



Challenges and Opportunities for Implementing Green HRM in Management Source Human Resources in Higher Education

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ABSTRACT

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Green Human Resource Management (Green HRM) integrates human resource practices with environmental sustainability goals. Higher education institutions, as educational institutions that influence future generations, have a crucial role to play in adopting green human resource management. This article aims to identify the challenges and opportunities for implementing green human resource management in higher education, as well as to provide recommendations for more sustainable human resource management. This research method uses a qualitative approach with a literature review approach. This approach is a comprehensive survey of scientific sources on a specific topic. The literature review provides a critical evaluation of these sources, including substantive findings as well as theoretical and methodological contributions to a specific topic. The results of the study indicate that despite challenges such as resistance to change and budget constraints, opportunities for implementing green human resource management remain, such as improving institutional image and operational efficiency, which can have long-term positive impacts. This study proposes stronger policies to support sustainability in higher education environments.

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INTRODUCTION

Universities, as centers of education, research, and innovation, hold a strategic role in driving the global sustainability agenda. In recent decades, environmental and sustainability issues have emerged as pressing concerns for society at large, influencing not only economic and industrial sectors but also education. The urgency of sustainability stems from increasing global awareness about climate change, resource scarcity, and environmental degradation, all of which require collective solutions. Higher education institutions are uniquely positioned to respond, as they are responsible for producing graduates who are

not only academically competent but also environmentally conscious. Evidence suggests that education plays a pivotal role in shaping social attitudes toward sustainability and preparing future leaders to implement environmentally responsible practices across sectors. Therefore, research on how universities can effectively integrate sustainability into their systems is vital. The conclusion is that by addressing sustainability challenges within higher education, society benefits from a new generation equipped with the skills, values, and commitment necessary to advance global environmental goals.

Despite the growing global commitment to sustainability, many higher education institutions face challenges in translating sustainability agendas into effective organizational practices. While universities acknowledge the importance of environmental responsibility, the lack of systemic integration of sustainability principles into administrative and academic functions hinders their impact. A major problem lies in human resource management practices, which often remain disconnected from sustainability initiatives. Without embedding green values into recruitment, training, performance, and compensation systems, universities risk producing graduates who are academically capable but lack awareness of environmental responsibilities. Moreover, higher education institutions continue to struggle with limited financial and operational resources, which further constrains their ability to design and implement sustainability-based policies. These structural limitations, coupled with resistance to organizational culture change, create gaps between sustainability rhetoric and real action. As a result, society misses the potential contributions of universities in preparing environmentally responsible citizens and professionals. This problem becomes the foundation of this research, highlighting the need for innovative approaches like Green Human Resource Management (Green HRM).

In practice, universities worldwide exhibit varied levels of engagement in sustainability implementation. Some leading institutions have successfully integrated sustainability into both academic programs and operational strategies, reporting improved institutional images and higher staff engagement in environmental initiatives. For example, universities that adopt eco-friendly campus operations and embed sustainability within their curricula are seen as role models in aligning higher education with global environmental agendas. However, these cases remain relatively limited, especially when examining how sustainability is integrated into human resource systems. Many universities still lack clear policies or frameworks for green recruitment, green training, and sustainability-based performance evaluation. This gap creates inconsistency in the ways universities contribute to reducing carbon footprints, improving energy efficiency, or fostering environmentally responsible behaviors among faculty and

staff. Moreover, the reliance on traditional HR practices often leads to wasteful resource use and missed opportunities to drive cultural change within institutions. These phenomena highlight the urgent need for comprehensive frameworks such as Green HRM to strengthen sustainability initiatives in higher education.

Previous research provides valuable insights into the role of Green HRM in promoting sustainability across different sectors. Studies by Mahdy et al. (2023) demonstrated that Green HRM practices such as energy-conscious training and eco-friendly recruitment significantly enhance organizational efficiency by reducing waste and supporting environmentally friendly technologies. Similarly, Mehta (2024) highlighted the potential of Green HRM in higher education, suggesting that it can reduce carbon footprints and increase environmental awareness among academic communities. Research also indicates that universities implementing Green HRM benefit from improved reputations and greater faculty engagement in sustainability programs. However, while the concept is well-studied in business and corporate contexts, its application in higher education remains underexplored. Most existing literature focuses on isolated HR practices rather than comprehensive frameworks tailored to the unique dynamics of higher education. This research positions itself within this gap, aiming to explore how universities can holistically adopt Green HRM to align their human resource strategies with broader sustainability goals.

Nonetheless, the current body of literature presents several weaknesses. First, research on Green HRM in higher education often lacks empirical depth and tends to generalize findings from the business sector, overlooking the specific challenges universities face. For example, Darvishmotevali & Altinay (2022) emphasized that the success of Green HRM strongly depends on top management support and regulatory frameworks, yet these factors differ significantly between business and education contexts. Additionally, Ari et al. (2020) pointed out that limited funding and cultural resistance in universities pose unique barriers not fully addressed in previous studies. These limitations create a research gap, as many questions remain unanswered regarding how Green HRM can be effectively adapted to higher education settings. The urgency of filling this gap is reinforced by the fact that universities are key agents in shaping future generations. Hence, this study contributes by providing a tailored analysis of Green HRM in higher education, offering both theoretical development and practical guidance for sustainable transformation.

The novelty of this research lies in its exploration of Green HRM within the specific context of higher education, with a focus on identifying best practices and adaptive strategies to overcome contextual challenges. While corporate

studies provide a foundation, universities operate with different missions, governance structures, and cultural dynamics, making direct applications insufficient. This research advances the state of the art by integrating sustainability into the HR practices of universities, not only as an operational necessity but also as a transformative cultural shift. By emphasizing green recruitment, training, performance management, and compensation, the study highlights how universities can embed sustainability into the very fabric of their institutions. Moreover, this research connects Green HRM with digital transformation, addressing how technology—such as e-recruitment and online training—can facilitate greener HR practices. The state of the art, therefore, is the contextual adaptation of Green HRM to higher education, ensuring that sustainability is systematically and strategically embedded in human resource management.

The central research problem is how higher education institutions can effectively implement Green HRM to achieve sustainability goals despite financial, operational, and cultural challenges. The argument presented is that universities require not only structural policies but also adaptive strategies that integrate green principles into their HR systems. By examining recruitment, training, performance management, and compensation, this study argues that universities can overcome barriers to sustainability through cultural change and innovative HR practices. Evidence from Khan & Muktar (2021) suggests that green recruitment is most effective when sustainability criteria are explicitly included in selection processes, while Pereira Ribeiro et al. (2021) show that sustainability-based training enhances both technical skills and environmental values. These findings strengthen the argument that Green HRM is a feasible and impactful approach for higher education. However, this research also acknowledges contextual challenges, particularly limited funding and resistance to change, and argues that overcoming these requires adaptive strategies and strong leadership commitment.

Based on these considerations, this research seeks to contribute to the ongoing discourse by providing a comprehensive framework for implementing Green HRM in higher education. The guiding argument is that Green HRM, when strategically applied, can transform universities into more sustainable institutions while simultaneously preparing environmentally responsible graduates. This research contributes theoretically by extending Green HRM frameworks beyond corporate contexts and practically by offering actionable recommendations for higher education administrators. By integrating insights from previous studies and addressing their limitations, this research aims to clarify how universities can align HR practices with global sustainability agendas. The conclusion is that Green HRM represents not just an administrative

tool but also a cultural shift toward embedding sustainability into the heart of higher education. Ultimately, this research argues that fostering a green organizational culture through HR policies will enable universities to strengthen their role as agents of sustainability, benefiting both their communities and the wider society.

METHOD

This research employs a qualitative approach using a systematic literature review (SLR) as its primary method. A qualitative design is considered most appropriate because the study aims to explore concepts, synthesize knowledge, and critically evaluate various perspectives on the implementation of Green Human Resource Management (Green HRM) in higher education. Unlike quantitative approaches that focus on numerical data, a qualitative literature review emphasizes the interpretation, integration, and contextual analysis of existing studies to build a deeper theoretical understanding.

The literature review approach in this study is not limited to summarizing previous research but is designed to provide a critical and comprehensive synthesis of relevant scientific sources. The process involves identifying, evaluating, and analyzing peer-reviewed journal articles, books, conference proceedings, and policy reports published within the last two decades, with a particular emphasis on the most recent findings (2020–2024). Databases such as Scopus, Web of Science, and Google Scholar are utilized to ensure the inclusion of credible and high-impact sources.

In conducting the review, this study applies a structured process consisting of several stages: (1) formulating research questions related to the challenges and opportunities of Green HRM in higher education; (2) developing inclusion and exclusion criteria, such as selecting studies explicitly addressing Green HRM, sustainability in HR practices, and higher education contexts; (3) collecting and categorizing relevant literature based on thematic similarities; and (4) conducting thematic analysis to identify key trends, gaps, and conceptual linkages across different studies.

This method ensures that the review does not merely compile findings but also highlights areas of consensus, debate, and underexplored issues. Moreover, the review provides a platform to examine both theoretical contributions—such as conceptual models of Green HRM—and practical insights, including case studies of universities adopting sustainability-based HR practices. The critical evaluation allows the study to not only map existing knowledge but also to identify research gaps, methodological limitations, and opportunities for future studies. By applying this qualitative literature review approach, the research aims to construct a holistic framework that connects human resource practices

with sustainability goals in higher education. This method is expected to produce a nuanced and evidence-based analysis that informs both academic discourse and practical decision-making by university administrators and policymakers.

FINDING AND DISCUSSION

Findings

Internal and Organizational Challenges

The study shows that one of the greatest obstacles in implementing Green Human Resource Management (Green HRM) in higher education is internal resistance and limited awareness among stakeholders. Many universities, especially in developing countries, have not fully grasped the concept or benefits of Green HRM, which leads to skepticism or fragmented implementation. Faculty and staff often perceive sustainability policies as additional workloads rather than opportunities for institutional improvement. Moreover, the lack of organizational culture supporting environmental responsibility weakens participation and commitment. Leadership plays a decisive role here; without clear direction and consistent communication from top management, green policies are unlikely to gain broad acceptance. In addition, psychological barriers, such as reluctance to change established work routines, further slow down adoption. These findings indicate that raising awareness, fostering sustainability-oriented culture, and demonstrating the long-term value of Green HRM are crucial to overcoming internal challenges.

Structural and External Barriers

Beyond internal obstacles, universities also face structural and external barriers that complicate the integration of Green HRM. Budget limitations remain a primary constraint, as universities must prioritize core activities such as teaching, research, and community service, leaving little funding for sustainability programs. The adoption of renewable energy, waste management systems, and eco-friendly infrastructure requires substantial investments that many institutions cannot afford. Another barrier is the absence of comprehensive regulatory support. While global initiatives emphasize sustainability, many higher education systems lack national policies that mandate or incentivize the integration of Green HRM. This misalignment creates uncertainty and weakens long-term planning. Furthermore, technological constraints—including limited access to digital tools, monitoring systems, and technical expertise—further restrict universities from fully realizing their sustainability goals. Collectively, these barriers highlight the need for supportive government frameworks, stronger partnerships, and targeted funding models to enable effective implementation of Green HRM.

Strategic Opportunities for Universities

Despite these challenges, the findings reveal that Green HRM opens significant opportunities for higher education institutions. First, it strengthens institutional reputation and competitiveness. Universities that champion sustainability are increasingly attractive to environmentally conscious students, faculty, and external stakeholders. These institutions also build stronger partnerships with industries and organizations committed to green practices, which enhances their access to collaborative projects and external funding. Second, Green HRM contributes to operational efficiency through resource-saving initiatives such as paperless administration, energy efficiency programs, and digitized HR processes. These practices not only lower costs but also align with universities' long-term financial sustainability. Third, Green HRM enhances employee engagement and motivation by integrating sustainability into training, performance evaluation, and reward systems. Faculty and staff involved in eco-friendly initiatives report a stronger sense of belonging and ownership of institutional goals. Finally, digital transformation provides a powerful enabler, offering innovative platforms—such as IoT-based monitoring systems, e-recruitment, and online training—that make Green HRM more measurable, efficient, and impactful.

Best Practices and Future Directions

The study highlights several universities that serve as models of Green HRM adoption, offering insights for institutions seeking to strengthen sustainability. For instance, the National Institute of Technology Silchar in India integrates green recruitment, ensuring new hires demonstrate sustainability awareness. Hasanuddin University in Indonesia applies green performance management, requiring staff to set specific sustainability targets. Kyoto University in Japan emphasizes green training and development, equipping staff and faculty with knowledge of sustainable technologies and practices. Swinburne University in Australia incorporates green compensation systems, offering incentives and recognition for staff who meet sustainability goals. These best practices illustrate that success depends on a combination of leadership commitment, resource allocation, and stakeholder participation. Looking forward, universities must adopt holistic strategies that integrate Green HRM into their curricula, foster inter-institutional and industry collaborations, and leverage digital platforms to accelerate implementation. Such approaches not only reduce environmental impact but also position universities as leaders in global sustainability education, shaping graduates who are both competent and environmentally responsible.

Discussion

The findings of this study demonstrate that the implementation of Green Human Resource Management (Green HRM) in higher education institutions

remains a complex process, influenced by financial, cultural, technological, and policy-related challenges. Adopting environmentally friendly policies and embedding performance measures into university operations often requires substantial upfront investments. These include training programs for faculty and administrative staff, procurement of environmentally friendly technologies, and the establishment of green performance management systems. Such requirements can be financially burdensome, particularly for universities that already struggle with limited budgets and must prioritize other critical programs such as academic research and development (Mahdy et al., 2023). Beyond financial barriers, resistance to change emerges as a significant obstacle. Universities with long-standing traditions and established working practices often encounter reluctance among faculty and staff to embrace sustainability-based policies. José et al. (2013) note that organizational culture plays a decisive role in shaping acceptance, with resistance frequently arising when policies are perceived as additional workloads or radical changes to daily habits. This perspective is reinforced by Renwick et al. (2013), who argue that skepticism about the effectiveness of Green HRM policies and uncertainty regarding implementation processes often undermine stakeholder confidence.

The challenges are compounded by external factors such as weak regulatory frameworks, particularly in developing countries where universities must rely primarily on internal policies to guide sustainability initiatives (Aburahma et al., 2020). Without supportive regulations, higher education institutions often lack the incentives or policy backing needed to prioritize Green HRM at a systemic level. Pereira Ribeiro et al. (2021) highlight that technological limitations also constrain adoption, particularly in regions with limited digital infrastructure and restricted access to renewable energy. This technological gap not only hinders efficiency but also limits universities' capacity to track and evaluate the outcomes of green initiatives. Despite these barriers, there is evidence that universities adopting environmentally friendly policies often receive positive recognition from the media and the broader public, which enhances their institutional image and competitiveness in an increasingly global higher education market (Aburahma et al., 2020).

The opportunities associated with Green HRM, therefore, provide a strong counterbalance to the challenges. Renwick et al. (2013) emphasize that efficient resource management practices, including renewable energy adoption, energy-saving initiatives, and improved waste management, not only contribute to environmental sustainability but also yield substantial cost savings. Ren et al. (2018) further argue that staff involvement in environmentally responsible activities fosters loyalty and enhances productivity, thereby creating both ecological and organizational benefits. Aburahma et al. (2020) add that

integrating digital technology into Green HRM offers a dual advantage, simultaneously reducing environmental impacts and improving communication between leaders, lecturers, and staff regarding institutional sustainability goals. This alignment demonstrates that Green HRM is not merely a compliance measure but also a catalyst for efficiency and innovation within higher education.

A critical contribution of Green HRM lies in its alignment with the Sustainable Development Goals (SDGs), particularly SDG 12 on responsible consumption and production, SDG 13 on climate action, and SDG 7 on affordable and clean energy (Sikdar et al., 2021). By integrating sustainability principles into HR policies, universities can directly support global efforts to address pressing environmental issues. Case examples illustrate this potential. The National Institute of Technology Silchar has adopted a “Green Campus” policy that encompasses energy reduction programs, solar panel installations, structured waste management, and sustainable natural resource use (Mukherjee et al., 2020). Complementing these initiatives, the university implements continuous training and development programs for staff focused on energy management and carbon emission reduction (Ari et al., 2020). Mehta (2024) highlights that this form of sustainability-oriented performance management not only enhances productivity but also fosters a more environmentally conscious work culture. Similarly, Hasanuddin University has implemented incentive-based policies to encourage faculty and staff involvement in energy saving, waste reduction, and tree-planting initiatives, demonstrating tangible outcomes in reducing operational costs while simultaneously enhancing social sustainability (Jumiati & Toaha, 2025).

The integration of training into Green HRM further strengthens the potential for systemic change. Liu and Mei (2020) argue that sustainability-based training programs not only educate staff on waste management and energy efficiency but also stimulate innovation in green technology research within academic contexts. Tanova and Bayighomog (2022) show that such initiatives contribute to improving staff quality of work life while cultivating a more proactive organizational culture oriented toward sustainability. In several European universities, these efforts have extended into curriculum design, where Green HRM concepts are embedded in human resource management and business management courses. As Aburahma et al. (2020) point out, this integration provides students with valuable opportunities to understand the role of HRM in supporting sustainability and prepares them to apply these principles in their future careers.

Another crucial factor is leadership. Roscoe et al. (2019) argue that leadership commitment is central to the successful adoption of Green HRM, as leaders establish the vision, communicate priorities, and design policies that

sustain organizational transformation. Yong and Fawehinmi (2019) provide evidence that structured green training programs significantly improve both employee motivation and engagement in sustainability initiatives, underscoring the importance of leadership-supported educational frameworks. Building international networks with universities that have successfully adopted Green HRM further amplifies this process, enabling institutions to share best practices and adapt proven strategies to their unique contexts (Aburahma et al., 2020).

Finally, the long-term success of Green HRM requires embedding sustainability into institutional strategies. Xie and Lau (2023) argue that aligning Green HRM with strategic planning and allocating appropriate budgets ensures that these policies are not temporary initiatives but integral components of higher education governance. Strengthening policies in this way enables universities to balance academic and sustainability goals, positioning them as leaders in both education and environmental stewardship. The discussion suggests that while challenges are real and persistent, Green HRM presents a transformative opportunity for higher education institutions to reduce environmental footprints, enhance operational efficiency, and contribute meaningfully to global sustainability agendas.

CONCLUSION

The study highlights that the implementation of Green Human Resource Management (Green HRM) in higher education, although fraught with challenges related to policy gaps, cultural resistance, and resource constraints, holds remarkable potential to transform universities into leaders of sustainability. Far from being a peripheral agenda, Green HRM represents a strategic pathway that can simultaneously advance institutional efficiency, strengthen reputation, and align higher education with the global sustainability agenda. By embedding green values into recruitment, training, performance evaluation, and reward systems, universities can cultivate a culture of environmental responsibility that resonates across faculty, staff, and students.

To achieve this transformation, higher education institutions must demonstrate stronger commitment through the development of comprehensive sustainability policies, sustained investment in human resource capacity building, and greater reliance on digital technologies to support implementation. Such strategies will not only reduce operational costs and improve organizational performance but also position universities as active contributors to the Sustainable Development Goals. Ultimately, Green HRM is not simply about managing human resources in a more sustainable way; it is about shaping future generations of graduates who embody sustainability principles and are prepared to drive positive change beyond the campus walls.

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