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Exploring the Role of Environmental Knowledge, Awareness, and Organizational Behavior in Driving Sustainability Performance and Decision-Making: Evidence from Somali Business Organizations

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ABSTRACT

This study investigates the influence of environmental knowledge, awareness, and organizational behavior on sustainability performance and decision-making in Somali organizations. This study reveals that, although environmental knowledge has historically been deemed essential for fostering sustainability, it is inadequate on its own to produce tangible sustainability results. Environmental knowledge serves as a crucial predictor of sustainability success, both directly and via the mediation influence of organizational behavior. The research used a quantitative approach, employing a standardized questionnaire administered to 300 employees from several firms in Somalia. Data analysis, encompassing Exploratory Factor Analysis (EFA), correlation, mediation testing, and ANOVA, was performed utilizing Jamovi 2.6.2 and SPSS 27 to evaluate the interrelations among the research variables. The findings demonstrate that organizational behavior acts as a vital conduit for converting environmental information into sustainable behaviors, underscoring the significance of leadership, culture, and policy support in sustainability efforts. Moreover, demographic variables like age, job experience, and education substantially affect environmental knowledge, awareness, and participation in sustainability, with older, more experienced, and better educated persons demonstrating more robust sustainability-related behaviors. Conversely, environmental awareness, although favorably associated with sustainability performance, does not have a statistically meaningful direct impact. These findings highlight the necessity for firms to progress beyond mere awareness campaigns and engage in systematic sustainability education programs, leadership-driven policies, and working cultures that promote sustainable practices. Through the integration of knowledge-based interventions, organizational participation, and systematic decision-making processes, organizations in Somalia can attain enduring enhancements in sustainable performance. The study offers significant insights for policymakers, corporate leaders, and academics aiming to improve sustainability practices using evidence-based initiatives that emphasize environmental knowledge and efficient organizational behavior frameworks.

Keywords: Environmental Knowledge, Awareness, Organizational Behavior, Decision Making.
JEL Classifications: Q56, M14, Q01

1. INTRODUCTION

Organizational behavior developed as a separate science throughout the industrial age, influenced by a focus on production, automation, and job efficiency. Pioneering management theorists like Frederick W. Taylor formulated Scientific Management, emphasizing output maximization via the quantification of human labor and the standardization of work procedures, frequently disregarding human welfare and environmental issues (Kanigel, 2005). During this era, the prevailing perspective of companies was mechanistic employees were perceived as tools of production, with efficiency as the paramount objective. The social and ecological consequences of industrialization were predominantly neglected. During the 1950s and 1960s, organizational behavior broadened

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its focus, integrating perspectives from psychology and sociology to comprehend motivation, leadership, and group dynamics. Academics like Herbert A. Simon further this intellectual development through his theory of bounded rationality, positing that human decision-making is restricted by finite information and cognitive limitations (Cristofaro, 2017). While Simon's work did not directly address sustainability, it prompted the acknowledgment that actions yield extensive repercussions beyond immediate organizational objectives.

The 1970s was a pivotal moment in global awareness as environmental issues, including oil spills, pollution, and deforestation, captured public focus. The 1972 United Nations Conference on the Human Environment in Stockholm represented the inaugural international initiative to prioritize environmental protection within the global policy framework, underscoring that economic advancement should not compromise ecological integrity (United Nations Environment Programme [UNEP], 2022). This conference established the foundation for integrating environmental and social aspects into business and governance. During the 1980s and 1990s, the notion of Corporate Social Responsibility (CSR) gained traction as companies were encouraged to acknowledge their obligations to stakeholders beyond shareholders. Carroll's (1991) four-dimensional model of CSR—economic, legal, ethical, and philanthropic—characterizes responsible business conduct as an equilibrium between profitability and social responsibility. As the 2000s commenced, corporate social responsibility (CSR) transitioned into the more comprehensive framework of corporate sustainability, incorporating environmental, social, and governance (ESG) factors into strategic planning and decision-making (Montiel and Delgado-Ceballos, 2014). Modern organizational behavior is a fusion of efficiency-oriented management with value-centered sustainability. Academics contend that companies function as socio-ecological systems in which leadership, culture, and employee behavior jointly influence environmental outcomes (Robertson and Barling, 2013; Zacher et al., 2023).

Environmental awareness and corporate social responsibility are interconnected ideas that shape contemporary perceptions of ethical and sustainable business activities. Environmental awareness denotes the comprehension of human influences on ecosystems by individuals and organizations, together with their ethical responsibility to alleviate damage. Corporate Social Responsibility (CSR) converts this consciousness into organized programs that harmonize economic development with social justice and environmental conservation (Latapí Agudelo et al., 2019).

The emergence of sustainability-focused management highlights that mere awareness is inadequate for instigating change; it necessitates the integration of environmental knowledge, practical frameworks, and supporting leadership. Contemporary organizations encounter escalating demands to integrate sustainability into fundamental operations—reducing waste, preserving resources, utilizing renewable energy, and lowering carbon emissions. These initiatives correspond with the overarching transition to stakeholder capitalism, when companies are assessed not just on financial outcomes but also on their impact on society welfare. Researchers have highlighted that behavior aimed at sustainability necessitates knowledge-driven interventions bolstered by leadership and institutional culture, rather than standalone awareness initiatives (Ketprapakorn and Kantabutra, 2022). The distinction between awareness and knowledge is essential: awareness fosters sensitivity to concerns, while knowledge provides individuals with the means to act successfully. This link precisely corresponds with the developing empirical evidence that corporate culture mediates the translation of knowledge into sustainable performance (Florez-Jimenez et al., 2024).

Recent bibliometric research from Bangladesh further substantiates this intellectual progression by demonstrating how Islamic financial organizations incorporate environmental and social considerations into their organizational frameworks. Hassan, İslam, Ahmed, and Sarker (2023) highlighted nascent study domains, including green banking and Islamic human resource management, that illustrate how ethical knowledge, organizational culture, and value-oriented conduct may synergistically improve sustainability performance. This conclusion indicates that environmentally conscious conduct in businesses is most effective when grounded in both institutional ethics and organized knowledge frameworks, rather than mere awareness.

Throughout Africa, the dialogue surrounding environmental consciousness and corporate social responsibility has intensified as governments, corporations, and civil society acknowledge the interconnectedness between ecological degradation and poverty. A multitude of African economies relies on natural resources, including agriculture, mining, and forestry, rendering them exceedingly susceptible to climate change. Policy frameworks, such as South Africa's National Environmental Management Act (NEMA) and Kenya's Environmental Management and Coordination Act, have formalized sustainability concepts by requiring ecologically responsible development. However, deficient governance frameworks, insufficient enforcement, and fiscal limitations hinder the effective execution of these policies (Naran et al., 2024). Corporate Social Responsibility in Africa has transitioned from charitable actions to strategic efforts integrated into commercial operations, emphasizing education, healthcare, renewable energy, and local community development. Nonetheless, persistent disparities in openness and accountability underscore the necessity for solid institutional structures to guarantee the efficacy of CSR (Florez-Jimenez et al., 2024). Recent evaluations of climate finance indicate that African Least Developed Countries (LDCs) are significantly reliant on external financial resources for adaptation and mitigation initiatives; yet inefficiencies in distribution and donor stipulations impede advancement (Nor, 2025b). Academics contend that enhancing the distribution of environmental information, fortifying governance, and incorporating corporate social responsibility into national development goals are essential for closing the divide between awareness and effective sustainability practices (Nor and Mohamed, 2025).

The interplay between environmental awareness, corporate social responsibility, and sustainability in Somalia illustrates a distinctive blend of susceptibility and developing institutional capability. The nation has significant environmental challenges—extended

droughts, desertification, deforestation, and frequent flooding—that jeopardize food security, livelihoods, and social stability (Nor, 2025a). The ecological crises have increased public awareness of environmental concerns; yet, converting this understanding into organized sustainable practices remains challenging. Somalia's participation in international climate-finance frameworks indicates an increasing dedication to tackling these issues. Nevertheless, research reveals enduring discrepancies between committed and allocated money, a challenge arising from institutional fragility, constrained governance ability, and insufficient data (Nor and Mohamed, 2025). Notwithstanding these challenges, climate-finance projects have begun supporting adaptation and resilience programs, encompassing reforestation, water conservation, and renewable energy implementation. Somali enterprises and NGOs are incorporating CSR concepts via community-oriented initiatives that enhance education, healthcare, and environmental restoration. These projects indicate a steady transition from charitable contributions to strategic sustainability. Nonetheless, corporate social responsibility in Somalia is predominantly voluntary and uncontrolled, constraining its scale and effectiveness. Researchers assert that enhanced collaboration among governmental institutions, commercial enterprises, and overseas funders is essential to bolster accountability, facilitate knowledge transfer, and cultivate a sustainable culture in accordance with global ESG norms (Naran et al., 2024).

The growing data from Somalia highlights that the change towards sustainability relies on translating environmental awareness into practical knowledge, supported by leadership and organizational culture. The results of this investigation further corroborate this association. The empirical findings indicate that environmental knowledge has a direct and considerable impact on sustainability performance, both independently and via organizational behavior, but environmental awareness alone has minimal impacts. These findings align with global and African studies highlighting that awareness serves just as a foundation; knowledge, leadership, and institutional frameworks are the mechanisms that translate awareness into practice (Zacher et al., 2023; Florez-Jimenez et al., 2024). In Somalia, where companies are reconstructing in the face of environmental and institutional instability, knowledge-based organizational behavior serves as a strategy for both sustainability and resilience. Companies that include sustainability leadership, staff training, and established policies exhibit enhanced sustainability performance compared to those that depend on informal awareness initiatives. This study addresses theoretical and empirical gaps by demonstrating how environmental knowledge, mediated by organizational behavior, is the essential conduit for Somali enterprises to attain long-term sustainability. The connection among knowledge, behavior, and performance establishes the conceptual basis for the ensuing literature study and empirical investigation.

2. LITERATURE REVIEW

Environmental education and awareness are recognized as essential precursors to sustainable behavior and performance. Nevertheless, academics increasingly assert that knowledge and awareness are separate categories functioning at varying cognitive levels. Environmental knowledge encompasses factual and procedural comprehension of ecological concerns and sustainable practices, whereas awareness denotes sensitivity or concern for those issues (Yusliza, et al., 2020). Recent meta-analyses indicate that environmental knowledge has a more significant and persistent impact on sustainable behavior than awareness, as knowledge enhances the capacity to act rather than just the intention. (Hernanda et al., 2023; van de Wetering et al., 2022;). Organizations that include environmental training into their everyday operations have a higher implementation of waste reduction, energy efficiency, and renewable energy practices than those that depend solely on awareness campaigns (Ahmad et al., 2021). This distinction signifies a progression in sustainability research from cognitive awareness to competence-based frameworks that prioritize the application of knowledge in practice.

In organizational settings, environmental knowledge functions through behavioral processes ingrained in company culture, leadership, and policy frameworks. Zacher et al., (2023) defines employee green behavior as the foundational element of sustainability-focused corporate behavior. Empirical research demonstrates that when managers advocate for environmental literacy and associate sustainability with performance assessments, employees adopt ecological values and display enhanced green citizenship behaviors (Ahsan, 2025). This affirms that organizational behavior serves as the intermediary conduit converting knowledge into sustainable performance. The leadership style is crucial in this process. Transformational and ethical leaders that position sustainability as a moral and strategic need augment workers' green self-efficacy and engagement in ecological activities (Luu, 2019). Thus, environmental knowledge fosters the capacity for sustainable action, but leadership and organizational behavior dictate the realization of that capacity.

The significance of human resource systems in environmental management has increased. Green Human Resource Management (GHRM) incorporates recruiting, training, and evaluation methods that are linked with sustainability goals (Pham, 2020). Companies using GHRM methods demonstrate increased environmental innovation and decreased ecological footprints (Renwick et al., 2016; Islam et al., 2025). This indicates that sustainability information should be integrated into HR systems that incentivize and promote ecologically responsible behavior. Empirical research in industrial and service sectors indicates that environmental training improves employees' procedural knowledge, whereas green performance incentives maintain motivation for the sustained use of eco-friendly practices (Miah et al., 2024). Consequently, organizational structures serve as channels for knowledge activation, converting acquired concepts into normal working practices.

Sustainability performance is seen at the strategic level as a multifaceted construct that includes environmental, social, and governance consequences. Research indicates that companies with elevated environmental knowledge intensity attain superior green innovation, operational efficiency, and stakeholder trust (Nawaz and Koç, 2019). Knowledge promotes sustainability by not just

increasing compliance but also by augmenting innovative skills that support competitive advantage. This relationship corresponds with the Resource-Based View (RBV), wherein environmental information is regarded as an intangible strategic asset. Companies that integrate sustainability information into their decision-making processes exhibit greater resilience amid environmental shocks and market fluctuations (Fernando et al., 2019). Consequently, environmental knowledge fortifies both adaptive and inventive capabilities, so immediately improving sustainability performance.

Organizational decision-making processes elucidate the impact of information on sustainability outcomes. Expanding upon Simon's concept of bounded rationality, recent research indicates that decision-makers with restricted knowledge frequently underestimate environmental hazards (Cristofaro, 2017; Vveinhardt and Sroka, 2020). When sustainability knowledge is included into management information systems and performance dashboards, managers are able to make more equitable decisions that consider environmental and social trade-offs (Su, and Li, 2024). This illustrates that decision architecture and availability to environmental information mitigate cognitive bias and institutionalize sustainability in strategic decisions. Moreover, companies implementing participatory decision-making frameworks where workers across several tiers engage in environmental planning attain enhanced sustainability results (Roscoe et al., 2019). Therefore, democratizing information inside businesses promotes shared responsibility for sustainable outcomes.

In the African setting, sustainability scholarship highlights systemic and institutional limitations. The continent confronts interconnected issues of resource dependence, government deficiencies, and climatic susceptibility. Recent studies indicate that the diffusion of environmental information via business networks, NGOs, and community initiatives improves local adoption of sustainable practices (Miao and Nduneseokwu, 2025). In Sub-Saharan Africa, environmental education and training significantly enhance business environmental performance, especially when bolstered by international frameworks like the SDGs and ESG reporting requirements (Onyango et al., 2023). Naran et al. (2024) indicate that African Least Developed Countries (LDCs) encounter significant financing and governance obstacles in climate initiatives; however, capacity-building interventions focused on knowledge transfer and institutional learning yield more substantial and enduring impacts than singular financial contributions. This substantiates the empirical assertion that knowledge-based ability is the fundamental predictor of sustained performance, particularly in resource-limited contexts.

In Somalia, sustainability issues converge with instability and constrained institutional capability. Environmental deterioration, caused by deforestation, droughts, and unchecked resource exploitation, jeopardizes ecological and economic stability. Recent studies indicate that Somali organizations and governmental institutions are progressively using environmental education and community engagement frameworks to enhance awareness and technical expertise (Nor and Mohamed, 2025). Empirical data from climate financing and resilience initiatives indicates that information exchange within local NGOs and commercial networks enhances project execution and accountability (Bäckstrand, 2008). This signifies that the shift from awareness to knowledge is crucial for Somalia's progression towards sustainable organizational behavior. Sustainability leadership is recognized as a vital mediating mechanism, wherein knowledgeable leaders convert environmental insights into operational strategies, thereby enhancing sustainability performance (Florez-Jimenez et al., 2024). Consequently, the Somali scenario corresponds with extensive evidence: environmental knowledge influences sustainable decision-making, and organizational behavior translates it into quantifiable performance.

In summary, contemporary literature identifies three empirical trends that substantiate the current investigation. Initially, environmental information directly predicts sustainable success by improving decision quality, fostering innovation, and ensuring policy alignment. Secondly, organizational behavior—encompassing leadership, human resource management, and culture—mediates the link by institutionalizing environmentally sustainable practices. Third, awareness, while fundamental, is inadequate without actionable information and structural support. These patterns together affirm that sustainability transformation is a behavioral and informational process: knowledge serves as the spark, organizational behavior acts as the conduit, and sustainability performance is the resultant consequence. This comprehensive understanding not only corroborates the study's empirical model but also situates Somalia within the worldwide shift towards knowledge-based sustainable management.

3. METHODOLOGY

This research employs a quantitative design, utilizing a cross-sectional survey to investigate the influence of environmental knowledge and awareness on sustainable decision-making and practices in organizational behavior in Somalia. A structured questionnaire was employed to gather data at a specific moment, facilitating the evaluation of relationships among key variables and documenting variations across demographic groups. The research focused on employees from multiple organizations in Somalia, ensuring a diverse representation across gender, age, marital status, work experience, and educational background. A purposive sampling technique was utilized to select participants possessing relevant knowledge and experience in organizational contexts, resulting in a total of 300 respondents. The standardized questionnaire comprised items assessing Environmental Knowledge (EK), Environmental Awareness (EA), Sustainability Performance (SP), and Organizational Behavior (OB).

The data collection utilized a structured questionnaire, with responses analyzed through Jamovi version 2.6.2 for preliminary data exploration and descriptive statistics. ANOVA analyses were performed using SPSS version 27 to identify differences among demographic groups. Exploratory Factor Analysis (EFA) was conducted utilizing principal axis factoring with varimax rotation to discern underlying dimensions within the data. Reliability testing utilized Cronbach's alpha to verify internal consistency.

ANOVA tests were employed to analyze the influence of demographic factors, including age, experience, and educational qualifications, on the research variables. A mediation analysis was conducted to assess the mediating role of Organizational Behavior in the relationship between Environmental Knowledge and Sustainability Performance, as well as between Environmental Awareness and Sustainability Performance. Jamovi 2.6.2 served as the primary tool for statistical analysis, whereas SPSS 27 was employed for the creation of ANOVA figures.

Ethical considerations were meticulously adhered to during the research process. This study, which centers on voluntary participation in a structured questionnaire and does not involve medical, clinical, or high-risk human subject experiments, did not require formal ethical approval. The research complied with rigorous ethical standards, guaranteeing voluntary participation, confidentiality, and data integrity. Participants received comprehensive information regarding the study's objectives, their rights, and the voluntary aspect of their participation. All respondents provided informed consent prior to completing the questionnaire. Consent was obtained via signed forms, and in instances where verbal consent was deemed more suitable due to security considerations, it was recorded in researcher field notes. All responses were anonymized to uphold confidentiality, and data was securely stored to avert unauthorized access. The research adhered to institutional guidelines and ethical standards to ensure transparency and safeguard participant welfare.

4. DATA ANALYSIS AND RESULTS

4.1. Demographic Report

The baseline demographics summarized in Table 1 provide a detailed understanding of the sample population across key variables: Gender, age, marital status, work experience, and qualifications. The sample is predominantly male, with 67.0% (n = 201) of respondents identifying as male, while 33.0% (n = 99) are female. This significant gender disparity highlights a male-majority composition in the study population. In terms of age, a large proportion of respondents fall within the 20–29 years age group, accounting for 63.7% (n = 191) of the sample. The 30–39 years age group comprises 28.7% (n = 86), while older age groups (40–49 years and 50 years and above) represent smaller fractions of the population at 4.0% (n = 12) and 3.7% (n = 11), respectively. This distribution suggests a younger workforce dominating the sample. Marital status is relatively evenly distributed, with 60.0% (n = 180) of participants identifying as single and 40.0% (n = 120) as married. This balance reflects a mix of family and non-family-oriented individuals in the study. Work experience levels are diverse, with the majority of respondents (26.7%, n = 80) having over five years of experience. Other experience categories include 20.0% (n = 60) with 2–3 years, 17.7% (n = 53) with 1–2 years, 16.0% (n = 48) with 3–4 years, 12.7% (n = 38) with 4–5 years, and 7.0% (n = 21) with <1 year of experience.

Table 1: Descriptive of baseline variables

Demographics	Counts	% of total
Gender		
Male	201	67.0%
Female	99	33.0%
Age (years)		
20-29	191	63.7
30-39	86	28.7
40-49	12	4.0
50	11	3.7
Marital Status		
Single	180	60.0
Married	120	40.0
Experience (years)		
<1	21	7.0
1-2	53	17.7
2-3	60	20.0
3-4	48	16.0
4-5	38	12.7
Above 5	80	26.7
Qualification		
Secondary	26	8.7
Diploma	24	8.0
Bachelor	132	44.0
Master	109	36.3
Others	4	1.3
PHD	5	1.7

Figure 1: Gender distribution of participants

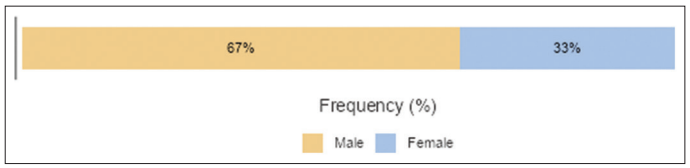


Figure 2: Percentage of participants' age

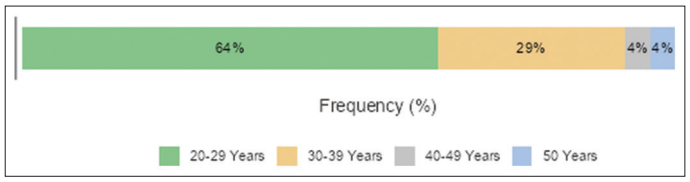


Figure 3: Participants distribution by their marital status

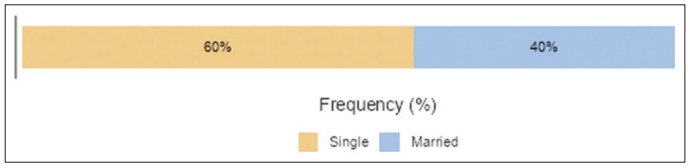


Figure 4: Participants distribution by their experience

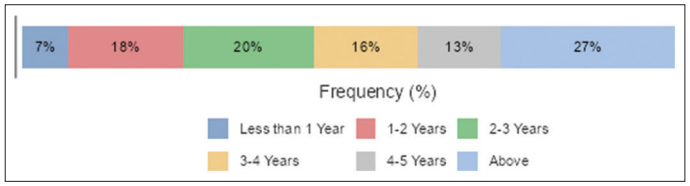
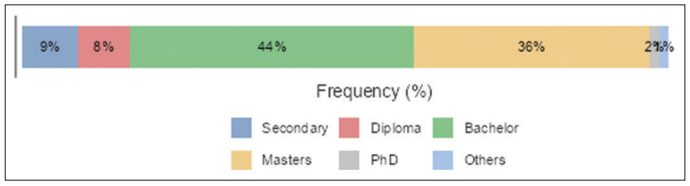


Figure 5: Participants' distribution by their qualification



This indicates a mix of early-career and seasoned professionals in the sample. Educational qualifications show that the majority of respondents hold either bachelor's degrees (44.0%, n = 132) or master's degrees (36.3%, n = 109). Secondary education accounts for 8.7% (n = 26), diplomas for 8.0% (n = 24), while a small percentage have doctoral (PhD) qualifications (1.7%, n = 5) or other advanced certifications (1.3%, n = 4). This reflects a highly educated sample, with significant representation of individuals possessing advanced degrees. Overall, the demographic data illustrate a relatively young, male-dominated sample with diverse levels of experience and predominantly high educational attainment, see Stacked bars also (Figures 1-5) for visualization.

4.2. Exploratory Factor Analysis

The exploratory factor analysis (EFA) presented in Table 2 identifies a clear four-factor structure encompassing organizational behaviour (OB), environmental knowledge (EK), sustainability performance (SP), and environmental awareness (EA). The analysis employed the principal axis factoring extraction method with varimax rotation, ensuring that the factors are distinct and interpretable.

Organizational behaviour (Factor 1) is represented by items OB3 (0.820), OB2 (0.777), OB4 (0.775), OB5 (0.704), and OB1 (0.666). These high loadings indicate strong alignment with this construct, with uniqueness values ranging from 0.297 to 0.517, demonstrating that most of the variance in these items is explained by the factor. Environmental knowledge (Factor 2) includes items EK2 (0.739), EK5 (0.658), EK3 (0.647), EK1 (0.571), and EK4 (0.569). While the loadings are slightly lower compared to organizational behaviour, they still represent good alignment with the environmental knowledge construct. Uniqueness values for these items range between 0.423 and 0.671, indicating moderate amounts of shared variance. Sustainability performance (Factor 3) is defined by items SP4 (0.737), SP5 (0.730), SP1 (0.699), and SP2 (0.636). These loadings indicate strong representation of the factor, with uniqueness values between 0.433 and 0.540, suggesting good reliability for this construct. It is worth noting that SP3 was excluded from the analysis, likely due to weak or cross-loadings, enhancing the overall clarity of this factor. Environmental awareness (Factor 4) includes items EA4 (0.633), EA2 (0.628), EA5 (0.614), EA3 (0.599), and EA1 (0.587). The loadings are slightly lower compared to the other factors, with uniqueness values ranging from 0.597 to 0.651. While these results reflect some potential for refinement, the items still align reasonably well with the construct.

As shown in Table 3, the model fit indices demonstrate that the four-factor solution is robust. The root mean square error of approximation (RMSEA) is 0.06, with a 90% confidence interval between 0.05 and 0.07, indicating an acceptable fit. The Tucker-Lewis Index (TLI) value of 0.91 further supports the model's suitability, highlighting strong comparative fit. The Bayesian Information Criterion (BIC) value of -374 highlights the model's parsimony, and the significant chi-square statistic ($\chi^2 = 202$, df = 101, $P < 0.001$) reflects the overall coherence of the factor structure. Then Scree Plot (Figure 6) further visualizes the eigenvalues of the factors, confirming the retention of four factors. A clear drop in eigenvalues after the second factor supports this decision.

The reliability analysis in Table 4 confirms that all study variables exhibit strong internal consistency. Environmental Knowledge (M = 4.17, SD = 0.632) shows acceptable reliability with Cronbach's $\alpha = 0.787$ and McDonald's $\omega = 0.790$. Environmental Awareness (M = 3.16, SD = 0.942) has slightly lower but acceptable reliability ($\alpha = \omega = 0.749$). Sustainability Performance (M = 4.13, SD = 0.654) and Organizational Behaviour (M = 3.88, SD = 0.843) demonstrate high reliability, with α and ω exceeding

Table 2: Exploratory factor analysis (EFA) results using principal axis factoring and varimax rotation

	Factor				Uniqueness
	Factor 1 (Organizational Behavior)	Factor 2 (Environmental Knowledge)	Factor3 (Sustainability Performance)	Factor 4 (Environmental Awareness)	
OB3	0.820				0.297
OB2	0.777				0.373
OB4	0.775				0.372
OB5	0.704				0.461
OB1	0.666				0.517
EK2		0.739			0.423
EK5		0.658			0.528
EK3		0.647			0.558
EK1		0.571			0.671
EK4		0.569			0.648
SP4			0.737		0.433
SP5			0.730		0.448
SP1			0.699		0.433
SP2			0.636		0.540
EA4				0.633	0.597
EA2				0.628	0.599
EA5				0.614	0.615
EA3				0.599	0.638
EA1				0.587	0.651

'Principal axis factoring' extraction method was used in combination with a 'varimax' rotation

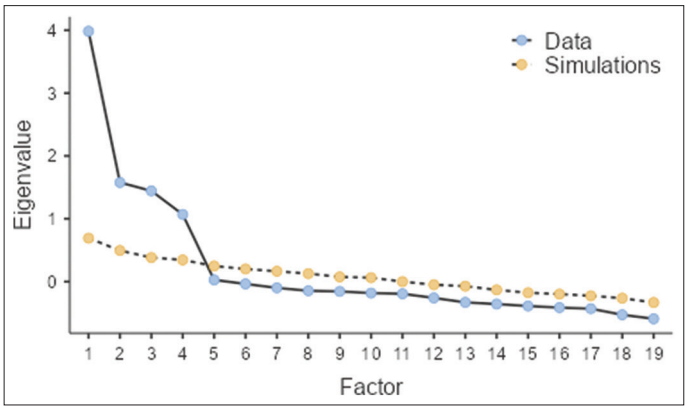
Table 3: Model fit measure of the factors

RMSEA	RMSEA 90% CI		Model test				
	Lower	Upper	TLI	BIC	χ^2	df	P
0.06	0.05	0.07	0.91	−374	202	101	<0.001

Table 4: Reliability analysis of study variables

Variables	Mean	SD	Cronbach's α	McDonald's ω
Environmental knowledge	4.17	0.632	0.787	0.790
Environmental awareness	3.16	0.942	0.749	0.749
Sustainability performance	4.13	0.654	0.866	0.873
Organizational behaviour	3.88	0.843	0.877	0.878

Figure 6: Scree plot of eigenvalues



0.86. These results ensure confidence in the consistency of the measurement instruments used.

In Figure 7, The correlation matrix not only presents the relationships between variables but also employs a gradient colour scheme to visually highlight the strength of these correlations. Stronger correlations are represented by darker green shades and weaker correlations, are depicted in lighter shades, or even near-white for negligible values. This colour-coded representation enhances the interpretability of the data, making it easier to identify key patterns, such as Environmental Knowledge shows a moderate positive correlation with Sustainability Performance (0.32) and Organizational Behavior (0.27), indicating that greater knowledge enhances performance and behaviour. Environmental Awareness, however, demonstrates weaker correlations, with its strongest link to Sustainability Performance (0.19). Organizational Behavior is moderately correlated with both Environmental Knowledge and Sustainability Performance, suggesting its potential role as a mediating factor. Age, Experience, and Qualification positively relate to Environmental Knowledge and Organizational Behavior, with Experience and Qualification showing a stronger interrelation (0.39). Overall, the matrix highlights the direct influences of certain variables, such as Environmental Knowledge, alongside indirect effects through mediating factors like Organizational Behavior.

4.3. Hypotheses Testing

The results of the mediation analysis, as presented in Table 5 and Figure 8, provide insights into the relationships between environmental knowledge (EnvrK), environmental awareness (EnvrA), organizational behaviour (OrgnB), and sustainability performance (SstnP).

4.3.1. H_1 and H_2: Environmental awareness and sustainability

The direct effect of environmental awareness on sustainability performance (EnvrA ⇒ SstnP) was insignificant (β = 0.01, z = 0.20, P = 0.844). This suggests that higher environmental awareness alone does not significantly predict better sustainability outcomes. The indirect effect of environmental awareness through organizational behaviour (EnvrA ⇒ OrgnB ⇒ SstnP) was also insignificant (β = 0.01, z = 0.69, P = 0.488). However, the percentage of mediation indicates that 60.8% of the effect of EnvrA on SstnP operates through organizational behaviour, implying that awareness may influence sustainability performance primarily when mediated by organizational behaviour, though the overall impact remains statistically insignificant.

4.3.2. H_3: Influence of Organizational Behaviour

Organizational behaviour had a significant positive impact on sustainability performance (OrgnB ⇒ SstnP; β = 0.26, z = 4.70, P < 0.001). This supports the hypothesis that organizational behaviour, shaped by leadership and cultural values, is critical in driving sustainability outcomes. Additionally, both environmental knowledge (EnvrK ⇒ OrgnB; β = 0.26, z = 4.79, P < 0.001) and awareness (EnvrA ⇒ OrgnB; β = 0.04, z = 0.70, P = 0.483) positively influenced organizational behaviour, although the effect of EnvrA was not significant.

4.3.3. H_4: Mediation of Organizational Behaviour

The results further highlight the mediating role of organizational behaviour. The indirect effect of environmental knowledge on sustainability performance through organizational behaviour (EnvrK ⇒ OrgnB ⇒ SstnP) was significant (β = 0.07, z = 3.35, P < 0.001), accounting for 23.4% of the total effect. Meanwhile, the direct effect of environmental knowledge on sustainability performance (EnvrK ⇒ SstnP) remained significant (β = 0.23, z = 4.10, P < 0.001), contributing 76.6% of the total effect. This indicates that both direct and mediated pathways play a role in linking environmental knowledge to sustainability performance.

Thus, the total effect of environmental knowledge on sustainability performance was strong and significant (EnvrK ⇒ SstnP; β = 0.30, z = 5.35, P < 0.001), underscoring the importance of environmental knowledge in achieving better sustainability outcomes. In contrast, the total effect of environmental awareness on sustainability performance was not significant (EnvrA ⇒ SstnP; β = 0.02, z = 0.37, P = 0.709), suggesting that awareness alone, without effective organizational practices, may not directly lead to improved sustainability performance.

Hence, these findings emphasize the critical role of organizational behaviour as a mediator in translating environmental knowledge into enhanced sustainability performance. While environmental awareness shows a potential indirect impact through organizational behaviour, its

Table 5: Mediation model to check the mediation role of organizational behaviour in the relationship of environmental knowledge and awareness with sustainability performance

Type	Effect	Estimate	*SE*	*β*	*Z*	P	% Mediation
Component	EnvrA⇒OrgnB	0.16	0.23	0.04	0.70	0.483	
	OrgnB⇒SstnP	0.20	0.04	0.26	4.70	<0.001	
	EnvrK⇒OrgnB	1.12	0.23	0.26	4.79	<0.001	
Indirect	EnvrA⇒OrgnB⇒SstnP	0.03	0.05	0.01	0.69	0.488	60.8
	EnvrK⇒OrgnB⇒SstnP	0.23	0.07	0.07	3.35	<0.001	23.4
Direct	EnvrA⇒SstnP	0.03	0.17	0.01	0.20	0.844	39.2
	EnvrK⇒SstnP	0.74	0.18	0.23	4.10	<0.001	76.6
Total	EnvrA⇒SstnP	0.07	0.18	0.02	0.37	0.709	100
	EnvrK⇒SstnP	0.97	0.18	0.30	5.35	<0.001	100

EnvrK: Environmental Knowledge, EnvrA: Environmental Awareness, OrgnB: Organizational Behaviour, SstnP: Sustainability Performance

Figure 7: Correlation heatmap of study variables

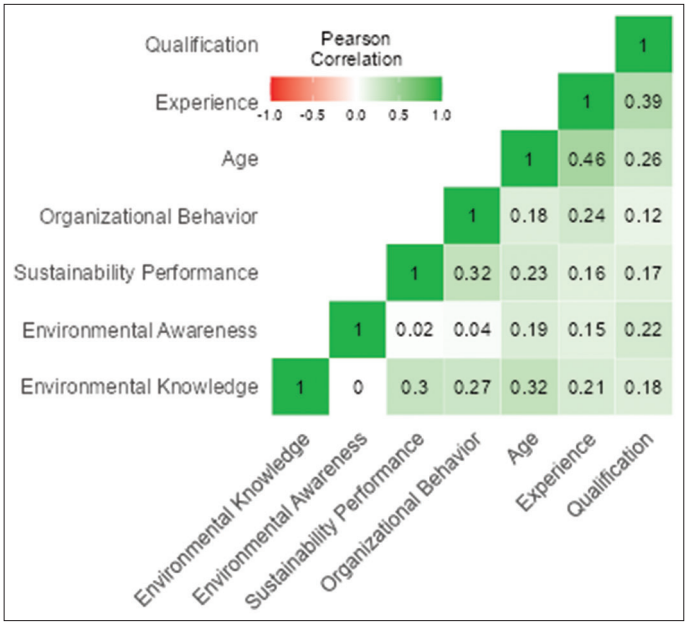
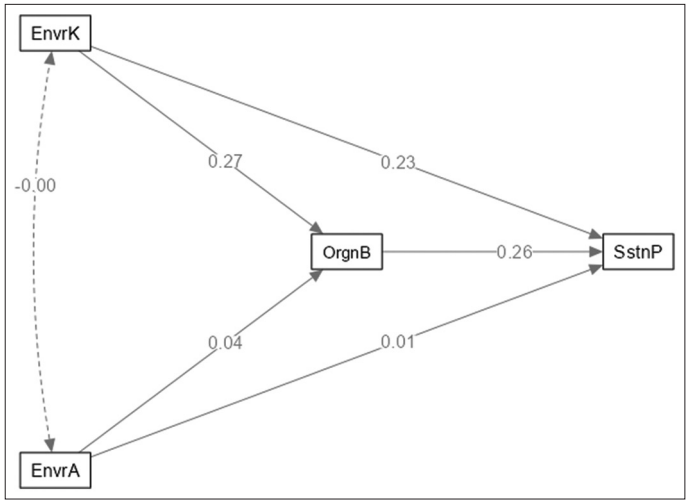


Figure 8: Path model of mediation with beta values



direct effect is negligible. Strong environmental knowledge, coupled with effective organizational practices, is key to achieving meaningful sustainability performance improvements in organizations.

The results in Table 6 reveal significant differences in environmental knowledge, environmental awareness, sustainability performance, and organizational behaviour across age groups, providing partial support for the hypothesis (H5) that age predicts these outcomes.

The mean environmental knowledge scores increased with age, from 20.0 (SD = 3.29) in the 20–29 age group to 22.9 (SD = 2.39) in the 50+ age group. ANOVA results show that these differences are statistically significant ($F = 14.39$, $P < 0.001$, $\eta^2 = 0.13$), indicating that older individuals tend to possess higher levels of environmental knowledge (Figure 9). The effect size ($\eta^2 = 0.13$) suggests a moderate to large impact of age on environmental knowledge. Similarly, environmental awareness showed a significant increase with age, with mean scores ranging from 15.4 (SD = 4.85) in the youngest group to 19.2 (SD = 3.82) in the oldest group (Figure 10). ANOVA results confirmed that the differences across age groups are statistically significant ($F = 5.87$, $P < 0.001$, $\eta^2 = 0.06$). However, the effect size ($\eta^2 = 0.06$) indicates a smaller impact of age on environmental awareness compared to knowledge. Sustainability performance also demonstrated significant differences based on age ($F = 6.28$, $P < 0.001$, $\eta^2 = 0.06$). Mean scores increased steadily from 20.3 (SD = 3.15) in the 20–29 age group to 24.4 (SD = 1.50) in the 50+ age group. This finding suggests that older individuals are more likely to exhibit behaviours that enhance sustainability performance (Figure 11). Although significant, the effect size ($\eta^2 = 0.06$) indicates that age explains only a modest proportion of the variance in sustainability performance. Organizational behaviour scores also varied significantly by age ($F = 3.40$, $P = 0.018$, $\eta^2 = 0.03$), with older individuals reporting higher scores. Mean scores ranged from 19.0 (SD = 4.29) in the youngest group to 22.6 (SD = 2.16) in the oldest group (Figure 12). The effect size ($\eta^2 = 0.03$) suggests a small but significant relationship between age and organizational behaviour.

The results in Table 7 indicate significant differences in environmental knowledge, environmental awareness, sustainability performance, and organizational behaviour based on levels of work experience, supporting the hypothesis (H5) that experience predicts these outcomes.

The mean environmental knowledge scores increased with greater work experience, ranging from 19.0 (SD = 4.34) for individuals with less than 1 year of experience to 21.9 (SD = 2.91) for those with more than 5 years of experience. ANOVA results show these differences are statistically significant ($F = 3.86$, $P = 0.002$, $\eta^2 = 0.06$). The effect size ($\eta^2 = 0.06$) indicates a moderate influence of work experience on environmental knowledge

(Figure 13). Environmental awareness also varied significantly by experience (F = 3.78, P = 0.002, η^2 = 0.06). The mean scores were lowest for those with <1 year of experience (12.6, SD = 4.95) and highest for those with 4–5 years of experience (17.9, SD = 4.62). However, the scores for individuals with more than 5 years of experience dropped slightly to 15.9 (SD = 4.00), suggesting that environmental awareness may plateau or fluctuate with extended work experience (Figure 14). Sustainability performance significantly differed across experience levels (F = 2.91, P = 0.014, η^2 = 0.05). The mean scores were relatively consistent across groups, with a slight increase for individuals with 4–5 years of experience (21.4, SD = 3.28) and those with more than 5 years (21.6, SD = 3.17). The effect size (η^2 = 0.05) indicates a modest relationship between experience and sustainability performance (Figure 15). Organizational behaviour also significantly differed by experience level (F = 3.99, P = 0.002, η^2 = 0.06). Mean scores increased with experience, from 17.8 (SD = 4.44) for individuals with <1 year of experience to 20.6 (SD = 3.34) for those with more than 5 years (Figure 16). The effect size (η^2 = 0.06) highlights a moderate impact of experience on organizational behaviour.

The results in Table 8 reveal significant differences in environmental knowledge, environmental awareness, sustainability performance, and organizational behaviour based on the highest level of qualification, offering support for the hypothesis (H5) that qualifications predict these outcomes.

Mean environmental knowledge scores increased with higher qualifications, ranging from 19.0 (SD = 3.70) for individuals with secondary education to 22.3 (SD = 3.20) for those with "other" advanced qualifications. ANOVA results indicate these differences are statistically significant (F = 2.95, P = 0.013, η^2 = 0.05). The effect size (η^2 = 0.05) suggests a modest influence of qualification on environmental knowledge, with individuals holding PhDs or other qualifications demonstrating the highest scores (Figure 17). Environmental awareness also varied significantly by qualification (F = 3.56, P = 0.004, η^2 = 0.06). Mean scores ranged from 13.0 (SD = 5.45) for secondary-level participants to 20.0 (SD = 2.16) for those in the "other" qualifications' category. The awareness levels were notably higher among individuals with PhDs (19.2, SD = 3.90) and "other" qualifications, indicating that advanced education contributes to greater environmental awareness (Figure 18).

The effect size (η^2 = 0.06) suggests a moderate relationship between qualification and awareness. Like that, sustainability performance showed significant differences across qualification levels (F = 2.80, P = 0.017, η^2 = 0.05). Mean scores increased from 18.6 (SD = 4.30) for secondary-level participants to 22.8 (SD = 2.63) for those with "other" qualifications. This indicates that higher educational attainment is associated with better sustainability performance (Figure 19), although the effect size (η^2 = 0.05) reflects a modest impact. Then the organizational behaviour scores also varied significantly by qualification (F = 2.56, P = 0.028, η^2 = 0.04). The mean scores ranged from 17.5 (SD = 5.98) for diploma holders to 22.0 (SD = 3.56) for individuals with "other" qualifications. While individuals with secondary education and PhDs scored relatively lower, those with bachelor's degrees, master's degrees, and "other" qualifications performed better in terms of organizational behaviour (Figure 20).

Table 9 below summarizes the outcomes of hypothesis testing, illustrating the links among environmental knowledge, awareness, organizational behavior, and sustainability performance. Hypotheses H1, H3, and H5 were validated, demonstrating that knowledge, leadership-driven behavior, and demographic characteristics are major predictors of sustainable outcomes, however H2 was not validated and H4 was only partially substantiated.

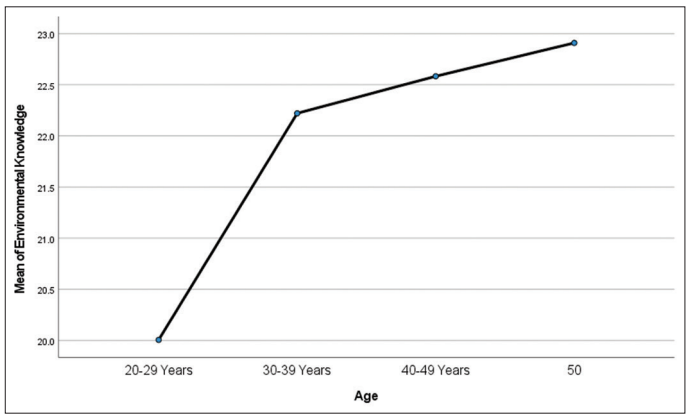
5. DISCUSSION OF THE FINDINGS

This study's findings provide significant insights into the interconnections among environmental knowledge, environmental

Table 6: Descriptive statistics and ANOVA results of environmental knowledge, awareness, sustainability performance, and organizational behaviour based on age

Variables	Age (years)	Mean	SD	SE	F	P	η^2
Environmental Knowledge	20-29	20.0	3.29	0.238	14.39	0.000	0.13
	30-39	22.2	2.33	0.251			
	40-49	22.6	1.83	0.529			
	50	22.9	2.39	0.719			
Environmental Awareness	20-29	15.4	4.85	0.351	5.87	0.000	0.06
	30-39	15.6	4.10	0.442			
	40-49	20.0	4.49	1.297			
	50	19.2	3.82	1.151			
Sustainability Performance	20-29	20.3	3.15	0.228	6.28	0.000	0.06
	30-39	20.9	3.53	0.381			
	40-49	21.6	1.93	0.557			
	50	24.4	1.50	0.453			
Organizational Behavior	20-29	19.0	4.29	0.310	3.40	0.018	0.03
	30-39	19.7	4.20	0.453			
	40-49	20.9	2.94	0.848			
	50	22.6	2.16	0.650			

Figure 9: Mean of environmental knowledge across age



consciousness, sustainability performance, and organizational behavior in Somali firms. The findings underscore the interplay of demographic traits, workplace dynamics, and knowledge frameworks in influencing sustainability practices, emphasizing the significance of organized information distribution, leadership initiatives, and policy integration in promoting sustainable behaviors.

The demographic composition of the sample reveals a workforce that is primarily male (67.0%) and youthful (63.7% aged 20–29 years), with a notable percentage possessing bachelor's (44.0%) and master's degrees (36.3%). The considerable educational attainment indicates that firms in Somalia possess a workforce well equipped for knowledge-driven sustainability activities. The substantial proportion of single respondents (60.0%) and early-career professionals suggests that several employees may lack the extensive experience required to cultivate profound sustainability insights, underscoring the necessity for specialized training and mentorship initiatives. 26.7% of responders with over 5 years of experience constitute a pivotal group capable of mentoring younger employees in making environmentally responsible decisions. Organizations ought to use the combination of early-career professionals and seasoned employees by instituting organized sustainability training customized for various career phases.

Figure 10: Mean of environmental awareness across age

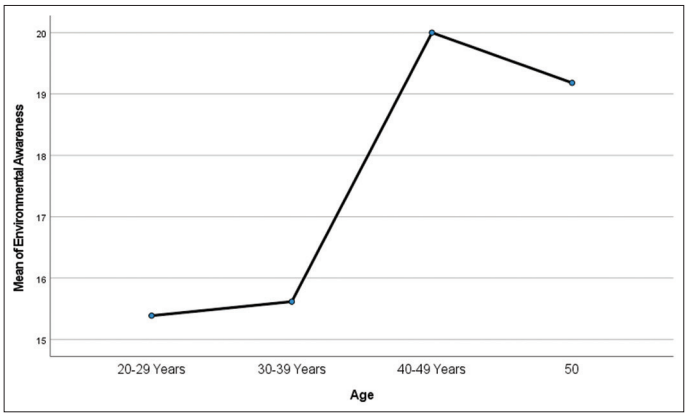


Figure 11: Mean of sustainability performance across age

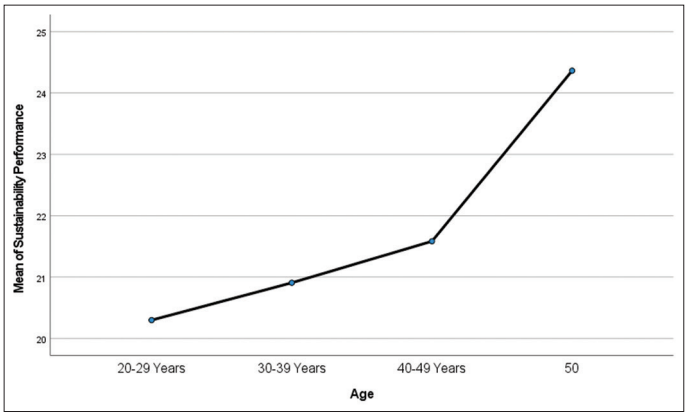
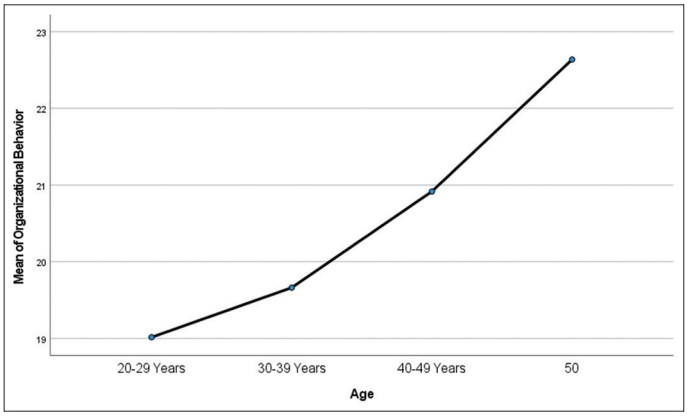


Figure 12: Mean of organizational behaviour across age



The exploratory factor analysis (EFA) results validate four essential aspects for comprehending sustainability practices: Organizational Behavior (OB), Environmental Knowledge (EK), Sustainability Performance (SP), and Environmental Awareness (EA). Organizational Behavior demonstrated the greatest factor loadings, underscoring its significant impact on converting knowledge into action. The distinction between Environmental Knowledge and Environmental Awareness is notably significant. Knowledge denotes a comprehension of sustainability issues and their resolutions, whereas awareness signifies a broad impression of environmental matters. The emergence of these two conceptions as distinct elements underscores the notion that knowledge-based interventions are more efficacious in promoting sustainability than merely enhancing awareness. Awareness

Table 7: Descriptive Statistics and ANOVA Results of Environmental Knowledge, Awareness, Sustainability Performance and Organizational Behaviour Based on Experience

Variables	Experience (year)	Mean	SD	SE	F	P	η^2
Environmental Knowledge	<1	19.0	4.34	0.947	3.86	0.002	0.06
	1-2	20.7	3.24	0.445			
	2-3	20.3	2.34	0.302			
	3-4	20.9	2.84	0.409			
	4-5	20.7	3.71	0.603			
	Above	21.9	2.91	0.326			
Environmental Awareness	<1	12.6	4.95	1.081	3.78	0.002	0.06
	1-2	15.2	5.41	0.744			
	2-3	15.8	5.09	0.657			
	3-4	15.8	3.68	0.531			
	4-5	17.9	4.62	0.749			
	Above	15.9	4.00	0.448			
Sustainability Performance	<1	21.0	2.77	0.603	2.91	0.014	0.05
	1-2	19.9	3.72	0.511			
	2-3	20.1	2.83	0.366			
	3-4	20.1	3.28	0.474			
	4-5	21.4	3.28	0.533			
	Above	21.6	3.17	0.354			
Organizational Behaviour	<1 year	17.8	4.44	0.968	3.99	0.002	0.06
	1-2	17.7	4.71	0.647			
	2-3	19.4	4.60	0.593			
	3-4	19.4	3.86	0.558			
	4-5	20.2	4.01	0.651			
	Above	20.6	3.34	0.374			

alone, devoid of systematic execution, does not inherently lead to behavioral change; conversely, information empowers employees with the means to undertake meaningful measures for sustainability.

The measurement model exhibits a robust fit, with RMSEA = 0.06, TLI = 0.91, and BIC = -374, validating that the four-factor structure precisely reflects the data. The reliability analysis indicates robust internal consistency across all research variables, with Sustainability Performance (α = 0.866) and Organizational Behavior (α = 0.877) demonstrating the greatest reliability coefficients. The results indicate that these two notions are well defined and essential for comprehending organizational approaches to sustainability. The somewhat reduced dependability for Environmental Awareness (α = 0.749) suggests considerable variability in awareness among individuals and organizations, underscoring that awareness alone is inadequate as a catalyst for sustainability initiatives. This discovery substantiates the assertion that companies ought to transcend awareness initiatives and concentrate on establishing systematic, knowledge-driven sustainability plans.

The correlation and mediation analysis corroborate these findings, indicating that Environmental Knowledge is favorably connected with both Sustainability Performance (0.32) and Organizational Behavior (0.27). This suggests that employees with environmental awareness are more inclined to participate in sustainability-oriented practices. Conversely, Environmental Awareness exhibits lower associations, indicating that although employees may acknowledge environmental challenges, this awareness does not inherently result in significant sustainability participation. The mediation study underscores Organizational Behavior as a critical mediator connecting Environmental Knowledge to Sustainability Performance. This indicates that firms must proactively cultivate workplace culture, leadership policies, and staff engagement methods to guarantee that environmental knowledge is converted

Figure 13: Mean of environmental knowledge across participants' experience

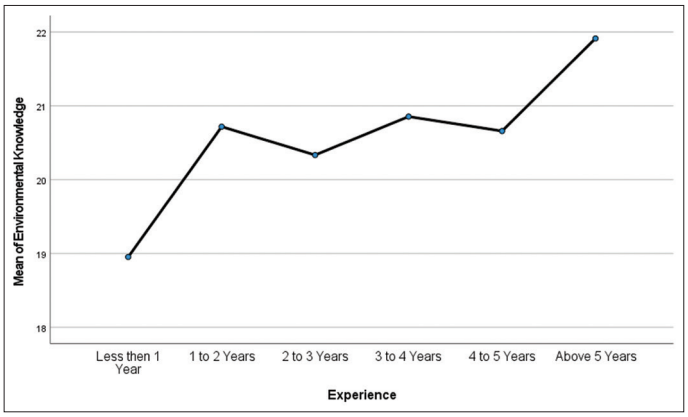


Figure 14: Mean of environmental awareness across participants' experience

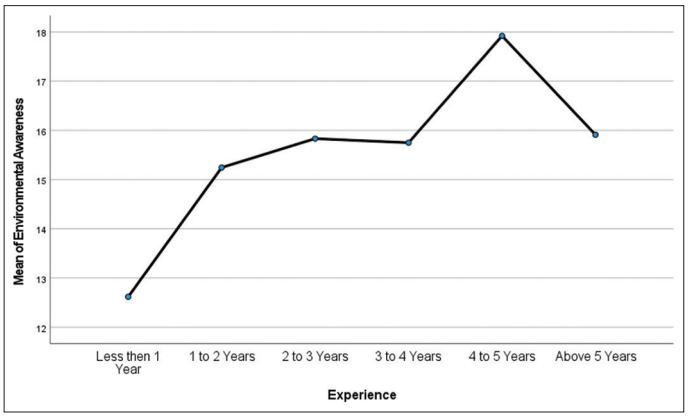


Figure 15: Mean of sustainability performance across participants' experience

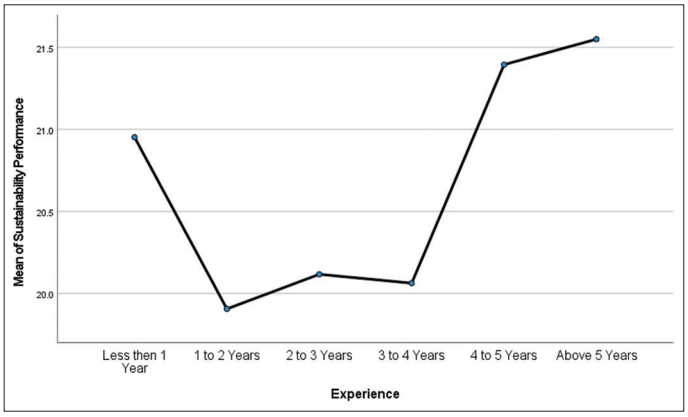


Figure 16: Mean of organizational behaviour across participants' experience

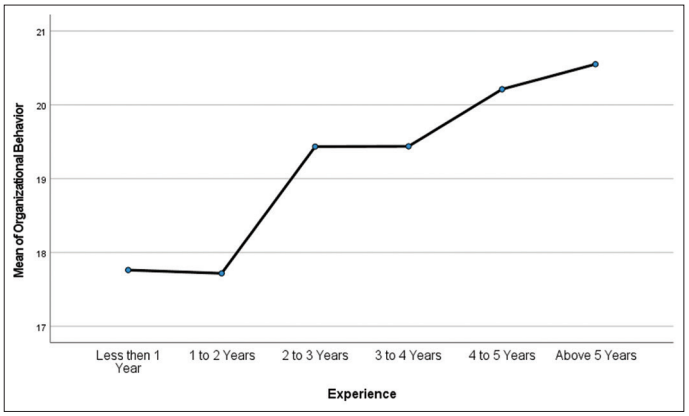


Figure 17: Mean of environmental knowledge across participants' qualification

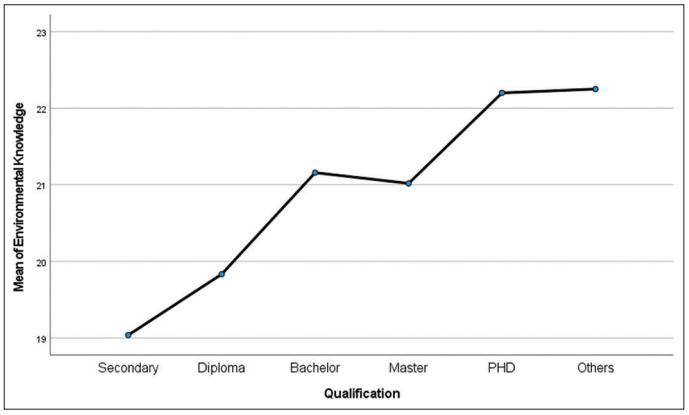


Table 8: Descriptive statistics and ANOVA results of environmental knowledge, awareness, sustainability performance, and organizational behaviour based on qualification

Variables	Qualification	Mean	SD	SE	F	P	η^2
Environmental Knowledge	Secondary	19.0	3.70	0.726	2.95	0.013	0.05
	Diploma	19.8	2.73	0.557			
	Bachelor	21.2	2.92	0.254			
	Masters	21.0	3.27	0.313			
	PhD	22.2	2.59	1.158			
	Others	22.3	3.20	1.601			
Environmental Awareness	Secondary	13.0	5.45	1.069	3.56	0.004	0.06
	Diploma	15.0	6.10	1.245			
	Bachelor	15.8	4.57	0.397			
	Masters	16.3	4.14	0.396			
	PhD	19.2	3.90	1.744			
	Others	20.0	2.16	1.080			
Sustainability Performance	Secondary	18.6	4.30	0.843	2.80	0.017	0.05
	Diploma	20.5	3.41	0.697			
	Bachelor	20.9	2.94	0.255			
	Masters	20.8	3.27	0.313			
	PhD	21.2	2.17	0.970			
	Others	22.8	2.63	1.315			
Organizational Behaviour	Secondary	18.0	5.06	0.992	2.56	0.028	0.04
	Diploma	17.5	5.98	1.220			
	Bachelor	19.9	3.62	0.315			
	Masters	19.5	3.85	0.369			
	PhD	17.6	8.26	3.696			
	Others	22.0	3.56	1.780			

Figure 18: Mean of environmental awareness across participants' qualification

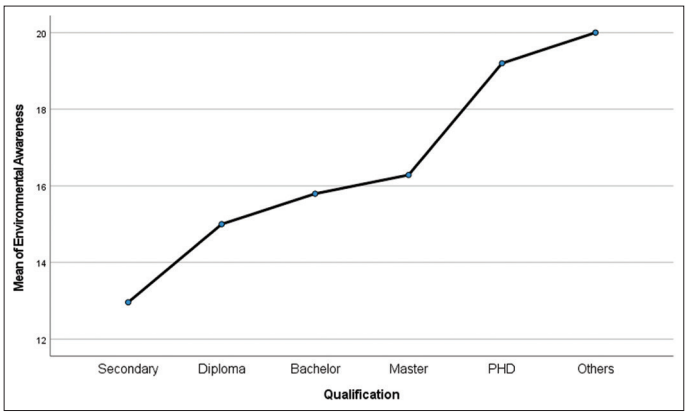


Figure 19: Mean of sustainability performance across participants' qualification

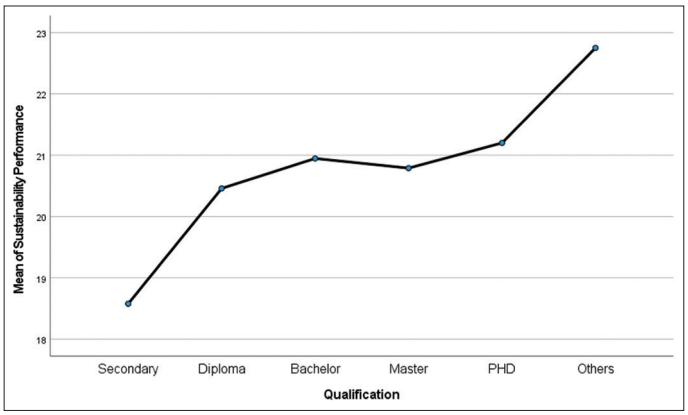
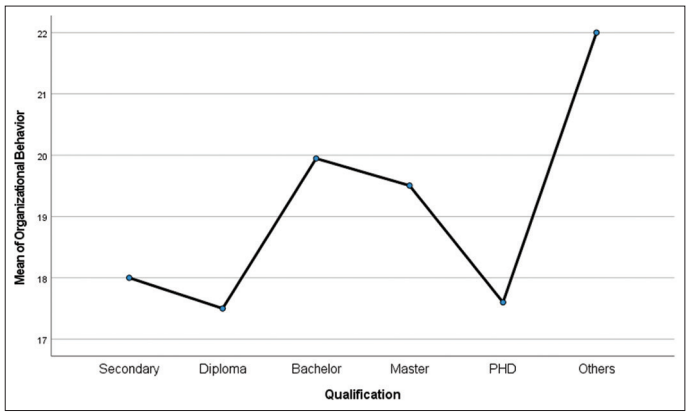


Figure 20: Mean of organizational behaviour across participants' qualification



into action. Merely holding information is insufficient; firms must foster an atmosphere in which sustainability is a fundamental aspect of decision-making.

The mediation study elucidates the significance of Organizational Behavior in sustainability performance. The direct impact of Environmental Knowledge on Sustainability Performance ($\beta = 0.23$, $P < 0.001$) is substantial, although the indirect influence via Organizational Behavior ($\beta = 0.07$, $P < 0.001$) is 23.4% of the overall effect. This affirms that information is crucial in sustainability initiatives, even without robust organizational influence, however organizational culture markedly amplifies its effect. In contrast, Environmental Awareness did not substantially affect Sustainability Performance, either directly ($\beta = 0.01$, $P = 0.844$) or indirectly via Organizational Behavior

Table 9: Summary of hypothesis testing results

No.	Hypothesis	Status	Table #
1	Higher environmental knowledge is positively correlated with the adoption of sustainable practices within an organization	Supported	Table 4
2	Higher environmental awareness leads to greater commitment to sustainability goals and practices in organizations.	Not Supported	Table 4
3	Organizational behavior, shaped by leadership and cultural values, significantly influences sustainability performance outcomes.	Supported	Table 4
4	Strong environmental knowledge and awareness contribute to better sustainability performance in organizations through organizational behavior.	Partially Supported	Table 4
5	Higher age, experience, and qualification predict better environmental knowledge, awareness, sustainability performance, and organizational behavior.	Supported	Table 5 and 7

(β = 0.01, P = 0.488). These results underscore a crucial implication: whereas awareness serves as a vital foundation, it does not enhance sustainable performance unless bolstered by knowledge, leadership involvement, and systematic policies. Organizations should consequently go from simply raising awareness to establishing organized sustainability education programs that empower staff with the knowledge to effectuate tangible change.

The influence of demographic demographics on essential sustainability indicators further substantiates these observations. The ANOVA results indicate that age, experience, and education substantially affect Environmental Knowledge, Environmental Awareness, Sustainability Performance, and Organizational Behavior. Individuals aged 50 and beyond exhibit the greatest levels of Environmental Knowledge (M = 22.9) and Sustainability Performance (M = 24.4), suggesting that comprehension and practices linked to sustainability enhance with age and experience. Employees with more than 5 years of experience demonstrate the greatest levels of Environmental Knowledge and Organizational Behavior, indicating that participation in sustainability enhances with more working experience. Educational qualities significantly influence outcomes, as those possessing PhDs and advanced degrees exhibit the greatest ratings in Environmental Knowledge, Awareness, and Sustainability Performance. The findings indicate that age, experience, and education all enhance an individual's capacity to comprehend and participate in sustainability activities, underscoring the necessity for firms to invest in continuous professional development and sustainability-oriented educational programs.

Collectively, these data demonstrate that Environmental Knowledge is the principal determinant of Sustainability Performance, both directly and via Organizational Behavior. This differs from Environmental Awareness, which, although frequently addressed in sustainability discussions, does not autonomously result in improved sustainability results. These findings indicate that firms ought to emphasize organized learning programs, leadership involvement, and sustainability-oriented policies instead of depending exclusively on awareness activities. Awareness alone is inadequate; employees require access to tangible knowledge, training, and a supportive workplace culture to convert awareness into action.

Organizational Behavior serves as a crucial mediating element, highlighting the significance of leadership, employee engagement, and systematic policies in promoting sustainable decision-making. Organizations that prioritize sustainability leadership, implement workplace training, and adopt policy-driven sustainability programs are more likely to achieve enduring enhancements in sustainability performance. Demographic findings indicate that experience and education significantly influence sustainability-related behaviors, implying that customized training programs for younger employees, along with leadership opportunities for seasoned professionals, may improve sustainable adoption.

This study highlights the significance of systematic knowledge-based strategies, leadership-oriented sustainability efforts, and demographic factors in promoting sustainable practices inside businesses. To achieve significant sustainability results, firms must transcend awareness campaigns and instead implement knowledge-based sustainability programs, foster conducive workplace cultures, and establish policies that reward sustainable activities. The research indicates that robust environmental knowledge, along with competent leadership and organized policies, is essential for attaining long-term sustainability enhancements.

6. CONCLUSION AND POLICY RECOMMENDATION

This study's findings provide unequivocal proof that environmental awareness significantly influences sustainability performance in companies. Although environmental awareness is a crucial component of sustainability discussions, it does not inherently lead to significant sustainability results. Knowledge forms the foundation for sustainable decision-making and actions. Employees with a robust comprehension of environmental concerns and sustainable practices are more inclined to incorporate them into their work when bolstered by systematic organizational policies and a leadership culture that emphasizes sustainability. Organizational behavior serves as a critical mediating component, illustrating that workplace culture, leadership involvement, and institutional support are essential for the effective translation of knowledge into action. In the absence of a working climate that promotes and enables sustainability, even the most knowledgeable individuals may find it challenging to effectuate significant changes.

The demographic study emphasizes the impact of age, experience, and education on sustainability involvement. Veteran employees

have elevated environmental awareness and sustainability performance, indicating that insights connected to sustainability evolve with time and professional experience. Educational attainment significantly influences environmental participation, with persons possessing advanced degrees exhibiting heightened involvement. These findings underscore the necessity of including sustainability education into professional development initiatives. Organizations must not depend on individual awareness to promote sustainability; rather, they should offer organized learning opportunities that enhance knowledge and create working settings that actively support sustainable practices.

To ensure the efficacy of sustainability measures, policy proposals must transcend mere awareness campaigns and concentrate on knowledge enhancement, leadership involvement, and institutional incorporation. Organizations have to allocate resources to sustainability training programs that extend beyond academic frameworks and emphasize actual implementation in professional environments. These programs must be tailored to various career phases, ensuring that junior staff acquire fundamental sustainability information while seasoned professionals are prepared for leadership positions in executing sustainable initiatives. Continuous education and professional development programs must be integrated into workplace policies to guarantee that sustainability knowledge is perpetually reinforced and updated in light of growing environmental concerns.

Leadership must be pivotal in advancing sustainability measures internally inside the firm. The study's findings underscore that organizational behavior profoundly influences sustainability outcomes, indicating that sustainability programs require robust leadership commitment and institutional support. Management must incorporate sustainability objectives into organizational strategies, workplace norms, and decision-making processes to ensure that sustainability is regarded as a fundamental operational concern rather than an abstract idea. Organizations must develop explicit sustainability performance indicators to assess the efficacy of sustainability programs and guarantee that personnel at all tiers are accountable for executing sustainable practices. Leadership involvement must extend beyond mere policy declarations to encompass active participation in sustainability initiatives, resource distribution, and incentive frameworks that motivate staff to integrate sustainable practices into their everyday activities.

Workplace settings should be structured to promote sustainable behaviors by integrating sustainability into everyday operations. Organizations have to cultivate sustainability-focused workplace cultures that enable employees to integrate environmental responsibility into their professional duties. This may entail forming sustainability committees, integrating sustainability measures into performance assessments, and fostering interdepartmental collaboration on sustainability initiatives. Employees must have access to explicit rules for the application of sustainability concepts to their individual tasks and responsibilities, so that sustainability is perceived not as an external requirement but as an integral component of corporate success.

Regulatory and institutional backing are essential for the enduring success of sustainability initiatives. Although Somalia now lacks a national regulatory framework enforcing sustainable practices inside companies, entities such as universities, research institutes, and industry groups can contribute to the promotion of sustainability education and research. Collaboration between business sector entities and academic institutions might improve the formulation of context-specific sustainability frameworks, ensuring that sustainability policies correspond with Somalia's economic and environmental conditions. Government entities and politicians have to contemplate the formulation of national sustainability standards that promote the adoption of best practices, the establishment of sustainability objectives, and the reporting of advancements in environmental performance by enterprises.

Ultimately, realizing significant sustainability advancements in businesses necessitates a transition from awareness to action, from individual accountability to institutional dedication, and from fragmented programs to cohesive sustainability frameworks. Organizations that prioritize knowledge-driven sustainability efforts, cultivate robust leadership commitment, and establish workplace conditions that promote sustainable behavior will be optimally positioned to enhance long-term sustainability performance. Sustainability must be regarded as a strategic priority integrated throughout all tiers of organizational decision-making, rather than as a distinct or optional role.

This study, while providing useful insights into the interplay between environmental knowledge, awareness, organizational behavior, and sustainability performance in Somali corporate enterprises, is not without its limits.

First, the employment of a cross-sectional design constrains the capacity to deduce causal links among the examined variables. The mediation analysis offers insights into underlying processes; nevertheless, longitudinal studies are necessary to validate the temporal sequence and causation among environmental knowledge, organizational behavior, and sustainability results.

Second, the sample was limited to 300 employees from specific enterprises in Somalia, perhaps failing to capture the whole spectrum of organizational kinds, sectors, or geographical dynamics within the nation. The generalizability of the findings may be limited. Subsequent research may augment the sample size and encompass a wider array of entities, including state institutions, NGOs, and international corporations active in Somalia.

Third, the study is exclusively based on self-reported data obtained via standardized questionnaires. This method is vulnerable to social desirability bias and common method variation, thereby affecting the dependability of the results. Integrating objective performance metrics, managerial assessments, or triangulating with qualitative approaches such as interviews and focus groups might enhance future study.

Fourth, organizational behavior was seen as a singular mediating construct, but it has intricate sub-dimensions like leadership

style, employee engagement, and company culture. Future study should analyze organizational behavior by breaking it down into its subcomponents to enhance understanding of their individual and collective impacts on sustainability performance.

Finally, the study indicates that environmental awareness does not have a statistically significant direct impact on sustainability outcomes; however, additional research is necessary to investigate potential moderators, including organizational support systems, technological readiness, or cultural values, that may influence this relationship.

In conclusion, future research should utilize longitudinal or experimental designs, implement mixed-method approaches, and examine further mediators and moderators to enhance the theoretical comprehension and practical implementation of sustainability strategies in developing and fragile-state contexts such as Somalia.

REFERENCES

Ahsan, M.J. (2025), Green leadership and innovation: Catalysts for environmental performance in Italian manufacturing. International Journal of Organizational Analysis, 33(7), 1646-1669.

Bäckstrand, K. (2008), Accountability of networked climate governance: The rise of transnational climate partnerships. Global Environmental Politics, 8(3), 74-102.

Carroll, A.B. (1991), The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. Business Horizons, 34(4), 39-48.

Cristofaro, M. (2017), Herbert Simon's bounded rationality: Its historical evolution in management and cross-fertilizing contribution. Journal of Management History, 23(2), 170-190.

Cristofaro, M. (2017), Herbert Simon's bounded rationality: Its historical evolution in management and cross-fertilizing contribution. Journal of Management History, 23(2), 170-190.

Fernando, Y., Jabbour, C.J.C., Wah, W.X. (2019), Pursuing green growth in technology firms through the connections between environmental innovation and sustainable business performance: Does service capability matter? Resources, Conservation and Recycling, 141, 8-20.

Florez-Jimenez, M.P., Lleo, A., Danvila-del-Valle, I., Sanchez-Marin, G. (2024), Corporate sustainability, organizational resilience and corporate purpose: A triple concept for achieving long-term prosperity. Management Decision, 62(7), 2189-2213.

Hassan, M.K., İslam, M.T., Ahmed, Z., Sarker, J.I. (2023), Islamic banking in Bangladesh: A literature review and future research agenda. International Journal of Islamic and Middle Eastern Finance and Management, 16(5), 1030-1054.

Hernanda, T., Azhari, A.F., Wardiono, K., Arlinwibowo, J. (2023), Relationship between knowledge and affection for the environment: A meta-analysis. European Journal of Educational Research, 12(2), 1071-1084.

Islam, M.F., Al Masud, A., Emon, M., Shuvro, R. A., Jony, M.T.I., Akter, T. (2025), Integrating green HRM for productivity and sustainability: green innovation, engagement and pro-environmental behavior as key mediators. Future Business Journal, 11(1), 24.

Kanigel, R. (2005), The One Best Way: Frederick Winslow Taylor and the Enigma of Efficiency. Cambridge: MIT Press Books. p1.

Ketprapakorn, N., Kantabutra, S. (2022), Toward an organizational theory of sustainability culture. Sustainable Production and Consumption, 32, 638-654.

Latapí Agudelo, M.A., Jóhannsdóttir, L., Davídsdóttir, B. (2019), A literature review of the history and evolution of corporate social responsibility. International Journal of Corporate Social Responsibility, 4(1), 1-23.

Luu, T.T. (2019), Green human resource practices and organizational citizenship behavior for the environment: The roles of collective green crafting and environmentally specific servant leadership. Journal of Sustainable Tourism, 27(8), 1167-1196.

Miah, M., Szabó-Szentgróti, G., Walter, V. (2024), A systematic literature review on green human resource management (GHRM): An organizational sustainability perspective. Cogent Business and Management, 11(1), 2371983.

Miao, Q., Nduneseokwu, C. (2025), Environmental leadership in Private organizations. In: Environmental Leadership in a VUCA Era: An Interdisciplinary Handbook. Singapore: Springer Nature Singapore. p317-398.

Montiel, I., Delgado-Ceballos, J. (2014), Defining and measuring corporate sustainability: Are we there yet? Organization and Environment, 27(2), 113-139.

Naran, B., Buchner, B., Price, M., Stout, S., Taylor, M., Zabeida, D. (2024), Global Landscape of Climate Finance 2024: Insights for COP29. Climate Policy Initiative. Available from: https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2024

Nawaz, W., Koç, M. (2019), Exploring organizational sustainability: Themes, functional areas, and best practices. Sustainability, 11(16), 4307.

Nor, M.I. (2025a), Investigating the dynamics of climate finance disbursements: A panel data approach from 2003 to 2022. PLoS One, 20(3), e0318170.

Nor, M.I. (2025b), Investigating donor fulfillment in global climate finance: The role of EU commitment. Frontiers in Climate, 7, 1629509.

Nor, M.I., Mohamed, A.A. (2024), Investigating the complex landscape of climate finance in least developed countries (LDCs). Discover Environment, 2(1), 76.

Onyango, E.A., Banwell, N., Mose, T.M., Ogallo, L.A. (2023), Gendered impacts of climate change: Women and transformative research, policy and practice. Frontiers in Climate, 5, 1215661.

Pham, T.D. (2020), A comprehensive study on classification of COVID-19 on computed tomography with pretrained convolutional neural networks. Scientific Reports, 10(1), 16942.

Renwick, D.W., Jabbour, C.J., Muller-Camen, M., Redman, T., Wilkinson, A. (2016), Contemporary developments in Green (environmental) HRM scholarship. The International Journal of Human Resource Management, 27(2), 114-128.

Robertson, J.L., Barling, J. (2013), Greening organizations through leaders' influence on employees' pro-environmental behaviors. Journal of Organizational Behavior, 34(2), 176-194.

Roscoe, S., Subramanian, N., Jabbour, C.J., Chong, T. (2019), Green human resource management and the enablers of green organisational culture: Enhancing a firm's environmental performance for sustainable development. Business Strategy and the Environment, 28(5), 737-749.

Su, S., Li, Y. (2024), Exploring the impact of the green marketing mix on environmental attitudes and purchase intentions: Moderating role of environmental knowledge in China's emerging markets. Sustainability, 16(24), 10934.

United Nations Environment Programme. (2022), Delivering on the Vision of the 1972 Stockholm Declaration. UN Environment Management Group. Available from: https://unemg.org/wp-content/uploads/2022/06/unep_emg_delivering-on-the-vision-of-the-1972-stockholm-declaration-rev3.pdf

van de Wetering, J., Leijten, P., Spitzer, J., Thomaes, S. (2022), Does environmental education benefit environmental outcomes in

children and adolescents? A meta-analysis. Journal of Environmental Psychology, 81, 101782.

Vveinhardt, J., Sroka, W. (2020), Workplace mobbing in Polish and Lithuanian organisations with regard to corporate social responsibility. International Journal of Environmental Research and Public Health, 17(8), 2944.

Yusliza, M.Y., Amirudin, A., Rahadi, R.A., Nik Ahmad, N.A., Ramayah, T., Muhamad, Z. (2020), An investigation of pro-environmental behaviour and sustainable development in Malaysia. Sustainability, 12(17), 7083.

Zacher, H., Rudolph, C.W., Katz, I.M. (2023), Employee green behavior as the core of environmentally sustainable organizations. Annual Review of Organizational Psychology and Organizational Behavior, 10(1), 465-494.