

## IN-DEPTH REVIEW OF GREEN HUMAN RESOURCE MANAGEMENT ALONG WITH LATEST INITIATIVES

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### ABSTRACT

**Purpose:** The paper aims to review advancements and current literature in the field of Green Human Resource Management (GHRM). It further intends to understand the relationship of GHRM with multiple variables and to highlight multiple green initiatives that organizations can use to further their environmental agenda.

**Design/Methods:** An in-depth review of the literature on GHRM published in referred journals was carried out.

**Findings:** GHRM is important for organizations looking to improve their sustainability and positively impact the environment. The core principle of GHRM is the incorporation of environmental sustainability within HRM practices to promote organizational and societal sustainability. Prevalent GHRM practices include green recruitment and selection, green training and development, green performance management, green compensation, and green involvement.

**Originality:** This study, in contrast to earlier reviews on GHRM, focused on investigating the functions of GHRM and various green initiatives such as green commuting, green buildings, energy conservation, paperless offices, employee recycling, virtual employee experience, change management, people's analytics, and work in the metaverse.

**Keywords:** *Green Human Resource Management, Employee Virtual Experience*

**Paper type:** Review Paper

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## INTRODUCTION

Rapid industrialization and extensive globalization have given rise to negative and pervasive effects on the environment, including pollution, environmental contamination, and a significant depletion of "natural resources" (Dahash & Abdlamer, 2022). This ecosystem devastation puts people and communities in peril, exacerbates climate change, and threatens food security. It is also clear that environmental pollution may have negative implications on human health and well-being. According to WHO 2022 statistics, one of the most prevalent environmental hazards to human health is air pollution which has caused an estimated 4.2 million premature deaths worldwide in the past years.

While there are short-term factors that affect environmental pollution, policymakers claim that long-term changes in technology, manufacturing and funding options, as well as economic and climatic policies, have the greatest impact (United Nations Environmental Programme [UNEP], 2022). Owing to the increased public concern, a heightened interest in transitioning to more environmentally friendly solutions such as enhanced municipal waste management, energy-efficient housing, electricity generation, industry, and transportation, has developed. Against this backdrop, companies, as the prime source of environmental pollution, are enduring significant pressure to ensure compliance with environmental sustainability goals in addition to the financial goals (Dahash & Abdlamer, 2022). Regarding total emissions, the industry sector ranks first in direct and indirect emissions (Pedersen et al., 2020). As a response to climate change, Goal 13 of the United Nations Sustainable Development Goals (UNSDGs) of the 2030 Agenda for Sustainable Development and The Paris Agreement, which aims to sustain the rise in global temperature to far below 2 degrees Celsius, was ratified by member countries. This puts a greater pressure and as a consequence, responsibility on organizations to cultivate an overall responsible outlook towards the achievement of environmental sustainability.

Given the intensifying pressures from policymakers, industry practitioners and customers alike, businesses have started to acknowledge the significance of environmental integration in organizations in terms of reduced ecological strain, increased environmental compliance and customer satisfaction (Zhang et al., 2019). Under the impetus of competitive pressures and the overall accountability of businesses towards society, companies have acknowledged the significance of incorporating green practices in organizations (Yong et al., 2020). Translated into green recruitment and selection, green training, green performance management, green pay and reward, and green involvement (Tang et al., 2018), green human resource management (GHRM) focuses on the incorporation of environmental sustainability principles within human resource management practices. GHRM is evidently becoming an important area of research as organizations have acknowledged the importance of creating a more sustainable future.

Over the years, the concept of GHRM has been defined in various ways by different scholars. For example, Ren et al. (2018, pp. 778) define it as “a phenomenon relevant to understanding relationships between organizational activities that impact the natural environment and the design, evolution, implementation, and, influence of HRM systems”. On the other hand, Kramar (2014, pp. 1075) defines sustainable HRM as, “human resource management (HRM) attributes that have the potential of yielding positive environmental outcomes.” Jabbour (2013, pp. 147-148) observes that “Green HRM is concerned with the systemic, planned alignment of typical human resource management practices with the organizations’ environmental goals”.

Despite these different definitions, the underlying theme is that GHRM comprises human resource management practices that incorporate environmental sustainability concepts. GHRM is an emerging field that focuses on the incorporation of environmental sustainability principles into human resource management practices. The notion of GHRM is rooted in the conception that using effective human resource management techniques can assist organizations in fulfilling their societal duty to safeguard the environment. The adoption of GHRM practices can take various forms, including the development of green recruitment and selection strategies, the implementation of green training and development programs, and the implementation of green performance management and reward systems (Tims et al., 2013). A recurring theme in past research is the positive impact of the fusion of environmental sustainability principles into human resource management practices. For example, GHRM can help organizations to reduce their environmental footprint and costs, improve their reputation, and attract and retain environmentally conscious employees (Tims et al., 2013). Additionally, GHRM can contribute to the creation of a more sustainable future by promoting environmental awareness among employees (Bansal, 2005), pro environmental behaviours (Chaudary, 2020) and green commitment complimenting environmental performance (Gilal et al., 2019), employee job satisfaction and meaningfulness (Shafaei et al., 2020).

Given the criticality of the subject matter, various scholars have attempted to interpret the studies on GHRM practices. Significant works include a bibliometric analysis (Bahuguna et al., 2023), a comprehensive review paper (Pham et al., 2020), and a systematic literature review on Green HRM (Yong et al., 2020). The present review paper will explore the concept of GHRM and its potential benefits for organizations and the environment. The paper will also examine the different functions of GHRM and its relationship with other variables in the literature. The research will be based on an analysis of existing literature on GHRM, including academic journals, books, and online articles.

The purpose of the present paper is threefold. First, the paper puts forward the fundamental concepts in the GHRM domain and some notable contributions in the field. Second, the paper elaborates on various green workplace strategies. Lastly, it makes an effort to recommend certain eco-friendly HR initiatives.

## LITERATURE REVIEW

### *Definitions of green human resource management*

Green human resource management (GHRM) is a concept that refers to the management of human resources in an environmentally sustainable way. This entails incorporating environmental factors into all facets of human resource management, such as hiring, training, reviewing employees' performance, and compensating them (Lian et al., 2018). The objective of GHRM is to develop a workforce that is both environmentally conscious and skilled (Garcia-Sanchez et al., 2017). GHRM is a relatively new concept that has been defined in various ways. Some authors define GHRM as the integration of environmental sustainability into human resource management practices (Kramar, 2014). Others define it as managing human resources in a manner that supports environmental sustainability (Wiek et al., 2018). Despite these different definitions, the core principle of GHRM is the incorporation of environmental sustainability into human resource management practices in order to promote organizational and societal sustainability (Burke et al., 2018). Some of the widely cited definitions are provided in Table 1.

*Table 1 Widely cited GHRM definitions*

Ren et al. (2018, pp. 778)	"A phenomenon relevant to understanding relationships between organizational activities that impact the natural environment and the design, evolution, implementation, and, influence of HRM systems."
Kramar (2014, pp. 1075)	Sustainable HRM are defined as, "Human resource management (HRM) attributes that have the potential of yielding positive environmental outcomes."
Jabbour (2013, pp. 147-148)	"Green HRM is concerned with the systemic, planned alignment of typical human resource management practices with the organizations' environmental goals."

By incorporating environmental sustainability into human resource management practices, GHRM plays a significant role in advancing organizational and social sustainability. By implementing GHRM practices, organizations can reduce their environmental impact and promote environmental sustainability, which can contribute to societal sustainability (Wiek et al., 2018). Additionally, GHRM can help organizations to nurture a culture of environmental responsibility among their employees, which can lead to increased engagement and motivation (Chen & Chang, 2017). It can also have potential cost savings effects through energy-efficient practices and recycling programs (Saeed et al., 2019). Furthermore, GHRM can also lead to improved organizational reputation and brand image, as organizations that are seen as environmentally-friendly may be more attractive to customers and stakeholders (Kim et al., 2019).

Despite the advantages, implementing GHRM practices can also present several challenges. One of the main challenges is the lack of clear guidelines and best practices for GHRM (Ali et al., 2020). Employees and managers may lack awareness and understanding of GHRM (Ahmed, 2015). Additionally, there may be resistance from employees to changes in organizational policies and practices, particularly if they are not seen as relevant or beneficial to them (Ali et al., 2020). Furthermore, there may also be lack of resources and funding to implement GHRM programs, as well as lack of support from upper management (Ali et al., 2020). Furthermore, GHRM processes may not align with the organization's goals and objectives, which can lead to resistance from employees and managers.

In sum, GHRM is an emerging field that emphasizes on the fusion of environmental sustainability into the HRM function. The benefits of GHRM include cost savings, improved employee engagement, and improved organizational reputation. However, organizations may face challenges in adopting GHRM programs, such as lack of distinct guidelines, resistance from staff, and lack of resources and funding.

### *RELATIONSHIP OF GHRM WITH VARIABLES*

The majority of GHRM research focuses on how GHRM practices affect outcomes at the employee and firm levels. In terms of employee-level outcomes, scholars have attended to both green and non-green variables including task-related and proactive pro-environmental performance (Darvishmotevali & Altinay, 2022), pro-environmental behaviour (Rubel et al., 2021), employee green creativity (Al-Hawari et al., 2021; Chen et al., 2021; Hameed et al., 2022), organization citizenship behavior towards the environment (Liu et al., 2021), voluntary green behavior (Amrutha & Geetha, 2021), organizational commitment (Ali et al., 2022; Shoaib et al., 2021), millennial employee retention (Islam et al., 2022), job performance (Yusliza et al., 2021) and organization citizenship behavior towards the organization (Aboramadan & Karatepe, 2021), green voice behavior, green knowledge sharing behavior, green helping behavior (Aboramadan et al., 2022), organizational trust, organizational pride, and turnover intentions (Ismail et al., 2022). In parallel, management scholars have studied the impact of GHRM practices on company's environmental performance (e.g., Rizvi & Garg, 2021; Shafaei et al., 2020) and overall firm performance outcomes (e.g., Ghouri et al., 2020; Opoku et al., 2021; Yong et al., 2022). Although the GHRM practices has primarily been researched as an independent variable, several studies have investigated the GHRM's mediating role on relationships. Úbeda-García et al. (2021) studied the mediating role of GHRM in the connection between Corporate social responsibility (CSR) and firm performance. Ali et al. (2022) also investigated the mediating role of GHRM in the link between intellectual capital and employee commitment, eco-friendly behavior and environmental performance. Similarly, Ahmad et al. (2021) examined the relationship between a ethical leadership and subordinates' pro-environmental work behavior with GHRM as a mediating variable. Jia et al. (2018) studied the association between

transformational leadership and green creativity with the mediating role of GHRM. A recent study by Zhou et al. (2023) showed the mediation effect of GHRM between CSR and environmental performance. Hence, rather than restricting the focus to GHRM practices as an independent component exclusively, studies now concentrate on examining the mediating mechanism of GHRM.

The widely used theories in the GHRM literature include Theory of planned behavior (e.g., Rubel et al., 2021), Social cognitive theory (e.g., Farooq et al., 2022; Naz et al., 2023; Nisar et al., 2021), Supplies value fit theory (Al-Hawari et al., 2021; Dumont et al., 2017), Ability motivation opportunity theory (e.g., Muisyo & Qin, 2021; Rizvi & Garg, 2021), Resource-based view theory (e.g., Afum et al., 2021; Rizvi & Garg, 2021; Zhang et al., 2021), Social exchange theory (e.g., Amrutha & Geetha, 2021; Khan et al., 2021; Ismail et al., 2022; Yusliza et al., 2021), Stakeholder theory (e.g., Úbeda-García et al., 2021), and Social identity theory (e.g., Ali et al., 2022; Malik et al., 2021).

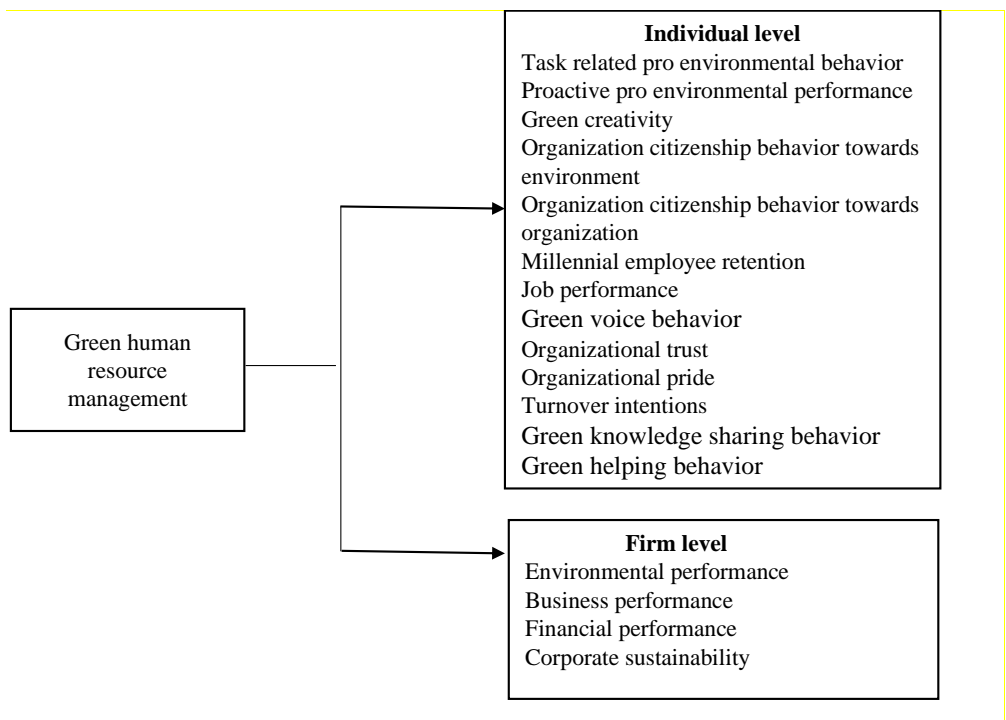


Figure 1. Summary of variables studied with GHRM

## GHRM FUNCTIONS

### *Green recruitment and selection*

Green recruitment and selection refer to the process of attracting and recruiting particular job applicants who demonstrate environmental consciousness towards environmental issues. Green recruitment, also known as sustainable recruitment or environmental recruitment, is the process of identifying, attracting, and hiring

individuals who possess the skills and qualifications needed to support the organization's ecological targets and sustainability initiatives. According to Tang et al. (2018), hiring is the process through which organizations attract candidates who possess high environmental awareness or are committed to contributing to environmental issues. Therefore, organizations that commit to environmental performance, value and recruit new candidates who have environmental knowledge and fulfil the job description criteria related to environmental reporting (Grolleau et al., 2012). The green hiring process comprises three major aspects, i.e., green employer branding, green attraction, and green awareness of potential employees (Tang et al., 2018). Green branding allows employers to attract employees based on environmental image of the organization (Tang et al., 2018). Green criteria are used to select and evaluate potential candidates. Green awareness focuses on selecting candidates based on their understanding and awareness about sustainability issues (Tang et al., 2018). According to the above deliberation of GHRM, green hiring practices integrate the ecological policy and strategies of the organization with the recruitment and selection criteria (Tang et al., 2018). This approach to recruitment focuses on identifying candidates who have a strong commitment to environmental stewardship and who possess the skills and knowledge necessary to implement sustainable practices within the organization (Siyambalapitiya et al., 2018). Another widely accepted aspect of green hiring process is the incorporation of environmental considerations. This can include using sustainable recruitment techniques, such as online job boards and social media platforms, to reach a larger pool of candidates and reduce the environmental impact of travel for interviews (Longoni et al., 2018). Additionally, organizations may prioritize the hiring of candidates who have experience working on sustainability projects or who possess relevant certifications or degrees related to environmental stewardship (Siyambalapitiya et al., 2018).

#### *Green training and development*

Green training through an integrated learning system improves employees' skills, awareness, and environmental management participation (Tang et al., 2018). Green training improves employees' environmental skills to advance green organizational targets (Jabbour, 2011). According to Tang et al. (2018), green training focuses on enhancing employee awareness, ensuring effective knowledge management with regards to environment, and building green climate. It focuses on educating and preparing individuals and organizations to adopt sustainable practices and reduce their environmental impact. This can include topics such as energy efficiency, renewable energy, waste reduction, and sustainable transportation (Kollmuss & Agyeman, 2002). One example is the LEED (Leadership in Energy and Environmental Design) certification program, which gives education and certification to professionals in the building and construction industry on sustainable construction, design and practices. Another example is the Environmental Protection Agency's Energy Star program, which offers training and resources for organizations to improve their energy efficiency and reduce their carbon footprint. Incorporating green training and development can not only increase overall organizational

performance but also save money and have a positive impact on the environment (Krause & Darnall, 2008).

#### *Green performance management*

Green performance management focuses on establishing green targets and evaluating green performance objectives. According to Tang et al. (2018), green performance management ensures that an employee's performance is evaluated for set performance indicators in activities related to fulfilling the ecological objectives. Green performance indicators and targets translate environmental objectives into action plans for employees through performance appraisals (Tang et al., 2018). The performance indicators assess employees based on environmental actions, environmental duties, reduction of carbon emissions, and communication of ecological issues and regulations (Tang et al., 2018). According to Molina-Azorin et al. (2015), green performance management can be used to direct employees to align their behaviours with the organization's sustainability goals. Green performance management includes appraisal of employee's environmental performance thereby encouraging them to be committed to the firm's ecological objectives (Renwick et al., 2013).

#### *Green compensation*

Green compensation ensures the provision of monetary and non-monetary rewards to incentivize employees' participation in the organization's environmental activities (Jabbour, 2013). Green compensation refers to the practice of offsetting carbon emissions by investing in activities that reduce or remove greenhouse gases from the atmosphere (Eccles & Serafeim, 2013). This can involve undertaking tasks like planting trees, funding renewable energy initiatives, or buying carbon credits from other businesses—all with the same compensation and benefits (Eccles & Serafeim's, 2013). According to Tang et al. (2018), green compensation can include non-financial incentives like green commuting incentives, green tax, and financial rewards such as green recognition. The focus is to reward employees' commitment to sustainable practices. Green compensation plans, therefore, motivate employees to play a potent role in executing environmental management initiatives (Renwick et al., 2013). One example of green compensation is the use of carbon offsetting schemes, in which organizations can offset their emissions by purchasing carbon credits from projects that reduce or remove greenhouse gases (Eccles & Serafeim, 2013). Another example is the use of green bonds, which are financial rewards that allow organizations to raise capital for projects that promote environmental sustainability (MacGregor, 2018). Overall, green compensation can be an effective way for organizations to minimize their environmental impact and contribute to the fight against environmental pollution (Eccles & Serafeim, 2013).

Example of green employee compensation is a program implemented by Patagonia, a clothing and outdoor gear company, which provides staff paid time off to engage in environmental conservation activities. This program not only encourages employees to engage in sustainable behaviors, but also aligns with the company's mission and values of environmental stewardship. Another example is the "Green Team" program



implemented by the City of Seattle, in which city employees can earn rewards for participating in sustainable initiatives such as recycling and reducing energy consumption. These rewards include gift cards, recognition, and the opportunity to attend special events. Overall, green employee compensation can not only encourage sustainable behaviors within the workplace, but also align with a company's mission and values, and support the greater community. This includes creating a culture of environmental stewardship within the company, where employees are encouraged to take an active role in the organization's sustainability initiatives and are rewarded for their contributions (Ardiza et al., 2021).

#### *Green involvement*

Green involvement is the engagement of staff members in ecological activities concerning environmental issues (Tang et al., 2018; Renwick et al., 2013). It is a process of giving employees the chance to get engaged in various environmental management activities thereby creating a mutual learning climate regarding environmental issues (Tang et al., 2018). This includes practices such as eco-friendly policies, engaging employees in environmental initiatives, and promoting a culture of sustainability within the workplace. Organizations with a strong commitment to environmental sustainability may also engage employees in environmental initiatives such as recycling programs, energy conservation initiatives, and community volunteer opportunities (Gifford, 2008). These initiatives not only help the organization reduce its environmental impact, but also promote employee engagement and satisfaction.

One example of such a practice is the implementation of telecommuting policies, which can reduce the carbon footprint of employees' commutes and increase employee satisfaction (Karakaya & Öztürk, 2016). Another example is the incorporation of sustainable procurement policies, which can promote the use of eco-friendly products and services within the organization (Bansal & Roth, 2000). Overall, green involvement is an important aspect of organizational sustainability and social responsibility. It involves implementing policies and initiatives that align with the company while also promoting employee engagement and satisfaction.

## **GREEN INITIATIVES FOR HUMAN RESOURCES**

Green initiatives for human resources refer to practices that intend to reduce the environmental impact of an organization's workforce. Some examples include:

#### *Green commuting*

Telecommuting and remote work policies, which can reduce the number of employees commuting to the office and thus decrease greenhouse gas emissions. It also includes encouraging employees to use public transportation, carpool, or bike to work. Implementing sustainable practices in the office, such as recycling, energy-efficient lighting, and using eco-friendly products (Gimenez-Nadal et al., 2019). Offering incentives for employees who adopt sustainable practices, such as providing a stipend for employees who purchase a hybrid car is another method (Gimenez-Nadal et al., 2019).

### *Green Buildings*

Buildings that are constructed, renovated, and operated in an environmentally responsible manner are referred to as green buildings, sustainable buildings, or energy-efficient buildings. They are intended to reduce the adverse effect on the environment and human health while maximizing the use of natural resources. In terms of human resources, green buildings often provide improved indoor environmental quality, which can lead to increased productivity, better employee morale, and reduced absenteeism (Goel, 2013). For example, studies have shown that employees in green buildings report higher levels of well-being and satisfaction with their work environment (Pless & Maier, 2010). Additionally, green buildings may also contribute to the overall economic development of a community by creating jobs in the construction and building operations industries (Kibert, 2016).

### *Conservation of Energy*

Conservation of energy with respect to human resource refers to the idea that individuals should use their energy and resources in an efficient and sustainable way in order to maximize productivity and effectiveness in the workplace (Lazaroiu, 2014). This concept is based on the premise of energy conservation, which highlights that energy cannot be produced or destroyed, but can be transferred or transformed (Fermi, 1956).

With respect to human resource practices, conservation of energy can be applied in several ways. For example, employees can be trained to work efficiently and effectively, using their time and resources in the most productive manner possible (Lazaroiu, 2014). Employers can also provide employees with the tools and resources they need to perform their jobs, such as ergonomic furniture and equipment, to help them conserve energy (Lazaroiu, 2014). Additionally, employers can create a culture of conservation within their organizations by promoting energy-efficient practices, such as recycling, carpooling, and telecommuting (Lazaroiu, 2014). This can not only help to conserve energy, but also improve employee morale and engagement (Lazaroiu, 2014). Overall, conservation of energy with respect to human resource is an important concept that can help organizations to improve productivity and effectiveness, while also promoting sustainability and environmental responsibility (Lazaroiu, 2014).

### *Paperless Offices*

A paperless office with respect to human resource is the use of digital technologies to manage and automate HR processes, such as recruitment, onboarding, performance management, and benefits administration. This approach aims to reduce the reliance on paper-based documents and manual processes, making HR operations more efficient and cost-effective (Kim & Lee, 2016).

For example, an organization may use an electronic applicant tracking system to manage job postings, resumes, and interview scheduling. This can help

to streamline the recruitment process, reduce administrative tasks, and improve the candidate experience (Briscoe , 2022). Additionally, an organization may use digital tools such as online onboarding portals and employee self-service portals to manage employee information, benefits enrollment, and performance evaluations (Fedorova et al., 2019). Overall, a paperless office approach in human resource can lead to improved organizational efficiency, cost savings, and a more positive employee experience (Kim & Lee, 2016).

### *Employee Recycling*

Recycling with respect to human resources refers to the process of rehiring or repositioning former employees within an organization (Bratton & Gold, 2012). This can include employees who have left the organization voluntarily or those who have been laid off or terminated. The practice of recycling employees is becoming more common as organizations look for ways to retain valuable talent and reduce the costs associated with recruiting and training new employees (Ramlall, 2004).

One of the main benefits of recycling is that they already have knowledge of the organization's culture and procedures, which can help them hit the ground running in their new role (Bratton & Gold, 2012). Additionally, recycling employees can also help reduce turnover costs and improve employee morale (Ramlall, 2004).

There are also some potential drawbacks to recycling employees. For example, if an employee was terminated for poor performance, it may not be in the organization's best interest to bring them back (Bratton & Gold, 2012). Additionally, some employees may not be suited for the new role they are being considered for, which could lead to poor job performance and dissatisfaction (Ramlall, 2004).

### *Virtual Employee Experience*

Virtual employee experience refers to the perception and attitudes of employees who work primarily or exclusively in a virtual environment (Hawkins & Mark 2022). This includes employees who work remotely, telecommute, or use virtual tools and platforms to collaborate with colleagues and perform their job duties. Virtual employee experience encompasses various aspects such as communication, collaboration, technology, and work-life balance (Carter et al., 2022).

One aspect of virtual employee experience is communication, which is critical for building trust and fostering collaboration among virtual teams ((Hawkins & Mark 2022). Effective communication in a virtual environment requires the use of a variety of platforms and technologies, such as project management software, video conferencing, and instant messaging (Carter et al., 2022).

Another aspect of virtual employee experience is collaboration, which can be challenging due to the lack of face-to-face interactions and the need to coordinate efforts across different time zones and locations (Hawkins & Mark 2022).. To enhance collaboration among virtual teams, organizations can implement virtual team-building activities and provide training on how to use collaboration tools and platforms (Carter et al., 2022). Technology is also a crucial aspect of virtual employee experience, as it enables remote work and collaboration (Duarte, 2020). Organizations

should ensure that virtual employees have access to the necessary tools and equipment, such as laptops, internet access, and mobile devices, to perform their job duties effectively (Carter et al., 2022).

Finally, virtual employee experience also includes work-life balance, which can be challenging for virtual employees due to the blurred boundaries between work and personal life (Hawkins & Mark 2022). Organizations can support virtual employees by providing flexibility and autonomy in managing their work schedule and promoting work-life balance policies and practices (Carter et al., 2022).

### *Change Management*

Change management process is critical when implementing green human resource practices, as it involves the coordination of people, processes, and technology to achieve sustainability goals. According to (Lauer & Thomas, 2010) the process of managing a change involves developing a feeling of urgency, assembling a group of supporters, developing a vision for the change, communicating that vision, equipping staff to carry out that vision, and accomplishing short-term victories to maintain momentum.

One of the key aspects of change management in green human resource is creating a sense of urgency. This involves communicating the need for change and highlighting the potential benefits of green practices, such as reducing environmental impacts and improving employee engagement (Farrell & Hart, 2015). Numerous strategies, including workshops, town hall meetings, and internal communication campaigns or board meetings can be used to accomplish this.

It is critical to put together a coalition of support after a sense of urgency has been established. This involves building a team of stakeholders who will champion the green human resource initiative and ensure that it is in congruence with the broad targets of the organization (Lauer & Thomas, 2010). This may include representatives from various departments, such as human resources, operations, and sustainability, as well as external stakeholders such as suppliers and customers. Creating a vision for change is another critical aspect of change management in green human resource. This involves developing a clear and compelling vision for the organization's future state and communicating it to all stakeholders (Lauer & Thomas, 2010). This vision should be aligned with the organization's overall goals and should take into account the potential benefits of green human resource practices.

After establishing the vision, it is important to communicate it to all stakeholders. This involves developing a communication plan that includes various channels, such as newsletters, internal social media, and training programs (Lauer & Thomas, 2010). This will ensure that everyone is aware of the initiative and understands their role in implementing it. Empowering others to act on the vision is another key component of change management in green human resource. This involves providing the necessary resources and support to help stakeholders implement the initiative (Lauer & Thomas, 2010). This may include training programs, tools and templates, and access to experts in green human resource practices.

Finally, creating short-term wins is important to sustain momentum. This involves identifying and implementing small, manageable changes that can be achieved quickly, such as reducing paper usage or encouraging recycling (Lauer & Thomas, 2010). These wins will help to build momentum and demonstrate the benefits of green human resource practices.

#### *Peoples Analytics*

Workforce analytics and people analytics both refer to the use of data and analytics to comprehend and enhance an organization's workforce performance. With respect to green human resource, people's analytics can be used to identify and track the environmental impact of an organization's workforce, as well as to identify opportunities for improvement.

One example of using people's analytics in green human resource is to track the carbon footprint of employees through their travel and commuting patterns. This information can be used to identify opportunities for reducing emissions and promoting sustainable transportation options, such as telecommuting or encouraging the use of public transportation (Carr & Stone, 2018).

Another example is using people's analytics to track the energy consumption of employees in the workplace. This can be done by analyzing data on employee behavior, such as when and how they use energy-efficient equipment, and identifying areas for improvement, such as promoting energy-saving practices and providing training on energy efficiency (Jones & Smith, 2019).

Overall, people's analytics can be a powerful tool for organizations looking to improve their environmental impact by better understanding and managing their workforce.

#### *Working in Meta Verse*

Working in the metaverse, or virtual reality, with respect to green human resource refers to the use of virtual environments to promote sustainable practices and behaviors among employees. This can include virtual training sessions on topics such as energy conservation, recycling, and responsible resource use (Mishra, 2017). Additionally, virtual office spaces can be designed to promote green behaviors, such as encouraging the use of virtual transportation instead of physical travel (Mishra, 2017).

One example of a metaverse platform that promotes green human resource is the virtual reality platform "EcoVR." This platform allows users to explore virtual environments that simulate real-world environmental issues and teaches them about sustainable practices (Nelson et al., 2007). This type of virtual training can be an effective way to educate employees about sustainable practices and behaviors, as it allows them to experience the impact of their actions in a simulated environment (Mishra, 2017).

Working in the metaverse with respect to green human resource can be an effective way to promote sustainable practices and behaviors among employees. Virtual

training and office spaces can be designed to educate and encourage staff to adopt green behaviors.

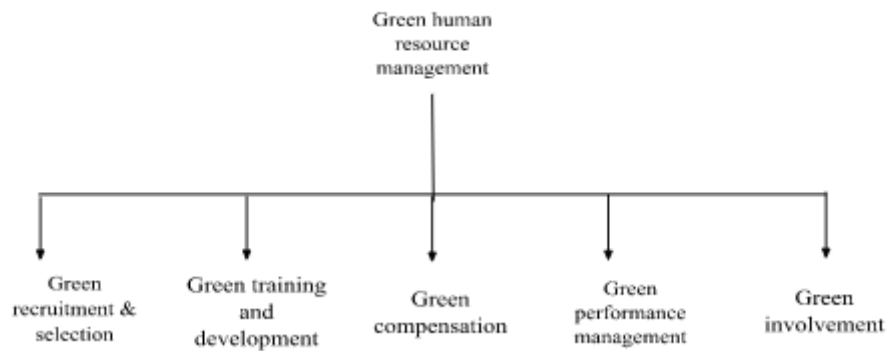


Figure 2: Conceptual framework

## PRACTICAL IMPLICATIONS

For all businesses, government organizations, and professionals, sustainable development are among the top priorities. Hence, from a practical standpoint, details of various green initiatives can help businesses invest in environmentally sustainable practices. The current review provides details of various green initiatives that employees should be aware of and details the organizations as to how the company's green initiatives will ultimately reduce their environmental impact. The review of the literature shows that most of the studies have been contextualized to the manufacturing sector (e.g., Alam, 2021; Amjad et al., 2021; Hassan & Jaaron, 2021; Ghouri et al., 2020), tourism and hospitality sector (e.g., Al-Hawari et al., 2021; Nisar et al., 2021) with only a few studies focusing on construction industry (e.g., Zhao et al., 2021), banking sector (e.g., Iddagoda et al., 2021), education sector (e.g., Yafi et al., 2021). Therefore, the current review paper directs managers and decision-makers of these sectors to develop better and greener human resources policies that encourage employees to act in an environmentally friendly manner at work. Although the manufacturing and tourism sectors can benefit the most from energy conservation initiatives, other sectors such as education, banking, construction, and technology sector can also benefit from the green initiatives. Initiatives such as green commuting, green building designs, conservation of energy, paperless office, employee recycling, virtual employee experience, change management initiatives, people analytics and use of meta verse are effective ways to encourage green behaviours among employees.

## CONCLUSION AND FUTURE DIRECTIONS

In conclusion, the concept of green human resource management is an essential aspect of creating a sustainable and environmentally responsible organization. Change management strategies such as communication, training, and employee involvement are crucial in ensuring the successful implementation of green HR practices.

Additionally, the virtual employee experience plays a crucial role in promoting sustainable behaviors and attitudes among employees. Furthermore, utilizing people analytics can provide valuable insights into employee engagement and behavior, allowing organizations to make data-driven decisions to promote green HR practices. However, more research is needed to fully understand the impact and effectiveness of green HR practices, as well as the role of technology in promoting sustainable behaviors and attitudes among employees.

The current paper provides a broader perspective of GHRM literature for scholars and industry practitioners. It also reveals several aspects that necessitate further investigation. Future researchers should explore the concept of GHRM through a technology-based perspective or Industry 4.0. Technology has significantly changed the organizational landscape to the extent that HR processes and practices are now dependent on technology. Hence, it is pertinent for industry practitioners and scholars to investigate the possible linkages of GHRM with technology. Artificial intelligence is assisting businesses in coordinating various frameworks and additionally providing a platform that can support all human resource functions, including recruitment, selection, training, development, compensation, and performance management. This is assisting businesses in going green in these functions (Garg et al., 2018). However, research in this domain is limited or, perhaps, absent from the mainstream literature. Furthermore, future researchers should investigate the role of virtual platforms in increasing employee outcomes as a response to GHRM practices. Virtual platforms teach users about sustainable practices while allowing them to explore virtual surroundings that mirror real-world environmental challenges. Such platforms could provide many opportunities to organizations and management who promote the incorporation of GHRM practices.

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