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Green Human Resource Management as an Educational Framework for Environmental Performance: Evidence from the Public Sector

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Abstract: Green Human Resource Management as an Educational Framework for Environmental Performance: Evidence from the Public Sector. Objective: This study aims to investigate the impact of Green Human Resource Management (GHRM) practices on environmental performance (GP) within government organizations. It seeks to fill the existing research gap by examining the mediating roles of green organizational commitment (GOC) and employee green behavior (EGB) in the relationship between GHRM and GP**. Methods:** The research employed a quantitative approach using a structured survey distributed to employees across various government organizations. Data were analyzed using Structural Equation Modeling (SEM) to assess the direct and indirect effects of GHRM on EP, with GOC and EGB as mediating variables. **Findings:** The study found that GHRM has a statistically significant positive effect on EP. Specifically, GHRM practices increased GP by p-value ($p < 0.008$). Furthermore, both GOC and EGB partially mediated this relationship. Among the two mediators, GOC demonstrated a stronger mediating effect, with a p-value of 0.000 for the total influence, compared to EGB, which had a p-value of 0.016. These results emphasize that fostering organizational commitment plays a more pivotal role in enhancing the effectiveness of GHRM strategies. **Conclusion:** The findings underscore the critical role of GHRM in promoting superior environmental performance, both directly and through fostering organizational commitment and individual green behaviors. The stronger mediating role of GOC suggests that cultivating a shared sense of environmental responsibility within the organization is key to maximizing the impact of green HR practices. **Practical Implications:** These findings provide actionable insights for policymakers and organizational leaders. For instance, local governments and corporate HR departments should prioritize investing in GHRM-specific training programs to strengthen employees' green commitment and behaviors. Additionally, embedding environmental values into organizational culture and HR frameworks can significantly enhance sustainable outcomes. Firms that institutionalize GHRM as part of their strategic operations are more likely to achieve long-term environmental compliance and resilience.

Keywords: green human resource management; green organizational commitment; environmental performance, employee green behavior, green training.

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INTRODUCTION

Environmental preservation has become a critical issue, prompting industries to adopt environmental protection practices Manufacturing companies, for instance, aim to reduce waste and enhance performance through sustainable practices (Melnyk *et al.,* 2003). Environmental sustainability has become a pressing demand and

challenge for businesses, as unsustainable activities contribute to environmental degradation. This issue concerns society at large, and all sectors, including public and private organizations, share the responsibility for driving environmental change. Research shows that 99% of surveyed CEOs view environmental sustainability as crucial to their future success (Unsworth *et al.,* 2021).

GHRM integrates eco-friendly practices into HR policies and plays a crucial role in promoting environmental awareness. According to Shaikh (2010), GHRM implements green policies, provides training, and adheres to environmental laws while enhancing organizational reputation through initiatives such as ISO 14000 environmental audits, thereby fostering a culture of sustainability. Environmental ethics, as emphasized by Keraf (2010), offer norms and moral principles that guide human behavior towards nature, inspiring sustainable values and actions. Individual human factors are vital to the adoption of environmentally friendly behaviors within organizations. To improve environmental performance, organizations encourage EGB, which refers to employees' actions contributing to environmental preservation (Dilchert, 2012). Employed Green Behavior (EGB) is a critical area of organizational behavior research that influences sustainability and impacts organizations, leaders, and employees. Cultural and socio-psychological factors shape environmental awareness, a key driver of green behavior (Sharma & Bansal, 2013; Mancha & Yoder, 2015). Several factors contribute to EGB, including perceived organizational support (Lamm, 2015), environmental policies (Ramus, 2020), employee motivation, and leadership styles (Olson, 2013; Safari, 2018; Afsar, 2017). Social responsibility and voluntary efforts further enhance EGB. Despite its significance, research on EGB's antecedents is still emerging. Further studies are needed to explore how organizations can embed EGB and connect HRM practices to environmental performance through employee commitment and behavior (Fernández *et al.,* 2003; Paillé *et al.,* 2014).

HRM supports the company's strategic vision and goals. Traditionally, the role of HRM is to communicate the company's executives' strategic vision to their workers and help them understand it. The direct consequences of HRM include successfully implementing the strategic vision and organizational effectiveness. The term GHRM stands for green human resource management. GHRM includes recruiting and retaining green employees, providing green training, and recognizing employees' green contributions in performance appraisals (Guest, 1997). GHRM plays an essential role in environmental management because the HRM function is critical to achieving the company's green goals (Bohdanowicz *et al.,* 2011; Jabbour & Santos, 2008; Paillé *et al.,* 2014).

A primary pillar of GHRM is green education and training. Essentially, the role of HR is not merely administrative but educational serving to communicate the strategic vision and helping employees understand and internalize sustainability values. Green training, as emphasized by Shaikh (2010), implements green policies and training while fostering a culture of sustainability. This organizational learning process equips individuals with the knowledge and awareness needed to shift conventional behaviors toward Employee Green Behavior (EGB).

In public organizations, Green Human Resource Management (GHRM), or environmentally based HR management, is a strategy that integrates environmental awareness and responsibility into every aspect of HR management. Green Human Resource Management is important for good governance, public accountability, and sustainable development. Batu City, East Java, has established various policies to support sustainable environmental management, including regional

regulations on environmental management, environmental quality improvement programs, environmental monitoring, and program management information systems. However, several environmental challenges related to waste and pollution management, and land conversion require an integrated, sustainable approach that includes policy, institutions, human resources, community participation, and technology.

The success of a company's environmental management depends on employees' green behaviour, as it improves the company's aggregate environmental performance (Daily *et al.,* 2009; Lo *et al.,* 2012). For companies to achieve ecological sustainability, it is essential to understand how GHRM influences employees' green behaviour, which, in turn, affects the company's environmental performance. Social identity theory provides a theoretical basis for employees' psychological processes of a company's green efforts: organizational commitment mediates GHRM in green behaviour. Based on social identity theory, employees who positively integrate organizational values (Ashforth & Mael, 1989; Carmeli, 2005; Peterson, 2004) tend to demonstrate solid organisational commitment (Turker, 2009). If employees care about environmental conservation, they are more likely to be committed to their company's implementation of environmental management initiatives, including GHRM. When employees become emotionally invested in their company's work, they tend to demonstrate higher organizational commitment (Bhattacharya *et al.,* 2009).

Individual human factors in organizations play a significant role in promoting green behaviour, so organizations in both the public and business sectors have taken the initiative to improve their environmental performance by motivating employees to engage in green behaviour. Employee Green Behaviour is defined as scalable actions and behaviours that contribute to environmental preservation (Dilchert, 2012). EGB is an important issue of concern in the field of organizational behaviour research. EGB, or green behaviour, refers to specific forms of green behaviour in the workplace, carried out by employees within an organization. Existing research notes that EGB affects the sustainability of environmental conditions and has significant implications for organizations, leaders, and employees.

GHRM involves HR practices aimed at achieving organizational environmental goals, aligning with Corporate Social Responsibility (CSR) initiatives. These practices include recruitment, training, performance management, and fostering a green organizational culture. GHRM is particularly effective in jurisdictions with strong environmental regulations or public concern for sustainability, and it has shown success in promoting EGB, with training as the most impactful practice. Other strategies include hiring environmentally conscious employees, integrating EGB into roles, and cultivating a green culture that supports GHRM. Organizational Green Culture, shaped by shared environmental values, influences HRM systems and can enhance EGB and environmental awareness. However, its impact on various variables, such as EGB and awareness, remains mixed (Gürlek & Tuna, 2018; Gürlek, 2020). Employees' green behavior is also influenced by their environmental knowledge and perceptions (Huang & Kung, 2011).

Environmental awareness, as a psychological factor, establishes a belief system that influences individuals to adopt green behavior (Sharma & Bansal, 2013). Culture plays a crucial role in fostering environmental awareness alongside socio-psychological variables. When employees internalize cultural values that emphasize environmental implications, they are more likely to engage in environmentally conscious behavior (Mancha & Yoder, 2015). The benefits of EGB for environmental

sustainability extend to both organizations and the broader community. Previous studies have identified several antecedents of EGB, including perceived organizational support (Lamm, 2015), organizational environmental policies (Ramus, 2020), employee motivation, environmental awareness, knowledge (Olson, 2013; Safari, 2018), environmental servant leadership (Afsar, 2017), and HRM practices (Saeed, 2019). Environmental performance reflects the outcomes of initiatives aimed at reducing negative environmental impacts. However, limited research explores how GHRM fosters employee commitment and green behavior to enhance environmental performance (Kim *et al.,* 2019). Based on this background, the problem formulation in this study is the direct influence of green human resource management on environmental performance, both directly and indirectly, through employee organizational commitment and environmentally friendly behavior. This research advances understanding of how GHRM practices improve environmental performance by influencing employee commitment and green behavior, providing a pathway for organizations to enhance sustainability outcomes.

Strategic HRM practices significantly influence employee attitudes and behaviors, particularly organizational commitment, as shown by Domínguez-Falcón *et al.* (2016) and Gould-Williams and Davies (2005). These practices focus on empowering employees to achieve company goals, contrasting traditional HRM's emphasis on external recruitment and behavioral control (Bratton & Gold, 2017). Strategic HRM also fosters psychological connections between employees and organizations (Arthur, 1994). Incorporating HRM into CSR, Shen and Benson (2016) introduced Socially Responsible HRM (SRHRM), which includes CSR training and assessments. SRHRM, a subset of CSR, positively impacts organizational commitment, as does Green HRM (GHRM), which addresses environmental issues (Kim *et al.,* 2019). Research in the hotel industry highlights GHRM's role in enhancing employee commitment through environmental training and practices (Hsiao *et al.,* 2014; Yen *et al.,* 2013). HRM practices also improve organizational performance by enhancing skills, motivation, and opportunities (Jiang *et al.,* 2012). In terms of environmental performance, HRM supports Environmental Management Systems (EMS) through training and initiatives, thereby fostering better outcomes (Melnyk *et al.,* 2003; López-Gamero *et al.,* 2009). EGBs, such as waste reduction, complement EMS and directly enhance environmental performance (Daily *et al.,* 2009; Roy *et al.,* 2013). This behavior reflects individuals' ecological awareness and contributes significantly to achieving organizational sustainability goals. Therefore, this study posits that green organizational commitment and employee green behavior mediate the relationship between green human resource management and environmental performance. Based on this background, the problem formulation in this study is the direct influence of green human resource management on environmental performance, both directly and indirectly through employee organizational commitment and environmentally friendly behavior. This research advances understanding of how GHRM practices improve environmental performance by influencing employee commitment and green behavior, providing a pathway for organizations to enhance sustainability outcomes. This study explores these dynamics, emphasizing the role of HRM in improving environmental outcomes. Therefore, the research's conceptual framework is presented in Figure 1.

H1: GHRM has a positive and significant effect on GP

H2: GHRM has a positive and significant effect

on EGB

H3: GHRM has a positive and significant effect on GOC

H4: EGB has a positive and significant effect on GP

H5: GOC has a positive and significant effect on GP

H6: GOC has a significant positive effect on EGB.

Figure 1. Conceptual framework

The relationship between GHRM and EP is formed directly and through a mediation pathway involving psychological factors and employee behavior. One important pathway is through GOC, which reflects employees' emotional attachment, rational beliefs, and moral responsibility toward the organization's environmental values (Meyer, Allen & Smith, 1991; Robbins & Judge, 2013). Consistent implementation of GHRM practices strengthens GOC, encouraging employees to contribute more to achieving the company's sustainability goals (Mowday *et al.,* 1982; Dinc, 2017). Previous studies (Dumont *et al.,* 2017; Kim *et al.,* 2019) showed that implementing GHRM principles can increase employees' intrinsic motivation to adopt environmentally friendly behaviors, improving the organization's environmental performance.

A strong commitment to sustainability values encourages employees to act consistently in support of environmental conservation through daily workplace practices (Norton, 2017). With increasing green behavior among employees, organizations can improve their overall Environmental Performance, strengthening their position in meeting social expectations for sustainability (Chan *et al.,* 2012; Dubey & Gupta, 2018). So, the indirect influence in this study can be hypothesized as follows :

H7a: GHRM indirectly affects EP through GOC

H7b: GHRM indirectly affects EP through EGB

H7c: GOC indirectly affects EP through EGB.

■ METHOD

Research Design

This study used a quantitative approach design. Data were collected at a certain point in time (one-time cross-sectional), as stated by Ray (2015). The study was conducted for 2 months, from September 2024 to November 2024. The random sampling method was used to overcome time and resource constraints while obtaining an easily accessible population. The respondents in this study were government employees who had provided verbal and written consent to participate. Each respondent participated voluntarily without receiving any special compensation, and the entire research process obtained ethical approval and complied with the relevant institution's research ethics policy.

Instruments

Data were collected using a questionnaire distributed in the office and online via Google Forms. The questionnaire was designed to obtain the data needed for the analysis, and the survey link was shared with employees through various communication channels, including institutional email and WhatsApp groups. This strategy aims to ensure that employees who are the research samples have adequate access to the questionnaire.

Data Analysis

Data collected from the respondents were used to assess environmental performance through green human resource management and explore mediating factors among Batu government employees. The data analysis utilized structural equation modeling with partial least squares (SEM-PLS). The main reason for choosing this approach is that it examines the modified findings from multiple research models to provide an overview the variables under study.

■ RESULT AND DISCUSSION

Descriptive Data

Respondent characteristics include age, gender, marital status, educational level, work experience, and current position. The research respondents were 100, 68% female, with the majority aged 31 to 50, 63% holding a bachelor's degree, 86% married, and 35% having worked 11 to 15 years. Description of the respondent show on table 1.

Table 1. Respondent characteristics

Characteristics		Frequency	Percentage (%)
Gender	Female	68.0	68.0
	Male	32.0	32.0
	Total	**100**	**100%**
Age	41-50 years	51.0	51.0
	31-40 years	33.0	33.0
	> 50 years	11.0	11.0
	<30 years	5.0	5.0
	Total	**100**	**100%**
Last Education	S1	63.0	63.0
	S2	12.0	12.0
	Hagih school	11.0	11.0
	Baccalaureate	10.0	10.0
	S3	4.0	4.0
	Total	**100**	**100%**
Duration of work	11-15 years	35.0	35.0
	16-20 years	24.0	24.0
	> 20 years	19.0	19.0
	6-10 years	13.0	13.0
	3-5 years	9.0	9.0
	Total	**100**	**100%**
Category	Staf	68.0	68.0
	Fungsional	29.0	29.0
	Struktural	3.0	3.0
	Total	**100**	**100%**

The table shows that if the convergent validity of each item is greater than 0.5, it is considered valid and ideal. The table shows that all loading factor values for GOC, EGB, GHRM, and GP are greater than 0.5. It can be concluded that all items used in each variable are by their measuring function and are appropriate with the measuring instrument that has been used in the study

Measurement Model

This research instrument consists of four primary constructs: GOC, EGB, GHRM, and EP. Each construct is measured using a series of items adapted from previous studies, which have been tested for validity and reliability. GOC is measured using nine items adapted from Ali & Nisar (2022). This instrument includes the dimensions of Affective Commitment, Continuance Commitment, and Normative Commitment. An example of a statement in this construct is: "I care about my company's environment." EGB is measured using eleven items adapted from Zhang *et al.* (2021). This instrument assesses the level of active employee involvement in environmentally friendly behaviors through individual actions, such as using environmentally friendly materials, and through advocacy to coworkers and management. One example of an item is: "I encourage my coworkers to adopt more environmentally conscious behaviors".

GHRM is measured using nineteen items adapted from Nejati & Yusoff (2019) and Ali & Nisar (2022). This instrument evaluates how human resource management practices in an organization support environmental sustainability, including training programs, reward policies, evaluations of environmental contributions, and the integration of sustainability principles into the management system. An example of an item is: "My institution provides environmental awareness training programs". EP is measured using eleven items adapted from Anwar *et al.* (2020). This instrument assesses an organization's initiatives in environmental sustainability, including waste management, energy conservation, implementation of environmental management systems (such as ISO 14001), and the use of alternative energy. An example of an item is: "The institution where I work promotes energy conservation practices, such as reminding people to save energy and turning off computers and lights when not in use."

All items are measured using a five-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree") (Sekaran & Bougie, 2021). This instrument has undergone content validation, which involves adjusting the research context and obtaining confirmation of the items' adequacy from experts in human resources and environmental sustainability.

Convergent Validity

Convergent Validity Analysis to see the validity of the relationship between indicators and their latent variables. The loading factor must be greater than 0.5, and the composite reliability must be greater than 0.7 (Hussein, 2015).

Table 2. Convergent validity

Variable	Item	Loading Factor	Cronbach Alpha	AVE
Organizational Commitment	Q1	0.776	0.924	0.625
	Q2	0.745		
	Q3	0.842		
	Q4	0.834		
	Q5	0.811		
	Q6	0.832		
	Q7	0.819		

	Q8	0.650		
	Q9	0.790		
Employee Green Behaviour	Q10	0.794	0.941	0.632
	Q11	0.806		
	Q12	0.734		
	Q13	0.686		
	Q14	0.835		
	Q15	0.854		
	Q16	0.805		
	Q17	0.820		
	Q18	0.875		
	Q19	0.770		
	Q20	0.746		
Green Human Resources Management	Q21	0.748	0.959	0.584
	Q22	0.756		
	Q23	0.813		
	Q24	0.661		
	Q25	0.760		
	Q26	0.709		
	Q27	0.767		
	Q28	0.773		
	Q29	0.752		
	Q30	0.850		
	Q31	0.813		
	Q32	0.773		
	Q33	0.820		
	Q34	0.825		
	Q35	0.832		
	Q36	0.818		
	Q37	0.737		
	Q38	0.743		
	Q39	0.784		
Environmental Performance	Q40	0.772	0.934	0.603
	Q41	0.777		
	Q42	0.757		
	Q43	0.825		
	Q44	0.814		
	Q45	0.651		
	Q46	0.790		
	Q47	0.760		
	Q48	0.782		
	Q49	0.783		
	Q50	0.813		

Table 2 shows each item's loading factor (convergent validity); values greater than 0.5 indicate validity and are ideal. Table 2 shows that all loading factor values of the GOC indicator, EGB, GHRM, and EP are greater than 0.5. It can be concluded that all items used for each

variable fulfill their intended measurement functions and are appropriate for the measuring instrument used in the study. In addition, the reliability test results in this study indicate a Cronbach's Alpha value greater than 0.6, indicating that the instrument is reliable. This means that if the instrument is used repeatedly with the same object, the data will be consistent.

Table 3. Discriminant validity results (HTMT)

Construction	EGB	EP	GHRM	KO
EGB				
EP	0.643			
GHRM	0.406	0.818		
GOC	0.507	0.587	0.406	

Furthermore, a Heterotrait-Monotrait correlation ratio (HTMT) analysis was conducted to assess the discriminant validity of the constructs; all correlations were below the 0.85 threshold, confirming discriminant validity (see Table 3). Therefore, the survey and dataset can be considered reliable and valid.

Hypothesis Testing

Based on the results of the direct influence test presented in Table 4 and Figure 2, the path coefficient values for each variable's influence are shown. The study's results reveal that GHRM significantly influences GP both directly and indirectly through mediation mechanisms. GHRM directly impacts GP (path coefficient: 0.191, p-value: 0.008) and strongly influences EGB (EGB, 0.455, p-value: 0.000) and (GOC, 0.878, p-value: 0.000). EGB positively contributes to GP (0.207, p-value: 0.002), while GOC has a stronger influence on GP (0.610, p-value: 0.000) and enhances EGB (0.447, p-value: 0.000). Mediation tests confirm significant indirect effects: GHRM enhances GP via EGB (0.094, p-value: 0.014) and GOC (0.536, p-value: 0.000), with GOC further influencing GP through EGB (0.092, p-value: 0.016). These findings highlight the pivotal roles of EGB and GOC in maximizing GHRM's impact on environmental outcomes.

Table 4. Hypothesis testing

H	Proposed Hypothesis	Path Coefficient	Standard Deviation	t-statistic	P-Value	Result
H1	GHRM -> GP	0.191	0.072	2.656	0.008	Supported
H2	GHRM -> EGB	0.455	0.114	4.002	0.000	Supported
H3	GHRM -> GOC	0.878	0.039	22.386	0.000	Supported
H4	EGB -> GP	0.207	0.067	3.094	0.002	Supported
H5	GOC -> GP	0.610	0.082	7.455	0.000	Supported
H6	GOC -> EGB	0.447	0.112	3.982	0.000	Supported
H6	GHRM-> EGB -> GP	0.094	0.038	2.469	0.014	Supported
H7	GHRM-> GOC -> GP	0.536	0.079	6.749	0.000	Supported
H8	GOC -> EGB -> GP	0.092	0.038	2.410	0.016	Supported

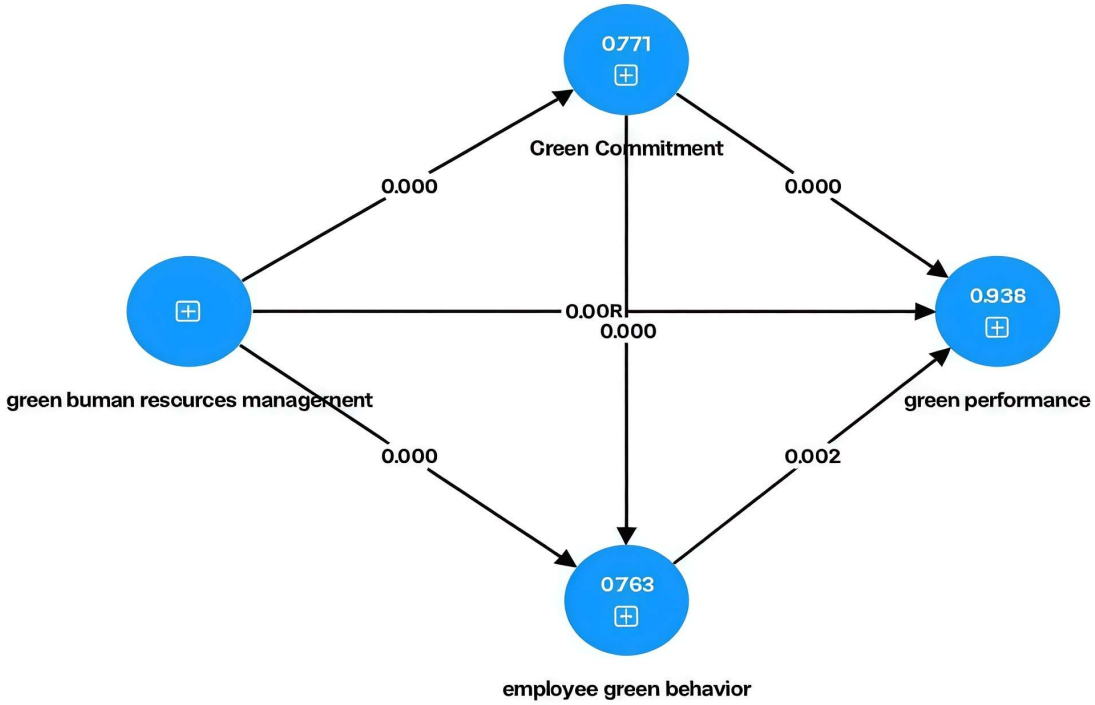

Figure 2. Hypothesis testing

H1: GHRM has a positive and significant effect on EP

GHRM also directly affects EP with a path coefficient of 0.189, a t-statistic of 2.646, and a p-value of 0.008. It shows that environmentally friendly behavior contributes positively to employee performance. Various international agreements addressing climate change have increased global attention to environmental issues (Hameed *et al.,* 2020). Recently, pressure from stakeholders, consumers, and employees on companies to demonstrate environmental responsibility has increased. This condition encourages companies to abandon traditional business models and adopt a more environmentally friendly approach by implementing green initiatives across their operations.

Zhang *et al.* (2019) stated that several previous studies have examined the mechanism of GHRM concerning improving organizational environmental performance and its influence on individual green behavior in the workplace. Organizations that adopt GHRM practices have been shown to contribute effectively to environmental sustainability (Zhang *et al.,* 2019). This finding aligns with the findings of Rizqulloh et al. (2024), Nabilla et al. (2022), and Mustafa (2022), which show that employee engagement positively and significantly influences employee performance.

H2: GHRM has a positive and significant effect on EGB

GHRM significantly influences Employee Green Behavior, with a path coefficient of 0.847, a t-statistic of 17.153, and a p-value of 0.000. It means that environmentally oriented human resource management practices can improve environmentally friendly behavior in the workplace. Along with growing global awareness of the importance of environmental protection, companies have begun to act more actively to address environmental challenges, no longer limited to reducing pollution and damage as in the early 2000s (Renwick *et al.,* 2008). Now,

many companies combine their business goals with environmental commitments. Pressure from various parties to improve environmental and social sustainability is getting stronger (Ardito, L. & Dangelico, 2018), encouraging organizations to implement Green Human Resource Management (GHRM) practices, which are known as part of green management in the field of human resources, and foster environmentally friendly behavior in the workplace (Renwick *et al.,* 2008).

In practice, GHRM connects various aspects of human resource management, such as recruitment, training, performance management, and compensation systems, with the company's environmental goals, thereby supporting the implementation of a more effective environmental management system (Jabbour *et al.,* 2013). Not only that, but GHRM also plays an important role in building a sustainable organizational culture (Opatha, HH & Arulrajah, 2014). Research by Saeed et al. (2019) shows that implementing GHRM practices positively impacts environmentally responsible employee behavior across various business sectors. Because GHRM practices are often formally rewarded and incentivized, green behavior carried out by employees in their work tends to increase and become part of the work culture.

H3: GHRM has a positive and significant effect on GOC

GHRM significantly influences GOC, with a path coefficient of 0.878, a t-statistic of 22.468, and a p-value of 0.000. These results indicate that GHRM plays a significant role in increasing employee organizational commitment to the agency. These results indicate that GHRM plays a significant role in increasing employee organizational commitment to the agency. The success of GHRM in supporting environmental performance cannot be separated from the important role of GOC. This commitment is reflected in employees' emotional involvement, rational awareness of sustainability's importance, and a sense of moral responsibility to support organizational goals focused on environmental conservation (Meyer, Allen & Smith, 1991; Robbins & Judge, 2013). Usually, employees with high levels of GOC show stronger loyalty, greater active participation in environmental programs, and more consistent work performance (Mowday *et al.,* 1982; Dinc, 2017).

These results align with the findings of Zhang *et al.* (2019), who emphasized that implementing GHRM, such as environmental awareness training, green contribution-based evaluation, and sustainability value-based recruitment programs, can strengthen employees' emotional and moral attachment to the organization. When an organization consistently displays a commitment to environmental sustainability through its HR policies and practices, employees feel more connected to its values, increasing their loyalty and dedication. In addition, these findings are consistent with the AMO (Ability, Motivation, Opportunity) theory, which explains that GHRM provides resources, motivation, and opportunities for employees to engage in green initiatives. Employees internalize these values as part of their organizational identity by feeling empowered and appreciated for their participation in environmental programs.

H4: EGB has a positive and significant effect on EP

EGB significantly affects EP, with a path coefficient of 0.206, a t-statistic of 3.073, and a p-value of 0.002. It shows that environmentally friendly behavior contributes positively to EP. EGB contributes to improving environmental performance by enabling employees to accumulate pro-environmental actions, which directly support waste management and energy savings. EGB has a strategic role in strengthening sustainable leadership practices by implementing

work behaviors oriented towards environmental conservation (Mirahsani *et al.,* 2024). Emerging from implementing Corporate Social Responsibility (CSR) and GHRM, EGB demonstrates proactive behavior that fosters organizational sustainability. In addition, the implementation of appropriate organizational policies and transparency in leadership significantly affects the formation of EGB, ultimately contributing to achieving the company's sustainability goals (Atikur Rahaman *et al.,* 2023).

H5: GOC has a positive and significant effect on EP

GOC significantly influences Environmental Performance, with a path coefficient of 0.613, a t-statistic of 7.507, and a p-value of 0.000. The analysis results show that GOC positively and significantly influences environmental performance, with a path coefficient of 0.613, t-statistic of 7.507, and p-value of 0.000. This value indicates that the higher an employee's commitment to the organization, the greater their contribution to the company's environmental performance.

This finding is consistent with the view of Meyer, Allen, and Smith (1991), who stated that employees with a high level of GOC tend to demonstrate behavior aligned with the organization's goals and values , including environmental sustainability. Employees who feel emotionally attached to their organization will be more motivated to participate in the company's actively initiated environmental conservation efforts. This study also supports the findings of previous studies by Iswantoro & Irmawati (2024) and Yang & Li (2023), which found that employees with high loyalty and involvement in the organization are more likely to contribute to achieving sustainability goals, including maintaining and improving environmental performance.

In addition, these results underscore the importance of building a strong organizational culture in supporting environmental programs. GOC influences individual performance in formal tasks and extends its influence to extra-role behaviors, such as green initiatives and voluntary participation in sustainability programs.

H6: GOC has a significant positive effect on EGB

OC significantly influences EGB, with a path coefficient of 0.849, a t-statistic of 18.693, and a p-value of 0.000. This value indicates a very strong relationship between employees' level of commitment to the organization and their tendency to behave in an environmentally friendly way in the workplace.

This finding confirms that highly committed employees will be more motivated to take voluntary actions to support environmental sustainability. This aligns with the views of Mowday *et al.* (1982) and Robbins and Judge (2013), who stated that GOC encourages individuals to act beyond their formal duties, including in the context of green behavior.

This study also strengthens the findings of Mirahsani et al. (2023) and Aryati (2024), which emphasize that pro-environmental behavior in the workplace is strongly influenced by employees' emotional attachment to the organization. The stronger the attachment, the higher the tendency of employees to take environmentally friendly actions, both in their primary tasks and in extra-role activities. The results of this study emphasize the importance of building an organizational climate that supports sustainability values. When an organization successfully internalizes environmental values into its work culture, employees will feel that green behavior is an obligation and part of their identity as members of the organization.

H7a: GHRM indirectly affects EP through GOC

The results of this study indicate that GHRM has an indirect effect on EP through GOC, with a

path coefficient of 0.094, a t-statistic of 2.469, and a p-value of 0.014. A p-value smaller than 0.05 and a t-statistic exceeding the critical value of 1.96 indicate that this mediation effect is statistically significant.

These findings show that implementing GHRM practices, such as green recruitment, environmentally oriented training, sustainability-based performance evaluation, and reward systems for pro-environmental behavior, not only contribute directly to the organization but also strengthen employees' commitment to the company's sustainability values. This commitment then drives increased employee performance. This study aligns with the findings of Hameed et al. (2020) and Zhang et al. (2019), which show that GHRM significantly influences employee behavior and performance by strengthening the psychological bond between individuals and organizations. Employees working in an organization committed to environmental conservation will be more motivated to perform their tasks.

The success of GHRM in driving employee performance depends on the formal policies implemented and how these policies strengthen employees' sense of commitment to the company's sustainability mission. Therefore, organizations must actively build a green commitment culture that is not just a slogan but also reflected in daily managerial practices.

H7b: GHRM indirectly affects EP through EGB

The study results indicate that GHRM indirectly affects EP through EGB, with a path coefficient of 0.536, a t-statistic of 6.749, and a p-value of 0.079. Although the p-value is greater than 0.05, but close to 0.05, this effect can still indicate a moderate mediation relationship in social and organizational behavior, especially given the high t-statistic.

This illustrates that implementing GHRM, such as integrating sustainability principles into recruitment, training, performance management, and rewards, encourages the formation of EGB. This green behavior, in the form of efficient resource use, reduced waste, and other environmentally friendly initiatives, ultimately improves individual performance within the organization.

H7c: GOC indirectly affects EP through EGB

GHRM significantly and indirectly affects employee performance through GOC. The path coefficient of 0.092 indicates a positive effect, though the value is relatively small. The t-statistic of 2.410 indicates that the effect is statistically significant, while the p-value of 0.038 indicates a low probability that this result occurs by chance. Thus, employees who engage in GHRM practices tend to be more committed to the organization's environmental values, improving their performance. The practical implication is that organizations should integrate GHRM practices into managerial strategies to improve employee environmental commitment and achieve optimal performance. Overall, GHRM emphasizes the importance of a sustainable approach to human resource management to achieve better workplace results.

Although GHRM has positively affected employee performance through GOC, its implementation in Batu City, East Java, may face some specific challenges. One of the main challenges is the lack of awareness of the importance of sustainable practices among local industry players, who often prioritize short-term profits over environmental sustainability. In addition, Batu City, known as a tourist area, may face pressure from the tourism sector that has not fully implemented environmentally friendly practices. Limited funding for green initiatives and employee training may also hinder the implementation of GHRM. The existing organizational culture, which may not support change or be resistant to innovation, also contributes to the obstacles. Therefore,

organizations in Batu City need to plan effective communication strategies and provide training to improve the understanding of GHRM. By addressing these challenges, organizations can be more successful in improving employees' environmental commitment and, ultimately, their performance, as discussed earlier.

Overall, the results of this study confirm the importance of GHRM improving GP, both directly and indirectly, through mediators such as EGB and GOC. Among these, mediation through GOC has a greater influence, highlighting the critical role of organizational commitment in enhancing the positive effects of GHRM on GP. These findings align with earlier studies by Lopez *et al.* (2009) and Paillé *et al.* (2013), which demonstrated that environmental management practices boost employees' green organizational commitment. Paillé *et al.* (2013) further elaborated that environmental management practices, such as issuing environmental policies and publishing annual environmental reports, significantly enhance green organizational commitment. This aligns with the current study's findings, especially in the context of government organizations tasked with environmental management and sustainable development. These organizations integrate environmentally conscious human resource management practices to ensure policy implementation while effectively addressing environmental challenges.

GHRM is a key element of human resource management that fosters the achievement of organizational goals through employee involvement (Dominguez-Falcon *et al.,* 2016). It expands the environmental management literature by analyzing how GHRM influences EGB and GP. The study focuses on the psychological processes underlying employees' green organizational commitment and their efforts to support environmental sustainability. It integrates organizational-level GHRM practices with individual-level employee factors that drive environmentally friendly behavior. Drawing on social identity theory, this research highlights the role of green organizational commitment as a mediator between GHRM and both EGB and GP. The findings align with Stites and Michael (2011), who noted that HRM practices emphasizing environmental considerations positively impact GP. Similarly, it confirms Paille *et al.* (2013), who showed that GHRM enhances employee green organizational commitment, which in turn fosters EGB. The study underscores that employee commitment to environmental goals leads to actions that improve GP, supporting the work of Daily *et al.* (2009). Social identity plays a critical role, as employees are motivated to align with the organization's environmental objectives when these objectives resonate with their values and guide their behavior. This reinforces the idea that GHRM practices not only influence individual behavior but also aggregate to enhance overall environmental performance.

The study makes several contributions to the development of science, particularly regarding the relationship between GHRM and organizational commitment. Based on social identity theory, the relationship between GHRM and organizational commitment can illustrate that implementing GHRM is a positive organizational signal that reflects concern for the environment. If employees have a positive perception of GHRM, they are more likely to be committed to their organization. These findings illustrate the principles of social identity in shaping the psychological relationship between organizations and employees in the context of environmental management. The study highlights that the impact of GHRM on GP is mediated by green organizational commitment and EGB. This offers valuable insights into how effective HR practices can enhance GHRM's role, particularly in government organizations, to achieve better environmental outcomes.

This study provides more robust support for the view that many academics and practitioners have begun to realize that sustainable

management, including environmental conservation, is an essential responsibility of the organization. To fulfill this responsibility, the organization must provide GHRM planning before implementing environmental management efforts. Implementing GHRM practices will help employees feel proud to be part of the organization and recognize the organization's role in protecting the environment, thereby strengthening employees' organizational commitment to the environment and increasing green behaviour, thereby increasing the success of the organization's green performance. The organization's attention to GHRM practices, especially in the implementation of training, employee involvement, and rewards and recognition for individual behavior that pays attention to the environment, will increase employee awareness, involvement, and commitment to the environment.

■ CONCLUSION

This study confirms that GHRM plays an essential role in improving GP both directly and through the mediation of EGB and GOC. GHRM has been proven effective in encouraging employee green behaviour and strengthening their commitment to the organization. The role of GOC as a mediator is more dominant than that of EGB, indicating that increasing employee commitment is the primary key to achieving organizational environmental goals. By implementing GHRM, organizations can build an environmentally friendly culture that not only improves environmental performance but also strengthens sustainability values in the workplace. Organizations should integrate green policies into human resource management such as environmental training, sustainability-focused recruitment, and performance evaluations tied to environmental goals while fostering emotional engagement and employee loyalty through clear communication of environmental vision and recognition of contributions, creating a supportive work environment with incentives, campaigns, and green facilities, and regularly evaluating the effectiveness of GHRM practices to adapt policies to organizational needs and environmental challenges.

From an educational perspective, these findings highlight that GHRM functions as a critical learning framework within public sector organizations. To maximize impact, organizations must move beyond formal policies and treat GHRM as a continuous learning process. This involves prioritizing "Green Training" to cultivate a shared sense of environmental responsibility and ensure that green behavior becomes an intrinsic part of the organizational identity. By integrating green policies such as environmental training and sustainability-focused evaluations while fostering loyalty through clear communication, organizations can build a resilient green culture that sustains long-term environmental excellence.

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