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Enhancing Corporate Sustainability Performance: Role of Green HRM, Green Leadership, Environmental Commitment, Green Innovation and Environmental Regulations.

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ABSTRACT

This study examined the relationships among green human resource management (GHRM), green transformational leadership (GTL), employee environmental commitment (EEC), green innovation (GI), environmental regulation (ER), and corporate environmental performance (CEP) within the context of Jordan. A quantitative research design was adopted to empirically test the proposed framework. Data were collected from 290 employees working across various industrial sectors through a structured Likert scale questionnaire. The measurement instruments were adapted from established studies to ensure reliability and validity. The collected data were analyzed using JASP software, employing descriptive statistics, structural equation modeling, and mediation and moderation analysis techniques. The findings revealed that GHRM and sustainable leadership positively influenced both EEC and CEP. EEC and GI served as significant mediating mechanisms, linking organizational practices with environmental outcomes. Furthermore, ER strengthened the relationships between employee commitment, GI, and CEP. The results highlighted the importance of integrating managerial practices, leadership strategies, and innovation processes to enhance sustainability outcomes. This study contributed to the literature by providing a comprehensive model that explained how internal and external factors jointly influenced environmental performance, offering valuable insights for organizations seeking to improve their sustainability practices.

INTRODUCTION

The increasing salience of environmental sustainability within corporate agendas reflects a broader

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global response to ecological degradation, climate change, and resource scarcity, with developing economies such as Jordan facing intensified environmental pressures due to limited natural resources and rapid urbanization (Aboramadan & Karatepe, 2021). In Jordan, environmental concerns related to water scarcity, energy dependency, and industrial pollution have prompted both governmental and organizational efforts to adopt more sustainable practices. Within this evolving national context, firms encounter mounting expectations from regulatory authorities, stakeholders, and international frameworks to integrate environmental considerations into their strategic and operational processes (Ahmed et al., 2023). Consequently, the incorporation of environmentally oriented management systems has emerged as a critical determinant of organizational resilience and competitiveness in Jordanian industries (Aiswarya & Manivel, 2025). Green human resource management (GHRM) and sustainable leadership represent key internal mechanisms through which organizations embed sustainability into their structures and cultures. GHRM promotes environmentally conscious recruitment, training, and performance management practices, while sustainable leadership cultivates a long term vision aligned with ecological responsibility (Akbar et al., 2024). These approaches collectively shape employee attitudes and behaviors toward environmental stewardship, thereby influencing corporate environmental performance (CEP) in a context characterized by both environmental constraints and regulatory evolution.

Despite the increasing emphasis on sustainability within Jordanian organizations, significant challenges persist in achieving consistent improvements in CEP, which constitutes the central dependent variable of this study (Agmapisarn & Khetjenkarn, 2025). Many firms in Jordan demonstrate an initial commitment to environmental initiatives. However, the translation of these initiatives into tangible environmental outcomes remains limited (Akgün et al., 2026). This discrepancy reflects structural and behavioral challenges, including insufficient employee engagement, lack of innovation in environmentally friendly processes, and uneven enforcement of environmental policies. CEP in the Jordanian context encompasses the reduction of resource consumption, effective waste management, and compliance with environmental regulation (ER), yet performance levels vary considerably across sectors (Akram et al., 2026). Moreover, existing literature often treats environmental performance as a direct consequence of organizational practices, thereby overlooking the underlying mechanisms that mediate these relationships (Ahmad et al., 2021). The absence of comprehensive empirical models that integrate behavioral and innovation based factors limits the understanding of how sustainability practices produce measurable environmental outcomes (Habibullah & Akram, 2024). Therefore, there is a pressing need to examine the determinants of CEP in Jordan, particularly by considering both internal organizational dynamics and the influence of external regulatory frameworks.

This study addresses these issues by examining the relationships between GHRM, sustainable leadership, and CEP within the Jordanian context, with particular emphasis on the mediating roles of green innovation (GI) and employee environmental commitment (EEC) (Ali et al., 2024). The primary aim centers on developing an integrated analytical framework that captures both direct and indirect pathways through which organizational practices influence environmental outcomes (Agrawal & Pradhan, 2023). Specifically, the study investigates how environmentally oriented human resource practices and leadership styles encourage employees to adopt pro environmental behaviors and contribute to innovation in sustainable products and processes. In addition, the study evaluates the moderating role of ER, acknowledging the significance of Jordanian regulatory institutions in shaping corporate environmental practices. By incorporating multiple constructs into a unified model, the research advances theoretical understanding of sustainability oriented organizational performance. The analytical focus lies in identifying causal relationships that explain how managerial strategies and employee responses interact to enhance environmental performance within a resource constrained and regulation driven environment such as Jordan.

The significance of this study lies in its contribution to both academic discourse and practical implementation of sustainability strategies in Jordan. From a theoretical perspective, the study enriches

the literature by integrating concepts from human resource management, leadership theory, and environmental performance into a comprehensive framework tailored to a developing country context. The inclusion of mediating variables such as EEC and GI highlights the importance of internal organizational processes in achieving sustainability outcomes (Al-Ajlouni et al., 2024). Furthermore, the consideration of ER as a moderating factor provides insight into how institutional pressures influence corporate behavior in Jordan. From a practical standpoint, the findings offer valuable implications for managers, policymakers, and stakeholders seeking to enhance CEP. Organizations in Jordan benefit from aligning human resource practices with environmental objectives and fostering leadership approaches that encourage sustainability oriented behaviors (Alavi & Aghakhani, 2023). At the policy level, the study underscores the necessity of effective regulatory frameworks in reinforcing environmentally responsible corporate practices, thereby contributing to national sustainability goals.

REVIEW OF LITERATURE

Recent studies suggest that GHRM is an important contributor to pro-environmental behaviours among employees (Ahmed et al., 2023). The use of recruitment, training, appraisal, and reward systems with an environmental focus helps to add ecological values into the organisational culture and thus influence how employees think and feel about sustainability (Al-Ajlouni et al., 2024). According to Ali et al. (2024), employees show a greater commitment to achieving environmental objectives if their organisation supports and uses such practices through reciprocity, as explained by the social exchange theory. However, whether or not this relationship is strong is dependent on the degree to which the organization GHRM practices are applied in a consistent, genuine manner. Ahmad et al. (2021) stated that if an organization uses GHRM policies in an insincere fashion, it can limit the level of internalization of environmental values of employees. In contrast, when there are consistent GHRM practices that develop both environmental awareness and commitment to sustainability, the sense of psychological ownership is developed among employees with respect to sustainability initiatives, resulting in increased employee commitment to the environment (Akram et al., 2026). Moreover, researching the relationship between GHRM and EEC provides insight into how much GHRM influences employee pro-environmental attitudes over time.

H1: There is a relationship between green human resource management and employee environmental commitment.

Integrating environmental considerations into human resource management practices is a strategic approach for organizations to improve their CEP (Yusliza et al., 2020). By using GHRM, organizations can align their employees' capabilities and behaviors toward achieving their sustainability objectives (You et al., 2025). This alignment fosters better success for companies in carrying out their environmental initiatives. GHRM also enables employees to acquire the competencies necessary to implement eco-efficient practices through training programs, while performance evaluation systems hold employees accountable for achieving environmental results (Setyaningrum & Muafi, 2023). However, the relationship between GHRM practices and CEP is not automatic or consistent across all organizations. Effectiveness of GHRM depends on the level of systematic integration of these practices into the overall organizational processes as opposed to treating them as separate initiatives (Agmapisarn & Khetjenkarn, 2025). Also, translating employee-level behaviors into firm-level environmental results requires coordinated efforts among multiple functional areas. When organizations have poor integration and fragmentation of their human resource practices with their operational strategies, it limits the organizations' ability to achieve significant improvements in their environmental performance (Chaudhary, 2020). Conversely, organizations that have established coherent and comprehensive GHRM systems have greater success at reducing resource usage, increasing the effectiveness of waste management, and improving their overall environmental performance. This suggests that the link between internal managerial practices and the resulting external environmental performance is an important area for further examination.

H2: There is a relationship between green human resource management and corporate sustainability performance.

Leadership is critical for creating organizational values and influencing employee perceptions about sustainable workplace practices (Adeyefa et al., 2023). Long-term environmentally focused, sustainable leaders support environmental employee engagement through their leadership behavior. By demonstrating environmentally responsible behaviors consistently, sustainable leaders establish normative expectations or guidelines to direct employee behaviors around environmental actions (Alkaf et al., 2024). According to Gupta and Jangra (2024), role modeling, communication and reinforcement of organizational environmental goals are ways sustainable leaders help to create a common vision or purpose among all employees. The connection between sustainable leadership and employee environmental engagement is also related to the perceived credibility and/or authenticity of leadership behavior (Singh et al., 2025). When there is continuity between environmental value beliefs held by employees and leadership behavior, employees are more likely to embrace or internalize those environmental values. Conversely, inconsistencies between the spoken word and actions create doubts in employees regarding the commitment of leadership and subsequently decrease employee engagement (Tanova & Bayighomog, 2022). Organizational culture and structural support systems can also influence the effectiveness of and commitment to promoting environmental engagement through leadership. In environments where participation and empowerment are promoted, the use of sustainable leadership will increase the intrinsic motivation of employees to engage in pro-environmental behavior (Zaman et al., 2025). Thus, understanding this relationship can provide an understanding of how leadership practice relates to employee level commitment to sustainability focused organizations.

H3: There is a relationship between green transformational leadership and employee environmental commitment.

Sustainable leadership is an important factor influencing not only the attitudes of employees toward the organization's goals and objectives but also affecting a broader range of organizational outcomes such as environmental performance (Aiswarya & Manivel, 2025). When sustainability is prioritized by the organization's leaders, the consideration of sustainability can be integrated into their approaches to strategic decision making, resource allocation and operational processes (Akbar et al., 2024). All three of these strategies create opportunities for the organization to adopt environmentally friendly practices. The extent to which the relationship between sustainable leadership and an organization's environmental performance is influenced by the effective implementation of the leadership's vision for sustainability is critical (Afum et al., 2021). If there is a lack of effective mechanisms for implementing a visionary approach to leadership, substantial environmental results cannot be achieved. Further, the lack of organizational complexity and external influences can limit the effectiveness of the organizations leaders in implementing sustainability initiatives (Suleman et al., 2025). According to Zhao et al. (2024), leaders who are committed to sustainability provide organizations with the potential to improve environmental performance through better coordination and strategic alignment. Governmental support is considered as a major vehicle for mobilizing resources for environmental initiatives, as well as developing an organizational culture that embraces continuous improvement (Pan et al., 2025). The research on the relationship between sustainable leadership and environmental performance illustrates the importance of the leadership role in the organization's environmental performance as a key motivating factor for driving environmental performance at the organizational level.

H4: There is a relationship between green transformational leadership and corporate sustainability performance.

Employees' commitment toward the environment is a pivotal behaviour in converting a firm's sustainability goals into measurable environmental results (Aggarwal & Agarwala, 2023). Employees

who demonstrate a commitment to the environment engage in behaviours which are environmentally responsible and can sustain environmentally friendly behaviours and encourage others through individual actions such as; decreased use of resources and reduction of waste, and support for green initiatives (Habibullah & Akram, 2024). The majority of these behaviours can improve an organization's corporate environment performance. The strength of this relationship will depend upon how well employee commitment is supported by systems and resources within the organisation (Abualigah et al., 2024). If there is a lack of infrastructure or managerial support, individual actions cannot yield significant results at the organisational level, nor lack of consistency in commitment across employees create a uniform application of environmentally friendly behaviours (Freitas et al., 2021). However, when a high degree of environmental commitment among employees is coupled with supportive organisational structures, their cumulative impact can improve the overall environmental performance of the organisation (Abualigah et al., 2023). This relationship also illustrates the importance of aligning individual values with organisational goals to achieving sustainability objectives; therefore, examining this relationship provides insight into how employee level attitudes and behaviours contribute to and help achieve larger organisation-level environmental results within an organisation.

H5: There is a relationship between employee environmental commitment and corporate sustainability performance.

Organizations environmental performance is heavily influenced by GI, which enables organisations to produce environmentally friendly products and processes through methods such as eco-efficient design, manufacturing and logistics (Yousaf et al., 2025). GI empowers companies to reduce their ecological footprint, improve their efficiency of resources and meet regulatory compliance obligations (Akgün et al., 2026). However, the relationship between GI and organization environmental performance is complex and dynamic. There are factors at both the organisation level and external environment level that influence the effectiveness of GI (Tabrizi et al., 2023). The effective deployment of GI is contingent upon a number of variables including a large investment in research and development and a supportive organisation culture that encourages an environment that fosters an experimental work environment. The potential for innovation to have an effect upon organization environmental performance is usually limited to those organisations that have sufficient resources to allow them to take advantage of innovative companies (You et al., 2025). For organisations that do not have sufficient resources, GI is not be as beneficial on environmental performance. According to Sahan et al. (2025), the benefits derived from GI depend on how well it aligns with an organization's strategy and the needs of its market. If innovation is not aligned with an organization's strategy and market needs, GI may not deliver the environmental benefits to environmental performance that were anticipated (Gim et al., 2022). Therefore, a more thorough investigation of the GI and environmental performance relationship as one of the critical drivers of the impact of technological improvement in the promotion of sustainability outcomes should be conducted.

H6: There is a relationship between green innovation and corporate sustainability performance.

The link between green human resource and CEP usually has an indirect impact, typically operating through other variables, which relate to employee attitudes and behaviours (Dumont et al., 2017). EEC is an important mediating variable, which links the organization's practices to the environmental performance of the organisation (Chaudhary, 2020). Green human resource practices helps to create an organisational culture which promotes employee pro-environmental behaviour and values. Nonetheless, even if there are green human resource practices in place, if employees do not internalize the required pro-environmental values, there will be limited direct impact on environmental performance (Yuan et al., 2024). However, when employees have developed a strong commitment to achieving the organization's environmental goals, they can support the implementation of the organization's sustainability efforts. In contrast, weaker commitment levels limits the effectiveness of human resource practices, with little or no improvement in environmental performance occurring as a result (Pandey et al., 2026).

H7: There is a mediating role of employee environmental commitment in the relationship between green human resource management and corporate sustainability performance.

CEP is often improved through promoting GI, which is the result of the influence of sustainable leadership (Ngo, 2025). Sustainable leaders create an environment conducive to developing and implementing innovative approaches to overcoming environmental obstacles (Austen & Piwowar-Sulej, 2024). However, there are many factors that contribute to the relationship between leadership and CEP, and the direct link may not fully capture the intricate process involved. GI can be used as a significant mediation tool to convert the sustainable leader's vision into tangible results (Zhang et al., 2024). Sustainable leaders direct the resources to apply to develop and implement new technologies or improve existing technologies to achieve environmentally friendly results (Dumont et al., 2017). However, the effectiveness of this mediation depends on the organization's capabilities and available resources. If the organizational capacity for innovative output is low, then the effect of leadership on CEP will be reduced.

H8: There is a mediating role of green innovation in the relationship between green transformational leadership and corporate sustainability performance.

The effect of committed employees on CEP is affected by external structures such as ER and that these external structures affect not only the committed employee's impact on CEP but also how much influence that employee has on affecting environmental performance (Aboramadan & Karatepe, 2021). According to Liu et al. (2021), this is expected to be the case whenever organizations operate in an institutional environment that has strict ER, in which case networked commitment have a stronger effect on CEP than in an institutional environment that has weak regulatory compliance due to the existence of regulatory pressures. Hence, the interaction between networks of committed employees and networked accountability can moderate this relationship. This can in a situation where an organization has a network of committed employees but no external institutional pressures that provide the organization with a basis to hold its employees accountable for their actions (Alavi & Aghakhani, 2023). Therefore, committed employee's actions contributes to environmental performance, and regulatory structures can support their environmental performance. It can result in providing information regarding the interaction between committed employees and the external regulatory framework.

H9: There is a moderating role of environmental regulation between employee environmental commitment and corporate sustainability performance.

Regulatory requirements provide both incentives and constraints that shape both the adoption of innovative environment solutions as well as their effectiveness (Gim et al., 2022). In heavily regulated environments, the influence of GI on environmental performance can be maximized through implementing of advanced green technologies to meet legal compliance requirements (Yuan et al., 2024). Conversely, the application of excessive regulatory pressure may impose financial and operational constraints that inhibit innovation capacity. On the other hand, the existence of moderate and well-conceived regulatory frameworks can stimulate innovation by providing clear guidelines for implementation and incentives for implementation (Sahan et al., 2025). The degree to which innovation can improve environmental performance through innovation is therefore based on the type and degree of regulatory intervention (Tabrizi et al., 2023). It also emphasizes the important role of the institutional context in determining the outcome of corporate innovation activities.

H10: There is a moderating role of environmental regulation between green innovation and corporate sustainability performance.

The model of study is reported in Figure 1.

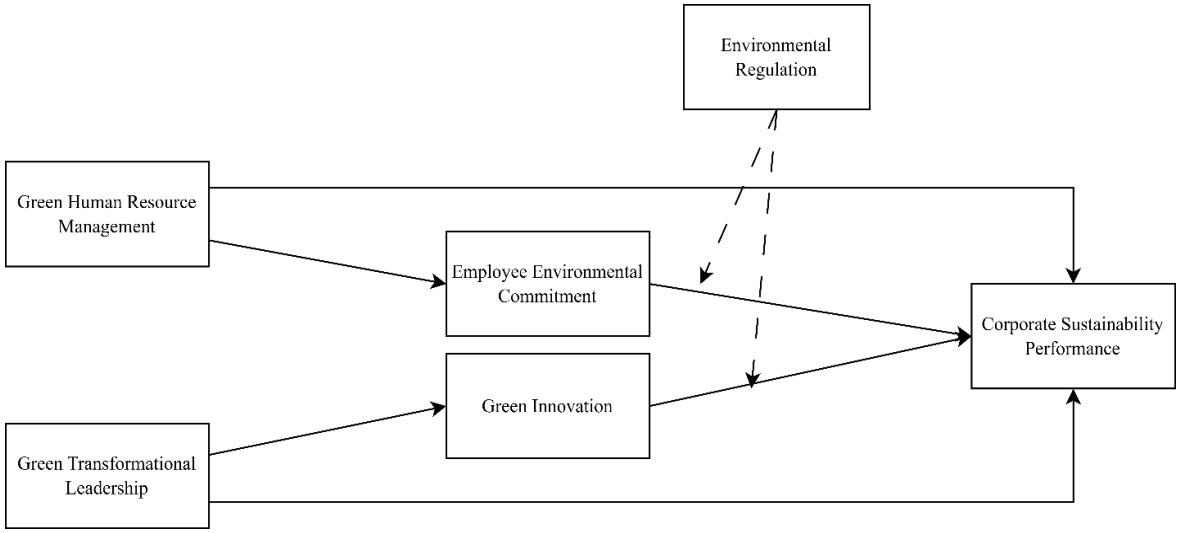


Figure 1: Framework of Study

METHODOLOGY

The methodology of this study was designed to empirically examine the relationships among GHRM, sustainable leadership, EEC, GI, ER, and CEP within the context of Jordan. A quantitative research design was employed to enable systematic data collection and rigorous statistical analysis of the proposed conceptual model. This research examined employees throughout the employee base of manufacturing organizations that produce in environmentally sensitive sectors such as energy, chemicals, in construction, and manufacturing. These sectors have been selected for this study because of their significant influence on the environment and because of their increased risk of environmental damages through government regulations and corporate sustainability requirements. To gain a comprehensive understanding of how employees perceive the company's overall environmental performance, employees at both managerial and non-managerial levels were included in this research. Additionally, the presence of multiple occupations within these organizations provided the opportunity to analyze any differences that expose employees to different green human resources practices, leadership styles, and green business practices. Therefore, this population was appropriate for this study, as environmental performance of corporations in Jordan are severely affected by their organizational practices. Moreover, employees were key informants and were personally impacted by the company's policies and helped implement environmental practices.

This research operationalized all variables by using well-defined definitions from extant literature, that operations could occur consistently across all constructs within the study in terms of theoretical framework development as well as reliability. Furthermore, GHRM was defined as the incorporation of environmental considerations into all managerial functions related to personnel management such as recruiting, training, performance evaluation and compensation systems. Additionally, sustainable leadership is defined as those behaviours exhibited by leaders that demonstrate accountability for unnecessarily damaging the environment; ethical decision making with respect to resource utilization, and taking into consideration the well-being of future generations through responsible use of natural resources (Avery & Bergsteiner, 2011). The concept of employee commitment to environmentalism and sustainability was measured by the degree to which an employee has formed a psychological bond with the organization's environmental sustainability efforts or objectives (Cop et al., 2020). The term GI is used to describe any type of process, product or practice that has been developed or implemented to be environmentally friendly (Soewarno et al., 2019). By comparison, ER means that there are formal policies or laws created by governmental bodies to regulate behaviours of organisations, they comply with society's expectations regarding environmental impacts. In addition, CEP refers specifically to

how well an organisation has performed with respect to minimizing their own environmental impacts through efficient use of resources and reducing pollution.

The measurement instruments for these constructs were adapted from previously validated scales in established empirical studies. Items measuring GHRM and sustainable leadership were adopted from well recognized sources in organizational research (Alhashmi et al., 2025; Avery & Bergsteiner, 2011). Similarly, scales for EEC, GI, ER, and CEP were derived from prior studies that demonstrated strong reliability and validity (Choi & Yu, 2014; Cop et al., 2020; Soewarno et al., 2019; Ya'u et al., 2021). Minor modifications were made to ensure contextual relevance to Jordan, while maintaining the integrity of the original constructs. All items were measured using a structured questionnaire.

To have a good representation of all different types of industries in Jordan, stratified random sampling was used as the sampling method for this study (Sekaran & Bougie, 2016). The population was divided into strata according to industry categories first, and then a sampling procedure conducted to select respondents randomly from each stratum. This type of sampling improves the representation of the overall sample and minimizes the likelihood of sampling error. The sample size to be used for analysis was determined before fit and was also established based on the requirements associated with conducting statistical tests. To ensure the results received were statistically powerful and reliable, more than 250 respondents were required as the final results included employees of a number of different organisations across multiple industries, thereby providing a greater opportunity to generalize the findings to other individuals and industries within Jordan.

In order to collect the required data for this research project, a structured questionnaire based on a seven-point Likert Scale format was developed. Each response was rated from strongly disagree (1) to strongly agree (7), providing a range of responses to indicate the participant's level of agreement with the statements included in the questionnaire. The structured questionnaire was developed in a hard copy format as well as electronically to allow maximum access and participation from study participants. Pilot testing was conducted prior to the administration of the main data collection instrument to evaluate the clarity and reliability of the structured questionnaire. The information gathered from pilot testing assisted with making revisions to wording and format of the structured questionnaire. To assist in minimizing response bias and to promote honesty in reporting, the study participants were assured of anonymity and confidentiality. Using a standardized instrument allowed for consistent measurement of the variables and collection of data appropriate for statistical analysis. The study collected a usable response of 290 respondents and JASP statistical tool was used to analyze the data.

DATA ANALYSIS AND FINDINGS

According to the demographics of the participants, there is no significant gender bias in the sample as males and females were nearly evenly distributed between 51% and 49%. The greatest proportion of participants (51%) are in the age group of 25-34 years old, indicating that most participants are just entering their profession. In addition, fewer participants are 45 years old and older (8%) than would be expected, which also indicates that there are many younger professionals in the sample. Participants, who are primarily (65%) single, provide further support for the younger demographic profile of the sample. The educational level of most participants is quite high, with 70% of respondents holding a bachelor's degree and 21% holding a master's degree. Accordingly, this demonstrates a highly educated workforce among the respondents. Of those surveyed, 73% of the participants have approximately 5-15 years of work experience, which demonstrates moderate amounts of professional experience. Similarly, the majority of respondents (41%) have been in their current organization for 7-10 years, which demonstrates a relatively stable workforce. The majority (60%) of respondents are in middle management positions, which further demonstrates the importance of the respondents as contributors to the decision-making processes of their organizations (see Table 1).

Table 1: Demographics

Variable	Level	Proportion
Gender	Male	51%
	Female	49%
Age Group	Less than 25 years	17%
	25–34 years	51%
	35–44 years	23%
	45 years and above	8%
Marital Status	Single	65%
	Married	26%
	Other	10%
Educational Level	Bachelor degree	70%
	Master degree	21%
	Doctoral degree	6%
	Other	3%
Work Experience	Less than 5 years	13%
	5–10 years	36%
	11–15 years	37%
	More than 15 years	14%
Organizational Tenure	Less than 3 years	13%
	3–6 years	27%
	7–10 years	41%
	More than 10 years	20%
Employment Level	Top management	18%
	Middle management	60%
	Operational staff	23%
Industry Sector	Manufacturing	25%
	Construction	27%
	Energy	25%
	Chemical	17%
	Other	7%

Furthermore, Table 2 shows that respondents had high mean scores on all of the study variables, indicating widespread environmentally-focused attitudes and practices. Employees' commitment to the environment is reflected in a mean of 4.414 (SD = 1.707), indicating that they feel strongly committed to their organization's ecologically sustainable business practices. Also, CEP and GHRM received similar, but slightly lower, mean scores of 4.393 (SD = 1.652) and 4.376 (SD = 1.697), respectively, indicating that sustainability was emphasized at the organizational and managerial levels. Additionally, GI and sustainable leadership received almost equally high means of 4.369 (SD = 1.678) and 4.345 (SD = 1.667) as well, suggesting that sustainability is being promoted through strong leadership and innovative practices. ER received the lowest mean score of 4.334 (SD = 1.627), and it remained high because of the high regulatory environment respondents reported experiencing. Based on the standard deviations for all the study variables are relatively close to each other, the degree of variability between and within the individual variables is moderate, with nearly all respondents providing similar responses due to their generally positive orientation to constructs associated with sustainability.

Table 2: Mean and Standard Deviation

	Valid	Missing	Mean	Std. Deviation
GHRM	290	0	4.376	1.697
GTL	290	0	4.345	1.667
EEC	290	0	4.414	1.707
GI	290	0	4.369	1.678
ER	290	0	4.334	1.627
CSP	290	0	4.393	1.652

According to the chi-square test results, overall model is statistically significant based on a chi-square value of 32.947 and 9 degrees of freedom, with a corresponding probability value of less than 0.001 which is much lower than the traditional cut-off for significance (0.05) and, consequently, concludes that the null hypothesis should be rejected because there is a meaningful difference between the expected and observed frequencies of variables in the model. These findings support the fact that the proposed model sufficiently explains the relationship of the variables being studied and provides further support that the proposed model can be used for subsequent analysis for the observed frequencies of the variables (Table 3).

Table 3: Chi-square Test

	Value	Df	p
Model	32.947	9	< .001

An anti-image correlation matrix assesses how well the variables used for factor analysis have partial correlations between variables. Every variable shares perfect correlation with itself within the diagonal's value of 1, which is to be expected. The remaining off-diagonal's value is low and negative as well, indicating that the variables have weak partial correlations after accounting for the effects of other variables. This pattern of correlation supports that there is no multicollinearity present amongst the several constructs in the model, implying that each construct is distinct from each other. Amongst all of the constructs, ER has the strongest negative correlation with green transformational leadership (GTL) (-0.301), which remains within an acceptable range. Collectively, the magnitude of the correlations indicates that the variables are sufficiently independent from each other to support the appropriateness of the current dataset for use within subsequent types of multivariate/factor analyses (see Table 4).

Table 4: Anti-Image Correlation Matrix

	GHRM	GTL	EEC	GI	ER	CSP
GHRM	1.000					
GTL	-0.103	1.000				
EEC	-0.062	-0.134	1.000			
GI	-0.019	-0.224	-0.268	1.000		
ER	-0.064	-0.301	-0.106	-0.28	1.000	
CSP	-0.022	-0.203	-0.254	-0.192	-0.194	1.000

The results presented in Table 5 provided strong empirical support for all proposed direct relationships. Specifically, the findings indicated that GHRM had a significant positive effect on EEC ($\beta = 0.440$, $p < 0.001$), thereby supporting hypothesis 1. Similarly, GHRM also exerted a significant positive influence on CEP ($\beta = 0.452$, $p < 0.001$), confirming hypothesis 2. The results further revealed that sustainable leadership significantly enhanced EEC ($\beta = 0.361$, $p < 0.001$), supporting hypothesis 3. In addition, sustainable leadership demonstrated a strong positive impact on CEP ($\beta = 0.553$, $p < 0.001$), thereby supporting hypothesis 4. EEC was also found to significantly contribute to CEP ($\beta = 0.458$, $p < 0.001$), providing evidence in support of hypothesis 5. Moreover, GI exhibited a significant positive relationship with CEP ($\beta = 0.502$, $p < 0.001$), confirming hypothesis 6.

Table 5: Direct Relationships

Direct effects	Relationship			Estimate	Std. error	z-value	p
H1	GHRM	→	EEC	0.440	0.054	8.160	< .001
H2	GHRM	→	CSP	0.452	0.083	5.445	< .001
H3	GTL	→	EEC	0.361	0.055	6.580	< .001
H4	GTL	→	CSP	0.553	0.079	7.000	< .001
H5	EEC	→	CSP	0.458	0.082	5.585	< .001
H6	GI	→	CSP	0.502	0.084	5.976	< .001

The results of the indirect effect analysis provided strong support for the mediating roles proposed in the study model. Specifically, the findings indicated that EEC significantly mediated the relationship between GHRM and CEP ($\beta = 0.269$, $p < 0.001$), thereby supporting hypothesis 7. This result suggested that GHRM enhanced CEP indirectly through its positive influence on employees' environmental commitment. In addition, GI was found to significantly mediate the relationship between sustainable leadership and CEP ($\beta = 0.234$, $p < 0.001$), providing empirical support for hypothesis 8. This finding demonstrated that sustainable leadership contributed to improved environmental performance through the promotion of innovative environmental practices (see Table 6).

Table 6: Indirect Relationships

Indirect effects	Relationship					Estimate	Std. error	z-value	p
H7	GHRM	→	EEC	→	CSP	0.269	0.037	7.270	< .001
H8	GTL	→	GI	→	CSP	0.234	0.029	8.068	< .001

The moderating effect analysis demonstrated that ER significantly strengthened the relationships between the predictor variables and CEP. Specifically, the interaction between ER and EEC showed a strong positive effect on CEP ($\beta = 0.652$, $p < 0.001$), thereby supporting hypothesis 9. This finding indicated that the positive impact of EEC on environmental performance became more pronounced under higher levels of regulatory pressure. In addition, the interaction effect between ER and GI was also significant ($\beta = 0.553$, $p < 0.001$), providing support for hypothesis 10. This result suggested that ER enhanced the effectiveness of GI in improving environmental outcomes (see Table 7).

Table 7: Moderating Relationships

Moderating effects	Relationship			Estimate	Std. error	z-value	p
H9	ER*EEC	→	CSP	0.652	0.083	7.855	< .001
H10	ER*GI	→	CSP	0.553	0.079	7.000	< .001

DISCUSSION AND CONCLUSION

This section develops the discussion on the findings. Evidence from this study support the first hypothesis that GHRM practices positively impacted employee commitment to the environment. Accordingly, companies that incorporated environmental values into their human resource management strategies were able to create a stronger psychological connection between their employees and the company's sustainability goals (Aggarwal & Agarwala, 2023). Additionally, employees appeared to respond positively to recruitment, training, and reward systems based on environmental considerations, which resulted in employees exhibiting behavior consistent with those of their employers (Abualigah et al., 2023). This is further corroborated by the understanding that structured and systematic practices of human resource management are an important way to shape employee attitude and motivate employees to behave in ways that are pro-environmental. Furthermore, this research highlights the need for organizations to integrate sustainability into their everyday business practices as opposed to implementing it as a stand-alone program or initiative (Akgün et al., 2026). The positive relationship between GHRM and employee commitment toward environmental responsibility does not suggest that employees are committed to the environment on their own accord (Adeyefa et al., 2023). Furthermore, the commitment is influentially developed through the implementation of systematic managerial practices (Agmapisarn & Khetjenkarn, 2025). Therefore, this finding supports the contention that implementing strategic human resource interventions is a critical component to developing a workforce that can actively support environmental sustainability.

The second hypothesis has been positively confirmed that GHRM has a positive impact on CEP. As a result of this research finding, companies who have implemented an extensive quantity of GHRM practices can therefore, improve upon their overall CEP (Ngo, 2025). Therefore, this result confirmed previous knowledge that CEP is influenced by organizational practices through the

collective employee actions of the organization (Singh et al., 2025). The finding also shows that CEP is not only heavily dependent on technological changes but also other factors such as the behavioral alignment of employee's work-related behavior to the organizational environmental goals.

The findings of the third hypothesis demonstrated a significant relationship between the influences of sustainable leadership on the development of environmental commitment by employees. The identification of a relationship between these two variables demonstrated that effective leaders positively impact employee attitudes toward environmental responsibility. Leaders who were consistently role models of sustainability through their promotion of sustainability values and demonstration of environmentally responsible behaviours were able to encourage employees to adopt similar attitudes (Afum et al., 2021). The acceptance of the hypothesis indicated the significance of leadership to the behavioural influence mechanism within organizations. Furthermore, the data demonstrated that employees are more likely to establish commitment to the organization when the leaders exhibit behaviour that is aligned with the organization's sustainability objectives (Pandey et al., 2026). This finding supports the broader perspective that leadership creates the tone and direction of an organization's culture. Such evidence also supports the position that sustainable leadership enhances employees' internalization of environmental values and thereby strengthens their commitment (Habibullah & Akram, 2024). Furthermore, the results support the viewpoint that leadership effectiveness in sustainability contexts is determined by the means of both communicating and demonstrating environmentally responsible behaviour.

The fourth hypothesis was confirmed through this research study which demonstrated that sustainable leadership has a positive impact on CEP. This means that leaders who place an emphasis on sustainability can be able to convert their vision into improved organizational performance (Gupta & Jangra, 2024). The positive correlation between leadership and environmental performance indicates that leadership aids in alignment of strategic goals with ecological considerations. This finding confirms previous assertions that leadership is pivotal in the direction of organizations as well as the allocation of resources (Yousaf et al., 2025). The confirmation of the fourth hypothesis also suggests that sustainable leadership is not limited to influencing the attitudes of employees, but it also directly contributes to organizational performance. According to Zaman et al. (2025), leaders have been shown to encourage and assist in the implementation of environmentally responsible behaviours and hold others accountable for their actions. This finding suggests that the commitment of leaders to sustainability is a key factor in achieving measurable improvements in the environment (Tanova & Bayighomog, 2022). Furthermore, the finding suggests that the success of environmental initiatives is heavily dependent on how many of them have been supported and reinforced by leadership.

In this study, the fifth hypothesis was accepted and it was also determined that EEC positively influenced the corporation's level of CEP. These results support the hypothesis that employees who have strong environmental values and commit to them would engage in behaviours that would improve those practices to produce better environmental outcomes (Liu et al., 2021). The support of this hypothesis provided evidence of the impact that employee-level attitudes have on achieving corporate sustainability goals; it also reiterated that CEP is a function of individual behaviours within a company (Pham et al., 2020). Employees who had an internalized commitment to meet the company's environmental goals would then demonstrate their participation in environmental initiatives such as resource conservation and waste reduction (Yusliza et al., 2020). The findings further support the view that an employee's behavioural commitment must be recognised as an important contributor to the actualization of corporate policy in practice (Austen & Piwowar-Sulej, 2024). Finally, they demonstrate that the success of corporate sustainability initiatives will be contingent upon the positive attitudes that employees have toward the implementation of those initiatives.

The sixth hypothesis was also supported reporting that the organizations that embrace

environmentally conscious practices are more adept at improving their overall ecological impact. According to Pan et al. (2025), by developing processes and products with less negative effect on the planet, organizations can achieve greater success. Technological advancement was shown to operate in conjunction with managerial approaches to improve how organizations achieve environmental performance improvement (Setyaningrum & Muafi, 2023). Organizations pursuing continuous innovation are better positioned to meet the challenges presented by the environment than those that do not place a high priority on innovation (Tabrizi et al., 2023). The finding supports sustainable development as a function of both behavioral and technological enhancement (Zhao et al., 2024). Therefore, GI should be considered one of the most important means for organizations in accomplishing their long-term goals for improving their environment performance.

The results supported seventh hypothesis, which suggested that employees' commitment to the environment played a mediating role in the relationship between GHRM practices and CEP. This finding showed that GHRM practices improved CEP through fostering employee commitment (Gim et al., 2022). Therefore, while human resource management practices provided a platform for sustainability, it was the commitment of employees to environmental values that resulted in implementing these human resources management practices into tangible results (Al-Ajlouni et al., 2024). Furthermore, acceptance of this hypothesis shows how critical consideration of behavioral mechanisms is to understanding organizational performance and how effective human resource management practices are on the extent to which employees have internalized environmental values. This finding is consistent with the view that organizational policy alone cannot result in performance unless employees are actively involved (Alavi & Aghakhani, 2023). Ultimately, this finding highlights the interrelatedness of management practices and employee behavior in achieving sustainability outcomes.

The eight hypothesis supported the assumption that there was a mediated relationship between sustainable leadership and CEP through GI. Sustainable leaders utilize innovation as a means to create influence and promote successful environmental outcomes (Suleman et al., 2025). Furthermore, sustainable leadership provides an environment that supports the development of environmentally friendly technologies and practices (Aboramadan & Karatepe, 2021). Moreover, highlighting this hypothesis illustrates that innovation is one of the key pathways for leadership to convert its vision into efficacy and demonstrates that leadership alone cannot create results; rather it must have mechanisms to help implement practical solutions. GI serve as a link between strategic intent and operational results, allowing entities to create measurable improvements in environmental performance (Abualigah et al., 2024).

According to the findings of ninth hypothesis, ER had an impact on the relationship between employee commitment to the environment and corporate performance regarding the environment (Tabrizi et al., 2023). This study indicates that when employee commitment is positively related to corporate performance regarding the environment, it will be even more strongly related if there is a strong regulatory framework in place (Sahan et al., 2025). This finding also supports the argument for the interaction of internal factors and external factors. Thus, even though employee commitment contributes to the achievement of corporate performance with respect to the environment, having a regulatory framework in place appears to enhance this relationship (Yuan et al., 2024). In addition, this study provides additional evidence supporting the idea that regulatory frameworks provide an accountability mechanism which encourage organizations to place emphasis on engaging in environmentally preferable practices. This is further supported by the finding that employee actions will be more successful when the activities of employees are supported by a structured regulatory environment (Freitas et al., 2021). Finally, the finding of a moderating effect on the relationship between employee behaviour and corporate performance related to the environment provides evidence that organizational outcomes are influenced by extrinsic pressures.

The tenth hypothesis was also supported and showed that ER had a moderating effect upon the

relationship between GI and CEP. This finding demonstrated that an organization's ability to utilize GI to enhance its environmental performance with the presence of regulatory pressure was contextual in nature (Liu et al., 2021). Organizations seem to utilize their innovative capabilities to meet the regulatory requirements when there are higher levels of regulatory pressure, thereby producing better environmental performance (Setyaningrum & Muafi, 2023). This acceptance of the hypothesis illustrates that regulation plays an important role as a contextual factor that affects organizational innovation. It also indicates that regulatory frameworks can act as both the impetus and as a support for innovation (You et al., 2025). This is consistent with the current body of knowledge that demonstrates that organizations that develop environmentally friendly technologies and/or practices do so in response to regulatory policies in place (Chaudhary, 2020). Moreover, this finding emphasizes that innovation on its own may not be sufficient to attain optimal performance without supporting institutional conditions (Dumont et al., 2017).

THEORETICAL AND PRACTICAL IMPLICATIONS

This research contributed to the development of sustainability literature and the theory of organizational behavior by bringing together various theoretical viewpoints into an integrated foundation. This study expanded HR management theory by showing how environmentally inclined practices have an important impact on employees' attitudes and results from an organization. This study augmented the field of leadership by including sustainable leaders as a significant part of the definition of effective leaders; environmental orientation is another critical element for successful leaders. This research expands knowledge by demonstrating that EEC is an important mechanism for translating human resource practices into effective results. The addition of GI provided additional theoretical depth in understanding how technological advancements connect with both behavioral and managerial processes. Finally, the moderating effect of ER provided evidence for how knowledge applies, it shows how environmental factors affect the way organizations behave. To sum up, the integration of these theories provided an explanation of CEP, the overall model provided a more comprehensive approach to the understanding of organizational sustainability driven performance and filled the gap that exists in the literature, as these variables have too often been studied individually.

For managers, policymakers, and other non-managerial organizational actors hoping to improve CEP, the results of this study provide useful information. From a managerial point of view, the findings suggest that there is value in incorporating environmental considerations into human resource practices such as recruiting employees with an interest in sustainability, training employees about sustainability and evaluating their performance based upon sustainability-related goals. Moreover, leadership was also found to play a significant role in influencing the degree to which employees support sustainability initiatives as well as the overall success of an organization. Accordingly, organizations were encouraged to use leadership models that specifically support environmental responsibility. Technology was also found to be a critical driver of improving environmental performance, which supports the need for organizations to invest in GI. This study identified EEC as an essential factor in enabling organizations to achieve their sustainability-related objectives, which suggests that organizations should work to increase employee engagement with their sustainability programs. In terms of policy, ER was shown to be very important, with evidence supporting that strong and effectively enforced regulations will help reinforce organizations' efforts to improve sustainability and create a uniform level of environmental performance across all industries.

LIMITATIONS AND FUTURE DIRECTIONS

Despite the valuable contributions of this research, there are several boundaries within the study which offer avenues for further research. The first limitation to the understanding of causal

relationships is attributed to the cross-sectional nature of the research design to collect data at one point in time. Future research could include a longitudinal approach and, therefore, assess how organisations have changed their practices and environmental performance over time. Secondly, the study relied solely on self-reported data, therefore creating a risk of common method bias and social desirability effects in the collected data. Future research could include multiple sources of data collected from objective measures of organisational performance, as these would provide additional validity to the data analyzed. Thirdly, the financial sectors in Jordan included in this study limit the generalizability of these findings in other sectors and in other countries that are subject to different regulatory environments. Future research may assess the applicability of the model to different geographic and industrial contexts to facilitate comparisons of results across several contexts. There are additional mediating and moderating variables that could be examined in the future, such as organisational culture, technological capability and stakeholder pressure, which may provide a better understanding of the model being used in this study. Furthermore, the expansion of this conceptual model will provide, regardless of additional variables added in the future, additional theoretical and empirical information related to CEP.

REFERENCES

Aboramadan, M., & Karatepe, O. M. (2021). Green human resource management, perceived green organizational support and their effects on hotel employees' behavioral outcomes. *International Journal of Contemporary Hospitality Management*, *33*(10), 3199-3222. https://doi.org/10.1108/IJCHM-12-2020-1440

Abualigah, A., Badar, K., Nisar, Q. A., & Karatepe, O. M. (2024). A moderated mediation model of green human resource management. *Service Industries Journal*, *44*(7-8), 457-479. https://doi.org/10.1080/02642069.2024.2332995

Abualigah, A., Koburtay, T., Bourini, I., Badar, K., & Gerged, A. M. (2023). Towards sustainable development in the hospitality sector: Does green human resource management stimulate green creativity? A moderated mediation model. *Business Strategy and the Environment*, *32*(6), 3217-3232. https://doi.org/10.1002/bse.3296

Adeyefa, A. E., Adedipe, A., Adebayo, I. N., & Adesuyan, A. J. (2023). Influence of green human resource management practices on employee retention in the hotel industry. *African Journal of Hospitality, Tourism and Leisure*, *12*(1), 114-130. https://doi.org/10.46222/ajhtl.19770720.357

Afum, E., Agyabeng-Mensah, Y., Opoku Mensah, A., Mensah-Williams, E., Baah, C., & Dacosta, E. (2021). Internal environmental management and green human resource management: significant catalysts for improved corporate reputation and performance. *Benchmarking*, *28*(10), 3074-3101. https://doi.org/10.1108/BIJ-09-2020-0504

Aggarwal, P., & Agarwala, T. (2023). Relationship of environmental strategy and performance: Role of green human resource management. *International Journal of Business Environment*, *14*(1), 37-66. https://doi.org/10.1504/IJBE.2022.10048217

Agmapisarn, C., & Khetjenkarn, S. (2025). How green leadership moderates organizational support and environmental performance: Strategic green human resource management insights. *Business Strategy and Development*, *8*(4). https://doi.org/10.1002/bsd2.70236

Agrawal, S., & Pradhan, S. (2023). Employee green behavior in hotels: the role of green human resource management, green transformational leadership and value congruence. *Consumer Behavior in Tourism and Hospitality*, *18*(2), 241-255. https://doi.org/10.1108/CBTH-11-2022-0191

Ahmad, S., Islam, T., Sadiq, M., & Kaleem, A. (2021). Promoting green behavior through ethical leadership: A model of green human resource management and environmental knowledge. *Leadership and Organization Development Journal*, *42*(4), 531-547. https://doi.org/10.1108/LODJ-01-2020-0024

Ahmed, Z., Khosa, M., Rehman, S. U., & Omar Faqera, A. F. (2023). Towards sustainable development in the manufacturing industry: Does green human resource management facilitate green

creative behaviour? A serial mediation model. *Journal of Manufacturing Technology Management*, *34*(8), 1425-1447. https://doi.org/10.1108/JMTM-03-2023-0106

Aiswarya, U. B., & Manivel, K. (2025). Green human resource management and organizational citizenship behavior: The influence of eco-friendly lifestyle and organizational commitment. *International Journal of Accounting and Economics Studies*, *12*(5), 583-595. https://doi.org/10.14419/vsdfbe88

Akbar, Y. K., Maratis, J., Nawangsari, L. C., Putri, R. K., & Sk, P. (2024). The effects of green human resource management practices on sustainable university through green psychological climate of academic and non-academic staff. *Cogent Business and Management*, *11*(1), 2375404. https://doi.org/10.1080/23311975.2024.2375404

Akgün, A. E., Keskin, H., & Esen, E. (2026). Green human resource management and B2B sustainability performance: The serial mediating role of green work engagement and green innovation *Journal of Business and Industrial Marketing*, *41*(6), 856-870. https://doi.org/10.1108/JBIM-01-2025-0045

Akram, Z., Ahmad, S., Akram, U., Khan, A. G., & Han, H. (2026). Redefining hospitality for a sustainable tomorrow: Green human resource management and knowledge-oriented leadership at the forefront. *Journal of Sustainable Tourism*, *34*(3), 736-763. https://doi.org/10.1080/09669582.2025.2516500

Al-Ajlouni, M. I., Al-Fawaeer, M., Al-Dweiri, M. A. M., Hijazi, R., Al Sarayreh, A., & Al-Ajlouni, K. M. G. (2024). Examining the mediating mechanism of the environmental organisational citizenship behaviour in the relationship between green human resource management and sustainable performance. *International Journal of Productivity and Quality Management*, *43*(3), 277-299. https://doi.org/10.1504/IJPQM.2024.142311

Alavi, S., & Aghakhani, H. (2023). Identifying the effect of green human resource management practices on lean-agile (LEAGILE) and prioritizing its practices. *International Journal of Productivity and Performance Management*, *72*(3), 599-624. https://doi.org/10.1108/IJPPM-05-2020-0232

Alhashmi, M., Hilmi, M. F., Ahmed, G., & Abudaqa, A. (2025). Moderating Role of Green Employee Behaviour on the Relationship between Green HRM Practices, Green Leadership and Sustainable Performance in the Resources Economy based Public Firms of UAE. *Journal of Mines, Metals & Fuels*, *73*(7). https://doi.org/10.18311/jmmf/2025/49892

Ali, S. R., Al masud, A., Hossain, M. A., Islam, K. M. Z., & ShafiulAlam, S. M. (2024). Weaving a greener future: The impact of green human resources management and green supply chain management on sustainable performance in Bangladesh's textile industry. *Cleaner Logistics and Supply Chain*, *10*. https://doi.org/10.1016/j.clscn.2024.100143

Alkaf, A. R., Yusliza, M. Y., Foster, B., Farooq, K., Ramayah, T., & Muhammad, Z. (2024). Green human resource management and sustainability: Moderating role of absorptive capacity. *Industrial and Commercial Training*, *56*(4), 290-310. https://doi.org/10.1108/ICT-02-2024-0013

Austen, A., & Piwowar-Sulej, K. (2024). Green human resource management in the manufacturing sector: A bibliometric literature review. *Engineering Management in Production and Services*, *16*(4), 34-47. https://doi.org/10.2478/emj-2024-0032

Avery, G. C., & Bergsteiner, H. (2011). Sustainable leadership practices for enhancing business resilience and performance. *Strategy & Leadership*, *39*(3), 5-15. https://doi.org/10.1108/10878571111128766

Cop, S., Alola, U. V., & Alola, A. A. (2020). Perceived behavioral control as a mediator of hotels' green training, environmental commitment, and organizational citizenship behavior: A sustainable environmental practice. *Business Strategy and the Environment*, *29*(8), 3495-3508.

Chaudhary, R. (2020). Green human resource management and employee green behavior: an empirical analysis. *Corporate Social Responsibility and Environmental Management*, *27*(2), 630-641. https://doi.org/10.1002/csr.1827

Choi, Y., & Yu, Y. (2014). The influence of perceived corporate sustainability practices on employees and organizational performance. *Sustainability*, *6*(1), 348-364. https://doi.org/10.3390/su6010348

Dumont, J., Shen, J., & Deng, X. (2017). Effects of green HRM practices on employee workplace green

behavior: The role of psychological green climate and employee green values. *Human resource management*, *56*(4), 613-627. https://doi.org/10.1002/hrm.21792

Freitas, W. R. d. S., Oliveira, J. H. C., Teixeira, A. A., & Stefanelli, N. O. (2021). Green human resource management, corporate social responsibility and customer relationship management: Relationship analysis in the Brazilian context. *International Journal of Productivity and Performance Management*, *70*(7), 1705-1727. https://doi.org/10.1108/IJPPM-12-2019-0597

Gim, G. C. W., Ooi, S. K., Teoh, S. T., Lim, H. L., & Yeap, J. A. L. (2022). Green human resource management, leader–member exchange, core self-evaluations and work engagement: the mediating role of human resource management performance attributions. *International Journal of Manpower*, *43*(3), 682-700. https://doi.org/10.1108/IJM-05-2020-0255

Gupta, A., & Jangra, S. (2024). Green human resource management and work engagement: Linking HRM performance attributions. *Sustainable Futures*, *7*, 100174. https://doi.org/10.1016/j.sftr.2024.100174

Habibullah, H., & Akram, T. (2024). The impact of green human resource management practices on employees' pro-environmental behavior: The mediating role of green lifestyle and the moderating effect of green self-efficacy. *The International Journal of Interdisciplinary Organizational Studies*, *19*(2), 99–119. https://doi.org/10.18848/2324-7649/CGP/v19i02/99-119

Liu, Z., Mei, S., & Guo, Y. (2021). Green human resource management, green organization identity and organizational citizenship behavior for the environment: The moderating effect of environmental values. *Chinese Management Studies*, *15*(2), 290-304. https://doi.org/10.1108/CMS-10-2019-0366

Ngo, Q. H. (2025). Green human resource management in vietnamese small restaurants: Integrating institutional and natural-resource-based perspectives. *Corporate Social Responsibility and Environmental Management*, *33*(2), 2108-2127. https://doi.org/10.1002/csr.70276

Pan, B., Xiang, J., & Qin, C. (2025). Green human resource management practices and pro-environmental behaviors in high-tech firms: The roles of greenwashing perceptions and motivation types. *Journal of Cleaner Production*, *525*, 146571. https://doi.org/10.1016/j.jclepro.2025.146571

Pandey, D., Singh, J., & Saxena, G. (2026). Green human resource management in hospitality: A two-decade bibliometric mapping of themes, trends, and emerging frontiers. *Asian Journal of Interdisciplinary Research*, *9*(2), 1-24. https://doi.org/10.54392/ajir2621

Pham, N. T., Hoang, H. T., & Phan, Q. P. T. (2020). Green human resource management: a comprehensive review and future research agenda. *International Journal of Manpower*, *41*(7), 845-878. https://doi.org/10.1108/IJM-07-2019-0350

Sahan, U. M. H., Jaaffar, A. H. H., & Osabohien, R. (2025). Green human resource management, energy saving behavior and environmental performance: A systematic literature review. *International Journal of Energy Sector Management*, *19*(1), 220-237. https://doi.org/10.1108/IJESM-01-2024-0013

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach* (7 ed.). John Wiley & Sons. https://books.google.com.pk/books?id=Ko6bCgAAQBAJ

Setyaningrum, R., & Muafi, M. (2023). Green human resource management, green supply chain management, green lifestyle: Their effect on business sustainability mediated by digital skills. *Journal of Industrial Engineering and Management*, *16*(1), 1-26. https://doi.org/10.3926/jiem.4152

Singh, S., Martins, A., & Tefera, O. (2025). Green human resource management and sustainable development goals in non-profit organisations. *SA Journal of Human Resource Management*, *23*. https://doi.org/10.4102/sajhrm.v23i0.2780

Soewarno, N., Tjahjadi, B., & Fithrianti, F. (2019). Green innovation strategy and green innovation: The roles of green organizational identity and environmental organizational legitimacy. *Management Decision*, *57*(11), 3061-3078. https://doi.org/10.1108/MD-05-2018-0563

Suleman, A. R., Nejati, M., Shafaei, A., & Redmond, J. (2025). Green human resource management practices in the hospitality and tourism industry: An integrative multilevel systematic review. *Journal of Hospitality and Tourism Management*, *62*, 46-56. https://doi.org/10.1016/j.jhtm.2024.12.009

Tabrizi, R. S., Karatepe, O. M., Rezapouraghdam, H., Rescalvo-Martin, E., & Enea, C. (2023). Green human resource management, job embeddedness and their effects on restaurant employees' green voice behaviors. *International Journal of Contemporary Hospitality Management*, *35*(10), 3453-3480. https://doi.org/10.1108/IJCHM-06-2022-0750

Tanova, C., & Bayighomog, S. W. (2022). Green human resource management in service industries: the construct, antecedents, consequences, and outlook. *Service Industries Journal*, *42*(5-6), 412-452. https://doi.org/10.1080/02642069.2022.2045279

Ya'u, A., Saad, N., & Mas'ud, A. (2021). Validating the effects of the environmental regulation compliance scale: Evidence from the Nigerian oil and gas industry. *Environmental Science and Pollution Research*, *28*(11), 13570–13580. https://doi.org/10.1007/s11356-020-11608-z

You, F., Kee, D. M. H., & Tan, G. P. L. (2025). Green human resource management, green transformational leadership, and green behavior in manufacturing industry in China: The role of green creativity. *Journal of Chinese Human Resources Management*, *16*(3), 142-163. https://doi.org/10.47297/wspchrmWSP2040-800507.20251603

Yousaf, H. Q., Naseer, M., & Aslam, M. Z. (2025). Green human resource management practices to promote environmental performance in the hotel industry: The moderating role of environmental knowledge and green transformational leadership. *Pakistan Journal of Commerce and Social Sciences*, *19*(2), 249-278. https://doi.org/10.64534/comm.2025.011

Yusliza, M. Y., Yong, J. Y., Tanveer, M. I., Ramayah, T., Faezah, J. N., & Muhammad, Z. (2020). A structural model of the impact of green intellectual capital on sustainable performance. *Journal of cleaner production*, *249*, 119334. https://doi.org/10.1016/j.jclepro.2019.119334

Yuan, Y., Ren, S., Tang, G., Ji, H., Cooke, F. L., & Wang, Z. (2024). How green human resource management affects employee voluntary workplace green behaviour: An integrated model. *Human Resource Management Journal*, *34*(1), 91-121. https://doi.org/10.1111/1748-8583.12510

Zaman, S. I., Qabool, S., Anwar, A., & Khan, S. A. (2025). Green human resource management practices: A hierarchical model to evaluate the pro-environmental behavior of hotel employees. *Journal of Hospitality and Tourism Insights*, *8*(4), 1217-1249. https://doi.org/10.1108/JHTI-02-2024-0146

Zhang, Q., Yang, L., Cheng, J., & Feng, T. (2024). How green human resource management and institutional pressure drive performance via green image: The equifinal paths and their performance outcomes. *Asia Pacific Journal of Human Resources*, *62*(1). https://doi.org/10.1111/1744-7941.12389

Zhao, F., Wang, L., Chen, Y., Hu, W., & Zhu, H. (2024). Green human resource management and sustainable development performance: Organizational ambidexterity and the role of responsible leadership. *Asia Pacific Journal of Human Resources*, *62*(1), e12391. https://doi.org/10.1111/1744-7941.12391

APPENDIX

Green Human Resource Management

GHRM1: The organization integrates environmental criteria into employee recruitment and selection.
GHRM2: Environmental training is regularly provided to employees.
GHRM3: Environmental performance is considered in employee appraisal systems.
GHRM4: The organization rewards employees for engaging in environmentally friendly practices.
GHRM5: Environmental responsibilities are clearly included in job descriptions.
GHRM6: The organization promotes awareness of environmental sustainability among employees.

Green Transformational Leadership

GTL1: Leaders in the organization emphasize the importance of environmental sustainability.
GTL2: Leaders demonstrate commitment to environmentally responsible practices.
GTL3: Leaders encourage employees to participate in environmental initiatives.
GTL4: Leaders integrate sustainability into strategic decision making.
GTL5: Leaders act as role models for environmental responsibility.

Employee Environmental Commitment

EEC1: I feel personally responsible for supporting environmental sustainability at work.
EEC2: I am committed to reducing environmental impact through my work activities.
EEC3: I actively participate in environmental initiatives within the organization.
EEC4: I am willing to go beyond my job requirements to support environmental practices.
EEC5: I value the organization's commitment to environmental sustainability.
EEC6: I consistently engage in behaviors that support environmental protection.

Green Innovation

GI1: The organization develops environmentally friendly products or services.
GI2: The organization adopts innovative processes to reduce environmental impact.
GI3: New technologies are implemented to improve environmental performance.
GI4: The organization encourages innovation related to environmental sustainability.

Corporate Environmental Performance

CSP1: The organization effectively reduces waste and pollution.
CSP2: The organization improves efficiency in the use of natural resources.
CSP3: The organization complies with environmental standards and regulations.
CSP4: The organization achieves its environmental performance objectives.

Environmental Regulation

ER1: Environmental regulations strongly influence organizational practices.
ER2: The organization strictly complies with environmental laws and standards.
ER3: Government regulations encourage the organization to improve environmental performance.
ER4: Regulatory pressure motivates the organization to adopt green practices.
ER5: Environmental policies are effectively enforced within the industry.