institutional dynamics, labour structures, and cultural settings differ significantly from those in developed markets.

The following themes represent promising directions for future research to advance both scholarly understanding and practical effectiveness of GHRM:

8.1 Comparative Studies between Emerging and Developed Markets

Much of the existing GHRM literature has been dominated by studies from Western contexts. Future research should undertake comparative analyses to explore how GHRM practices, drivers, and outcomes differ across socio-economic and regulatory environments. Comparative case studies between, for example, Germany and India, or Brazil and the UK, could illuminate how institutional strength, corporate governance, labour laws, and environmental norms influence GHRM adoption and effectiveness. Such cross-contextual insights would enhance the development of culturally and economically sensitive models of green HRM (Amrutha & Geetha, 2019).

Trends, Challenges, and Future Directions in Green Human Resource Management: Evidence from Emerging Economies

8.2 Longitudinal Research on GHRM Impact on Firm Performance

While there is growing evidence linking GHRM to positive environmental and organizational outcomes, most studies remain cross-sectional, offering only a snapshot of effectiveness. Longitudinal research is needed to track how GHRM practices evolve over time and how they impact firm performance, including productivity, profitability, employee retention, and environmental compliance. For instance, a 5–10-year panel study across firms in China, South Africa, or Malaysia could reveal causal pathways and temporal dynamics that short-term studies cannot capture (Miah et al., 2024).

8.3 Sector-Specific GHRM Models

Industries differ widely in terms of environmental impact, workforce characteristics, and regulatory pressures. Hence, there is a strong case for developing sector-specific GHRM frameworks tailored to the unique needs of fields such as agriculture, hospitality, construction, and transportation. For example, the hospitality sector in Thailand or Indonesia may benefit from GHRM strategies focused on waste reduction, customer awareness, and eco-certification training, while the agricultural sector in India or Kenya may require community-based green workforce models. Sectoral research can improve contextual relevance and practical applicability (Tanova et al., 2022).

8.4 Intersectionality in Green HRM

Another emerging area of inquiry is the intersection of GHRM with social dimensions such as gender, caste, age, disability, and income disparities. Green initiatives may unintentionally reinforce workplace inequalities if marginalized groups are excluded from training, decision-making, or recognition systems. Future studies should investigate how GHRM practices can be made inclusive and equitable. For example, how do green upskilling programs reach low-income workers or women in rural enterprises? Research in South Asia and Africa can particularly illuminate the intersectional dynamics in green employment (Rahman & Miah, 2024).

8.5 Role of Green Leadership and Ethical Climate

Leadership commitment and organizational ethics are critical yet underexplored mediators in the successful adoption of GHRM. Future studies should examine how green leadership styles (e.g., transformational, servant, ethical leadership) and ethical workplace climates influence

employee participation in sustainability efforts. Case studies from emerging market firms that have demonstrated strong environmental and ethical commitments—such as Tata Steel in India or Natura in Brazil—can serve as rich sources of insight into how leaders shape pro-environmental behaviours through vision, culture, and trust (Ali & Anwar, 2021).

Future research on GHRM must move beyond generic models to engage with the complex, evolving, and context-specific realities of sustainability and workforce management. By adopting interdisciplinary approaches, mixed-method designs, and inclusive frameworks, scholars can contribute to the creation of robust, locally grounded, and globally relevant GHRM strategies. Such research will not only advance theory but also support organizations, governments, and institutions in fostering sustainable and socially responsible workplaces in the Global South.

9. Conclusion

Green Human Resource Management (GHRM) signifies a timely alignment of the organisational development activities with the sustainable goals for the emerging economies. In the face of escalating environmental degradation, climate-related risks, and stakeholder expectations, GHRM provides a strategic bridge between human capital management and environmental stewardship. By embedding ecological consciousness into HR functions—ranging from recruitment and training to performance appraisal and employee engagement—organizations can simultaneously enhance environmental performance, strengthen employee morale, and bolster reputational capital.

Evidence from countries like India, China, Brazil, South Africa, and the Gulf States suggests that GHRM adoption is gaining momentum, driven by regulatory imperatives, market pressures, and evolving social norms. However, the progress remains uneven and fragmented, largely constrained by weak policy enforcement, limited awareness, resource deficits, and cultural inertia (Oliveira & Costa, 2022). Small and medium enterprises, in particular, face difficulties in institutionalizing green HR practices due to cost constraints and lack of technical expertise.

The need for an all pervasive strategy at multi-level exists to overcome these challenges and to exploit the benefits of Green Human Resource Management implementation. At the organizational level, a stronger commitment from top leadership is

Trends, Challenges, and Future Directions in Green Human Resource Management: Evidence from Emerging Economies

critical to embedding sustainability into corporate vision, values, and culture. At the policy level, governments and regulatory bodies must provide robust frameworks, incentives, and monitoring systems to support GHRM adoption across sectors. Simultaneously, academic institutions and professional bodies must mainstream green HR principles into management education, research, and training programs to build long-term capacity.

Green Human Resource Management acts as a source of environmental conservation. Its integration not only helps firms meet compliance requirements but also cultivates a sustainability-oriented workforce that can innovate, adapt, and lead in an increasingly green economy. Synergy between visionary leadership, enabling institutions, engaged employees, and context-sensitive strategies leads to the success of Green Human Resource Management. If understood rightly it can be seen that Green Human Resource Management can lead to sustainable development enabling people practices into powerful tools for environmental transformation and societal enhancement.

HR's role in achieving the SDGs:

In perspective of emerging economies, this study highlights the Integration of Green Human Resource Management in Traditional Human Resource Management in alignment with the sustainability goals. This study discusses about the key green Human Resource Management factors Green Recruitment and Selection, Green Training and Development, Green Compensation Management, and green friendly eco-centric practices. These practices contribute notable towards the SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action), by aligning employee behaviour and organizational systems with environmental and social goals. HR functions are also instrumental in promoting gender equality (SDG 5), health and well-being (SDG 3), and quality education through continuous green skill development (SDG 4), (Amrutha, 2020). Thus, Green Human Resource Management becomes not only a tool for internal environmental responsibility but also a catalyst for aligning organizational behaviour with global sustainable development priorities.

10. References

Ali, M., & Anwar, S. (2021). The impact of green transformational leadership on green

employee behavior. *Human Resource Management Review*, 31(2), Article 100723. <https://doi.org/10.1016/j.hrmr.2020.100723>

Amrutha, V. N., & Geetha, S. N. (2019). A systematic review on green human resource management: Implications for social sustainability. *Journal of Cleaner Production*, 247, Article 119131. <https://doi.org/10.1016/j.jclepro.2019.119131>

Amrutha, V. N. (2020). A systematic review on green human resource management: Implications for social sustainability. *Journal of Cleaner Production*, 247, Article 119131. <https://doi.org/10.1016/j.jclepro.2019.119131>

Aragón-Correa, J. A., & Sharma, S. (2003). A contingent resource-based view of proactive corporate environmental strategy. *Academy of Management Review*, 28(1), 71–88.

Bezuidenhout, H., Benneworth, P., & Giuliani, E. (2021). Emerging market global players from China, Brazil and South Africa. *Sustainability*, 13(21), Article 12234. <https://doi.org/10.3390/su132112234>

Bezuidenhout, H. (2021). Non-financial emerging multinationals: Insights from China, Brazil, South Africa. *Journal of Cleaner Production*, 279, Article 124478. <https://doi.org/10.1016/j.jclepro.2020.124478>

Daily, B. F., Bishop, J. W., & Massoud, J. A. (2012). The role of training and empowerment in environmental performance: A study of the Mexican maquiladora industry. *International Journal of Operations & Production Management*, 32(5), 631–652.

Dhillon, M. K., Rafi-Ul-Shan, P. M., Amar, H., Sher, F., & Ahmed, S. (2022). Flexible green supply chain management in emerging economies: A systematic literature review. *Global Journal of Flexible Systems Management*. <https://doi.org/10.1007/s40171-022-00321-0>

Trends, Challenges, and Future Directions in Green Human Resource Management: Evidence from Emerging Economies

- Guenther, E., Endrikat, J., & Guenther, T. (2016). Environmental management control systems: Conceptualization and empirical evidence. *Journal of Cleaner Production*, *136*, 147–171.
- Günther, E., Guenther, T., Schiemann, F., & Weber, G. (2016). Stakeholder relevance for carbon disclosure. *Journal of Cleaner Production*, *136*, 147–171.
- Harmer, A., et al. (2013). “BRICS without straw”? A systematic review of newly emerging economies. *Globalization and Health*, *9*, Article 15.
- Jabbour, C. J. C., Santos, F. C. A., & Nagano, M. S. (2013). Green human resource management and organizational citizenship behavior toward the environment: Evidence from the Brazilian mining sector. *Journal of Environmental Management*, *114*, 131–141.
- Jabbour, C. J. C., de Sousa Jabbour, A. B. L., Sarkis, J., & Govindan, K. (2016). Bridging GHRM and green supply chain management: Framework and implications for sustainability performance. *Journal of Cleaner Production*, *112*, 1824–1833.
- Jackson, S. E., Renwick, D. W. S., Jabbour, C. J. C., & Müller-Camen, M. (2011). State of the art and future directions for green human resource management: Introduction to the special issue. *German Journal of Human Resource Management*, *25*(2), 99–116.
- Krishnan, R., Sowmya, K. R., Wase, D., & Kandasamy, L. (2025). Sustainable learning through AI tool adoption among university students in Ethiopia based on an extended UTAUT model. *Asian Journal of University Education*, *21*(3).
<https://doi.org/10.24191/ajue.v21i3.60>
- Lee, S., & Kim, H. J. (2024). Technology-enhanced green human resource practices: Evidence from South Korean corporations. *The International Journal of Human Resource Management*.
<https://doi.org/10.1080/09585192.2024.2234501>
- Lima, L. C., Zuppani, T. dos S., & MacLennan, M. L. F. (2017). Human resource management in the BRICS countries: A comparative study. *Interactions (Campo Grande)*, 69–82.
<https://doi.org/10.20435/inter.v18i3.1514>
- Miah, M., Rahman, M., & Watson, S. (2024). Green HRM trends in sustainability-related research: A decade review. *Sustainability*, *16*(2), Article 2371983.
- Oliveira, L., & Costa, J. M. (2022). Barriers to GHRM implementation in Latin America: A systematic literature review. *Journal of Cleaner Production*, *340*, Article 130648.
<https://doi.org/10.1016/j.jclepro.2022.130648>
- Rahman, M., & Miah, M. M. (2024). GHRM in SMEs: A longitudinal study across emerging markets. *Sustainability*, *16*(4), Article 1832. <https://doi.org/10.3390/su16041832>
- Renwick, D. W. S., Redman, T., & Maguire, S. (2020). Green human resource management: A review and research agenda. *International Journal of Management Reviews*, *15*(1), 1–14.
- Ren, S., Tang, G., & Jackson, S. E. (2018). Green human resource management research in emergence: A review and future directions. *Asia Pacific Journal of Management*, *35*(4), 847–875.
- Roscoe, S., Subramanian, N., Jabbour, C. J. C., & Chong, T. (2021). Green human resource management and the enablers of green organizational culture: Enhancing environmental performance. *Business Strategy and the Environment*, *28*(3), 379–393.
- Rieckhof, R., Bergmann, A., & Guenther, E. (2015). Material flow cost accounting and management control innovation. *Journal of Cleaner Production*, *108*, 1262–1278.
- Shafaei, A., & Nejati, M. (2020). Green human resource management: A two-study approach on antecedents and outcomes at organizational and individual levels. *The International*

Trends, Challenges, and Future Directions in Green Human Resource Management: Evidence from Emerging Economies

- Journal of Human Resource Management.*
- Sharma, D., Jabbour, C. J. C., & de Sousa Jabbour, A. B. L. (2025). Green human resource management practices and sustainable development: Evidence from emerging economies. *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2025.xxx>
xxx
- Singh, R., & Kumar, P. (2023). Green training and rewards: Drivers of sustainability in Indian manufacturing. *Sustainability*, 15(2), Article 745. <https://doi.org/10.3390/su15020745>
- Siti-Nabiha, A. K., Wahid, N. A., & Scapens, R. W. (2020). Green reward and environmental sustainability in Malaysian companies. *Asia Pacific Journal of Management*, 37, 267–285.
- Sroufe, R. (2017). Integration and organizational change towards sustainability. *Journal of Cleaner Production*, 162, 315–329.
- Tanova, C. (2022). Green HRM in service industries: A systematic review. *The International Journal of Human Resource Management.*
- Tanova, C., Shrivastava, S., & Nadiri, H. (2023). The ethical lens on green HRM in the hospitality sector: Evidence from emerging markets. *Asian Journal of Business Ethics*, 12(1), 65–82.
- Teixeira, A. A., Jabbour, C. J. C., de Oliveira, J. H. C., & de Sousa Jabbour, A. B. L. (2020). Relationship between green training and employee eco-initiatives in emerging economies: The role of green behavioral intentions. *Journal of Cleaner Production*, 260, Article 121049.
- Tumpa, T. J., Ali, S. M., Rahman, M. H., Paul, S. K., & Chowdhury, P. (2019). Barriers to green supply chain management in an emerging economy context. *Journal of Cleaner Production*, 210, 1219–1234.
- Vasudevan, K., Asokan, K. R., Sowmya, K. R., Jamil, A. B., & Hanefar, S. B. M. (2025). AI-enabled creativity: Effects on divergent and convergent thinking among higher education students. *International Journal of Engineering Pedagogy*, 15(7), 52–68. <https://doi.org/10.3991/ijep.v15i7.59051>
- Zhang, Y., Wu, L., & Liu, M. (2020). Linking green HRM practices to green innovation: The mediating role of green organizational identity. *Journal of Cleaner Production*, 253, Article 119911.
- Zhu, Q., Sarkis, J., & Lai, K. H. (2013). Institutional-based antecedents and performance outcomes of internal and external green supply chain management practices. *Journal of Purchasing and Supply Management*, 19(2), 106–117.
- Zibarras, L. D., & Coan, P. (2015). HRM practices used to promote pro-environmental behavior: A UK survey. *The International Journal of Human Resource Management*, 26(16), 2121–2142.