Journal of Management and JMBE

and Business Enviroment

The Journal of Management and Business Environment (JMBE) is a blind-review journal that is published by Magister Management, Soegijapranata Catholic University, Semarang, Indonesia. The journal is intended to provide forums for academicians and practitioners to disseminating relevant, high quality research and discussing issues in the field of management and business environment.

We welcome manuscripts on theoretical and empirical research papers, professional papers, review papers, cases and organizational practices in the field of management. Submissions should be original and critical papers that are not under review, accepted, published or will be published elsewhere.

TABLE OF CONTENTS

The Effect of GHRM on Environmental Performance Mediated by Employee Environmental Knowledge at GL Zoo

Aloysius Dhimas Trikurnian
Sanata Dharma University
trikurnian.dhimas@gmail.com

Caecilia Wahyu Estining Rahayu
Sanata Dharma University
caecilia50@gmail.com

Abstract
This study aims to determine the effect of green human resource management (GHRM) on environmental performance mediated by employee environmental knowledge. This study uses a quantitative approach with three independent variables: green recruitment and selection, green training and development, green performance management and appraisal, and the dependent variable, environmental performance, with the mediating variable of employee environmental knowledge. Data were collected using a questionnaire tested for validity and reliability before being distributed and analyzed using the SmartPLS3 application. The sample comprised all Gembira Loka Zoo (GL Zoo) employees, totaling 100 respondents. The technique used in non-probability sampling is purposive sampling. The results showed that green training and development directly affect environmental performance, and employee environmental knowledge fully mediates the effect of green performance management and appraisal on environmental performance.

Keywords: environmental knowledge, environmental performance, green performance management and appraisal, green recruitment and selection, green training and development.

INTRODUCTION

Ecosystem change poses a threat to biodiversity around the world and impacts global food production. Many species risk losing their habitat and being affected by climate change due to human activities. According to the Red List of the IUCN or International Union for Conservation of Nature (in Taylor & Duram, 2021), nearly 9,000 animal species are threatened with or on the brink of extinction. However, humans need to be aware of their impact on the

environment due to the need to be more aware of the importance of environmental preservation.

According to González (in Bazrkar & Moshiripour, 2021), in recent years, the opinion has emerged that the business world must be actively involved in environmental management. Several organizational units must work together to implement environmental management programs to have a positive and sustainable environment, including the resource management unit, which is recognized as an essential factor. Several studies confirm that green human resource management practices and actions significantly impact an organization's environmental performance by reducing waste and increasing organizational productivity. Previous research shows that environmental knowledge influences employees' ecological behavior and participation in environmental issues.

Green human resource management practices have similarities with conventional human resource management practices, such as recruitment and selection, training and development, performance management and appraisal, and compensation. However, according to Jabbour & Santos (2008), green human resource management practices must have the capabilities necessary to continuously improve the organization's environmental performance. Research on Green Human Resource Management and environmental performance in Indonesia is still limited. No one has researched botanical gardens and zoos, especially in the Special Region of Yogyakarta, like the tagline on the Gembira Loka Zoo logo, which is "Bukan Sekedar Rekreasi," where with its vision and mission, it is hoped that Gembira Loka Zoo will not only be an environmentally friendly recreation place that is creative, interesting, and educational.

According to Paillé (2022), the actual contribution of green human resource management is more visible in several sustainable development goals, especially in the 4th

point, namely quality education, then the 8th point, namely decent work and economic growth, then the 9th point, namely industry, innovation, and infrastructure, and the 12th point, namely responsible consumption and production. Based on the environmental quality index reported by the Regional Planning and Development Agency, Yogyakarta Special Region, in 2020, the environmental quality index of the Special Region of Yogyakarta amounted to 61.05, in 2021, decreased by 60.53 and continued to decline until 2022 amounted to 59.92 (Badan Perencanaan dan Pembangunan Daerah DIY, 2020). This is the basis for why this research was conducted in the Special Region of Yogyakarta. According to Regulation No. 27 of 2021 of the Ministry of Environment and Forestry of the Republic of Indonesia on Environmental Quality Index, explained in Appendix 7 regarding the Procedures for Calculating the Environmental Quality Index at point B regarding the Environmental Quality Index Category that the environmental quality index of Special Region Yogyakarta is still included in the moderate category with a range of numbers, $X \leq 50$, $X < 70$ (Kementerian Lingkungan Hidup dan Kehutanan, 2021).

LITERATURE REVIEW

The effect of green recruitment and selection on environmental performance

Green recruitment and selection are essential to green human resource management practices. Companies are interested and select candidates who commit to environmental issues. According to Perron (in Ercantan & Eyupoglu, 2022), One of the fundamentals of green recruitment and selection is the candidate's green awareness. This includes personality factors that can achieve ecological goals, such as the candidate's green awareness. It has been proven that environmentally conscious employees can continuously develop their environmental awareness, positively impacting their companies' environmental performance. Companies

should adopt specific criteria when recruiting and selecting environmentally conscious employees and ensure that all employees are aware of environmental issues.

Previous research by Bazrkar and Moshiripour (2021) shows that green recruitment and selection positively and significantly impact environmental performance. This is demonstrated by the result of a P value of 0.004, which means that the hypothesis is accepted. Muchsinati and Fairly's research (2023) also showed the results of a P value of 0.044, indicating a positive and significant influence between green recruitment and selection on environmental performance. Thus, the researcher formulates the first hypothesis as follows:

H1 (a): Green recruitment and selection directly affect environmental performance

The effect of green training and development on environmental performance

Employees can acquire ecological preservation and environmental protection skills necessary for accomplishing environmental goals through green training and development programs (Jabbour in Ercantan & Eyupoglu, 2022). All green training and development approaches enhance employees' environmental awareness, teach green ideals, and strengthen their capacity to execute green work practices (Zoogah & Peng in Ercantan & Eyupoglu, 2022). Their comprehension of the connection between worker actions and the surroundings is improved as a result. It equips people with the knowledge and abilities to identify environmental issues and take appropriate action to lessen them.

Previous research by Bazrkar and Moshiripour (2021) demonstrated a substantial and favorable association between environmental performance and green training and development. This is evidenced by the P value of 0.000, which means the hypothesis is accepted. Muchsinati and Fairly's research (2023) also showed a P value of 0.047, demonstrating that green development and training have a good and substantial impact on environmental performance. Thus, the researcher formulates the second hypothesis as follows:

H2 (b): Green training and development directly affect environmental performance.

The effect of green performance management and appraisal on environmental performance

Green performance management and appraisal is a method to measure employee performance in the environmental management process (Jabbour & Santos in Ercantan & Eyupoglu, 2022). According to Hermann, Kroeze, and Jawjit (in Ercantan & Eyupoglu, 2022), for managers and staff, performance appraisal is the most critical component of green performance management since it affects the process and efficacy of ensuing awards and remuneration.

Previous research by Bazrkar and Moshiripour (2021) demonstrated a strong correlation and beneficial influence between environmental performance and green performance management and appraisal. This is evidenced by the P value of 0.000, which means the hypothesis is accepted. Muchsinati and Fairly's research (2023) also showed a P value of 0.036, suggesting that environmental performance and green performance management assessments have a favorable and substantial relationship. Thus, the researcher formulates the third hypothesis as follows:

H3 (c): Green performance management and appraisal directly affect environmental performance.

The effect of green recruitment and selection on environmental performance mediated by employee environmental knowledge.

Employers should prioritize choosing and appointing workers who care about and support the environment. Therefore, firms should develop an environmental reputation and illustration inspired by the idea that the organization is responsive to the environment to boost the appeal of hiring from a talent pool of candidates who are becoming more environmentally

concerned (Isrososiawan et al., 2021). One of the finest practices in human resource management is green recruiting and selection, which enables businesses to develop human resource management initiatives for every job applicant (Kiplangat et al., 2022).

The degree of concern for environmental issues and their remedies is known as environmental knowledge. Employees who know environmental management, waste management, and efficient use of resources show a tendency to exhibit environmentally friendly behaviors in the workplace, such as turning off computers, lights, fans after working hours, saving water and electricity, using electronic media to reduce paper use, avoiding the use of disposable cups for tea, and using stairs instead of elevators (Karmoker et al., 2021).

Bazrkar and Moshiripour's research (2021) concluded that the relationship between green recruitment, selection, and performance is mediated by employee environmental knowledge. This is evidenced by the result of a P value of 0.001, which means that the hypothesis is accepted. Thus, the researcher formulates the fourth hypothesis as follows:

H4 (d-g): Employee environmental knowledge mediates the effect of green recruitment and selection on environmental performance.

The effect of green training and development on environmental performance mediated by employee environmental knowledge.

Organizations can achieve a sustainable and environmentally friendly environment through proper and adequate employee training and development. According to Zooghah (in Khan, 2022), developing employees' attitudes, knowledge, skills, abilities, and behaviors that can prevent changes in attitudes and skills related to the environment falls under green training and development. Zakaria (in Khan, 2022) states that exploratory learning and skill development are potent media to motivate company innovation. Training employees has also been shown to impact workers' attitudes and engagement in green activities tremendously

JMBE

(Bissing Olson in Khan, 2022). Understanding human interactions, environmental problems, and the different relationships within environmental systems is known as environmental knowledge (Burchett in Fawehinmi et al., 2020). This knowledge can include the abilities required to lessen harmful environmental effects, leading to environmentally friendly actions.

Bazrkar and Moshiripour's research (2021) concluded that employee environmental knowledge mediates the relationship between green training and development and environmental performance. The outcome of a P value of 0.000, which indicates that the hypothesis is accepted, confirms this. Thus, the researcher formulates the fifth hypothesis as follows:

H5 (e-g): Employee environmental knowledge mediates the effect of green training and development on environmental performance.

The effect of green performance appraisal on environmental performance mediated by employee environmental knowledge.

An essential function of human resource management is to calculate or measure employee environmental performance. Companies must build an Environmental Management Information System (EMIS) and environment-related audits to encourage better environmental performance. Most organizations have developed Environmental audits and EMIS (Wells in Khan, 2022; Carpenter in Khan, 2022). Schwalm (in Khan, 2022) indicates that EMIS aims to effectively monitor energy, pollution levels, legal requirements, and increased resource usage. Environmental indicators guarantee that workers are accountable for environmental management (Coan and Zibarras in Khan, 2022).

Ecological and environmental protection, the natural environment, and ecosystems are all included in environmental knowledge (Fryxell and Lo in Bresciani et al., 2023). Increasing public awareness and providing environmental education is a workable and straightforward

way to increase environmental knowledge (Yadav and Pathak in Hossain et al., 2022). Understanding environmental concepts, issues, and strategies that can be used to address environmental problems is known as environmental knowledge (Wang in Hossain et al., 2022).

Bazrkar and Moshiripour's research (2021) concluded that the relationship between green training and development and environmental performance is mediated by employee environmental knowledge. This is evidenced by the P value of 0.008, which means the hypothesis is accepted. Thus, the researcher formulates the sixth hypothesis as follows:

H6 (f-g):   Employee environmental knowledge mediates the effect of green performance management and appraisals on environmental performance.

Accordingly, the research framework is presented in Figure 1.
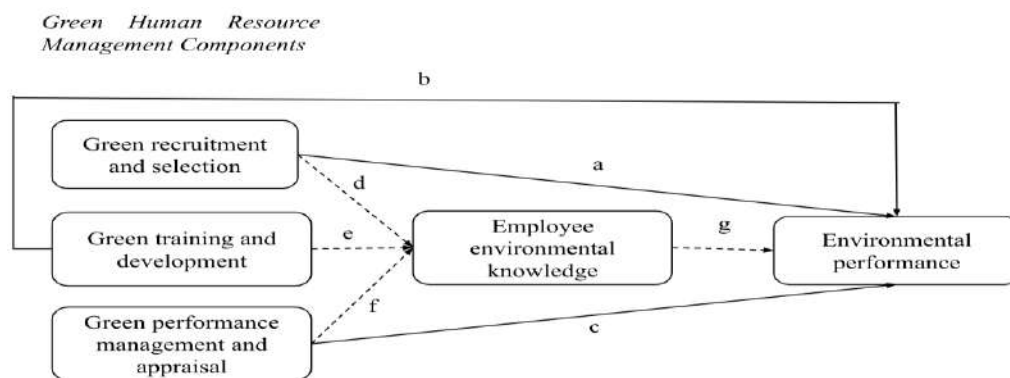
Figure 1. The Research Framework

METHODS

Purposive sampling was employed in the study to choose sample participants from the population based on particular concerns (Sugiyono in Emilia & Sanjaya, 2023). This research made specific considerations: Gembira Loka Zoo employees with contract or permanent employee status, a minimum age of 20 years, a minimum work period of 1 year, and at least the last education at the high school level.

Table 1. The result of the Validity Test

Research Variables	Statement items	Loadings Factor Value
Green Recruitment and Selection (GRS)	GRS1.2	0.732
	GRS2.1	0.746
	GRS2.2	0.849
	GRS2.3	0.884
Green Training and Development (GTD)	GTD1.1	0.876
	GTD1.2	0.845
	GTD1.3	0.861
	GTD2.1	0.746
	GTD2.2	0.804
Green Performance Management and Appraisal (GPM)	GPM1.1	0.906
	GPM1.2	0.886
	GPM2.2	0.837
Employee Environmental Knowledge (EEK)	EEK2.1	0.865
	EEK2.2	0.804
	EEK2.3	0.821
	EEK3.1	0.878
	EEK3.2	0.825
	EEK3.3	0.868
Environmental Performance (EP)	EP1.1	0.786
	EP1.2	0.783
	EP2.2	0.753
	EP3.1	0.819
	EP3.2	0.770

Source: Results of Primary Data Processing, 2024

Surveys were employed to get information from the participants. The sample used was made up of all employees, totaling 100 respondents. The questionnaire included two green recruitment and selection indicators (recruitment process and recruitment requirements), two green training and development indicators (training objectives and trainees), two green performance management and appraisal indicators (work quality and employee compliance), two employee environmental knowledge indicators (subjective knowledge and abstract knowledge), and three environmental performance indicators (environmental management policies, waste management, and regulatory compliance) with a total of 26 statement items. The SmartPLS3 application was used to verify the authenticity of each question on the questionnaire. Testing with a significant level of 0.05 resulted in each item being valid (see Table 1). The questionnaire was declared reliable using Average Variance Extracted (AVE), Cronbach's Alpha, and Composite Reliability (see Table 2).

Table 2. The result of Cronbach's Alpha, Composite reliability, AVE

Research Variables	Cronbach's Alpha	Composite reliability	AVE
Employee Environmental Knowledge (EEK)	0.919	0.937	0.712
Environmental Performance (EP)	0.842	0.888	0.612
Green Performance Management and Appraisal (GPM)	0.852	0.909	0.769
Green Recruitment and Selection (GRS)	0.831	0.880	0.649
Green Training and Development (GTD)	0.885	0.916	0.685

Source: Results of Primary Data Processing, 2024

RESULTS AND DISCUSSION

Results

The majority of respondents were male (78 people or 78%), contract employees (81 people or 81%), 20-25 years old (33 people or 33%), 1-3 years of service (37 people or 37%), and the last education was high school (83 people or 83%).

Table 3 shows that green training and development directly affects performance (t-statistic 3.040 and p-values 0.002). Also, green performance management and appraisal affect environmental performance mediated by employee environmental knowledge (t-statistic 2.603 and p-values 0.010).

Table 3. Path coefficient results and specific indirect effects

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Status
GRS → EP	0.175	0.206	0.105	1.671	0.095	not significant
GTD → EP	0.245	0.245	0.084	3.040	0.002	significant
GPM → EP	0.139	0.110	0.116	1.196	0.232	not significant
GRS → EEK → EP	-0.027	-0.026	0.045	0.608	0.544	not significant
GTD → EEK → EP	0.058	0.061	0.040	1.442	0.150	not significant
GPM → EEK → EP	0.198	0.210	0.076	2.603	0.010	significant

Source: Results of Primary Data Processing, 2024

Referring to Hair, Black, Babin, and Anderson in Radito et al. (2023), R square values of 0.50 to 0.25 are regarded as weak and 0.75 as crucial. Based on the coefficient of determination (R Square), the environmental performance (EP) variable of 0.503 and the

employee environmental knowledge (EEK) variable of 0.504 (table 4) are in the moderate category.

Table 4. Coefficient of Determination

	R Square	R Square Adjusted
EP	0.503	0.482
EEK	0.504	0.488

Source: Results of Primary Data Processing, 2024

Discussion

It is established from the findings of hypothesis testing that there is no direct relationship between green recruitment and selection practices and environmental performance. According to the study, green recruitment and selection practices did not directly impact environmental performance. This aligns with Pramudita and Gunawan's (2023) research, which also discovered that green recruitment and selection procedures, part of green human resources management practices, do not affect environmental performance. This occurs because green human resources management is still relatively new to employees and businesses in Indonesia, particularly in Yogyakarta.

It is established that green training and development directly impact environmental performance based on the findings of hypothesis testing. According to the study's findings, environmental performance is directly impacted by green training and development, so implementing more effective green training and development strategies will enhance environmental performance. This study's results align with Khan's research (2022), which implies that a solid and favorable correlation exists between environmental performance and green human resource management techniques, one of green training and development practices.

It is established from hypothesis testing results that there is no direct relationship between environmental performance and green performance management and appraisal. The

study showed that green performance appraisal does not directly affect environmental performance. This is consistent with Yusoff et al.'s research (2020), which similarly determined that one of the hypotheses was whether or not environmental performance is positively impacted by green performance appraisal.

The findings of the hypothesis test indicate that employee environmental awareness mediates the lack of effect that green training and development, as well as green recruiting and selection, have on environmental performance. This result contradicts Bazrkar and Moshiripour's research (2021), which found that the relationship between environmental performance and green human resource management practices - including green training and development and recruitment practices - is mediated by employees' environmental knowledge.

The outcomes of the hypothesis test demonstrate that employee environmental knowledge acts as a mediating factor between environmental performance and green performance management and appraisal. This result is consistent with research by Bazrkar and Moshiripour (2021), which also discovered that the relationship between environmental performance and green human resource management practices—which include green performance management and appraisal procedures—is mediated by employees' environmental knowledge.

CONCLUSION AND IMPLICATIONS

The findings show that employee environmental knowledge completely mediates the impact of green performance management and appraisal on environmental performance and that green training and development directly impact environmental performance.

In order to optimize green training and development processes, Gembira Loka Zoo's Human Resource Development (HRD) staff, who oversee employee training and development, should be particularly concerned with identifying green training needs.

In order to optimize the implementation of green performance management and appraisal at Gembira Loka Zoo, the company may be able to assess environmental performance through the use of the Public Disclosure Program for Environmental Compliance (PROPER), which is one type of government policy to improve the company's environmental management performance by what has been determined in the laws and regulations to all employee divisions.

REFERENCES

Badan Perencanaan dan Pembangunan Daerah DIY. (2020). *Indeks Kualitas Lingkungan Hidup DIY*. https://bappeda.jogjaprov.go.id/dataku/data_dasar/chart/8029

Bazrkar, A., & Moshiripour, A. (2021). Corporate practices of green human resources management. *Foresight and STI Governance*, *15*(1). https://doi.org/10.17323/2500-2597.2021.1.97.105

Bresciani, S., Rehman, S. U., Giovando, G., & Alam, G. M. (2023). The role of environmental management accounting and environmental knowledge management practices influence environmental performance: mediated-moderated model. *Journal of Knowledge Management*, *27*(4). https://doi.org/10.1108/JKM-12-2021-0953

Emilia, S. B., & Sanjaya, R. (2023). The Influence of E-Servqual on Customer E-Satisfaction, A Case of A State-Owned Bank. *Journal of Management and Business Environment (JMBE)*, *5*(1). https://doi.org/10.24167/jmbe.v5i1.10303

Ercantan, O., & Eyupoglu, S. (2022). How Do Green Human Resource Management Practices Encourage Employees to Engage in Green Behavior? Perceptions of University Students as Prospective Employees. *Sustainability (Switzerland)*, *14*(3). https://doi.org/10.3390/su14031718

Fawehinmi, O., Yusliza, M. Y., Mohamad, Z., Noor Faezah, J., & Muhammad, Z. (2020). Assessing the green behavior of academics: The role of green human resource management and environmental knowledge. *International Journal of Manpower*, *41*(7). https://doi.org/10.1108/IJM-07-2019-0347

Hossain, I., Nekmahmud, M., & Fekete-Farkas, M. (2022). How Do Environmental Knowledge, Eco-Label Knowledge, and Green Trust Impact Consumers' Pro-Environmental Behaviour for Energy-Efficient Household Appliances? *Sustainability (Switzerland)*, *14*(11). https://doi.org/10.3390/su14116513

Isrososiawan, S., Rahayu, A., & Wibowo, L. A. (2021). Green Human Resources Management Mendukung Kinerja Lingkungan Industri Perhotelan. *Jurnal Co Management*, *3*(2). https://doi.org/10.32670/comanagement.v3i2.425

Jabbour, C. J. C., & Santos, F. C. A. (2008). The central role of human resource management in the search for sustainable organizations. *International Journal of Human Resource Management*, *19*(12). https://doi.org/10.1080/09585190802479389

Karmoker, K., Kona, F. A., Oyshi, A. H., & Yasmin, K. S. (2021). Effects of Green Human Resource Management on Employee Green Behavior: Moderating Role of Employee Environmental Knowledge. *International Journal of Sustainable Development & World Policy*, *10*(2). https://doi.org/10.18488/journal.26.2021.102.64.80

Kementerian Lingkungan Hidup dan Kehutanan. (2021). *Peraturan Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia Nomor 27 Tahun 2021 Tentang Indeks Kualitas Lingkungan Hidup*. https://www.regulasip.id/book/18636/read#:~:text=Peraturan%20menteri%20lingkung an%20hidup%20dan,Tentang%20indeks%20kualitas%20lingkungan%20hidup

Khan, S. (2022). Effects of Green Human Resource Management practices on environmental performance: Evidence from Textile Sector of Emerging Country. *Munich Personal RePEc Archive*, *112379*.

Kiplangat, T. J., Sang, H., & Kingori, P. (2022). Influence of Green Recruitment and Selection on Sustainability of Selected Tea Factories in Kericho Highlands Region, Kenya. *East African Journal of Business and Economics*, *5*(1). https://doi.org/10.37284/eajbe.5.1.522

Muchsinati, E. S., & Fairly, D. (2023). Pengaruh Green Human Resource Management Terhadap Environmental Performance Dengan Green Employee Empowerment Sebagai Variabel Mediating Pada …. *Cakrawala Repositori IMWI*.

Paillé, P. (2022). *Green human resource management research: Issues, trends, and challenges*.

Pramudita, E. J., & Gunawan, A. W. (2023). Pengaruh Green Human Resource Management, Green Human Capital Dan Green Innovation Terhadap Environmental Performance Melalui Green Human Capital Dan Green Innovation Pada Pt Mitrakarya Cipta Gemilang. *Glosains: Jurnal Sains Global Indonesia*, *4*(1). https://doi.org/10.36418/glosains.v4i1.385

Radito, T. A., Jefrison, J., & Prapti, M. S. (2023). The Effect Of Consumer Trust And Service Performance On Customer Loyalty Of Pt. Jne. *Journal of Management and Business Environment (JMBE)*, *4*(2). https://doi.org/10.24167/jmbe.v4i2.5274

Taylor, J. A., & Duram, L. A. (2021). Linking personal experience to global concern: How zoo visits affect sustainability behavior and views of climate change. *Sustainability (Switzerland)*, *13*(13). https://doi.org/10.3390/su13137117

Yusoff, Y. M., Nejati, M., Kee, D. M. H., & Amran, A. (2020). Linking Green Human Resource Management Practices to Environmental Performance in Hotel Industry. *Global Business Review*, *21*(3). https://doi.org/10.1177/0972150918779294