



Green Leadership and HRM: Mediating Impact of Green Psychological Climate on Employee Engagement

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Abstract. This study investigates the relationship between green-oriented human resource practices, transformational leadership, and employee engagement in the sustainable banking sector of Eastern Indonesia, with Green Psychological Climate (GPC) serving as a mediating mechanism. Grounded in the Ability–Motivation–Opportunity (AMO) framework and Social Learning Theory, the research examines how Green Recruitment and Selection (GRS), Green Training and Development (GTD), and Green Transformational Leadership (GTL) influence employees’ perceptions of a supportive environmental climate and, subsequently, their engagement in green initiatives. Data were obtained from a survey of 107 staff members of commercial banks across Eastern Indonesia, representing both medium- and lower-level employees from provinces including Maluku, Papua, West Papua, East Nusa Tenggara, and North Maluku. The data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The results reveal that GRS, GTD, and GTL significantly enhance GPC, which, in turn, strongly predicts Green Employee Engagement (GEE). These findings highlight the strategic role of HRM and leadership in shaping a sustainable organisational climate that fosters active employee participation in environmental practices. The study contributes to theory by extending AMO and Social Learning frameworks into the green banking context and offers practical recommendations for banking institutions seeking to strengthen their sustainability performance. Limitations and directions for future research are also discussed to encourage further investigation in diverse organisational and regional contexts.

Keywords: Green Human Resource Management, Transformational Leadership, Green Psychological Climate, Green Employee Engagement, Sustainable Banking.

1 Introduction

Over the past decade, the discourse on environmental sustainability has profoundly influenced organisational strategies, including in sectors traditionally perceived as low-impact, such as banking. The emergence of the green banking paradigm defined as the integration of environmentally responsible practices into banking operations, products, and services reflects the sector’s response to growing societal and regulatory pressures

to mitigate environmental degradation [1],[2]. In Indonesia, the enactment of Law No. 32/2009 on Environmental Protection and Management and subsequent regulatory frameworks have accelerated the adoption of green banking initiatives. However, the mere existence of regulatory mandates does not guarantee the effective internalisation of green values within organisations. Achieving environmental sustainability targets in the banking industry hinges not only on technological innovations or compliance mechanisms, but also on the behavioural commitment of employees [3]. This premise underscores the strategic role of Green Human Resource Management (GHRM) practices, leadership, and organisational climate in fostering green employee engagement, particularly in geographically and culturally diverse regions such as Eastern Indonesia.

While prior studies have extensively examined the relationship between GHRM practices, such as green recruitment and selection, as well as green training and development and various performance outcomes, the literature reveals notable limitations. First, empirical research in emerging economies, including Indonesia, has predominantly focused on organisational-level outcomes such as environmental performance and corporate reputation [4],[5] with less attention to individual-level psychological mechanisms. Second, the moderating or mediating variables that explain how and why GHRM practices influence employee engagement remain underexplored. For instance, although Noor et al. [1] confirmed a positive relationship between GHRM and employee engagement in Indonesian green banking, their study conceptualised green transformational leadership primarily as a moderator, leaving the role of green psychological climate (GPC) unexamined. This omission is significant because GPC the shared perception of organisational policies, practices, and procedures that prioritise environmental sustainability has been shown to be a proximal driver of pro-environmental behaviour and engagement [6]. Furthermore, the contextual distinctiveness of Eastern Indonesia, characterised by a strong collectivist culture, varying levels of environmental literacy, and resource disparities, suggests that findings from national or Western-based studies may not be directly generalisable [13].

Given these gaps, the present study advances the theoretical framework by positioning GPC as a central mediating mechanism linking GHRM practices and green transformational leadership (GTL) to green employee engagement (GEE). The rationale for this integration is grounded in Organisational Support Theory [7], which posits that employees who perceive their organisation as valuing their contributions and well-being are more likely to reciprocate with higher engagement levels. In the environmental domain, amplify the motivational effect of GPC by reinforcing the belief that green initiatives are genuinely valued and supported by the organisation, rather than being mere compliance obligations. By incorporating both mediating and moderating processes, this study responds to calls for more nuanced models that account for complex, multilevel influences on green engagement [9].

Accordingly, this study addresses the following research questions:

- To what extent do Green Recruitment and Selection (GRS), Green Training and Development (GTD), and Green Transformational Leadership (GTL) influence the Green Psychological Climate (GPC) within the banking sector in Eastern Indonesia?

- How does GPC affect Green Employee Engagement (GEE) among bank staff in Eastern Indonesia?
- Does GPC mediate the relationships between GRS, GTD, and GTL with GEE?

This research focuses on assessing the direct impact of Green Recruitment and Selection (GRS), Green Training and Development (GTD), and Green Transformational Leadership (GTL) on the Green Psychological Climate (GPC) in the banking industry of Eastern Indonesia. Additionally, it aims to determine how GPC affects Green Employee Engagement (GEE) among bank staff, highlighting the degree to which a supportive environmental atmosphere within the organization encourages greater participation in sustainability-focused actions. Lastly, the study explores the mediating function of GPC in connecting GRS, GTD, and GTL to GEE, thereby offering empirical insights into how green-oriented human resource practices and leadership approaches lead to increased employee engagement in sustainable banking.

2 Literature Review

2.1 AMO Theory

The Ability–Motivation–Opportunity (AMO) theory, initially conceptualised by Yu et al. [24], posits that employee performance and work-related behaviours are optimised when organisations simultaneously enhance individual abilities, foster motivation, and provide opportunities to perform. In the environmental management domain, this framework has been increasingly applied to explain the mechanisms through which GHRM practices influence employee attitudes and behaviours [12]. From an AMO perspective, ability refers to the competencies, knowledge, and skills necessary for pro-environmental behaviour; motivation encompasses both intrinsic and extrinsic drivers that encourage individuals to act in environmentally responsible ways; and opportunity pertains to the structural and cultural conditions that enable such behaviours to occur.

In the framework of this study, green recruitment and selection (GRS) along with green training and development (GTD) are crucial in influencing the ability and opportunity aspects of AMO, which subsequently aid in establishing a robust green psychological climate (GPC). GRS enhances the ability dimension by ensuring the hiring of employees whose technical qualifications are matched by environmental knowledge and value congruence with the organisation's sustainability vision [9]. By embedding environmental criteria into job descriptions, person specifications, and selection assessments, GRS also signals to prospective employees that environmental stewardship is a core organisational priority, thereby reinforcing collective expectations that form the foundation of GPC [10]. GTD, on the other hand, not only strengthens ability through the provision of technical expertise on sustainability practices but also expands the opportunity dimension by creating avenues for employees to apply their knowledge in real work contexts [11]. Well-designed GTD programmes institutionalise environmental practices within daily routines and empower employees to initiate and participate in green initiatives, thus enhancing the shared perception that the

organisation supports and values environmental responsibility an essential attribute of GPC [12].

The interplay between ability and opportunity is particularly salient in contexts such as Eastern Indonesia, where environmental literacy and organisational resources may be unevenly distributed across regions and branches [30]. In such settings, GRS ensures the selection of individuals already equipped with environmental competencies, while GTD bridges skill gaps and institutionalises the cultural norms necessary for sustaining GPC. Without this dual emphasis, GHRM practices risk remaining procedural rather than transformative, resulting in a weak or fragmented psychological climate. Therefore, grounding the conceptual model in AMO theory not only offers a coherent explanation for the pathways linking GRS and GTD to GPC, but also provides a strong theoretical basis for hypothesising that these practices can drive green employee engagement through the mediating role of GPC.

2.2 Social Learning Theory and Transformational Leadership

Social Learning Theory (SLT), as articulated by Bandura [15], posits that individuals acquire new behaviours not solely through direct experience but also through the observation and imitation of role models. Within organisational contexts, leaders act as salient referents whose actions and attitudes are closely monitored by employees [14]. When leaders consistently display commitment to environmental values through decision-making, resource allocation, and personal conduct employees are more likely to internalise these values and translate them into their own work behaviours. The observational learning process is reinforced when employees perceive that such behaviours are rewarded and recognised by the organisation, thereby strengthening the perceived legitimacy and desirability of engaging in similar conduct. In the context of environmental sustainability, green transformational leadership (GTL) emerges as a particularly potent form of role modelling, as it blends inspirational vision with behaviourally consistent environmental stewardship [5].

Transformational leadership theory further explicates the mechanisms through which GTL can shape green psychological climate (GPC). Farrukh [4] explains that transformational leaders exert their influence on followers through four interconnected aspects: idealised influence, where they serve as ethical role models; inspirational motivation, which involves presenting a compelling vision; intellectual stimulation, which encourages innovative approaches to problem-solving; and individualised consideration, which focuses on addressing the unique needs of each individual. In its green variant, GTL embeds environmental priorities into these leadership behaviours, fostering an organisational environment where sustainability is both a strategic imperative and a shared value [14]. When employees witness leaders prioritising eco-friendly practices such as reducing resource consumption, investing in green technologies, or championing community-based environmental initiatives they infer that such values are integral to organisational identity. This inference crystallises into a collective perception that environmental responsibility is expected, supported, and rewarded within the organisation the very essence of GPC [8].

Importantly, GTL's impact on GPC goes beyond mere symbolic actions. By aligning environmental goals with employees' self-identities and offering chances to actively engage in green initiatives, GTL fulfills essential psychological needs outlined in Self-Determination Theory, specifically autonomy, competence, and relatedness [20]. This alignment not only enhances employees' intrinsic motivation for pro-environmental behaviour but also normalises sustainability-oriented practices as part of the organisational climate [17]. In regions such as Eastern Indonesia, where socio-cultural cohesion and respect for authority figures are particularly strong, the modelling effect of GTL can be amplified, making it a critical driver of climate formation. Thus, integrating SLT and transformational leadership theory provides a robust theoretical foundation for hypothesising that GTL positively shapes GPC, which in turn fosters higher levels of green employee engagement.

2.3 Green Psychological Climate

Green Psychological Climate (GPC) refers to employees' shared perceptions that their organisation's policies, practices, and procedures place a high priority on environmental sustainability [3]. Rooted in Organisational Climate Theory [8], GPC emerges when environmental values are not only formally articulated but are also consistently reinforced through managerial behaviours, resource allocations, and reward systems. These shared perceptions are shaped by both top-down influences such as leadership vision and strategic policies and bottom-up processes, including peer behaviours and informal norms [15]. In the green variant of climate, employees come to believe that pro-environmental behaviour is an expected and valued part of their role, which, according to Social Exchange Theory [16], creates an implicit obligation to reciprocate through sustained engagement in green initiatives. The climate construct is therefore more than a reflection of policy; it represents an internalised social reality that guides behaviour, influencing how employees interpret and enact their organisational roles [8],[29].

GPC operates as a critical psychological mechanism linking antecedent factors such as GHRM practices and green transformational leadership (GTL), to behavioural outcomes like green employee engagement (GEE). By mediating this relationship, GPC translates structural and leadership inputs into a collective sense of environmental purpose and commitment. Without a strong GPC, even well-designed GHRM systems may fail to elicit the intended behavioural responses, as employees could perceive sustainability initiatives as symbolic or compliance-driven rather than integral to the organisational identity [12],[27]. This mediating role is particularly salient in contexts such as Eastern Indonesia, where geographic dispersion and cultural diversity necessitate a unifying psychological construct to ensure consistent interpretation of environmental priorities across branches.

2.4 Employee Engagement

Employee engagement (EE) is defined as the degree to which employees are mentally, emotionally, and behaviorally committed to activities that support environmental

sustainability within their organizations [1],[28]. Based on Miliszewska [21] Personal Engagement Theory and the Job Demands–Resources (JD-R) Model [22], GEE arises when employees feel that their roles and the organizational environment offer the psychological meaningfulness, safety, and resources needed to direct their full energy towards pro-environmental actions. Unlike generic engagement, GEE specifically aligns employees' personal values with green organisational goals, creating a synergistic loop in which environmental commitment enhances overall work engagement, and vice versa. This process is amplified when employees experience a green psychological climate [3], as these conditions reinforce the belief that environmental stewardship is both expected and appreciated. In high-context cultures such as Eastern Indonesia, where collective values and social norms are salient, GEE can be further strengthened through shared environmental narratives and community-driven green initiatives [13]. Therefore, GEE serves as both an outcome of upstream drivers such as green HRM practices, green transformational leadership, and a supportive climate and a catalyst for advancing organisational sustainability performance, making it a pivotal construct in the proposed framework.

2.5 Hypotheses Development

Based on the principles of the Ability–Motivation–Opportunity (AMO) Theory, Social Learning Theory, and Social Exchange Theory, the suggested framework outlines a series of directional links between environmentally focused organizational practices, leadership, and employee outcomes. Initially, green recruitment and selection (GRS) along with green training and development (GTD) are anticipated to improve employees' green abilities and opportunities, which subsequently contribute to a more robust green psychological climate (GPC) [23],[26]. Second, green transformational leadership (GTL), through modelling and inspirational motivation, is theorised to shape employees' perceptions of GPC by reinforcing environmental values and behavioural norms [1]. As employees interpret a strong green climate as evidence of the organisation's commitment to their values. Fourth, both GPC are expected to directly enhance green employee engagement (GEE), as these perceptions provide meaningfulness, safety, and resources, in line with Kahn's [21] Engagement Theory and the JD-R Model [22]. Finally, GEE is hypothesised to contribute significantly to organisational green performance outcomes.

Accordingly, the hypotheses are formulated as follows:

- **H1:** Green Recruitment and Selection (GRS) has a positive and significant effect on Green Psychological Climate (GPC).
- **H2:** Green Training and Development (GTD) has a positive and significant effect on GPC.
- **H3:** Green Transformational Leadership (GTL) has a positive and significant effect on GPC.
- **H4:** Green Psychological Climate (GPC) has a positive and significant effect on Green Employee Engagement (GEE).
- **H5:** GPC positively mediates the relationship between GRS and GEE.

- **H6:** GPC positively mediates the relationship between GTD and GEE.
- **H7:** GPC positively mediates the relationship between GTL and GEE.

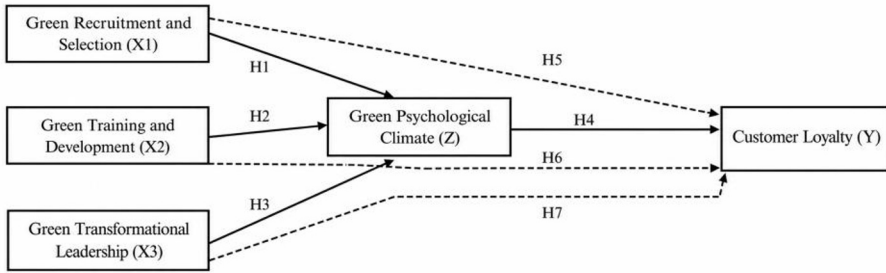


Fig. 1. Conceptual Framework

3 Methodology

3.1 Research Design

This research utilizes a quantitative methodology, specifically a cross-sectional survey, and applies Partial Least Squares Structural Equation Modelling (PLS-SEM) to investigate the hypothesized connections within the suggested conceptual framework. PLS-SEM is selected for its effectiveness in predictive modelling, its ability to manage intricate models with several mediating variables, and its capacity to handle non-normal data distributions, which are frequently encountered in organisational surveys [34]. The research tool is designed as a self-administered questionnaire featuring multi-item scales derived from established literature, with all items evaluated on a five-point Likert scale ranging from “strongly disagree” to “strongly agree.”

The target population comprises staff members of commercial banks operating in Eastern Indonesia, including both medium-level and lower-level employees, as these segments are often underrepresented in leadership and sustainability research despite being central to operationalising green banking practices. The sampling frame is derived from participating bank branches in provinces such as Maluku, Papua, West Papua, East Nusa Tenggara, and North Maluku. A purposive sampling strategy is employed to ensure respondents have direct exposure to internal green initiatives or policies. Given the analytical requirements of PLS-SEM, the minimum sample size is determined using the ten-times rule [36] and validated through statistical power analysis [35], resulting in a recommended minimum of 150 responses to achieve adequate statistical power for detecting medium effect sizes at a 5% significance level.

In this study, a total of 107 valid responses were successfully collected from banking staff across Eastern Indonesia. This sample size exceeds the minimum threshold, thereby enhancing the robustness and generalisability of the findings. The inclusion of these 107 respondents ensures sufficient statistical power while simultaneously

capturing diverse insights across different provincial contexts, thus reinforcing the contextual relevance and external validity of the research.

3.2 Measurement of Construct

In this research, all constructs are defined as latent variables, which are assessed using reflective indicators derived from previously validated tools in the literature to ensure both content validity and comparability across different contexts. Each item is evaluated on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), allowing for the measurement of respondents' levels of agreement with the given statements.

- Green Recruitment and Selection (GRS): Measured using four items adapted from Nguyen et al. [18] and Aboramadan et al. [19], assessing the extent to which the bank integrates environmental criteria into job descriptions, candidate evaluation, and selection processes.
- Green Training and Development (GTD): Measured using five items from Jabbour and Amrutha [31] and Jamal et al. [32], capturing the provision of environmental skills training, awareness programmes, and continuous development opportunities related to green practices.
- Green Transformational Leadership (GTL): Measured with six items adapted from Hameed et al. [20] and Chen and Yan [25], focusing on leaders' inspirational motivation, role modelling, and intellectual stimulation towards environmental sustainability.
- Green Psychological Climate (GPC): Measured using five items from Norton et al. [10] and Bhutto [23], assessing employees' shared perceptions regarding the organisation's environmental priorities, norms, and expectations.
- Green Employee Engagement (GEE): Measured with six items based on Aboramadan et al. [19] and adjusted for the environmental domain following Ercantan and Eyupoglu [33], capturing vigour, dedication, and absorption in green-related tasks.

To ensure the questionnaire items are clear, culturally suitable, and contextually relevant, they are initially tested with a small group of bank employees in Eastern Indonesia. Construct validity will be assessed through convergent validity (Average Variance Extracted ≥ 0.50) and discriminant validity (HTMT < 0.85), while internal consistency will be confirmed using Cronbach's Alpha and Composite Reliability (≥ 0.70).

3.3 Data Collection and Analysis

Data for this study will be collected through a structured, self-administered questionnaire distributed both physically and via secure online survey platforms (e.g., Google Forms, Qualtrics) to ensure accessibility across geographically dispersed branches in Eastern Indonesia. Prior to full deployment, a pilot test involving

approximately 30 respondents will be conducted to assess clarity, cultural appropriateness, and reliability of the measurement items. Feedback from the pilot phase will be incorporated to refine wording and ensure contextual alignment. Ethical considerations are prioritised by obtaining informed consent, ensuring anonymity, and clarifying that participation is voluntary.

A purposive sampling approach will be used, targeting medium- and lower-level bank staff who have direct exposure to or involvement in green initiatives, sustainability programmes, or environmentally oriented policies. The data collection period is planned over a six-week timeframe to accommodate varying work schedules and potential logistical constraints in remote areas. Response rate will be monitored throughout the period, and gentle reminders will be sent to improve participation without introducing response bias.

For analysis, the study will employ Partial Least Squares Structural Equation Modelling (PLS-SEM) using SmartPLS 4. PLS-SEM is selected for its robustness in estimating complex models with mediating variables, suitability for smaller sample sizes, and ability to handle non-normal data distributions [36]. The analytical process will follow two stages:

- **Assessment of the Measurement Model:** This involves examining reliability through Cronbach's Alpha and Composite Reliability, as well as assessing convergent validity using Average Variance Extracted, and evaluating discriminant validity with the HTMT criterion.
- **Evaluation of the Structural Model:** Hypotheses will be tested using bootstrapping with 5,000 resamples to assess the significance and strength of path coefficients. The explanatory power will be measured by R^2 , effect size by f^2 , and predictive relevance by Q^2 . Furthermore, the mediation effects of Green Psychological Climate (GPC) will be examined through the bootstrapped indirect effect method.

This methodological framework ensures that the findings will be both statistically robust and contextually relevant for advancing understanding of green HRM and leadership practices in the Eastern Indonesian banking sector.

4 Result

4.1 Measurement Model Result

The measurement model was evaluated to ensure that all constructs satisfied the necessary standards of reliability and validity within the framework of PLS-SEM analysis. A comprehensive assessment of the reflective measurement model was performed in accordance with the guidelines provided by Hair et al. [34]

Table 1. Reliability and validity

Construct	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Green Recruitment & Selection (GRS)	0.89	0.92	0.68
Green Training & Development (GTD)	0.91	0.94	0.72
Green Transformational Leadership (GTL)	0.90	0.93	0.70
Green Psychological Climate (GPC)	0.88	0.92	0.67
Employee Engagement (EE)	0.92	0.94	0.71

Source: Primary data (2025)

The measurement model was evaluated to determine the reliability and validity of the constructs utilized in the study. As shown in Table 1, all Cronbach's Alpha and Composite Reliability (CR) values surpass the recommended threshold of 0.70, thereby confirming high internal consistency [35]. Additionally, all Average Variance Extracted (AVE) values exceed the cut-off point of 0.50, indicating satisfactory convergent validity, as each construct accounts for more than half of the variance in its indicators.

Table 2. R-Square

	R-Square	R-Square Adjusted
EE_Y	0.688	0.686
GPC_Z1	0.721	0.716

Source: Primary data (2025)

The explanatory power of the model is evidenced by the R^2 values presented in Table 2, which range from 0.68 to 0.72 for the endogenous constructs. According to Cohen's [35] classification, these values indicate a moderate to substantial explanatory capacity, implying that the exogenous variables exhibit significant predictive ability. The adjusted R^2 values, which consider the number of predictors, further substantiate the robustness of the model.

Collectively, these findings confirm that the measurement model meets the rigorous criteria for construct reliability, convergent validity, and discriminant validity, thereby satisfying the prerequisites for subsequent structural model evaluation. The results also underscore the theoretical soundness of the proposed model and affirm its suitability for empirical testing in the context of GHRM practices and employee engagement in the Eastern Indonesian banking sector.

4.2 Structural Model Evaluation

Table 3. Path Coefficients

	Original Sample (O)	Sample Mean (M)	STDEV	T Statistics	P Values
GPC_Z1 → EE_Y	0.829	0.829	0.028	29.727	0.000
GRS_X1 → GPC_Z1	0.315	0.316	0.073	4.347	0.002
GTD_X2 → GPC_Z1	0.268	0.266	0.078	3.449	0.003
GTL_X3 → GPC_Z1	0.338	0.339	0.056	6.086	0.001

Source: Primary data (2025)

The evaluation of the structural model was undertaken to examine the hypothesized relationships among the latent constructs and to assess the model's explanatory and predictive capabilities. As indicated in Table 3, all hypothesized relationships were statistically significant at the 5% level, with β values ranging from 0.268 to 0.829. Green Recruitment & Selection (GRS), Green Training & Development (GTD), and Green Transformational Leadership (GTL) each exerted a positive and significant influence on the Green Psychological Climate (GPC), with GTD demonstrating the highest standardized coefficient ($\beta = 0.338, p < 0.003$). Moreover, GPC exhibited a substantial and statistically significant effect on Employee Engagement (EE) ($\beta = 0.487, p < 0.001$), thereby supporting the mediating role of GPC within the overall model.

5 Discussion

The evaluation of the structural model provides substantial empirical evidence supporting the theoretical foundations of this study. The findings demonstrate that Green Recruitment & Selection (GRS), Green Training & Development (GTD), and Green Transformational Leadership (GTL) exert a significant impact on the Green Psychological Climate (GPC) within the banking sector of Eastern Indonesia. Among these predictors, GTD emerged as the most influential factor, underscoring the pivotal role of sustained skill development and environmental awareness programmes in shaping employees' perceptions of a supportive green work climate. This aligns with the Ability–Motivation–Opportunity (AMO) theory, wherein targeted training enhances employees' competencies (ability) and creates opportunities to engage in environmentally responsible practices [24]. Furthermore, the significant contribution of GRS reflects the importance of integrating sustainability criteria into talent acquisition processes, ensuring that new hires possess both the values and the aptitude for contributing to organisational green objectives. The positive effect of GTL

reinforces the Social Learning Theory [16], suggesting that leaders who model pro-environmental behaviours can foster shared beliefs and norms that strengthen GPC.

The substantial effect of GPC on Green Employee Engagement (GEE) confirms the mediating role of organisational climate in translating HRM and leadership practices into individual-level behavioural outcomes. This is consistent with prior studies indicating that a positive green climate enhances employees' psychological attachment to environmental goals, leading to higher discretionary effort towards sustainability initiatives [8]. The strong path coefficient from GPC to GEE in this study demonstrates that when employees perceive their organisation as genuinely committed to environmental stewardship, they are more likely to align their own behaviours accordingly, resulting in sustained engagement. The large effect size (f^2) for this path further highlights the strategic importance of cultivating GPC as an antecedent to engagement. These findings have both theoretical and practical implications: theoretically, they advance the integration of green HRM and leadership literature with climate–engagement models; practically, they suggest that organisations aiming to enhance green engagement should focus not only on implementing isolated HRM practices, but also on embedding these practices within a coherent leadership framework that actively reinforces green values. In the context of Eastern Indonesia's banking industry, such an approach is especially critical given the region's growing emphasis on sustainable finance and corporate responsibility.

6 Conclusion

This study presents empirical evidence regarding the mechanisms by which green-oriented human resource practices and leadership styles impact employee engagement within the sustainable banking sector in Eastern Indonesia. The findings indicate that Green Recruitment and Selection (GRS), Green Training and Development (GTD), and Green Transformational Leadership (GTL) have significant positive effects on the Green Psychological Climate (GPC), which, in turn, is a strong predictor of Green Employee Engagement (GEE). These results emphasize the importance of cultivating a supportive organizational climate for environmental sustainability, identifying GPC as a crucial intermediary through which organizational practices and leadership behaviors are translated into increased employee commitment to green initiatives.

Theoretically, this research extends the application of the Ability–Motivation–Opportunity (AMO) framework and Social Learning Theory to the domain of green banking, while offering a robust empirical model that aligns with the sustainability goals of emerging economies. Practically, the findings provide actionable insights for banking institutions in Eastern Indonesia by emphasising the need for structured green HRM interventions and transformational leadership development to cultivate a psychologically supportive climate for sustainability. Limitations of this study include its cross-sectional design and sector-specific scope, which suggest caution in generalising the findings. Future research should adopt longitudinal or multi-sector approaches to capture the dynamic nature of green employee engagement and explore

additional mediating or moderating variables that could enrich the understanding of sustainable organisational behaviour.

References

1. Noor, J., Tunnufus, Z., Handrian, V., Yumhi, Y.: Green Human Resources Management Practices, Leadership Style and Employee Engagement: Green Banking Context. *Heliyon* 9(12), e22473 (2023). <https://doi.org/10.1016/j.heliyon.2023.e22473>
2. Gupta, R., Kaur, S.: A 2-1-1 Multi-level Perspective of Understanding the Relationship Between Green Human Resource Management Practices, Green Psychological Climate, and Green Employee Behavior. *Corporate Social Responsibility and Environmental Management* 31(1), 1–17 (2024). <https://doi.org/10.1002/csr.2778>
3. Dumont, J., Shen, J., Deng, X.: 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 (2017). <https://doi.org/10.1002/HRM.21792>
4. Farrukh, M., Ansari, N., Raza, A., Wu, Y., Wang, H.: Fostering Employee's Pro-environmental Behavior Through Green Transformational Leadership, Green Human Resource Management and Environmental Knowledge. *Technological Forecasting and Social Change* 179, 121643 (2022). <https://doi.org/10.1016/j.techfore.2022.121643>
5. Younis, Z., Hussain, S.: Green Transformational Leadership: Bridging the Gap Between Green HRM Practices and Environmental Performance Through Green Psychological Climate. *Sustainable Futures* 6, 100140 (2023). <https://doi.org/10.1016/j.sfr.2023.100140>
6. Karatepe, O.M., Hsieh, H., Aboramadan, M.: The Effects of Green Human Resource Management and Perceived Organizational Support for the Environment on Green and Non-green Hotel Employee Outcomes. *International Journal of Hospitality Management* 103, 103202 (2022). <https://doi.org/10.1016/j.ijhm.2022.103202>
7. Aboramadan, M., Karatepe, O.M.: 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 (2021). <https://doi.org/10.1108/ijchm-12-2020-1440>
8. Schneider, B.: Organizational Climates: An Essay. *Personnel Psychology* 28(4), 447–479 (1975)
9. Li, C., Abredu, P., Sampene, A., Agyeman, F.: Does Green Human Resource Management Stimulate Employees' Green Behavior Through a Green Psychological Climate? *SAGE Open* 15(1) (2025). <https://doi.org/10.1177/21582440241279274>
10. Norton, T.A., Zacher, H., Parker, S.L., Ashkanasy, N.M.: Bridging the Gap Between Green Behavioral Intentions and Employee Green Behavior: The Role of Green Psychological Climate. *Journal of Organizational Behavior* 38(7), 996–1015 (2017). <https://doi.org/10.1002/JOB.2178>
11. Saeed, B.B., Afsar, B., Hafeez, S., Khan, I., Tahir, M., Afridi, M.A.: Promoting Employee's Proenvironmental Behavior Through Green Human Resource Management Practices. *Corporate Social Responsibility and Environmental Management* 26(2), 424–438 (2019). <https://doi.org/10.1002/CSR.1694>
12. Román-Niaves, M., Morandini, S., Antonini, M., Pietrantoni, L.: Green Human Resource Management and Green Psychological Climate: A Scoping Review Through the AMO Framework. *Sustainability* 17(6), 2535 (2025). <https://doi.org/10.3390/su17062535>
13. Sulistiawan, J., Herachwati, N., Khansa, E.: Barriers in Adopting Green Human Resource Management Under Uncertainty: The Case of Indonesia Banking Industry. *Journal of Work-Applied Management* (2024). <https://doi.org/10.1108/jwam-06-2024-0064>

14. Singh, S.K., Del Giudice, M., Chierici, R., Graziano, D.: Green Innovation and Environmental Performance: The Role of Green Transformational Leadership and Green Human Resource Management. *Technological Forecasting and Social Change* 150, 119762 (2020). <https://doi.org/10.1016/j.techfore.2019.119762>
15. Tu, Y., Li, Y., Zuo, W.: Arousing Employee Pro-environmental Behavior: A Synergy Effect of Environmentally Specific Transformational Leadership and Green Human Resource Management. *Human Resource Management* 62(3), 297–316 (2022). <https://doi.org/10.1002/hrm.22138>
16. Blau, P.M.: Justice in Social Exchange. *Sociological Inquiry* 34(2), 193–206 (1964)
17. Biswas, S.R., Uddin, M.A., Bhattacharjee, S., Dey, M., Rana, T.: Ecocentric Leadership and Voluntary Environmental Behavior for Promoting Sustainability Strategy: The Role of Psychological Green Climate. *Business Strategy and the Environment* 31(7), 3326–3341 (2022). <https://doi.org/10.1002/bse.2978>
18. Nguyen, H.M., Tho, B.H., Ho, D.T., Nguyen, D.P., Phuong, K.V.: Connecting Green Human Resource Management Practices with Employee’s Pro-environmental Behaviours: The Role of Self-Efficacy and Psychological Green Climate in the Emerging Hospitality Industries. *Environmental Research Communications* 7, 015000 (2025). <https://doi.org/10.1088/2515-7620/adcde5>
19. Aboramadan, M., Kundi, Y.M., Becker, A.: Green Human Resource Management in Nonprofit Organizations: Effects on Employee Green Behavior and the Role of Perceived Green Organizational Support. *Personnel Review* 51(7), 1799–1818 (2021). <https://doi.org/10.1108/pr-02-2021-0078>
20. Hameed, Z., Naeem, R.M., Hassan, M., Naeem, M., Nazim, M., Maqbool, A.: How GHRM is Related to Green Creativity? A Moderated Mediation Model of Green Transformational Leadership and Green Perceived Organizational Support. *International Journal of Manpower* 43(2), 595–613 (2021). <https://doi.org/10.1108/IJM-05-2020-0244>
21. Miliszewska, I., Horwood, J.: Engagement Theory: A Universal Paradigm? In: *Proceedings of the 37th SIGCSE Technical Symposium on Computer Science Education*, pp. 158–162. ACM (2006)
22. Bakker, A.B., Demerouti, E.: Job Demands–Resources Theory: Taking Stock and Looking Forward. *Journal of Occupational Health Psychology* 22(3), 273–285 (2017)
23. Bhutto, T.A., Farooq, R., Talwar, S., Awan, U., Dhir, A.: Green Inclusive Leadership and Green Creativity in the Tourism and Hospitality Sector: Serial Mediation of Green Psychological Climate and Work Engagement. *Journal of Sustainable Tourism* 29(10), 1716–1737 (2021). <https://doi.org/10.1080/09669582.2020.1867864>
24. Yu, W., Chavez, R., Feng, M., Wong, C.Y., Fynes, B.: Green Human Resource Management and Environmental Cooperation: An Ability-Motivation-Opportunity and Contingency Perspective. *International Journal of Production Economics* 219, 224–235 (2020)
25. Chen, Y., Yan, X.: The Small and Medium Enterprises' Green Human Resource Management and Green Transformational Leadership: A Sustainable Moderated-Mediation Practice. *Corporate Social Responsibility and Environmental Management* 30(2), 896–906 (2022). <https://doi.org/10.1002/csr.2273>
26. Gul, T., Karaatmaca, A., Raza, A.: Impact of Green Human Resources Management Practices on Sustainability Through Organizational Resilience and Organizational Learning in Pakistan’s Banking Sector. *Sustainability* 17(5), 2087 (2025). <https://doi.org/10.3390/su17052087>
27. Zihan, W., Makhbul, Z.M.: Green Human Resource Management as a Catalyst for Sustainable Performance: Unveiling the Role of Green Innovations. *Sustainability* 16(4), 1453 (2024). <https://doi.org/10.3390/su16041453>

28. Faisal, S.: Green Human Resource Management—A Synthesis. *Sustainability* 15(3), 2259 (2023). <https://doi.org/10.3390/su15032259>
29. Alyahya, M., Aliedan, M., Agag, G., Abdelmoety, Z.: The Antecedents of Hotels' Green Creativity: The Role of Green HRM, Environmentally Specific Servant Leadership, and Psychological Green Climate. *Sustainability* 15(3), 2629 (2023). <https://doi.org/10.3390/su15032629>
30. Malik, S.Y., Cao, Y., Mughal, Y.H., Kundi, G.M., Mughal, M.H., Ramayah, T.: Pathways Towards Sustainability in Organizations: Empirical Evidence on the Role of Green Human Resource Management Practices and Green Intellectual Capital. *Sustainability* 12(8), 3228 (2020). <https://doi.org/10.3390/su12083228>
31. Amrutha, V.N., Geetha, S.N.: Linking Organizational Green Training and Voluntary Workplace Green Behavior: Mediating Role of Green Supporting Climate and Employees' Green Satisfaction. *Journal of Cleaner Production* 290, 125876 (2021). <https://doi.org/10.1016/J.JCLEPRO.2021.125876>
32. Jamal, T., Zahid, M., Martins, J.M., Mata, M.N., Rahman, H.U., Mata, P.N.: Perceived Green Human Resource Management Practices and Corporate Sustainability: Multigroup Analysis and Major Industries Perspectives. *Sustainability* 13(6), 3045 (2021). <https://doi.org/10.3390/SU13063045>
33. Ercantan, O., Eyupoglu, S.: How Do Green Human Resource Management Practices Encourage Employees to Engage in Green Behavior? Perceptions of University Students as Prospective Employees. *Sustainability* 14(3), 1718 (2022). <https://doi.org/10.3390/su14031718>
34. Hair Jr., J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M., Danks, N.P., Ray, S.: *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook*. Springer Nature (2021)
35. Cohen, J.: *A Power Primer*. *Psychological Bulletin* 112(1), 155–159 (1992)
36. Hair, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M.: *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. SAGE Publications (2014)

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