



## **Green HRM and Organizational Sustainability: Strategies for Environmental Responsibility**

**Dhirendra Kumar Jena**

Dept. Of MBA, Balasore College of Engineering & Technology, Sergarh , Balasore, Odisha

**DOI : <https://doi.org/10.5281/zenodo.19499433>**

### **ARTICLE DETAILS**

**Research Paper**

**Accepted:** 21-03-2026

**Published:** 10-04-2026

**Keywords:**

*Green HRM, Organizational Sustainability, Environmental Responsibility , Corporate Social Responsibility (CSR) , Sustainable Business Strategies , Eco-friendly HRM Practices , Regulatory Compliance*

### **ABSTRACT**

Green Human Resource Management (GHRM) serves as a strategic planning mechanism which combines both environmental responsibility and organizational sustainability programs. The analysis examines how GHRM plays an essential part in developing sustainable business approaches while promoting ecological protection. The research analyzes GHRM adoption through Resource-Based View and Stakeholder Theory and Institutional Theory and explores the motivating factors while evaluating implementation approaches and implementation obstacles. The research uses a qualitative approach to analyze academic and industry literature through systematic literature review methods. GHRM practices involving green recruitment and green training and performance management systems show substantial importance in supporting corporate sustainability goals. Organizations encounter three main barriers to GHRM implementation which stem from financial limitations and absence of established practices and employee opposition. GHRM implementation remains subject to various governmental decisions as well as industrial requirements alongside stakeholder demands. Research findings demonstrate that GHRM produces beneficial outcomes for maintaining employee connections to their work while increasing maintenance rates and strengthening corporate social duty systems. Text analytics tools help organizations gain new perspectives on GHRM assessment quality which lets them evaluate



their sustainability programs more effectively. A structured GHRM approach needs to be established because leaders must partner with employees through technological systems to maintain sustainability for the long term. These findings supply both managers and policymakers and researchers with important implications that support the expansion of sustainable human resource management expertise.

---

---

## 1. Introduction

With worsening of environmental challenges and ultimate demand for global sustainability, the organizations are increasingly employing Green Human Resource Management (GHRM) as a strategic lever to facilitate environmental responsibilities. Organizations can integrate eco- friendly policies into HRM practices (e.g. green recruitment and sustainability performance management) and encourage their employees to participate in environmental activities so that they can bring in long term organizational sustainability as well as HRM sustainability and CSR objectives. In this study, the authors examine the critical role that GHRM plays in creating sustainable business strategies and ecological stewardship in the corporate arena.

Research on Green Human Resource Management (GHRM) and Organizational Sustainability has been based on several theories that provided a strong theory foundation for environmental responsibility of HR practices. The Resource Based View (RBV) Theory (Barney, 1991) stated that firms could achieve competitive advantage by using human capital to implement sustainable practice. The Stakeholder Theory (Freeman, 1984) contributed that balance of interests of shareholders costs, customers and environmental stakeholders is essential for the advancement of green HRM strategies. As DiMaggio and Powell (1983) demonstrated using the Institutional Theory (DiMaggio & Powell, 1983), organizational responses to normative pressures from the regulatory bodies, industry standards and societal expectations resulted in the adoption of a sustainable HRM practice. Moreover, the Ability-Motivation-Opportunity (AMO) Theory (Appelbaum et al., 2000) helped to understand how organizations could facilitate employees' green behaviors by means of training, incentives and participatory decision making. It was assumed that the Social Exchange Theory (Blau, 1964) that employees would reciprocate environmentally responsible HRM initiatives with increased commitment and pro-environmental behaviors. Together, these theories provided a strong basis for the strategic integration of GHRM to sustain organization.



With the aim to bolster corporate social responsibility and gain a competitive edge, organizations began to adopt Green HRM (GHRM) practices of moving towards paperless operations, supporting remote work, and using energy efficient technologies (Ahmad, 2015). Environmental criteria were also integrated in recruitment, training and performance management processes to develop green workforce (Anam Salim, Nibedita Gogoi, & Sumanta Dutta, 2022). Despite this, there was a lack of standardized guidelines that could facilitate the consistent adoption of GHRM in organisations (Joshi, n.d.). Additionally, the shift in employee behavior towards green practices was a formidable challenge, which needed to be sustained for any significant change to take place (Joshi, n.d.). In addition, organizational financial constraints were also a major barrier because GHRM involves a substantial initial investment, which is difficult for organizations with limited budgets (Joshi, n.d.). In addition, employees did not receive adequate training and were not made aware of green HRM practices (Joshi, n.d.). The trends, issues and challenges in this highlighted the difficulties in the integrating of sustainability into HRM and also indicated the necessity of comprehensive frameworks and organisation commitment.

Consequently, in recent years, organizations have been under pressure to adopt eco-friendly practices within their human resource management (HRM) strategies. However, Green HRM (GHRM) awareness has been increasing but its systematic implementation remains a challenge, especially with the alignment of the HR policies with sustainable business objectives. The main problems include the absence of the standard rules, the lack of funds, and the unwillingness of employees to participate in green programs. In addition, organizations typically struggle with the ability to measure the impact of GHRM on corporate social responsibility (CSR) and long- term organizational sustainability. The purpose of this research is to fill these gaps by examining how environmental responsibility can be incorporated into HRM in an effective way by employing a structured approach to the use of green policies in recruitment, performance management and employee engagement. This study is highly relevant since this is an area that is continually growing in terms of knowledge about sustainable business practice, thereby providing practical elements to policymakers, HR professionals, and corporate leaders as to how economic growth can be achieved whilst maintaining environmental responsibility.

Organizations need to understand and implement GHRM strategy in order to comply with the regulatory requirements, embellish their brand image, and provide a sustainable workforce in the industrialised world that is becoming eco-savvy.



## 2. Objective of the study

1. To explore the role of Green HRM strategies in organizational sustainability.
2. To investigate challenges in Green HRM adoption using text analytics.
3. To examine external and regulatory influences on Green HRM through qualitative analysis.
4. To analyse organizational benefits of sustainability-driven HRM using text data.
5. To develop a qualitative framework for assessing Green HRM effectiveness with text analytics.

Green HRM has emerged as a crucial strategy to achieve organizational sustainability with the growing amount of emphasis on the use of sustainable business practices. Organizations are going green with eco friendly HR policies but they problem of implementation, regulatory compliance, and even problem of what to measure it still remain. With the objective of providing comprehensive understanding of industry narratives, stakeholder perceptions and policy trends, this study will be exploratory and qualitative, and thus using text analytics tools will help gain a deeper insight into them. The result of this section is to review existing literature on Green HRM, organizational sustainability, regulatory influences, and assessment frameworks to better build a strong theoretical foundation on what has been written in the Green HRM area, enlightening on the key themes, conceptual framework and research gaps that will inform this study.

## 3. Literature Review

Human Resource Management (HRM) that is environmentally responsible has become an important strategic framework in recent years, which aims to establish an environmental responsibility in the organisation through sustainability principles in their policies and practices of HRM. Green HRM has come to the fore as an important tool for companies to adopt a sustainable business model, to increase employee engagement and reduce ecological footprints (Parab, 2023). Green HRM strategies help sustainability in various ways: green recruitment, green training, green performance management, and green employee engagement. Green recruitment is a way to hire employees with sustainability values (Singh, Hassan, & Ram, 2022), green training and development programs are a way to educate employees on environmental awareness and eco friendly practice that leads to an improved environmental performance (Pilania, 2024). But they also include sustainability metrics in the performance appraisal and offer rewards for green initiatives to motivate employees (Jain, 2023). Some



studies find link between employee involvement in sustainability programs and enhancing performance and workplace involvement (Palupiningtyas, 2024). Furthermore, the use of paperless systems and virtual collaboration tools in the digitalization of HRM processes has a positive impact on environmental impact and the operational efficiency (Jora et al., 2023). The empirical research has proved that Green HRM have a tremendous role to play in organizational sustainability, profitability, and competitiveness (Devi et al., 2024) because a number of studies found about improvement in environmental performance with the reduction in energy

consumption and waste production (Akbar et al., 2024). In addition, Green HRM improves employee skills and strengthens employee commitment to environmental goals (Sujatha, 2024). Despite this, the implementation of Green HRM has its own challenges, including high initial investment costs, resistance to change on the part of the employees, and the need for a strategic alignment with broader corporate goals (KalpanaB et al., 2020; Mitra & Hembrom, 2020; Alkaf et al., 2023). However, several Green HRM practices have been shown to be challenging to incorporate into the organization, but firms that actually manage to integrate these practices into their organization show an improvement in sustainability performance and competitive advantages that make Green HRM an important aspect of today's business strategy.

There thus exists a need for Green Human Resource Management (Green HRM) as a critical approach to harmony between sustainability and HR practices with the issues of drivers, implementation strategies, challenges and impacts on the organizational performance. Green HRM adoption is mainly driven by external pressures from stakeholders, regulatory requirements and sustainability initiatives in industries that are implementing environmental management systems (EMS) and ISO 14001 certifications (Khan et al., 2021). Further, drivers such as carbon footprint reduction in the tourism sector contribute to the adoption (Sitohang et al., 2024). Usually, implementation strategies include green recruitment, training, and performance appraisal (Jusdijachlan and Ridwan, 2023) and in industry, banking, digital solutions are used to reduce environmental impact (Fazal and Shaiq, 2023). Nevertheless, there are still challenges such as low awareness, budget constraint, and employee resistance (Shukla & Bankar, 2022; Tanveer, Yusliza, & Fawehinmi, 2023; Sarkar, 2022). The research shows that Green HRM improves the level of employee engagement, environmental performance, and the competitiveness of business (Zhao, 2023) and that employee environmental consciousness is vital for its success (Gul, Mahesar, & Bakari, 2023). Digital HR solutions like paperless operations and virtual training further enhance Green HRM by increasing efficiency and reporting sustainability (Purohit, Aithal, & Kumar, 2024). Future research will need to



explore the implementation and effectiveness of Green HRM strategies at the sector level, employee perceptions, and how long term sustainability impacts look at the end of the day (Sachdeva & Singh, 2022).

However, as Green HRM can enhance organizational sustainability, it also has a number of challenges to its implementation. A primary barrier is based on the fact that the green training, digital HR system, and eco friendly infrastructure is very expensive and some times out of reach of SME (Pilania, 2024). It has been found in Malaysia that cost are the main deterrent, as businesses generally concentrate more on financial growth rather than focusing on environmental responsibility (Sathasivam, Islam, Bakar, & Hashim, 2024). Besides, HR professionals and employees are not aware and have knowledge gaps which prevent them to effectively adopt Green HRM. According to studies, HR managers are unable to connect the sustainability goals with the HR policies due to lack of skills, especially in the field of higher education (Maluka, Mowela, & Mabasa, 2024) and in areas where Green HRM is not yet well developed (Shukla & Bankar, 2022). One of the reasons implementation is further complicated is due to employee resistance which usually correlates with workers perceiving green initiatives as additional workload without direct incentives (Sarkar, 2022). In the hospitality industry, for example, there is no proper motivation and no proper guidelines to follow in green performance appraisals and training (Tanveer, Yusliza, & Fawehinmi, 2023). Besides, Green HRM integration with existing HR systems is difficult for organizations as sustainability oriented

performance management and compensation models necessitate structural changes that HR departments are often reluctant to go with (Akbar et al., 2024; Sachdeva & Singh, 2022). Furthermore, external pressures, for example, regulatory uncertainties and the lack of legal frameworks, also hinder the adoption (Sapna & Gupta, 2021; Kurniawati, 2023) as businesses are not supported by the government or have issues with compliance owing to policies that are not consistent (Sapna & Gupta, 2021; Kurniawati, 2023). Moreover, limited organizational commitment is another great challenge, and some organizations implement Green HRM in a superficial manner just to have good public relations rather than to make it a strategic initiative (Jain, 2023). Previous research shows that organizations with a weak environmental culture are unable to fully adopt Green HRM and thus adopt it in a fragmented way (Purohit, Aithal, & Kumar, 2024). To address these barriers, one first needs to offer financial incentives, awareness programs, regulatory support, as well as greater corporate commitment to sustainability.

Differing perceptions of barriers of the employees and stakeholders often hinder the adoption of Green Human Resource Management (Green HRM) and henceforth its successful implementation. One of the



main problems is the absence of organizational support and poorly developed green culture, because employees consider weak leadership commitment to be the biggest barrier to sustainability initiatives (Sulistiawan, Herachwati, & Khansa, 2024). Stakeholders stress the need for structured policies and rewarding system in realizing Green HRM (Sulistiawan et al., 2024). In addition, low awareness and poor training make it difficult to adopt Green HRM, as employees find it hard to comprehend Green HRM objectives, while stakeholders plead for training programs to achieve full understanding (Shukla & Bankar, 2022; Parab, 2023). Moreover, financial conditions may trigger large hurdles, whereby employees and HR managers identify budget limitations as the main shortcoming whereas stakeholders indicate that long term cost cuttings in sustainability management can be made from sustainable practices compared to the high cost of initial investments (Sulistiawan et al., 2024; Prakash, Gupta, & Kaur, 2022). Another complicating factor that prevents acceptance of Green HRM and implementation is employee resistance to change, especially from the dread of increased workload and job security (Singh and Pandey, 2020; Sulistiawan et al., 2024); however, Green HRM aligning sustainability initiatives with employee incentives increases employee acceptance. Furthermore, inconsistent legal frameworks lead to regulatory and compliance issues in banking, manufacturing industries, and employees are merely satisfied when their firms' Green HRM practices have no clarity (Prakash et al., 2022; Sulistiawan et al., 2024). The second major problem arises from the perception of Green HRM as a public relations gimmick whereby employees consider the corporate sustainability initiatives as a branding tool rather than an actual environmental commitment (Parab, 2023). Stakeholders argue that Green HRM needs to be integrated into the core corporate values as opposed to using it as a marketing strategy in order to gain credibility and success in the long run (Shukla & Bankar, 2022). These barriers are to be addressed through strategic leadership, employee engagement, financial planning and regulatory support to promote the adoption and the effectiveness of Green HRM.

Green Human Resource Management (Green HRM) is shaped to a large extent by government policies and industry regulations, which set the rules of the game, compliance standards and financial incentives. Concerning green recruitment, training, and performance management HR policies, governments all over the world have set environmental regulations that require

businesses to be sustainable (Maheswari, 2024; Ichdan & Maryani, 2024). But even though these regulations impose compliance obligations on industry, research has indicated that compliance with them do not always mean better environmental performance unless industry activities are guided by the implementation of effective sustainability practices (Maheswari, 2024). Moreover, government



incentives including tax benefits and subsidies also entice businesses to embrace Green HRM, evidenced by the impact policy backed sustainability programs exert on speeding up the adoption of the concept (Chandana et al., 2024; Shan & Ji, 2024). Green HRM practices also vary across sectors, where industry specific regulations determine Green HRM practices, as noted by Wasim Musthaq & Jegadeeshwaran (2023) that it is becoming imperative for the banks to adopt sustainable finance policies and it has become compulsory for manufacturing firms to adapt green recruitment and environmental training programs to achieve their carbon reduction goal (Ichdan & Maryani, 2024). Likewise, the green standards enforced by the government in the IT industry for example, encouraging remote work policies, paperless HR operations, sustainable office designs (Nittoor, 2020). These regulatory measure however have not resolved challenges associated with Green HRM adoption such as weak enforcement mechanisms that allow companies only to superficially comply and financial constraints that in most cases affects the ability to integrate Green HRM particularly in developing economies, (Maheswari, 2024; Chandana et al., 2024). Research suggests that strengthening of regulatory frameworks that provide clear compliance guidelines, providing government incentives for HR practices that promote sustainability, and supporting the industry to collaborate and share best practices across sectors (Shan & Ji, 2024) can help improve the effectiveness of Green HRM to enhance organizational sustainability. Through these measures, the Green HRM can be evolved from the regulatory obligation to the strategic driver of corporate sustainability.

A number of external and regulatory factors such as government regulations, corporate social responsibility (CSR) mandates, industry standards and stakeholder pressures enhance the adoption of Green Human Resource Management (Green HRM). The government policies are an important driver and environmental regulations like mandatory carbon reporting and environmental audits, push the business to adopt Green HRM practices (Maheswari 2024). Furthermore, the research shows that green recruitment and training initiatives are adopted more in manufacturing industries due to the presence of environmental performance laws (Ichdan & Maryani, 2024). Along these lines, the absence of punishments for the non-abidance of guidelines and the non-endorsed execution of guidelines can limit Green HRM viability, particularly in creating economies (Maheswari, 2024). The CSR driven organizations are also inclined to invest in sustainability oriented HR practices through a tool named Green HRM to fulfill stakeholder expectations and improve corporate reputation (Zihan, Makhbul, & Alam, 2024; Jain, 2023). Moreover, compliance with the industry standards and certifications, i.e., ISO 14001, GRI (Global Reporting Initiative) and SDGs (Sustainability Development Goals) also encourage the organizations to adopt Green HRM (Masoumik & Abdul Rashid, 2021; Chandana et al., 2024). Moreover, the role of Green Intellectual Capital (GIC) investment and the importance of a Green



sustainability-oriented leadership with top management commitment and organizational readiness are highly instrumental as success factors of adopting Green HRM (Alkaf et al., 2023). Also, due to stakeholder pressures, such as consumers' and investors' demands and activist groups advocating for environmental protection, they are chief driving forces (Shukla & Bankar, 2022; Chandana et al., 2024). This is compelling in those industries with high levels of environmental scrutiny, i.e. energy, mining, and manufacturing (Chandana et al., 2024). Green branding and sustainable HR practices, which are used by organizations to obtain a competitive advantage, also affect Green HRM adoption in a competitive market (Zihan et al., 2024). This collectively emphasizes the surge in the significance of regulatory framework, industry standard, and the stakeholder expectations in the evolution and implementation of Green HRM in different sectors.

It is known that Green Human Resource Management (Green HRM) contributes positively to employee engagement and retention as the organizations that incorporate sustainability into their HR practices have a more motivated and committed workforce. Abdelhakim (2024) and Palupiningtyas (2024) agree that Green HRM practices, including green training, eco-friendly workplace policies, and sustainability-driven incentives, contribute extensively to employee engagement since they make workers feel as if their work has a great purpose and makes them feel satisfied with their jobs. Additionally, leadership is important to reiterating sustainability initiatives as studies in the hospitality sector indicate that transformational leadership intensifies the relationship between Green HRM and employee engagement (Ababneh, Awwad, & Abu-Haija, 2021). In the retention aspect, organizations that adopt Green HRM strategies have lower turnover rates, employees feel they are in line with corporate sustainability goals and this is especially true with millennials and Gen Z workers who consider environmental responsibility in their career selection (Ismail & Hassan, 2020; Hussain et al., 2023). In addition, employees who view their organization as having strong corporate environmental responsibility have a higher level of organizational commitment, as Green HRM improves the quality of working environment and increases employee loyalty (Ahmed et al., 2024; Pilania, 2024). Moreover, Green HRM considers eco friendly office environment, work life balance as well as providing sustainability driven incentives to employees which alleviates stress and prevent burnout, complementing engagement and performance (Abdelhakim 2024; Dira, et al 2024). Despite this, there is still work to be done in the implementation of Green HRM, as employees may resist change and there is no clear incentive for them to do so (Pilania, 2024). One of the barriers for organizations to practice green recruitment is the high initial cost of green recruitment, sustainability training and eco friendly workplace improvements which are even more challenging in



resource constrained environments (Al-Hajri, 2020). However, Green HRM is still a strategic tool for employee engagement and retention as well as for creating a sustainable and responsible corporate culture.

Corporate Social Responsibility (CSR) is significantly supported by Green Human Resource Management (Green HRM) to embed sustainability in HR policies and make an organization environment conscious. Green HRM reinforces employee adherence to sustainability projects and fortifies long term sustainable initiative through the integration of HR functions like recruitment, training and performance management with CSR objectives (Yin, 2023; Herrera & Heras-Rosas, 2020). In this approach, the increased required dimensionality demands businesses to move beyond views of regulatory compliance and engage in the triple bottom line, namely, people, planet, and profit (Stahl et al., 2020). Those studies proved that green HRM is a meaningful element in corporate sustainability frameworks in Malaysian SMEs, which studies in the impact of green HRM on enhancing corporate sustainability are through paperless processes, energy efficient workplaces and through eco friendly HR policies (KalpanaB, ShivalingappaB, & ManojH,2020; Zihan, Makhbul, & Alam, 2024). Moreover, Green HRM also leads to a sustainable workforce by encouraging green training, rewards, and eco-friendly leadership development to assist CSR initiatives and improve workplace well-

being (Amin, 2024; Asuzu et al., 2024; Winarno & Silvianita, 2024). In addition to internal benefits, companies that employ Green HRM enhance stakeholder perceptions and corporate reputation, and attract a socially responsible investor base and human resources (millennial and Gen Z who highly value sustainability and ethical business practice) (Hameed, Mahmood, & Shoaib, 2022; Bahmanyari et al., 2020). Similarly, incorporating Green HRM with CSR initiatives enables organizations to communicate their sustainability commitments to stakeholders and customers more efficiently and consequently improve their market position (Santana, Morales-Sánchez, & Pasamar, 2020). Despite these, Green HRM has high initial implementation costs and lack of expertise, as well as inconsistent regulations that hinder its ability to drive CSR goals (Yin, 2023; KalpanaB et al., 2020). Research suggests that to have the most impact, there needs to be closer cooperation between the HR and CSR teams to ensure Green HRM initiatives are aligned with corporate sustainability strategies (Zihan et al., 2024).

Green Human Resource Management (Green HRM) effectiveness can best be evaluated through the assessment of the qualitative indicators such as employee engagement, leadership commitment, integration into workplace and innovation towards sustainability. Two qualitative measures of Green HRM success are employee awareness and participation in green initiatives, i.e., recruiting programs and energy



conservation efforts, which if high in nature means that the organisation is implementing its sustainability policies effectively (Pilania, 2024; Dira et al., 2024). Also, leadership commitment is important as organizations that have proactive green leadership and executive support are likely to implement more effective Green HRM strategies (Anshima et al., 2024). Further research indicates that the culture and leadership attitudes of an organization have a significant impact on the adoption and success of Green HRM initiatives, especially in the case of service based industries (Rapo, 2024). Also, the degree to which Green HRM policies are assimilated into the routine HR functions, like recruitment, training and performance appraisal, indicating the organization's sustainability commitment in the long run (Sujatha, 2024; Pilania, 2024) is another important qualitative measure. Moreover, employees' perception of their organization's green efforts gives insights into the effectiveness of Green HRM because employees are more likely to participate in sustainability activities when they believe these green practices are real corporate commitments rather than public relations activities (Ahmed et al., 2024; Amanullah et al., 2024). In addition, the quality and impact of green training programs also suggest that green HRM would have been successful, with organisations providing ongoing sustainability education having higher level of engagement and sustainability commitment (Sujatha 2024; Pilania 2024). Moreover, Green HRM encourages innovation and creativity in sustainable HR practices whereby employees raise ideas for waste reduction, eco-friendly workplace designs, and new sustainability projects (Ahmed et al., 2024). Together, these qualitative indicators form a full scale of Green HRM effectiveness, stressing an underlying need for an organization's sustainable corporate culture, continual leadership backing, and employee creative initiatives.

In this way, integrating text analytics tools in the assessment of Green Human Resource Management (Green HRM) sustainability outcomes is a new method to measure qualitative indicators hidden in HR practices. Text analytics allows organizations to fetch insights from unstructured textual data such as sustainability reports, employee feedback, and HR policy documents etc., and traditional evaluation methods are only concerned with quantitative metrics (Singh, Awasthi, Patra, Srivastava, & Trivedi, 2024). Text mining and NLP are the tools employed for these tools in order to identify repeated sustainability themes in the HRM area

such as training effectiveness, employee engagement, and green leadership initiatives (Lozano & Barreiro-Gen, 2024). Furthermore, sentiment analysis on employee created content or employee generated content like performance reviews and internal messages is another strong method when used to capture insight into workforce sentiments towards green HR policies and sustainability engagement



(Francis & Zeb-Obipi, 2021; Singh et al., 2024). Finally, machine learning models advance the sustainability reporting by categorizing the HRM contributions to the corporate sustainability goals, consistent with the frameworks like the GRI and the ESG (Hronová & Špaček, 2021). HR analytics that include text based data helps organizations predict trends in workforce sustainability expectations, HRM challenges and long term effects of sustainability training programs in the future (Poonia & Kumari, 2024). Additionally, organizations can study the trends in employee sustainability engagement, retention and attrition associated with green HR policies and can base their strategic decisions on data (Francis & Zeb-Obipi, 2021). Yet, the use of text analytics for Green HRM is far from being implemented: it raises the issues of data privacy, lacks standardized methodologies for the analysis of sustainability outcomes, and requires fine tuning depending on the domain of application (industry) (Hronová & Špaček, 2021; Lozano & Barreiro-Gen, 2024). Further research should be conducted to refine text analytics frameworks to provide more accurate and sector specific assessments of Green HRM effectiveness as well as ethical issues of employee data privacy (Singh et al., 2024). The potential of advanced text analytics in integrating into Green HRM assessment for the improvement of sustainability measurement is huge. This enables organizations to employ comprehensive, data driven methods to assess their environmental and social commitments.

## **4. Methodology**

### **4.1 Research Design**

The objectives of this study are to conduct qualitative research in the form of a systematic literature review to describe Green Human Resource Management (Green HRM) and its role in organizational sustainability. The use of a qualitative approach is suitable as it enables a detailed study of the existing academic and industry related research on Green HRM strategies, challenges and their implications on environmental responsibility. The study aims at synthesizing knowledge from different sources to give an overall understanding of Green HRM practices and their effectiveness in supporting sustainability.

### **4.2 Research Approach**

In this study, the deductive research approach has been used because it is based on existing theories and frameworks of Green HRM and organizational sustainability. To achieve this, this study draws on literature from peer reviewed journals, industry reports and policy documents to identify the main themes and challenges within the literature, identify strategic interventions that have been posed previously in



order to overcome these difficulties. The deductive approach enables structuring of findings in a systematic manner and reaching conclusions from the existing knowledge in the field.

### 4.3 Research Philosophy

The philosophy underlying this research is interpretivist in nature, as it focuses on the understanding of social and organizational context of Green HRM practices. This study is appropriate for the interpretivism as it recognizes the complexity of human resource practices,

corporate sustainability policies and regulatory influences in different industries. The study attempts to explain how organizations incorporate Green HRM practices to their sustainability strategies taking into account leadership roles, employee involvement, compliance and industrial applications.

### 4.4 Data Collection

For the study, secondary data is used from a wide literature review. The data sources are taken from peer reviewed journal articles, industry white papers, government regulations and corporate organization sustainability reports. The study proceeds with a structured literature review methodology following a systematic approach and classifying the sources according to their contribution to the Green HRM strategies, challenges, and implementation frameworks.

### 4.5 Data Analysis Methods

Qualitative text analysis methods used to analyze the collected literature include thematic analysis on the construction and use of industrial digital maps within their work environments and correspondence analysis on the construction process of industrial digital maps using every sociomaterial assembly set recorded in the literature.

**4.5.1 Thematic Analysis:** This method assists to discover the reoccurring themes in the Green HRM literature, for example, training, compliance, employee engagement and leadership in the sustainability initiatives. In illustrating the interconnections among different HRM practices and sustainability challenges, the latter method is utilized in the form of the thematic maps.

**4.5.2 Correspondence Analysis:** This method is employed for differentiating the conceptual frameworks from practical applications of Green HRM by mapping the relationships between key terms including 'sustainability', 'HRM', 'policy' and 'compliance'.



**4.5.3 Network Graphs:** Term association analysis is used to study the linkages between different sustainability strategies and HR functions in Network Graphs.

These qualitative techniques combine to provide a full evaluation of what is already known on this topic and enable the development of an integrated framework for Green HRM and environmental responsibility. The contribution is to understand how HR policies and practices affect sustainability adoption in various organizational contexts.

## 5. Analyze and Discussion

### 5.1 Topic Modelling

Topics



Fig1: Topic Modelling

The analysis of topic modeling on the topic of Green Human Resource Management (Green HRM) and organizational sustainability offers a better understanding of important themes like strategies, challenges, compliance factors, employee engagement, leadership roles and industrial applications. It also comes out that training, research and strategic policies have a key part to play in overcoming the challenges of Green HRM implementation while green organizational business and sustainable management are at the core of corporate sustainability efforts. Further, environmental practices, compliance and also worker engagement become key factors impacting Green HRM effectiveness, most especially in industries having stringent sustainability regulation. Recent research (2023–2024) on employee participation and





'sustainability', closely matches with 'Organizational Sustainability' in the research title and plays the central role in the literature. Likewise, the term 'Green HRM' is also found as the dominant term which is in line with the core focus of the study. The appearance of "organizations" indicates that sustainability strategies are applied in corporate settings, and the appearance of "environmental" confirms a strong emphasis on sustainability concerns in "Environmental Responsibility." The term 'Employee' is a major term which helps us to understand the importance of the workforce engagement in Green HRM. The inclusion of "2024" and "2023" indicates a recent focus on contemporary research and thus, ensures that the study is relevant to the modern times. Additional insights are given in several medium sized words. "Policies," "implementation," and "training" imply that Green HRM strategies are very practical in nature. The terms "research" and "management" emphasize the scholarly and managerial perspectives in sustainability integration. Further adding to this, engagement, adoption, and regulatory, emphasize employee participation, strategic decision making in regards to, and compliance in sustainability ambitions. The words 'practices', 'effectiveness', 'commitment', and 'leadership' are all smaller words that provide additional context for the meaning of this article, which turns out to be focused on the assessment of the success of Green HRM initiatives and the role of corporate leadership in promoting sustainability. The word cloud is closely related to the research title which is Green HRM, Organizational Sustainability, strategies and environmental responsibility. The prominence of words related to implementation and engagement indicates that a research direction may be to develop and evaluate practical sustainability strategies. Likewise, the study should examine employee engagement and leadership roles in the promotion of sustainability initiatives. As the study is highly focused on recent research (2023-2024), incorporating the latest trends and issues will make the study more applicable. Research should give practical recommendations to organizations on how to enhance their sustainability performance and create an environmental responsible culture using HRM practices in order to have maximum impact.

### 5.3 Thematic Map

- 6 The Green HRM and Organizational Sustainability: Strategies for Environmental Responsibility thematic map illustrates how the main themes and sub-themes associated with the broader research area (i.e., green HRM and organizational sustainability) relate and addresses important elements, challenges, and strategies for integrating Green HRM into sustainable organizations. Green HRM and Organizational Sustainability forms the core of all

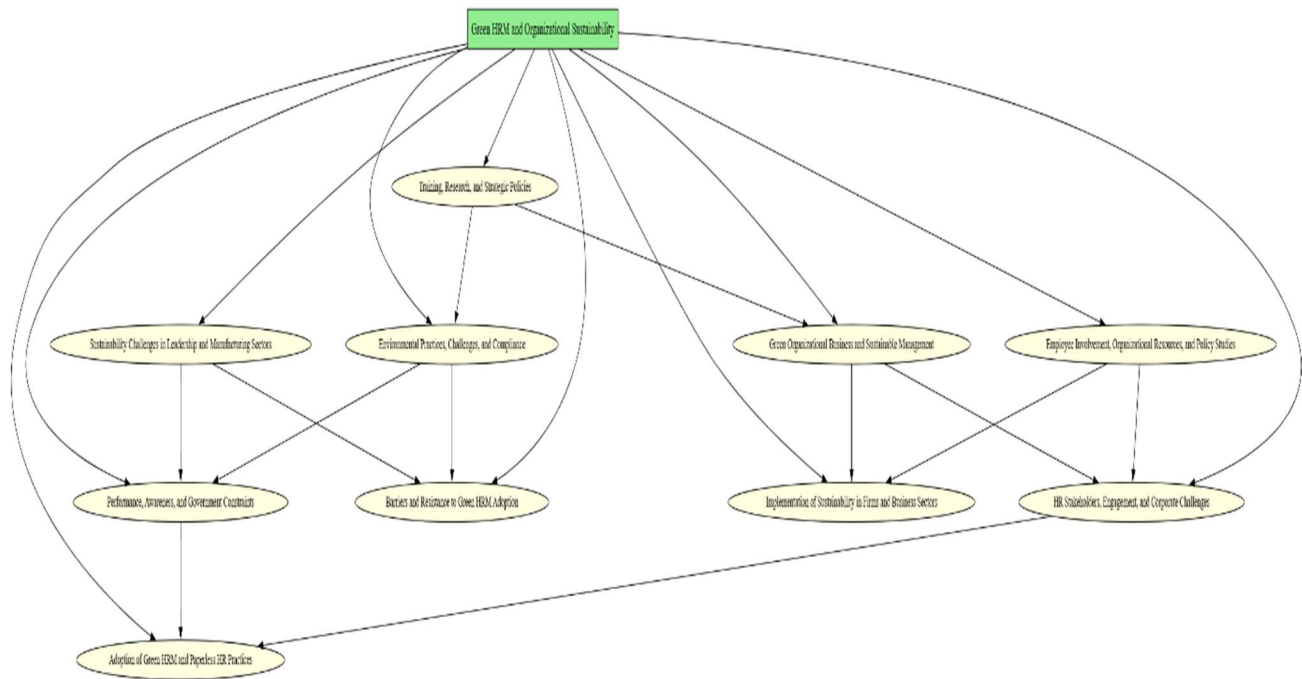


Fig3: Thematic Map

other themes, focusing on the idea of bringing HRM practices in line with environmental responsibility. Other main themes emanate from this central concept, with Training, Research, and Strategic Policies dealing with the role of employee training, research, and policy frameworks in promoting sustainability, and Sustainability Challenges in Leadership and Manufacturing Sectors that discusses the challenges leaders and manufacturing industries confront in practicing sustainability. Regulatory requirements and eco friendly work place initiatives are discussed in Environmental Practices, Challenges, and Compliance chapter and Green Organizational Business and Sustainable Management chapter focuses on how sustainability can be incorporated into the business operations. Additionally, Employee Involvement, Organizational Resources, and Policy Studies are concerned with workforce engagement, resource allocation and the role of policy research in promoting Green HRM. In addition to these core themes, there are also numerous secondary themes, including Performance, Awareness, Government Constraints, and Barriers and Resistance to Green HRM Adoption, which focus on how regulatory policies and awareness campaigns can inspire adoption of sustainability or the financial, cultural and operational challenges to the adoption of green practices. Further, Implementation of Sustainability in Firms and Business Sectors looks into industry specific approaches of sustainability integration and HR Stakeholders, Engagement, and Corporate Challenges discuss the role of HR professionals and corporate challenges in such efforts. These themes converge to the Adoption of Green HRM and Paperless HR Practices, which is the final theme of Green HRM that involves digital transformation, green HR policies

and minimizing the environmental impact. These themes are interrelated, as only effective training and strategic policies can overcome barriers and resistance, and government regulations and awareness programs can affect the corporate sustainability framework. However, the thematic map ultimately concludes that Green HRM plays an overall role in organizational sustainability through the processes of leadership, training, compliance, employee engagement, and policy frameworks, which collectively push for the sustainability initiatives and hence help ensure long term environmental responsibility and sustainable HRM practices.

## 6.1 Correspondence analysis

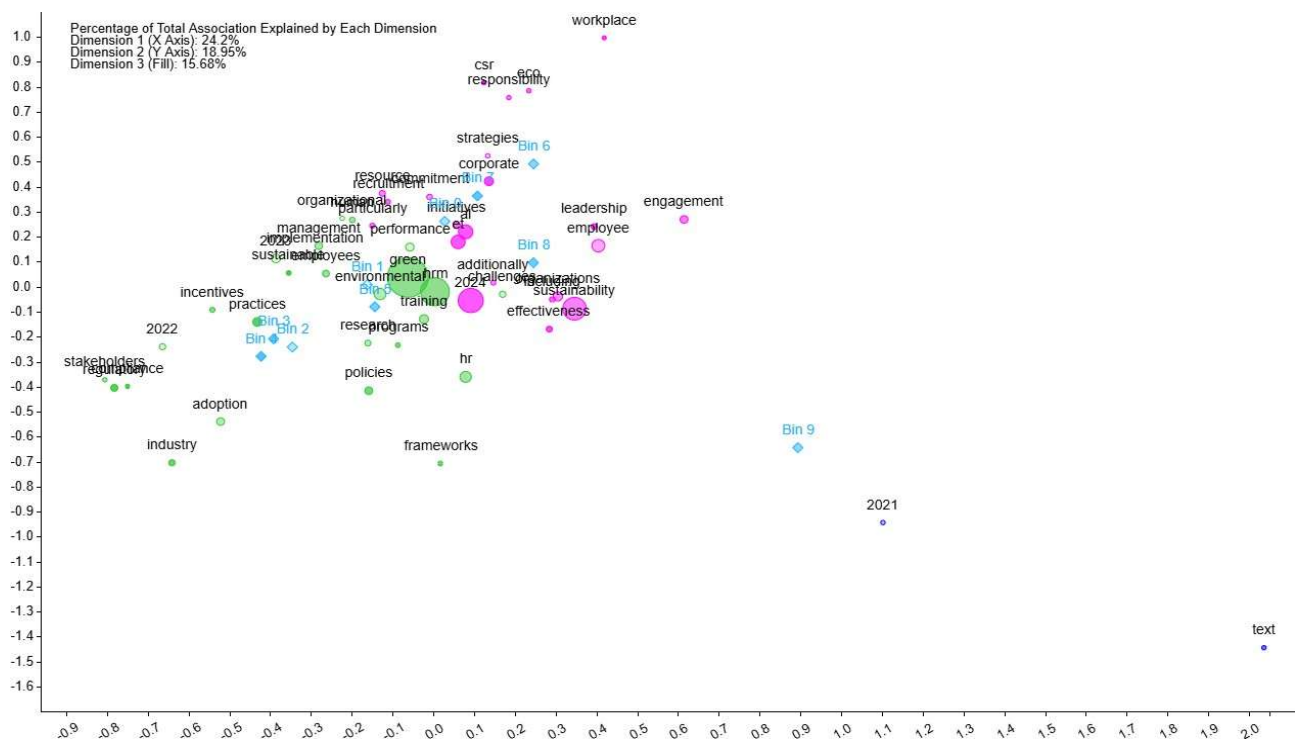


Fig 4: Correspondence Analysis

Correspondence analysis is a statistical technique which can be applied to visualize relationships between categorical variables, such as 60 key terms concerning Green HRM and three clusters (bins) across three dimensions. The X-axis (Dimension 1) successfully explains 24.2% of the total variance and juxtaposes terms near the right of the dimension for terms indicative of practical implementation and action (e.g., engagement, leadership, training, initiatives) from terms related to more general concepts and frameworks (e.g. stakeholders, adoption, policies, frameworks) at the left of the dimension. On the Y-axis (Dimension 2), which accounts for 18.95% of variance, terms associated with organizational practices and performance (e.g., "workplace," "CSR," "corporate responsibility") are at the top and those related to

broader sustainability and research (e.g., "research," "programs," "text") are at the bottom. Color and size (15.68%) are the third dimension that helps make distinctions within clusters. The central cluster (Bin 8) is made up of the keywords: sustainability, green, organizations, employee engagement and leadership, which is indicative of core research themes. The terms in the left side clusters (Bins 1–3) are also theoretical and policy related terms such as 'stakeholders', 'adoption', and 'policies', which are associated with the theoretical and policy based aspects of Green HRM. Right-side clusters (Bins 6, 9) focus on practical implementation and management aspects, as seen in the clusters of 'strategies, 'corporate performance' and 'training.' One term, 'text', is very distant from and dispersed from other terms, implying a unique association pattern or weak affinity to major themes. This confirms that the central concepts of Green HRM research include "sustainability", "green", "engagement", "leadership", and "implementation". Making the distinction between the conceptual frameworks (X-axis) and the scope of taking action (Y-axis) there is a need to merge theoretical models with practical action. The granular term clustering shows different aspects, or phases, of Green HRM adoption, and the outlier analysis requires further study. There are important research implications, specifically, for work on implementation strategies, such as employee engagement and leadership. Furthermore, deeper insight into the Green HRM and organizational sustainability will be offered by linking conceptual frameworks with practical applications, by exploring specific relationship within the clusters and by examining outlier terms. This will help refine the research focus and also provide meaningful knowledge to the field.

## 6.2 Links tool

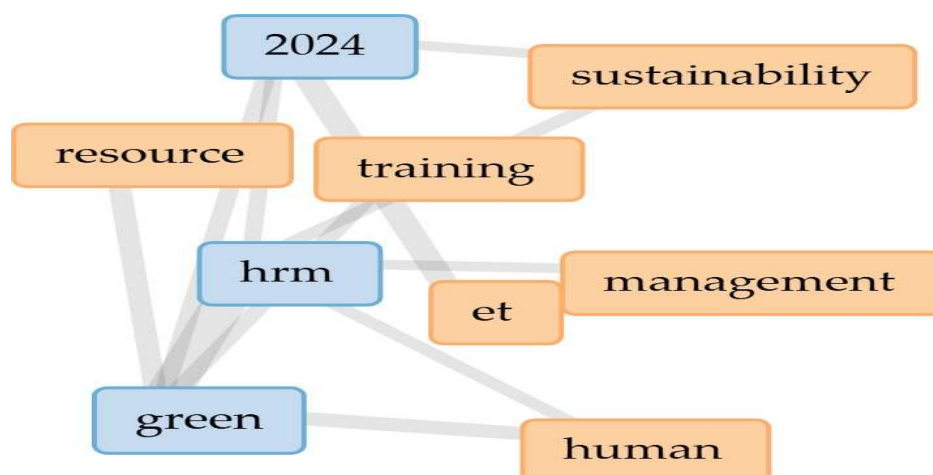


Fig: Link Tool

Link Tools displays network graphs of term co-occurrences in a text corpus, which are used to visualize a text corpus's frequency of terms appearing in the same documents. Size of nodes (boxes) and thickness



of edges (lines) are the measure of terms associations strength, so to reveal the structural relationships of the research domain. The term "HRM," "green," "sustainability," "training," "resource," and "management" are prominent in the central cluster of the network and connected with each other and the core concepts of Green HRM and Organizational Sustainability. The strongest of them all is the 'green – HRM' relation which supports Green HRM as the main contributor and 'sustainability – management' that focuses the relation on managerial practices involved in sustainability initiatives. This connection supports the importance of capacity building and allocating resources to implement sustainability initiatives in much the same way as the 'training' and 'resource' connection has been mentioned. Further thematic linkages are also shown in supporting connections, e.g. HRM with training and resource implying the identification of the HR function in sustainability, and green with sustainability indicating the direct link between green practices and sustainability goals. The presence of "2024" related to "HRM" indicates a modern emphasis on recent research development in Green HRM. Nevertheless, peripheral words like 'et' and 'human' show more weak relations and hence may represent either common words or words not quite connected to core concepts. "Human" may still be relevant in discussions on human resource management and its role in sustainability, but "et" may be a noise term that doesn't add much value. The analysis of the graph also supports the fact that Green HRM and Organizational Sustainability are the dominant themes which focus on the application of practical strategies such as training, resource allocation and management driven sustainability efforts. This further reinforces the need for recent studies and emerging trends in the field as it relates to 2024. While the role of human resources is less central, it is still a part of trying to understand the human dimension of sustainability. According to these findings, future research is recommended to focus on fine tuning of practical implementation strategies with regard to resource management and training and integrating recent academic advances in order to remain relevant. Secondly, additional research into the human side of sustainability can help explore how Green HRM practices are connected humanly to employees and organizational stakeholders. Also, filtering noise terms such as "et" will help to improve the clarity and precision of the analysis. Therefore, examining these network connections offers a more structure and evidence based way in which key sustainability concepts interact with one another, thereby adding to Green HRM and organizational sustainability research knowledge.

The analysis of different text analysis methods resulted in different insights into Green HRM and its organizational impact. Green HRM adoption barriers were observed to be related to the strategies, challenges, compliance, and employee engagement, and the training and strategic policies were crucial to the adoption. The word clouds visually highlighted frequently used terms including, sustainability and



Green HRM, quickly and only in a limited degree summarizing dominant themes. This representation was more comprehensive and depicted interrelationships of core concepts including training, research and sustainability challenges. By implementing correspondence analysis, it served to differentiate practical implementation from conceptual frameworks in order to connect theoretical models to empowers strategies. Network graphs also showed term co occurrence and identified structural relationships among HRM, sustainability and resource management.

Each method was aligned with the research objectives and was unique in contributing to the understanding of the role of Green HRM in the organizational sustainability. Broad, but shallow view was presented by word clouds, but thematic maps, and network graphs allowed to explore strategies, benefits and regulatory influences. The most effective method was correspondence analysis, which allowed key term clusters to be identified and a framework based on qualitative analysis to be developed which linked theory to practice. Correspondence analysis proved to be the most insightful approach for further research, since, in addition to being able to analyze practical aspects of the adoption of Green HRM, it also allows for the analysis of both conceptual and practical aspects. Therefore, it was suggested that it is the best method to evaluate the effectiveness of Green HRM and construct a structured assessment framework.

Other methods of text analysis are less structured and statistical than correspondence analysis, but correspondance analysis allowed for a more structured and statistical approach to distinguishing between implementation terms like "engagement," "leadership," and "training," and more conceptual themes such as "stakeholders," "adoption," and "policies." The other problem with word clouds is that, as opposed to correspondence analysis, the charts provided a superficial yet rapid visual representation of the most common terms. Thematic maps were applicable in counting how subjects were related to each other and how they influenced regulation while providing regulatory gap analysis, yet they were not as effective because there was not as much of a quantifiable way of putting terms into clusters to identify differences between theoretical models and actionable strategies. In contrast to the network graphs, which had discussed term co-occurrence and relationships, correspondence analysis enabled better distinction between theoretical construct and real world application through which Green HRM adoption could be refined in a better framework. It is for this reason that correspondence analysis was considered the most comprehensive and insightful method of structuring Green HRM research, linking conceptual frameworks with practical HRM strategies, and building an effective sustainability framework.



## 6. Conclusion

The study on Green Human Resource Management (GHRM) and organizational sustainability shows that HR practices have to significantly contribute to the development of environmental responsibility. Organisations can leverage green recruitment, sustainable training, and employee engagement initiative to promote CSR and connect it to sustainability goals. The adoption of the green buildings was seen as not yet as widespread probably because of certain challenges such as financial constraints, regulatory inconsistency and employee resistance despite benefits of which were potentially possible. The results highlight the need for a structured design of GHRM, especially by making the sustainability efforts efficient and replicable.

### 6.1 Managerial Implications

The study is important for corporate managers to embed GHRM principles in the core business strategies to gain long term sustainability. Therefore, organizations need to invest in leadership development programs that spread green HRM values and develop incentive structures that will promote employees' participation in sustainability initiatives. Besides, digital HR solutions like AI driven green recruitment and paperless HR processes can be integrated for efficiency in operations and cutting the amount of environmental footprint. Managers should develop

targeted communication strategies and change management frameworks that link employees' values to corporate sustainability objectives in order to overcome resistance to change.

### 6.2 Research Implications

In addition, this study contributes to the small number of studies that provide a structured framework for assessing effectiveness in the field of GHRM. Empirical research on the industry specific GHRM practices are needed and there is a need for further research based on high environmental impact industries i.e. manufacturing and energy. Further research could study on the connection among GHRM and the upcoming patterns like advanced HR virtualization and faroff work durability. Further, standardized metrics are required to measure the effectiveness of practices of GHRM, and also to standardize the reporting of sustainability across organizations.



### 6.3 Societal Implications

GHRM practices adoption is important to society since it integrates global sustainability efforts and climate change mitigation. Green HR policies implemented in organizations aid in developing an environmentally conscious workforce that instills pro environmental behaviors in and out of the workplace. Through a culture of sustainability, companies can help to change social norms such that people are willing to make sound purchasing decisions and demand that more responsible company behaviors be adopted. In addition, Green HRM is consistent with the UN Sustainable Development Goals (SDGs), especially those that promote decent work, sustainable economic growth, and responsible consumption and production.

### 6.4 Future Directions

In order to encourage widespread adoption of Green Human Resource Management (GHRM), it would be worthwhile for the future efforts to include the development of standardized policy frameworks, employee engagement through incentives and utilizing AI and big data to monitor sustainability. Unique industry challenges should be addressed by exploring sector specific applications and strong leadership commitment is required for green HR policies integration with broader business objectives. Clear policies, technological advancements, and proactive leadership will together ensure that GHRM will be long term success in pushing sustainable organizational practices.

### Reference

- Abdelhakim, M. (2024). The Role of Green Human Resource Management in Enhancing Employee Engagement and Environmental Performance. *International Journal of Green Management and Business Studies*. <https://doi.org/10.56830/ijgmbs06202404>.
- Ahmed, Z., Khosa, M., Nguyen, N., Faqera, A., & Rehman, S. (2024). Green HRM fostering followers' green creativity: Unfolding the role of environmental concern and employee engagement with eco- initiatives as a serial mediation. *Creativity and Innovation Management*. <https://doi.org/10.1111/caim.12614>.
- Akbar, A., Ahmad, S., Khalid, M., Aslam, M., & Bhatti, M. (2024). Analyzing the Effect of Green HRM on Organizational Performance. *Bulletin of Business and Economics (BBE)*. <https://doi.org/10.61506/01.00402>.



- Alkaf, A., Yusliza, M., Ehido, A., Saputra, J., & Muhammad, Z. (2023). Top Management Support, Green Intellectual Capital and Green HRM: A Proposed Framework for Sustainability. *Journal of Environmental Management and Tourism*. [https://doi.org/10.14505/jemt.v14.5\(69\).12](https://doi.org/10.14505/jemt.v14.5(69).12).
- Amanullah, M., Bhuiyan, M., & Das, D. (2024). Promoting Employee Green Values Beyond the Office Walls Through Green HRM Utilizing Employee Environmental Knowledge as a Mediator. *Journal of Risk Analysis and Crisis Response*. <https://doi.org/10.54560/jracr.v14i3.504>.
- Amin, B. (2024). Positive Effects of Green HR Practices on Corporate Social Responsibility: Empirical Evidence from Tunisian Business. *Asian Journal of Economics, Business and Accounting*. <https://doi.org/10.9734/ajeba/2024/v24i81451>.
- Chandana, C., Iragaraju, N., Reddy, M., Swathi, D., & Sharma, G. (2024). Eco-Friendly HRM: Investigating Green and Sustainable Practices in Indian Enterprises. *MATEC Web of Conferences*. <https://doi.org/10.1051/mateconf/202439201043>.
- Devi, S., Yadav, B., Goel, D., Kaur, S., & Bhoyar, S. (2024). Embracing green HRM: Propelling organizational sustainability forward. *Environment and Social Psychology*. <https://doi.org/10.54517/esp.v9i4.2202>.
- Fazal, S., & Shaiq, M. (2023). Green Human Resource Management Practices in Banking Sector of Pakistan: An exploratory Study. *International Journal of Social Science & Entrepreneurship*. <https://doi.org/10.58661/ijssse.v3i2.147>.
- Francis, N., & Zeb-Obipi, I. (2021). Predictive Human Resource Analytics and Organizational Sustainability of Deposit Money Banks in South-South, Nigeria. .
- Herrera, J., & De Las Heras-Rosas, C. (2020). Corporate Social Responsibility and Human Resource Management: Towards Sustainable Business Organizations. *Sustainability*. <https://doi.org/10.3390/su12030841>.
- Hronová, Š., & Špaček, M. (2021). Sustainable HRM Practices in Corporate Reporting. *Economies*, 9,
- 75. <https://doi.org/10.3390/ECONOMIES9020075>.
- Hussain, S., Mumtaz, R., Khan, S., Fatima, E., & Shahid, M. (2023). IMPACT OF GREEN HRM PRACTICES ON ORGANIZATIONAL SUSTAINABILITY AND EMPLOYEE RETENTION: EVIDENCE FROM THE SMES' SECTOR OF BAHAWALPUR. *Bulletin of Business and Economics (BBE)*. <https://doi.org/10.61506/01.00002>.



- Ichdan, D., & Maryani, M. (2024). Green human resource management practices in the manufacturing industry: A sustainable approach. *Annals of Human Resource Management Research*. <https://doi.org/10.35912/ahrmr.v4i1.2140>.
- Jain, A. (2023). SUSTAINABLE BUSINESS PRACTICES: HARNESSING GREEN HRM STRATEGIES. *INDIAN JOURNAL OF APPLIED RESEARCH*. <https://doi.org/10.36106/ijar/6711342>.
- Jusdijachlan, J., & Ridwan, S. (2023). Eco Friendly HRM: A Catalyst for Environmental Excellence in Hospitality. *International Journal of Advanced Multidisciplinary*. <https://doi.org/10.38035/ijam.v2i3.351>.
- Khan, N., Wei, H., Yue, G., Nazir, N., & Zainol, N. (2021). Exploring Themes of Sustainable Practices in Manufacturing Industry: Using Thematic Networks Approach. *Sustainability*. <https://doi.org/10.3390/su131810288>.
- Lozano, R., & Barreiro-Gen, M. (2024). Developing and testing a Tool for Rapid Assessment of Sustainability in Organisations. *Business Strategy and the Environment*. <https://doi.org/10.1002/bse.3875>.
- Maheswari, U. (2024). Strategy orientation and government regulation on environmental performance: The role of green supply chain management. *Journal of Management and Business Insight*. <https://doi.org/10.12928/jombi.v1i2.669>.
- Maluka, H., Mowela, S., & Mabasa, F. (2024). Green HRM Practices at a Historically Disadvantaged Higher Education Institution in South Africa: Implementation and Challenges. *International Journal of Applied Research in Business and Management*. <https://doi.org/10.51137/ijarbm.2024.5.2.2>.
- Nittoor, S. (2020). Implementation Of Green Human Resource Management In It Industry With Reference To Hyderabad Region. , 31, 348-353.
- Palupiningtyas, D. (2024). Green HRM: Strategies for Sustainable Business Practices and Employee Engagement. *Management Studies and Business Journal (PRODUCTIVITY)*. <https://doi.org/10.62207/dhfpj238>.
- Parab, J. (2023). GREEN HRM – A SUSTAINABLE TOOL FOR DEVELOPMENT OF BUSINESS. *International Journal of Management, Public Policy and Research*. <https://doi.org/10.55829/ijmpr.v2i2.155>.



- Prakash, A., Gupta, A., & Kaur, S. (2022). Economic Aspect of Implementing Green HR Practices for Environmental Sustainability. *IMIB Journal of Innovation and Management*. <https://doi.org/10.1177/ijim.221109016>.
- Rapo, M. (2024). Exploring the Influence of Green HRM Practices on Employee Motivation and Sustainable Performance: A Focus on Organizations in the Service Industry in Tirana. *Economicus*. <https://doi.org/10.58944/rbxx6764>.
- Sachdeva, C., & Singh, T. (2022). A Thematic Analysis of Drivers Related to Green Human Resource Management. *Proceedings of the International Conference on Industrial Engineering and Operations Management*. <https://doi.org/10.46254/in02.20220602>.
- Sathasivam, K., Islam, M., Bakar, R., & Hashim, R. (2024). Implementing green HRM practices in an emerging country: Insights from managerial and nonmanagerial employees across various industries. *Business Strategy & Development*. <https://doi.org/10.1002/bsd2.404>.
- Shan, C., & Ji, X. (2024). Environmental Regulation and Green Technology Innovation: An Analysis of the Government Subsidy Policy's Role in Driving Corporate Green Transformation. *Industrial Engineering and Innovation Management*. <https://doi.org/10.23977/ieim.2024.070106>.
- Shukla, K., & Bankar, S. (2022). Adoption of Green HRM Practices for Building Sustainable Models in the Indian Markets. *SDMIMD Journal of Management*. <https://doi.org/10.18311/sdmimd/2022/29464>.
- Singh, S., Awasthi, K., Patra, P., Srivastava, J., & Trivedi, S. (2024). Sustainable HRM the next hotspot for management research? A study using topic modelling. *International Journal of Organizational Analysis*. <https://doi.org/10.1108/ijoa-08-2023-3940>.
- Yin, Q. (2023). The Impact of Green Human Resource Management on Organizational Performance. *Frontiers in Business, Economics and Management*. <https://doi.org/10.54097/fbem.v1i1i3.13198>.