



# Green Human Resource Management and Innovation: A Systematic Literature Review

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**Abstract** GHRM (Green human Resource Management) is a strategic initiative that integrates environmental considerations into human resource practices. This approach embeds environmental sustainability into various human resources (HR) activities, including eco-friendly recruitment, environmental training programs, fostering a green organizational culture, and engaging employees in sustainability efforts. GHRM, when combined with innovation, acts as a driving force to enhance environmental performance and achieve a competitive edge for firms. This study seeks to assess the current landscape of GHRM in conjunction with innovation, with a focus on identifying research gaps in the existing literature. A synthesis of literature review (SLR) was conducted using Scopus and Web of Science, encompassing the years from 2016 to 2025, which resulted in the identification of 30 existing articles. The literature employs the RBV and AMO frameworks to balance the three foundations of sustainability: social, economic, and environmental. This approach supports sustainable development and ensures that organizations meet their environmental objectives. The integration of AMO and RBV provides the strategic internal capabilities necessary for fostering innovation and managing human resources effectively on a global scale. This study provides a substantial contribution to the field of GHRM and innovation by offering a thorough analysis of the existing literature and suggesting future research directions that support both theoretical progress and practical application in the realms of sustainability and innovation.

**Keywords:** Green human resource management, GHRM, Innovation, green innovation, Systematic literature review.

## 1. Introduction

The 21st century has witnessed growing and sustained attention to economic, social and environmental issues. The issues have increasingly pressured policymakers, organizations, customers and stakeholders to integrate environmental strategies [1] into their practices due to recent initiatives taken by the Kyoto Protocol and the Bali Action Plan [2]. In response to environmental change, organizations increasingly emphasize sustainability practices such as green marketing, green accounting, and green operations [3]. As human capital represents critical organizational asset, firms undertake planning, staffing, coordination, and application of such green activities. For this, green human resources have evolved as a concept in academic scholarship [4]. GHRM refers to organizational strategies that support sustainability and green initiatives throughout the enterprise [5]. It includes various green approaches such as green recruitment (GR), green training (GT), green performance management (GPM), green rewards and green organization culture, which not only enhance employee performance but create a competitive edge. For example, to integrate ecological practices and green values, organizations frequently use training and education initiatives to update employees regarding the first change, new performance standards and staff competencies [6]. Sustainable staffing & selection practices are to hire environmentally responsible individuals who can support the implementation of the organization successfully to attain ecological goals [7]. Environmental rewards and recognition are seen as effective methods to encourage employee willingness to generate environmental initiatives. This is achieved through open communication to express their environmental thoughts in an honest and unrestrained manner. Similarly, a green performance system can aid in the alignment of employees' attitudes with the ecological objective of the firm. Significantly, GHRM also contributes to dynamic change by encouraging innovative new ideas, procedures, or technologies, reducing harm to the environment and improving resource efficiency. Green innovation now becomes an important tool for organizations to improve market position, attract customers, and offer green leads to competitive advantages. These innovations are divided into process and product innovation. Product innovation is to enhance the functions of products and services for customers and clients, whereas process innovation increases cost efficiency and organizational flexibility [8]. By applying the AMO and resource-based view theory, this study analyzes how GHRM practices contribute to the organizational innovation outcome related to GHRM and innovation. AMO theory investigates the human resource management performance relationship, which contends that employees' opportunities, motivations and abilities influence organizational performance, whereas the RBV theory of the organization posits that performance and competitive advantage are contingent on how a company utilizes its essential tools which are valuable, rare and challenging for competitors to copy [9,10]. Through initiatives such as green hiring, training & development, performance-based incentives, employee engagement, GHRM assists organizations in building sustainable practices. It provides a comprehensive framework that attracts, develops, inspires and

retains ecofriendly human capital. As a result, organization enhance their sustainable effectiveness. This is achieved through continuous innovation in procedures, goods and services. This alignment transforms organizations' compliance approach into a value-creating strategy, making the firm gain a competitive advantage and viability.

Despite the extensive research on GHRM and innovation, a notable gap still exists in the literature. For instance, while some studies explore the intersection of GHRM and eco- innovation [10,11,12] Yet only 30 relevant articles were identified, showing a lack of in-depth research on this topic. This emphasizes a clear need for more comprehensive research, particularly given its potential to contribute to environmental sustainability. Additionally, there is a scarcity of information on current trends in topics and new themes. Previous literature inadequately explores the types of innovation that are most commonly aligned with GHRM practices. The research aims to address the unexplored area by answering key research questions to gain a holistic perspective of GHRM and innovation to the following questions:

RQ1: What are the current trends, citation analysis and emerging themes in GHRM & innovation?

RQ2: Which types of innovation are most frequently associated with GHRM & innovation?

RQ3: What are the future avenues and limitations related to GHRM & innovation?

The literature is classified into seven parts. The first part introduces the topic, followed by the second part on the synthesis of literature review. The third, fourth & fifth parts discuss the methodology, findings, future directions, and limitations, respectively, and the sixth and seventh parts discuss and conclude the study.

## 2. Review of Existing Literature

The table (1) highlights a rich synthesis of research that offers the interaction of GHRM with themes like environmental effectiveness, green innovation and employee behavior. The period 2016-2025 shows the growing academic and practical interest in sustainable human resource practices in the context of organizational strategy and performance. The table (1) indicates information related to prominent authors, publication year, journal, type of innovation involved, theoretical approach used and significant findings of the study. The dominant theme focuses on the instrumental role GHRM plays in fostering green innovation, which enhances environmental performance. The study underpins theories like Resource-based theory (RBV) and NBRV theory, highlighting that intangible resources such as green human and intellectual capital [13] act as strategic assets that provide competitive advantages. Alongside these, other theories such as stakeholder theory, ability-motivation-opportunity theory, and institutional theory provide different overviews for understanding the GHRM interaction with the internal and external environment. Employs stakeholder and supply fit theory to demonstrate that external consumer pressure, when mediated between green HR practices and employee value, leads to greater innovation. In terms of methodology and conceptual development, the table (1) shows the emergence of a more refined framework. The

author's literature review shows the synthesis of existing research with a focus on future directions and unexplored themes such as the social pillar of sustainability. Empirical studies mostly utilized structural equation modelling to resolve the complex relationships among variables and in some studies, another method also included TISM and MICMAC model systems to examine driving and dependent factors in GHRM adoption. Most current research indicates a growing tendency to divide green innovation into specific categories. These categories include sustainable product innovation and process innovation, granting a more nuanced understanding of how GHRM contributes to competitive advantage [14, 15]. Similarly, other studies integrate GHRM with corporate social responsibility and strategic environment planning. This integration represents an organizational movement towards a holistic sustainability approach. In this approach, CSR initiatives are transformed into improved environmental output through the combination of catalyst effect of GHRM and innovation. The table (1) collectively shows that GHRM significantly contributes to areas of green innovation, employee performance, green creativity and environmental performance with the theoretical and methodological approach. As research increases, GHRM stands out as a crucial driver of organizational sustainability.

**Table 1: Systematic Literature Review**

| Author                           | Article                                                                                                                                                     | context  | Sector               | Innovation type  | Theory                                            |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------|------------------|---------------------------------------------------|
| Singh, S (2020)                  | <i>"Green innovation and environmental performance: The role of green transformational leadership and green human resource management"</i>                  | UAE      | Manufacturing (SMES) | Green innovation | RBV and AMO theory                                |
| Shah, N., & Soomro, B. A. (2023) | <i>"Effects of green human resource management practices on green innovation and behavior"</i>                                                              | Pakistan | Automobile           | Green innovation |                                                   |
| Niazi, U.I (2023)                | <i>"Green HRM, green innovation and environmental performance: the role of green transformational leadership and green corporate social responsibility"</i> | Pakistan | Banking sector       | Green innovation | NRBV                                              |
| Al-Swidi (2022)                  | <i>"How does consumer pressure affect green innovation of manufacturing SMEs in the presence of green human resource management"</i>                        | India    | Manufacturing (SMES) | Green innovation | Stakeholder theory and Supplies-values fit theory |

|                                   |                                                                                                                                     |                                    |                 |                              |                                        |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------------|------------------------------|----------------------------------------|
|                                   | <i>ment and green values? A moderated mediation analysis"</i>                                                                       |                                    |                 |                              |                                        |
| Yong, Jing Yi (2024)              | <i>"Green human resource management: A systematic literature review from 2007 to 2019"</i>                                          | developed and developing countries | Multiple sector |                              | ***                                    |
| Macke, J., & Genari, D. (2019)    | <i>"A systematic review on green human resource management: Implications for social sustainability"</i>                             | India                              | Business        |                              | AMO theory and Social Identity Theory  |
| Sahan, U. M. H                    | <i>"Green human resource management, energy saving behavior and environmental performance: a systematic literature review"</i>      | Malaysia                           | Business        |                              | RBV and the Theory of Planned Behavior |
| Tariq, S et al (2016)             | <i>"Green employee empowerment: a systematic literature review on state-of-art in green human resource management"</i>              | Pakistan                           | Business        |                              | AMO theory                             |
| Shafaei, A., & Nejati, M. (2024). | <i>"Green human resource management and employee innovative behaviour: does inclusive leadership play a role?"</i>                  | Australia                          | Business        | employee innovative behavior | social exchange theory                 |
| Ren, S (2018)                     | <i>"Bibliometric analysis and systematic review of green human resource management and hospitality employees' green creativity"</i> | India                              | Business        |                              |                                        |
| Yong, J (2019)                    | <i>"Nexus between green intellectual capital and green human resource management"</i>                                               | Malaysia                           | Manufacturing   |                              |                                        |

|                                   |                                                                                                                                                                     |          |                                                                         |  |                         |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------|--|-------------------------|
| Tang, G (2018)                    | <i>"Green human resource management practices: scale development and validity"</i>                                                                                  | China    | Manufacturing & Service                                                 |  |                         |
| Aftab, J., & Veneziani, M. (2024) | <i>"How does green human resource management contribute to saving the environment? Evidence of emerging market manufacturing firms"</i>                             | Pakistan | Manufacturing sector                                                    |  | Social Cognitive Theory |
| Saeed, B. B (2018)                | <i>"Promoting employee's PR environmental behavior through green human resource management practices"</i>                                                           |          | coal power generation, food processing, chemicals, and pharmaceuticals. |  |                         |
| Yusliza, M. Y (2017)              | <i>"Deciphering the implementation of green human resource management in an emerging economy"</i>                                                                   | Malaysia | manufacturing and service sectors                                       |  | RBV                     |
| Sathasivam, K (2021)              | <i>"Embracing organisational environmental sustainability: Experiences in green human resource management"</i>                                                      | Malaysia | electrical and electronics industry                                     |  |                         |
| Chaudhary, R. (2020)              | <i>"Effects of green human resource management: testing a moderated mediation model"</i>                                                                            | India    | Education / Higher Education                                            |  |                         |
| Roscoe, S (2019)                  | <i>"Green human resource management and the enablers of green organisational culture: Enhancing a firm's environmental performance for sustainable development"</i> | China    | Manufacturing                                                           |  |                         |
| Moktadir, M. A (2020)             | <i>"Antecedents for greening the workforce: implications for green human resource management"</i>                                                                   | India    | Tannery Industry                                                        |  |                         |

|                                         |                                                                                                                                                                 |           |                                                    |                  |                                                   |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------|------------------|---------------------------------------------------|
| Tiwari, P (2025)                        | <i>"The Impact of Green Human Resource Management Practices on the Environmental Performance of Organisations"</i>                                              | India     | manufacturing, IT, services, and FMCG              |                  | Institutional theory, RBV, and contingency theory |
| Tanova, C., & Bayighomog, S. W. (2022). | <i>"Green human resource management in service industries: the construct, antecedents, consequences, and outlook"</i>                                           | India     | manufacturing, services, and technology industries |                  |                                                   |
| Masri, H. A., & Jaaron, A. A. (2017)    | <i>"Assessing green human resources management practices in Palestinian manufacturing context: An empirical study"</i>                                          | Palestine | Manufacturing                                      |                  |                                                   |
| Mousa, S. K., & Othman, M. (2020)       | <i>"The impact of green human resource management practices on sustainable performance in healthcare organisations: A conceptual framework"</i>                 | Palestine | Healthcare sector                                  |                  |                                                   |
| Ullah, S (2023)                         | <i>"Green intellectual capital and green HRM enabling organizations go green: mediating role of green innovation"</i>                                           | Pakistan  | Food Manufacturing Industry                        | Green innovation | RBV                                               |
| Shahbaz, M. H., & Malik, S. A. (2025)   | <i>"Exploring the role of green intellectual capital and HRM: green innovation and environmental performance intensify competitive advantage"</i>               | Pakistan  | Food Manufacturing Industry                        | Green innovation | RBV                                               |
| Rana, G., & Arya, V. (2024)             | <i>"Green human resource management and environmental performance: mediating role of green innovation – a study from an emerging country"</i>                   | India     | Manufacturing                                      | Green innovation |                                                   |
| Zhou, S (2024)                          | <i>"The effect of corporate social responsibility on environmental performance: the mediating role of green innovation and green human resource management"</i> | Ethopia   | Textile industry                                   | Green innovation |                                                   |

|                                        |                                                                                                                    |       |                 |                                                    |            |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------|-------|-----------------|----------------------------------------------------|------------|
| Zhang, S., Chen, M., & Tang, G. (2024) | <i>"How green human resource management can promote green competitive advantage: The role of green innovation"</i> | China | Multiple sector | Green Product Innovation, Green Process Innovation | NRBV       |
| Muisyo, P. K., & Qin, S. (2021)        | <i>"Enhancing the FIRM'S green performance through green HRM: The moderating role of green innovation culture"</i> | China | Manufacturing   | Green Product Innovation, Green Process Innovation | AMO theory |

Note: RBV (Resource based view theory), NBRV (Natural resource-based view theory)

### 3. Methodology

The research utilized a systematic literature review (SLR) to comprehensively examine [16] the relationship between GHRM and innovation. This approach provides an empirical foundation by enabling the selection of relevant and significant articles while minimizing researcher bias [17, 18]. For ensuring transparency and consistency, the PRISMA framework was followed, which provide a clear and replicable method for conducting literature review [19]. Two theoretical frameworks guided the analysis of the 30 articles: "RBV theory and the AMO framework". The RBV theory helps identify crucial internal resources like green human capital and capabilities related to innovation [20]. In parallel, the AMO theory enabled the categorization of GHRM practices into ability enhancing, motivation and opportunity enhancing [21]. Together, these frameworks offer a structural basis for interpreting the literature and understanding how GHRM procedures contribute to organizational innovation.

#### 3.1 Identification

To ensure the robustness and comprehensiveness of the review, the study followed systematic search procedures using established academic databases. Specifically, it focused on the topics of GHRM and innovation, with a particular interest in green innovation practices. As recommended in prior bibliometric and systematic review studies [22,23]. "Scopus and Web of Science (WOS) were selected as the main databases due to their wide coverage of peer-reviewed literature and their strong reputations for indexing high-impact journals". The search term used included: "Green human resource management", "GHRM", "Innovation" and "Green innovation". Boolean operators ("AND", "OR") were applied to broaden the search while ensuring thematic focus. The search initially yielded 128 articles: 103 from Scopus and 25 from WOS. After removing 30 duplicates, 98 records were retained for further screening.

#### 3.2 Screening



The next phase involved the application of screening criteria based on best practices in systematic review. First, titles and abstracts of the 98 articles were reviewed, resulting in the exclusion of 25 articles that did not meet the thematic scope of the study. Full texts of the remaining 73 articles were then sought for retrieval. However, five articles could not be accessed due to database restrictions or availability issues. Following retrieval, 68 articles were subjected to an eligibility assessment. The study included only peer-reviewed journal articles and excluded conference proceedings, book chapters, editorial content and non-English language publications, as guided by established screening protocols [24]. Eighteen articles were excluded at this stage based on relevance and quality criteria. Ultimately, 50 studies were initially considered for inclusion; however, the final synthesis primarily analyzed 30 articles, each with a minimum of five citations. This approach was adopted to improve the quality and reliability due to filter out low-impact or less relevant studies. As a result, the focus remained on literature that contributes positively to the academic discourse in this area. The PRISMA flow diagram (Fig.1) visually represents this identification, screening, and inclusion process.

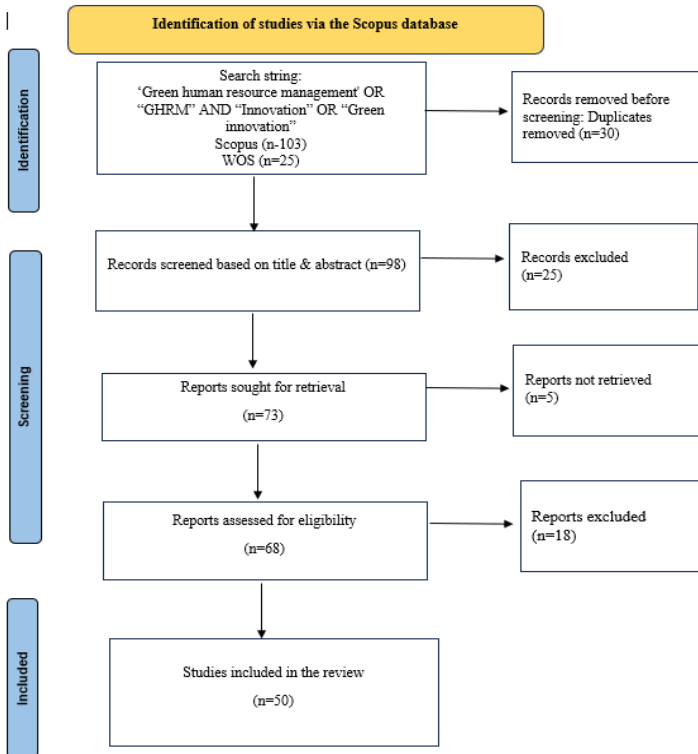
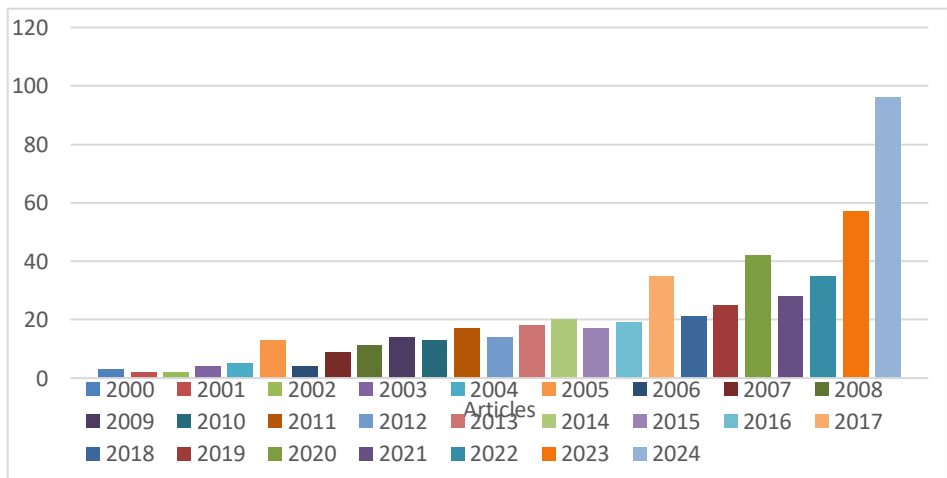


Figure 1: PRISMA Framework

## 4. Findings

### 4.1 Publication Trends (RQ1)

The annual publication trends on GHRM and innovation from 2000 to 2024 are shown in Figure (2). The years from 2000–2016 present a relatively low number of publications of 20 articles per year. A noticeable growth begins in 2017, with a sharp rise in 2020, 2023 and a peak in 2024. The highest output occurs in 2024 with around 100 articles, representing growing academic interest due to global awareness of sustainability and growing integration of green policies and practices in organizations and among policy-makers.



**Figure 2: Annual Scientific Production**

### 4.2 Citation analysis (RQ1)

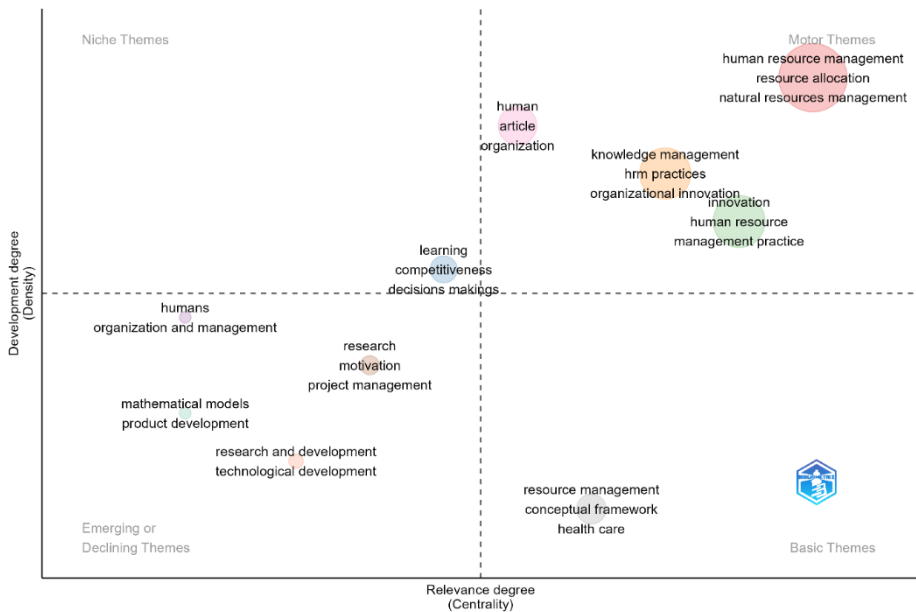
The table 2 depicts a comparative analysis of ten key publications related to GHRM and innovation, focusing on their citation impact as indicated by Total citations (TC), TC per year and normalized total citations (NTC). The study by Rehman (2021) emerges as the most cited work with 498 total citations and a remarkably high citation rate of 99.60 citations per year, highlighting strong academic influence. Munawar (2022) and Awan (2023) also demonstrated substantial yearly citations of 39.00 and 33.33, respectively. Among them, Awan's article shows the highest NTC value of 3.61, suggesting a significant normalized impact. Niazi (2023), although a relatively recent publication, highlights a noteworthy TC per year of 22.33 and a high NTC of 2.42, showing its emerging relevance in the area. In contrast, Sobhah (2020) and Awwad AL-Shammari (2022) show lower citation rates and NTC values, indicating a relatively moderate level of academic influence. Overall, the findings suggest that although older articles typically accumulate more citations over time, several current studies are quickly gaining recognition, especially those focused on current environmental issues and innovative practices.

**Table 2. Citation Analysis**

| Paper                                                                                         | DOI                            | TC  | TC per Year | NTC  |
|-----------------------------------------------------------------------------------------------|--------------------------------|-----|-------------|------|
| Rehman Su, 2021, “ <i>Technological Forecasting and Social Change</i> ”                       | 10.1016/j.techfore.2020.120481 | 498 | 99.6        | 1.83 |
| Song W, 2020, “ <i>European Journal of Innovation Management</i> ”                            | 10.1108/EJIM-11-2019-0315      | 165 | 27.5        | 1.29 |
| Munawar S, 2022, “ <i>Journal of Hospitality and Tourism Management</i> ”                     | 10.1016/j.jhtm.2022.06.009     | 156 | 39          | 2.19 |
| Awan Fh, 2023, “ <i>Environmental Science and Pollution Research</i> ”                        | 10.1007/s11356-022-22424-y     | 100 | 33.33       | 3.61 |
| Sobaih Acee, 2020, “ <i>Sustainability</i> ”                                                  | 10.3390/su122410371            | 90  | 15          | 0.71 |
| Muisyo Pk, 2022, “ <i>Journal of Manufacturing Technology Management</i> ”                    | 10.1108/JMTM-10-2020-0388      | 80  | 20          | 1.12 |
| Sun X, 2022, “ <i>Economic Res Ekon Istraz</i> ”                                              | 10.1080/1331677X.2021.2025127  | 79  | 19.75       | 1.11 |
| Übeda-García M, 2022, “ <i>Corporate Social Responsibility and Environmental Management</i> ” | 10.1002/csr.2171               | 74  | 18.5        | 1.04 |
| Awad Al-Shammari As, 2022, “ <i>Frontiers In Environmental Science</i> ”                      | 10.3389/fenvs.2022.901235      | 68  | 17          | 0.95 |
| Niazi Ui, 2023, “ <i>Environmental Science and Pollution Research</i> ”                       | 10.1007/s11356-023-25442-6     | 67  | 22.33       | 2.42 |

### 4.3 Emerging Themes (RQ1)

The thematic map in Figure (3) examines, analyzes and reports patterns within the data [25]. It is divided into four sections based on centrality and density: primary themes, motor, emerging or declining and niche themes [26]. The motor theme represents HRM, resource allocation and sustainable natural resource management. The primary themes are resource management and conceptual framework, are central but less developed. The niche themes include learning, competitiveness and decision-making, indicating high development but limited importance. The emerging or declining themes, including HRM practices and organizational innovation, are moving toward core research areas, highlighting their growing relevance. Technological development, humans, organization management, product development and so on are emerging or declining themes, showing low in both centrality and density. Each section holds its importance and it suggests researchers focus on motor themes-related keywords due to current research interest. Also, it offers an abundant opportunity for further investigation and scholarly advancement.



**Figure 3: Emerging Themes**

#### 4.4 Most frequent types (RQ2)

In the realm of GHRM and innovation, the most common occurrence of types of innovation is green innovation, shown in Table (1) which broadly includes both sustainable product innovation and process innovation. These innovations are related to environment-friendly products without any wastage and the implementation of environment-sustainable processes within the organizations. [27, 28, 29,30] highlight how GHRM practices nurture these types of innovation, which directly enhance environmental performance, competitive edge and enhance corporate social responsibility (CSR) initiatives. [15] included both types of innovation, showing a growing interest in understanding their unique contribution within the broader context of sustainability.

#### 5. Future avenues & limitations (RQ3)

The research presents a thorough synthesis of the connection between GHRM and innovation. But still, it is significant to address the existing constraints. Firstly, the literature was only confined to English language publications and on two databases, which may have resulted in the omission of significant studies published in other languages or listed in alternative databases such as Google Scholar and Dimensions. Additionally, the study considered the time period from 2016 to 2025, possibly overlooking earlier foundational research that could offer conceptual context. The number of articles is very low, suggesting that scholars pay more attention to keywords of innovation and

GHRM. The thematic analysis has a concentration on green product and process innovation, but limited exploration of social innovation and green business model innovation within the GHRM area. The underexplored dimensions should be identified to gain a more nuanced understanding of GHRM's role in fostering diverse innovation types. Methodologically, the study mostly relies on quantitative methods such as PLS-SEM or empirical methods; it is required to include qualitative and mixed methods also. It can use case studies or longitudinal studies to uncover causal mechanisms and contextual factors in depth. Cross-sectoral and cross-cultural comparisons also present a promising research direction. Examining how institutional environments influence GHRM innovation across developed and developing countries could offer valuable insight for theory and policy making. As sustainability challenges evolve, integrating dynamic capabilities and digital transformation into GHRM research may enhance the understanding of how technology can empower organizations to enable eco-innovation. There is also a need for interdisciplinary research from environmental science, behavioral psychology, and strategic management. It can support a robust theoretical framework and offer actionable insights for practice, enabling organizations to contribute towards environmental performance and sustainability transition. While this literature focused on the manufacturing industry in China, further research could examine the applicability of GHRM practices and green innovation culture in under-researched industries such as agriculture, construction, healthcare, logistics and small-scale service enterprises. Furthermore, geographic regions like Africa, Latin America and Southeast Asia remain underexplored and offer diverse environmental and cultural areas that could yield valuable insights. Table (1) highlights the theoretical perspective, future studies may integrate other lenses, such as Institutional Theory, Social Exchange Theory, or Dynamic Capability Theory, to understand how organizational systems and external pressure interact with GHRM and innovation in-fluence employee performance. The wider scope will enhance the generalizability, depth and practical relevance of the GHRM literature.

## 6. Discussion

The literature offers a comprehensive exploration of the link between GHRM and innovation. The systematic literature review of 30 relevant articles between 2016 and 2025 was conducted using PRISMA framework, drawing data from the Scopus and Web of Science databases. The publication trends show a rise in publications after 2017, highlighting the growing interest in GHRM. The most cited article in the related field is Rehman (2021), followed by Munawar (2022) and Awan (2023) due to their focus on highly relevant topics, publication in a high-impact journal, and broad and reliable sources. The thematic analysis represents emerging themes and examines motor themes such as human resource management, strategic human resource management and natural resource allocation as central themes to recent research and provides fruitful areas for further exploration. With respect to types of innovation, the analysis highlighted the primary focus on green products and green process innovations. These types of innovation are supported by GHRM practices that promote environmental behaviour and facilitate corporate social responsibility and environmental performance. However, the other innovation types, such as social innovation and green business model innovation, are unexplored, showing opportunities for future research. This study is based on two theories: theory of AMO and RBV. When applied together, these provide

a strong foundation for understanding that GHRM and innovation reinforce each other to enhance organizational effectiveness. While AMO describes how HR practices stimulate employees towards sustainability, RBV shows the strategic significance of developing green capabilities. The joint effort of these is unlocking innovation, building organizational resilience and fostering sustainability. From a managerial perspective, these findings emphasize the importance of embedding GHRM into core HR functions such as recruitment, training, performance management and incentive systems. Managers should also design HR policies that only attract environmentally conscious talent but also develop their capabilities through green training initiatives. Rewarding sustainable practices and innovation through performance appraisals further enhances motivation and aligns employee behaviour with organizational goals. However, GHRM strategies should be adapted to cross-cultural and cross-sectoral differences to better understand the influence of influential contexts. Interdisciplinary fields could enhance theoretical developments and provide practical insight. In addition, emphasis on digital transformation and dynamic capabilities in green human resource management also offers new paths for understanding how technological advancement supports environmental innovation. The study also identifies the need for qualitative, longitudinal and mixed-method approaches to deepen contextual understanding.

## 7. Conclusion

This review confirms that Green Human Resource Management significantly supports innovation and sustainability within organizations. Applying AMO and RBV theories show how GHRM enhances employee engagement and builds internal green capabilities, promoting long term resilience. While green product and process innovations are well explored areas such as social innovation and green business models remain under researched. Overall, GHRM is shown to be a foundational element of sustainability and innovation, providing significant value to academia, society and policymakers.

## References

1. Sharma, D., Bhardwaj, B. Green human resource management practices and sustainable development in India: A systematic literature review and future research agenda. *Social Sciences & Humanities Open* 11, 101420 (2025). <https://doi.org/10.1016/j.ssaho.2025.101420>
2. Miah, M., Szabó-Szentgróti, G., Walter, V. A systematic literature review on green human resource management (GHRM): an organizational sustainability perspective. *Cogent Business & Management* 11(1), 2371983 (2024). <https://doi.org/10.1080/23311975.2024.2371983>
3. Jabbour, C.J.C., Santos, F.C.A. Relationships between human resource dimensions and environmental management in companies: Proposal of a model. *Journal of Cleaner Production* 16(1), 51–58 (2008). <https://doi.org/10.1016/j.jclepro.2006.07.025>

4. Daily, B.F., Huang, S.C. Achieving sustainability through attention to human resource factors in environmental management. *International Journal of Operations & Production Management* 21(12), 1539–1552 (2001). <https://doi.org/10.1108/01443570110410892>
5. Joshi, A., Kataria, A., Rastogi, M., Beutell, N.J., Ahmad, S., Yusliza, M.Y. Green human resource management in the context of organizational sustainability: A systematic review and research agenda. *Journal of Cleaner Production* 430, 139713 (2023). <https://doi.org/10.1016/j.jclepro.2023.139713>
6. Paillé, P., Valéau, P., Renwick, D.W. Leveraging green human resource practices to achieve environmental sustainability. *Journal of Cleaner Production* 260, 121137 (2020). <https://doi.org/10.1016/j.jclepro.2020.121137>
7. Chaudhary, R. Green human resource management in Indian automobile industry. *Journal of Global Responsibility* 10(2), 161–175 (2019). <https://doi.org/10.1108/JGR-12-2018-0084>
8. Takalo, S.K., Tooranloo, H.S. Green innovation: A systematic literature review. *Journal of Cleaner Production* 279, 122474 (2021). <https://doi.org/10.1016/j.jclepro.2020.122474>
9. Haldorai, K., Gon, W., Phetvaroon, K., Gazzoli, G. Green synergy: Integrating green human resource management and green supply chain management for sustainable performance in the Thai hospitality industry. *International Journal of Hospitality Management* 128, 104196 (2025). <https://doi.org/10.1016/j.ijhm.2025.104196>
10. Singh, S.K., Giudice, M.D., Chierici, R., Graziano, D. Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technological Forecasting and Social Change* 150, 119762 (2020). <https://doi.org/10.1016/j.techfore.2019.119762>
11. Shah, N., Soomro, B.A. Effects of green human resource management practices on green innovation and behavior. *Management Decision* 61(1), 290–312 (2023). <https://doi.org/10.1108/MD-07-2021-0869>
12. Al-Swidi, A.K., Al-Hakimi, M.A., Gelaidan, H.M., Al-Temimi, S.K.A.J. How does consumer pressure affect green innovation of manufacturing SMEs in the presence of green human resource management and green values? A moderated mediation analysis. *Business Ethics, the Environment and Responsibility* 31(4), 1157–1173 (2022). <https://doi.org/10.1111/beer.12459>
13. Agyabeng-Mensah, Y., Tang, L. The relationship among green human capital, green logistics practices, green competitiveness, social performance and financial performance. *Journal of Manufacturing Technology Management* 32(7), 1377–1398 (2021). <https://doi.org/10.1108/JMTM-11-2020-0441>
14. Julius, M.M., Usmani, M.S. Implications of green HRM on the firm's green competitive advantage: The mediating role of enablers of green culture. *Journal of Manufacturing Technology Management* 32(10), 2189–2210 (2021). <https://doi.org/10.1108/JMTM-01-2021-0033>
15. Zhang, S., Chen, M., Tang, G. How green human resource management can promote green competitive advantage: The role of green innovation. *Business Strategy and the Environment* 33(5), 4613–4625 (2024). <https://doi.org/10.1002/bse.3715>
16. Murillo-Ramos, L., Huertas-Valdivia, I., García-Muiña, F.E. Antecedents, outcomes, and boundaries of green human resource management: A literature review. *Revista de Administração de Empresas* 63(4), 1–21 (2023). <https://doi.org/10.1590/S0034-759020230401>

17. Kraus, S., Breier, M., Dasi-Rodríguez, S. The art of crafting a systematic literature review in entrepreneurship research. *International Entrepreneurship and Management Journal* 16(3), 1023–1042 (2020). <https://doi.org/10.1007/s11365-020-00635-4>
18. Passarelli, M., Bongiorno, G. Is it the time to reshape entrepreneurship education? State-of-the-art and further perspectives. *International Entrepreneurship and Management Journal* 21(1), (2025). <https://doi.org/10.1007/s11365-025-01071-y>
19. Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., et al. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews* 4, 1–9 (2015). <https://doi.org/10.1186/2046-4053-4-1>
20. Barney, J. Firm resources and sustained competitive advantage. *Journal of Management* 17(1), 99–120 (1991). <https://doi.org/10.1177/014920639101700108>
21. Brockner, J., Flynn, F.J., Dolan, R.J., Ostfield, A., Pace, D., Ziskin, I.V. Commentary on “Radical HRM innovation and competitive advantage: The Moneyball story.” *Human Resource Management* 45(1), 127–145 (2006). <https://doi.org/10.1002/hrm>
22. Zupic, I., Čater, T. Bibliometric methods in management and organization. *Organizational Research Methods* 18(3), 429–472 (2015). <https://doi.org/10.1177/1094428114562629>
23. Ulhaq, I., Nayak, R., George, M., Nguyen, H., Quang, H. Green knowledge management: A bibliometric analysis, research trends and future directions. *VINE Journal of Information and Knowledge Management Systems* (2024). <https://doi.org/10.1108/VJIKMS-02-2024-0069>
24. Liñán, F., Fayolle, A. A systematic literature review on entrepreneurial intentions: Citation, thematic analyses, and research agenda. *International Entrepreneurship and Management Journal* 11(4), 907–933 (2015). <https://doi.org/10.1007/s11365-015-0356-5>
25. Braun, V., Clarke, V. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3(2), 77–101 (2006). <https://doi.org/10.1191/1478088706qp063oa>
26. Martínez, M.A., Cobo, M.J., Herrera, M., Herrera-Viedma, E. Analyzing the scientific evolution of social work using science mapping. *Research on Social Work Practice* 25(2), 257–277 (2015). <https://doi.org/10.1177/1049731514522101>
27. Rana, G., Arya, V. Green human resource management and environmental performance: Mediating role of green innovation – a study from an emerging country.  *Foresight* 26(1), 35–58 (2024). <https://doi.org/10.1108/FS-04-2021-0094>
28. Shahbaz, M.H., Malik, S.A. Exploring the role of green intellectual capital and HRM: Green innovation and environmental performance intensify competitive advantage. *International Journal of Innovation Science* (2025). <https://doi.org/10.1108/IJIS-09-2024-0270>
29. Niazi, U.I., Nisar, Q.A., Nasir, N., Naz, S., Haider, S., Khan, W. Green HRM, green innovation and environmental performance: The role of green transformational leadership and green corporate social responsibility. *Environmental Science and Pollution Research* 30(15), 45353–45368 (2023). <https://doi.org/10.1007/s11356-023-25442-6>
30. Ullah, S., Mehmood, T., Ahmad, T. Green intellectual capital and green HRM enabling organizations go green: Mediating role of green innovation. *International Journal of Innovation Science* 15(2), 245–259 (2023). <https://doi.org/10.1108/IJIS-12-2021-0222>



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