

# Green human resource management in Sustainable University: Systematic literature review

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**Abstract.** The concept of environmentally friendly human resource management (GHRM) within the university corporate sector has emerged as a contemporary and intriguing research topic. The push to develop research in sustainability management is ongoing, focusing on raising awareness about the importance of adopting environmentally friendly practices in university corporate services. This research aims to explore the developments in GHRM research over the past five years and to map out future research opportunities in university human resource management using a systematic literature review approach. The literature review findings indicate a positive correlation between GHRM practices and pro-environmental behavior among university employees, mainly when supported by GHRM training and education programs. However, there still needs to be more research that presents opportunities for future exploration. This study contributes to the theoretical framework of sustainability and human resource management.

## 1 Introduction

Currently, several global concerns are emerging regarding the protection and desirability of the environment, which results in the implementation of environmentally responsible management in an organization [1]. Environmentally friendly human resource management in practice is intensively studied in academic and practical management literature. Currently, interest in environmentally friendly human resource management has increased [2]. This is due to the increasing awareness and recognition of environmentally friendly management strategies that reduce negative impacts or environmental footprints. Business sustainability will also be boosted when environmentally friendly management is implemented. Research

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on environmentally friendly human resource management has increased significantly among undergraduates since 2016 [3-6].

Universities have a vital role in bringing awareness to environmental management and sustainable practices, but more research is needed in this area [7]. The University recognizes the importance of encouraging sustainability by being socially responsible [8]. Research on green human resource management in Indonesia is still very rare, especially in the university corporate sector.

Increasing HR awareness of environmental issues can produce an environmentally friendly human resources approach that emphasizes non-paper, carbon footprint, and waste management [9]. Human resources are very important in initiating environmental activities that include green initiatives and process changes. Environmentally friendly human resource management can be considered as a sustainable transformation that has a good impact on the organization [10].

This research aims to examine how GHRM is represented in the university corporate sector through journals, years, national contexts, and research methods. In addition, this research will conduct a systematic review of existing literature regarding environmentally friendly human resource management to ascertain which topics have been discussed and which areas require further treatment or development. This research is specifically in the university sector. This study answers this research statement:

RQ1. How has the field of green human resources in management research developed in recent years?

RQ2. What area of green human resources research has not addressed the challenges and opportunities of GHRM?

## 2 Methods

Since the development of data mining tools, the process known as systematic literature review (SLR) has experienced a surge in popularity. After completion of the search strategy and use of bibliometric analysis (BA), SLR examines the inclusion of collection data. For the this research, "Biblioshiny" is a bibliometric instrument used for science mapping examination. The author then used the strings green human resource management" or "GHRM" and "university" or "higher education". We found 20 documents to generate data. The steps of the research as shown in Figure 1.

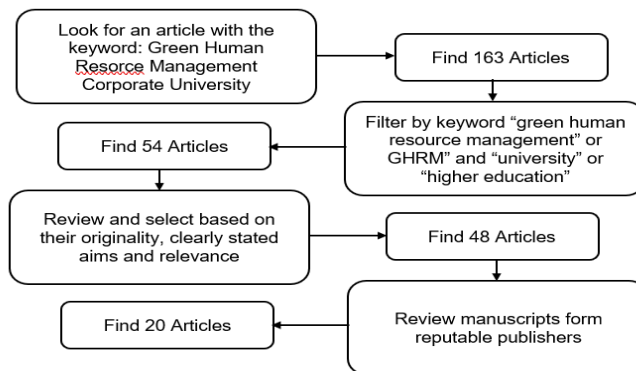
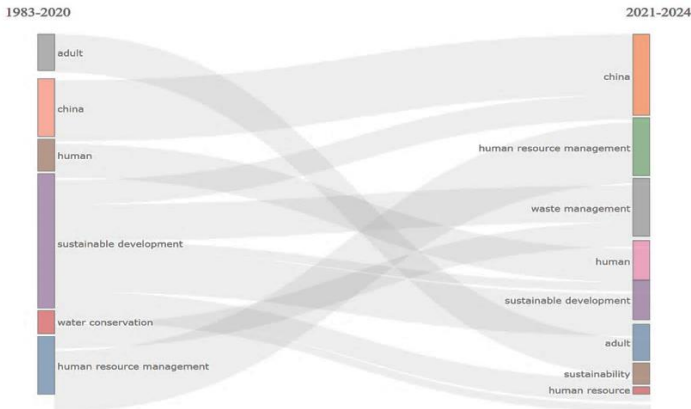


Fig. 1. Steps of the research

### 3 Result and Discussion

In Figure 2 represents the results of the analysis conducted using Biblioshiny. Analysis using thematic maps that consist of Niche Themes, Emerging or Declining Themes, Motor Themes, and Basic Themes makes it more convenient to interpret and evaluate the results of the research. If it is related to this research, the corresponding topic is Sustainable Development Human Resource Management Water Conservation, and Waste Management Recycling Innovation. The topic of Sustainable Development Human Resource Management Water Conservation is at the midpoint between Emerging or Declining Themes and Motor Themes. This shows that this topic is developing well and is connected to other topics. In addition, the topic of Waste Management Recycling Innovation is located in the position of motor themes, which means that this topic continues to develop well and is connected to other themes.



**Fig. 2.** Bibliometric thematic evolution

**Table 1.** Key Findings

Autors	Methods	Country	Participant	Findings	Equation	Difference
(Al-Alawneh et al., 2024) [7]	Quantitative (PLS-SEM)	Palestine	University of Palestine	<ul style="list-style-type: none"> <li>GHRM has a positive effect on EP.</li> <li>MS and GOC can mediate the relationship between GHRM and EP.</li> </ul>	We are testing the impact of GHRM in the context of sustainable universities	Adding environmental performance and mediation with the influence of organizational culture and management support variables.
(Noor Faezah et al., 2024) [11]	Quantitative (PLS-SEM)	Malaysia	Academicians in five public research universities across Malaysia	<ul style="list-style-type: none"> <li>GHRM is positively related to EEB.</li> <li>Green Commitment can mediate the influence of GHRM and EEB.</li> </ul>	Testing GHRM in a sustainable university setting	It is testing green commitment as a mediator between GHRM and EEB.

<b>Autors</b>	<b>Methods</b>	<b>Country</b>	<b>Participant</b>	<b>Findings</b>	<b>Equation</b>	<b>Difference</b>
(Fawehinmi et al., 2024) [12]	Quantitative (PLS-SEM)	Malaysia	Lecturers in Malaysian public universities	<ul style="list-style-type: none"> <li>• PBC and EGB are positively related.</li> <li>• EGB does not affect GHRM.</li> <li>• PBC can mediate the effects of GHRM, EGB, and GHRM and attitude.</li> </ul>	Testing the influence of GHRM on the university environment and sustainable behavior.	Further testing on employee sustainability behavior and PBC.
(Alnaqbi et al., 2024) [13]	Quantitative	United Arab Emirates	Employees	<ul style="list-style-type: none"> <li>• GHRM is positively related to GIWB</li> <li>• ESSL drives the relationship between GHRM and Green Commitment.</li> <li>• Green Commitment has a positive effect on innovative behavior.</li> </ul>	It is testing the impact of GHRM in a university setting that focuses on green commitment.	Women are more environmentally conscious about adjustment than men.
(Wasim Akram et al., 2024) [14]	Quantitative	Saudi Arabia	employees of the higher education sector	<ul style="list-style-type: none"> <li>• GHRM can influence employee green behavior.</li> <li>• Organization support can mediate the influence of GHRM and employee green behavior.</li> </ul>	Analyzing GHRM from a university perspective.	Focus on employees towards green behavior and organizational support.
(Taamneh et al., 2024) [15]	Quantitative	Jordan	employees	<ul style="list-style-type: none"> <li>• GHRM has a positive and significant effect on CSR.</li> <li>• Transformational leadership can mediate the influence of GHRM and CSR.</li> </ul>	Analyzing GHRM from a university perspective.	Adding transformational leadership as a mediating variable
(Muhammad Ali &	Quantitative	Pakistan	employed in Pakistani	<ul style="list-style-type: none"> <li>• GHRM is positively related to</li> </ul>	Focusing on GHRM in the	They are further highlighting

<b>Autors</b>	<b>Methods</b>	<b>Country</b>	<b>Participant</b>	<b>Findings</b>	<b>Equation</b>	<b>Difference</b>
Nisar, 2023) [16]				environmental performance <ul style="list-style-type: none"> <li>Employee behavior and GHRM can affect organizational performance</li> <li>GSE can moderate between commitment and environmentally friendly behavior.</li> </ul>	university environment	GSE's commitment to improving environmental performance.
(Haeruddin et al., 2023) [17]	Quantitative	Indonesia	academics scattered in Indonesian public universities	<ul style="list-style-type: none"> <li>GHRM positively and significantly affects employee health, well-being, and productivity.</li> <li>Quality Work Life can be improved with the presence of GHRM in the university environment.</li> </ul>	Focus on GHRM at universities.	Found that employee health, wellness, and productivity can be increased with GHRM, and GWL can even be increased with GHRM.
(Wang et al., 2023) [18]	Quantitative	China, Bangladesh, Malaysia	Varios Universities In Bangladesh	<ul style="list-style-type: none"> <li>GHRM is positively related to job search intention and organizational reputation</li> <li>Corporate social responsibility can mediate the influence of GHRM on job search intention and organizational reputation.</li> </ul>	Focusing on GHRM in the university environment	The finding the influence between GHRM and organizational reputation and job search intention and the role of corporate social responsibility as a mediator.
(Mohammed & Faisal, 2023) [19]	Quantitative	Iraq	institutions in Iraqi academic	GHRM has a significant impact on university sustainability through strategic excellence.	Testing the influence of GHRM and university sustainability.	Finding that strategic advantage can mediate GHRM and university sustainability.
(Asfahani, 2023) [20]	Quantitative	Saudi Arabia	Intitution in Saudi Academic	<ul style="list-style-type: none"> <li>GHRM, environmental</li> </ul>	Focus on GHRM and sustainable	It was found that there is ecology in

<b>Autors</b>	<b>Methods</b>	<b>Country</b>	<b>Participant</b>	<b>Findings</b>	<b>Equation</b>	<b>Difference</b>
				<p>performance, and competitive advantage can have a positive relationship.</p> <ul style="list-style-type: none"> <li>• ESSL can have a positive influence on GHRM and ecological performance.</li> <li>• GHRM has a negative relationship with competitive advantage.</li> </ul>	environmental performance.	GHRM, ESSL can mediate GHRM and ecological performance, and there is a negative influence between GHRM and competitive advantage.
(F. Ahmad et al., 2023) [21]	Quantitative	Pakistan, Hungary	academic staff members from 25 Pakistani universities	Employee environmental commitment can mediate GHRM and ecological performance. So, to improve universities' environmental performance and sustainability, green knowledge and environmental responsibility must be encouraged through GHRM.	Focusing on the impact of GHRM and university sustainability.	The influence of ecological performance in improving GHRM and university sustainability.
(Abbas et al., 2022) [22]	Quantitative	Czech republic, UAE, and Finland	Employee	<ul style="list-style-type: none"> <li>• Green training and development (GTD) and top management commitment towards greening workforce (TMCGW) positively affect green university sustainability. And TMCGW plays a mediating role.</li> <li>• Gender moderates</li> </ul>	Focusing on GHRM and university sustainability.	Green Training and Development (GTD) and Top Management Commitment Towards Greening Workforce (TMCGW) have an important role in improving GHRM.

<b>Autors</b>	<b>Methods</b>	<b>Country</b>	<b>Participant</b>	<b>Findings</b>	<b>Equation</b>	<b>Difference</b>
				between GTD and University Sustainability . <ul style="list-style-type: none"> <li>GHRM can improve and promote green behavior and employee sustainability.</li> </ul>		
(Ercantan & Eyupoglu, 2022) [23]	Quantitative	Turkey	students from the largest university	<ul style="list-style-type: none"> <li>GHRM influences prospective employee perceptions and employee voluntary behavior.</li> <li>Psychological green climate perceptions can play an indirect mediation role.</li> </ul>	Focusing on GHRM and sustainability at the University.	The existence of prospective employee perceptions and voluntary behavior that influence GHRM.
(Aboramadan, 2022) [24]	Quantitative	Italy	Employee in Palesatina	GHRM has a significant influence on employee green behavior. Moreover, GWE has been proven to be able to intervene significantly on the relationship.	Focus on sustainability and GHRM in the university environment.	GWE is able to mediate the role of GHRM and employee green behavior
(Yafi et al., 2021) [25]	Quantitative	Malaysia	Employed	Green training positively affects environmental performance (skills, abilities, knowledge, behavior, attitudes, green awareness, and motivation). Competence and motivation can mediate the relationship between green training and environmental performance.	Focus on sustainability and GHRM in the university environment.	A relationship was found between the six dimensions of green competency on environmental performance and green training.
(Devi et al., 2024) [26]	Quantitative	India	staff members of University	<ul style="list-style-type: none"> <li>GHRM and green sustainability</li> </ul>	Focusing on GHRM in a university	GHRM is able to support the

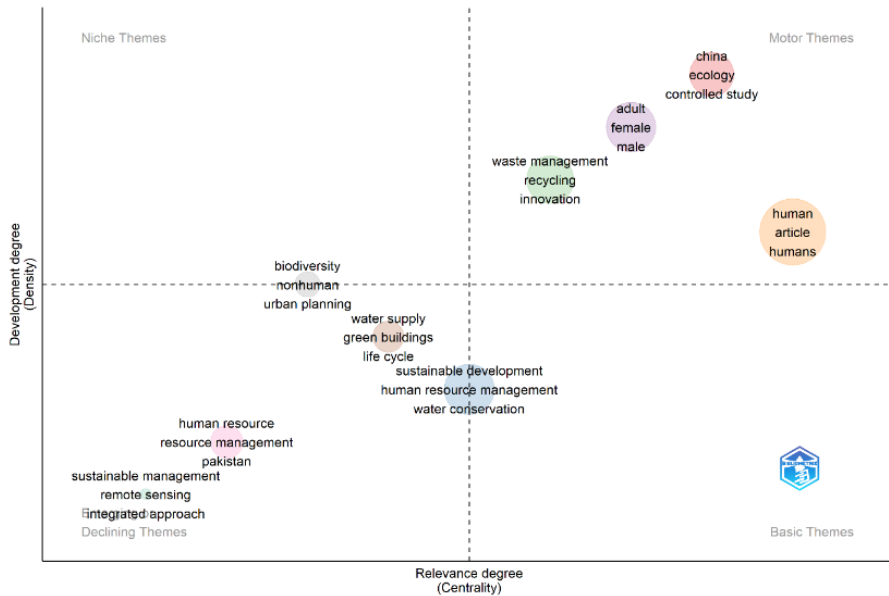
<b>Autors</b>	<b>Methods</b>	<b>Country</b>	<b>Participant</b>	<b>Findings</b>	<b>Equation</b>	<b>Difference</b>
				<p>have a direct impact on each other.</p> <ul style="list-style-type: none"> <li>GHRM significantly supports the organization's environmental mission and is essential in supporting green business practices.</li> </ul>	environment and green sustainability.	organization's environmental mission and is essential in supporting green business practices.
(Ba & Cao, 2023) [27]	Quantitative	China	manufacturers in China's Guangdong Province	<ul style="list-style-type: none"> <li>GHRM affects environmental performance.</li> <li>Pro-environmental actions can mediate the influence of GHRM and environmental performance.</li> <li>In addition, universities can moderate the impact of GHRM and the impact of ecological behavior.</li> </ul>	Focusing on GHRM and university sustainability.	It was found that environmental performance and green recruitment help GHRM in universities.
(Japir Bataineh et al., 2023) [28]	Quantitative	Turkey	managers and staff of the Ministry of Education in Iran	<ul style="list-style-type: none"> <li>Green training affects OCB and environmental performance</li> <li>OCB is able to mediate the influence of both.</li> <li>Organizational support has a moderating role between green training and CEP.</li> </ul>	Focus on GHRM through green training.	The role of OCB on GHRM was found.
(Bahmani et al., 2023) [29]	Quantitative	Turkey	teachers and administrators from three different universities	GHRM can affect innovation performance. Environmental leadership can be enhanced through green innovation.	Focus on GHRM and green innovation.	Green innovation has an important influence in GHRM.



**Table 2.** Number of countries with the most documents

Country	Article
Malaysia	16
Pakistan	14
China	7
India	7
Jordan	6
Saudi Arabia	6

Even though both topics have similar sizes, Sustainable Development Human Resource Management Water Conservation is more highly relevant and more frequently discussed. it also has the similarity of being directly related to humans as the main actors of sustainability change.



**Fig. 3.** Bibliometric thematic map.

In Figure 3, the thematic evolution is separated into two periods. The first is 1983-2020 which is divided into 6 clusters of discussion material and the second period 2021-2024 is divided into 8 clusters. If it is analyzed from the topics that have been obtained, in the 1983 - 2020 topic period, Sustainable Development is the most frequently discussed topic and finally divided into 6 topics in the 2021 - 2024 period. Although the discussion has changed, the weighted inclusion index for sustainable development in the 2021-2024 period is still the most frequently discussed. This shows that sustainability is considered to be a prevalent topic.

Turning to the 2021-2024 period, sustainability and waste management are the main topics that are extensively discussed. This can be seen from the advent of the keyword waste management. This shows that human resource management and sustainable development are starting to consider matters with an environmental context over time. Although there has been a change in the main focus in the two periods, the topic of human resource management is still considered relevant in the context of sustainable development because humans play an important role as actors in sustainable development.

## 4 Conclusion

When considering the environmental issues facing the planet, green human resource management, sustainability, and environmental management are important topics. Corporate university researchers are particularly interested in studying the problems of green human resource management, sustainability, and ecological management because many hospitality companies are implementing various environmental measures for multiple reasons. This paper will summarize and synthesize previous research on GHRM practices, sustainability, and environmental management in the corporate university industry published between 2021 and July 2024.

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