AWARENESS AND ADAPTIVE BEHAVIOUR TOWARD CLIMATE CHANGE AMONG VIETNAMESE PEOPLE IN IMPLEMENTING THE NET ZERO 2050 COMMITMENT

Abstract

Vietnam's commitment to Net Zero announced at COP26 marks a pivotal milestone in the country's efforts to address and manage climate change. This study highlights the critical role of public engagement in achieving this target by analyzing Vietnamese citizens' awareness and pro-environmental behaviour in the context of climate change, thereby providing essential insights to support the realization of the Net Zero goal. Using responses from a five-point Likert-scale questionnaire survey of 493 inhabitants across Vietnam from diverse backgrounds, the authors employed SPSS to examine the relationship between climate change awareness and adaptive behaviour. The results indicate that risk perception of climate change is positively correlated with knowledge of climate change, extreme weather experience, trust in science, and green self-identity. Furthermore, climate change risk perception positively influences attitudes toward climate change, which in turn are positively associated with pro-environmental behaviours. Based on these findings, the authors propose several recommendations to foster greater public participation in Vietnam's pursuit of the Net Zero target.

Keywords*: Climate change, Net Zero, Public awareness, Pro-environmental behaviour, Risk perception*

1. Introduction

In recent years, climate change has been an urgent issue of global concern due to its direct impact on society, economy and humanity. More alarmingly, environmental pollution and climate change have been increasingly severe, posing a direct threat to worldwide sustainable development. To be more specific, January 2025 was recorded as the warmest January globally by the Copernicus Climate Change Service (C3S), 1.75°C above the pre-industrial level. This global trend has been particularly evident in Asia, in 2023, the Emergency Events Database reported 79 disasters in Asia that were related to hydro-meteorological hazards, affecting millions of people (WMO, 2024).

In an era marked by escalating climate crises, the World Bank ranked Vietnam among five countries most exposed to climate-related hazards, owing to its geographical position along the East Sea. In 2020 alone, Vietnam incurred economic losses of about $10 billion, equivalent to 3.2% of its GDP, and projections suggest that by 2050 the country could lose approximately 12–14.5% of its GDP annually due to climate-related problems (World Bank, 2022). In this context, Vietnam's commitment to achieving Net Zero, announced at COP26, represents a significant step forward in enhancing the country's readiness for sustainable development.

Along with the pursuit of Net Zero emissions, Vietnam has established a comprehensive roadmap to realize this target. To achieve this goal, the government issued the National Climate Change Adaptation Plan for the period 2021–2030, with a vision to 2050, providing guidance for society to work collectively toward the ambition.

Although Vietnam's commitment at COP26 marks a critical milestone at the policy level, successfully reaching this objective requires proactive efforts to reduce or prevent greenhouse gases not only from the government but also from corporations and individuals (BNEF, 2024). Moreover, it is pointed out that while effective government policies play a vital role in steering the country toward sustainability, communities also need sufficient knowledge of risks to take empowered action, as they are the key to attaining this goal (Khatibi et al., 2021).

Halady & Rao (2010) once investigated the relationship between awareness to climate change and behavioural changes amongst individual industry managers in India. Furthermore, Annukka (2011) examined the linkage between public understanding of science and corresponding actions. As recorded, current studies have just examined individual factors including knowledge, experiences with extreme weather, or beliefs about climate change, without integrating modern psychosocial factors such as green self-identity, trust in science, or risk perception of climate change (Diakakis et al., 2021; Kahan et al., 2012).

Acknowledging the importance of public awareness and behaviour in mitigating climate change progress, this study was conducted under the title ***"Awareness and Adaptive Behaviour Toward Climate Change among Vietnamese People in Implementing the Net Zero 2050 Commitment"***. By investigating public climate knowledge, extreme weather experience, trust in science, and green self-identity affect risk perception and pro-environmental behaviours, the research aims to contribute to Vietnam's sustainable development agenda towards having a society capable of making meaningful and collective action towards the Net Zero 2050 goal.

2. Literature review and hypothesis development

2.1. Theoretical literature

The UNFCCC (1992) defines climate change as alterations in global climate caused directly or indirectly by human activity, distinct from natural variability. In contrast, the IPCC adopts a broader definition, including both natural and human-induced changes. These differing definitions influence policy approaches such as adaptation.

Climate knowledge refers to an individual's cognitive understanding of the climate system—its causes, effects, and potential solutions (Weber & Stern, 2011). According to Leiserowitz et al.(2010) it includes understanding how the climate system works, knowledge of global warming causes and consequences, contextual awareness, and practical knowledge enabling action. The USDA Climate Hubs (2018) define extreme weather events as intense, short-term phenomena (e.g., heat waves, floods, cyclones) that cause major damage. Similarly, the WMO describes them as rare and unusually severe occurrences varying by region. Trust in science, based on Romano (2003), involves subjective confidence in others' influence on one's outcomes. In climate studies, it reflects belief in scientific explanations and acceptance of climate risks (Vecina et al., 2024). Green self-identity is the extent to which individuals view themselves as environmentally responsible, influencing sustainable behaviour and eco-friendly consumption (Han et al., 2021; Mahasuweerachai & Suttikun, 2022).

Risk perception represents individuals' subjective assessment of threats and uncertainties related to climate change (Van Eck et al., 2020). Attitude toward climate change integrates cognitive evaluations of its likelihood with emotional responses to its consequences (Van der Linden, 2017). Finally, pro-environmental behaviour refers to deliberate actions that minimize environmental harm and promote sustainability (Kollmuss & Agyeman, 2002; Krajhanzl, 2010).

2.2. Empirical literature and hypotheses

Bradley et al. (2020) found that climate knowledge positively influences individuals' perceptions of climate change risks. Similarly, Van Eck et al. (2020) identified knowledge of climate impacts, response strategies, and scientific consensus as key predictors of risk perception. Most studies, such as Kahan et al. (2012), measured risk perception indirectly through scientific literacy or education rather than specific climate knowledge (Guy et al., 2014). However, a few studies (Sundblad et al., 2007; Tobler et al., 2012) directly examined content knowledge and found a positive relationship with perceived risk.

H1: Knowledge positively affects climate change risk perceptions

Ai et al. (2024) suggested that extreme weather experiences influence climate change risk perceptions mainly indirectly, through individuals' causal attributions. These experiences increased perceived risk among those without party affiliations but had no significant effect on individuals with strong political ties. Previous studies (Dai et al., 2015; Zaalberg et al., 2009; Frondel et al., 2017) consistently found that personal experiences with natural hazards—especially when involving personal damage—significantly heighten individual risk perceptions of climate change.

H2: Extreme weather experience positively affects climate change risk perceptions

In their study, Van Eck et al. (2020) claimed that trust in scientists emerged as a positive and significant predictor of climate change risk perceptions. They concluded that although trust in science is a valuable component of the model, affect remains the most influential predictor of climate change risk perceptions. Specifically, trust in scientists was identified as a significant predictor of climate change risk perceptions and was independently associated with heightened perceptions of climate change risk.

H3: Trust in science positively affects climate change risk perceptions

In their prior studies (Whitmarsh & O'Neill, 2010; Babutsidze & Chai, 2018), the authors propose that 'green self-identity'as a sense of personal alignment with environmental issues and causes, serves as a significant predictor of climate change risk perception. Furthermore, in a study of Bradley et al. (2020), green self-identity not only exerts a strong influence on climate change risk perception, but through its impact on perception, it also contributes to fostering individuals' pro-environmental behaviour.

H4: Green self-identity positively affects climate change risk perceptions

According to Masud et al. (2013), risk perception of climate change positively and significantly influences attitudes toward climate change. Similarly, Bayard and Jolly (2007) found that environmental risk perceptions significantly shape

environmental attitudes. Rasiah et al. (2020) further emphasized that accurate risk perceptions can reshape beliefs, which in turn affect attitudes toward climate change. Understanding these attitudes is essential for guiding behaviour and promoting adaptive responses to climate change.

H5: Climate change risk perceptions positively affect attitudes towards climate change

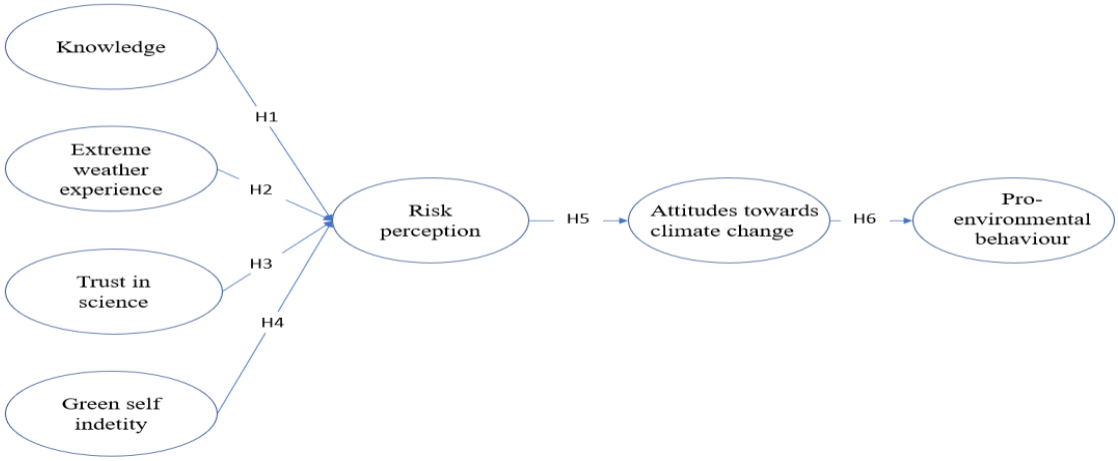
Masud et al. (2013) claimed that attitudes towards climate change positively affect pro-environmental behaviour. In their study, the SEM results indicated that attitudes toward climate change exert a positive and significant influence on pro-environmental behaviour. This relationship implies that when individuals perceive climate change as a serious issue and develop favorable attitudes towards addressing it, they are more likely to adopt environmentally responsible behaviours. Strengthening such attitudes can therefore be seen as a key driver in promoting long-term sustainable development.

H6: Attitudes towards climate change positively affect pro-environmental behaviour.

3. Methodology

3.1. Research framework

Figure 1. Research Framework



(Source: Compiled and developed by the research team)

This study proposes a framework integrating the Theory of Planned behaviour (Ajzen, 1991) and Protection motivation Theory (Rogers, 1975) to explain climate-related behaviours. It highlights the role of cognitive and motivational factors in shaping pro-environmental actions, drawing on prior studies. Knowledge, extreme weather experiences, trust in science, and green self-identity are all linked to risk perception (Bradley et al. ,2020; Ai et al. ,2024; Van Eck et al. ,2020; Whitmarsh & O'Neill, 2010). Risk perception influences attitudes toward climate change (Masud et al., 2013), which in turn predict pro-environmental behaviours. Overall, the framework, as illustrated in Figure 1, outlines a pathway from perceptions to attitudes and behaviour toward climate change.

3.2. Research method

This study employed a quantitative approach to examine public perceptions and behaviours related to climate change. The collected data were analyzed using SPSS 27.0. Descriptive statistics were used to summarize respondents' demographic characteristics and key variables. Reliability of the constructs was tested through Cronbach's Alpha. Exploratory Factor Analysis (EFA) was conducted to validate the measurement structure, followed by correlation analysis to examine relationships among variables. Finally, regression analysis was applied to test the proposed relationships in the research framework.

3.3. Data set

This study aims to investigate the impact on pro-environmental behaviour of factors including knowledge, extreme weather experience, trust in science, green self-identity, risk perception, and attitudes towards climate change. Primary data were collected from 498 respondents in Vietnam from August to September 2025 through a 5-point Likert scale survey questionnaire. The variables are presented in Table 1.

Table 1. Variable measurement

Ordinal number	Variable	Code	Unit
Dependent variable			
1	Pro-environmental behaviour	PEB	Likert 5-point
Mediating variables			
1	Climate change risk perception	RP	Likert 5-point
2	Attitudes towards climate change	ACC	Likert 5-point
Independent variables			
1	Knowledge	KN	Likert 5-point
2	Extreme weather experience	EWE	Likert 5-point
3	Trust in science	TIS	Likert 5-point
4	Green self-identity	GSI	Likert 5-point

(Source: Compiled by the research team)

4. Result & Discussions

4.1. Descriptive analysis

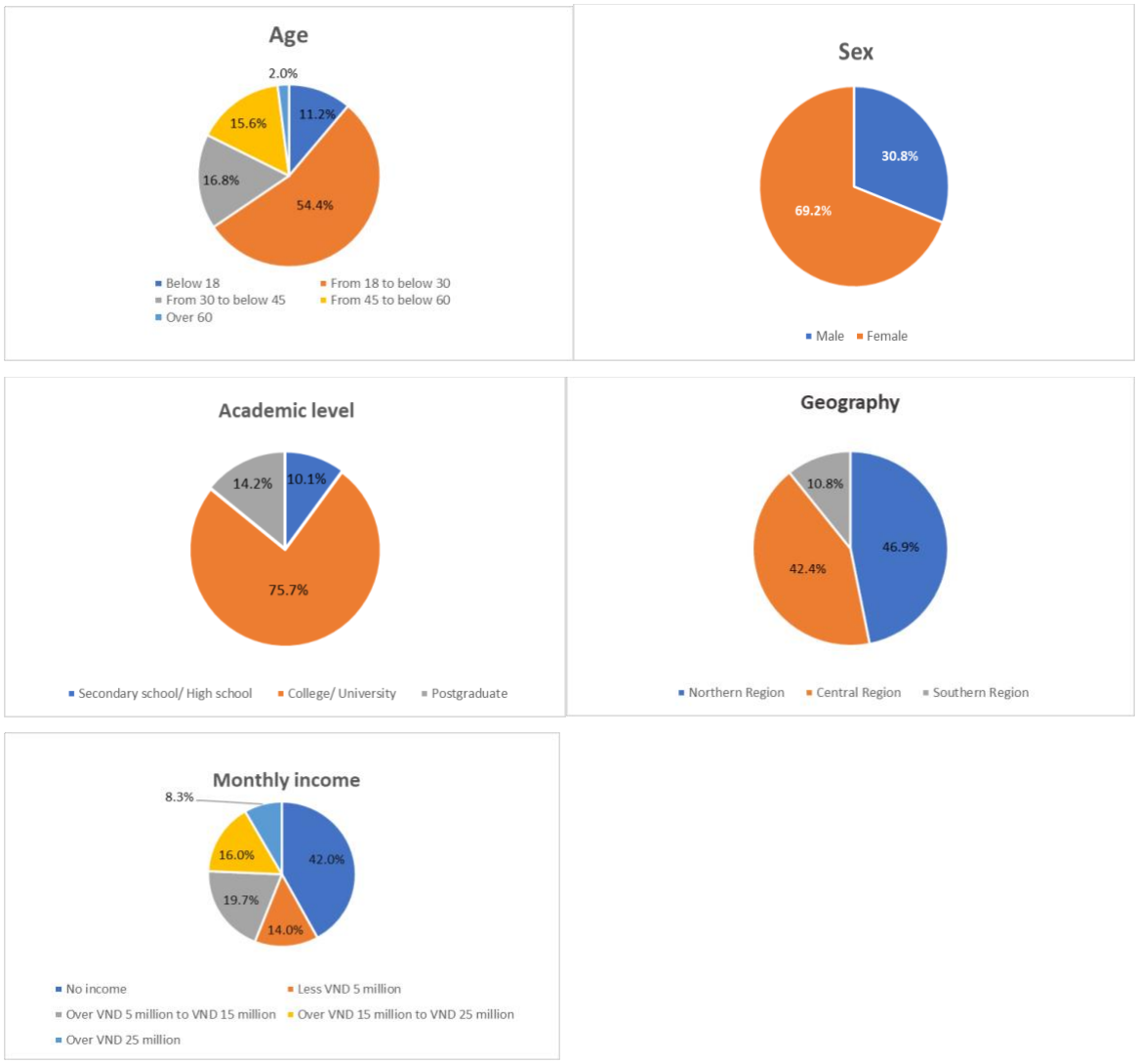


Figure 2. Demographic distribution of respondents

(Source: Author's analysis result)

The survey received 493 responses from participants. As highlighted in Figure 2, the majority of respondents belonged to the young population group, were mostly female, and resided in Northern Vietnam. Most of them were currently studying or had completed college or university education and had no income, yet all income options were selected, indicating the comprehensiveness of the dataset.

Table 2. Descriptive statistics

	N	Minimum	Maximum	Mean	Std.Deviation
KN1	493	1	5	4.14	0.721
KN2	493	1	5	4.32	0.696

KN3	493	1	5	3.84	0.784
KN4	493	1	5	3.90	0.901
EWE1	493	1	5	4.10	0.848
EWE2	493	1	5	4.17	0.830
EWE3	493	1	5	4.24	0.763
EWE4	493	1	5	3.69	0.971
TIS1	493	1	5	4.02	0.728
TIS2	493	1	5	4.11	0.734
TIS3	493	1	5	3.91	0.822
TIS4	493	1	5	3.86	0.899
GSI1	493	1	5	4.17	0.729
GSI2	493	1	5	4.21	0.731
GSI3	493	1	5	3.85	0.867
GSI4	493	1	5	4.06	0.789
RP1	493	1	5	4.47	0.642
RP2	493	1	5	4.45	0.644
RP3	493	1	5	4.44	0.674
RP4	493	1	5	4.32	0.749
RP5	493	1	5	4.17	0.799
ACC1	493	1	5	4.25	0.692
ACC2	493	1	5	4.19	0.677

ACC3	493	1	5	4.13	0.763
ACC4	493	1	5	4.30	0.680
PEB1	493	1	5	3.77	0.835
PEB2	493	1	5	3.57	0.980
PEB3	493	1	5	3.66	0.933
PEB4	493	1	5	4.12	0.739
PEB5	493	1	5	3.75	0.909
Valid N (listwise)	493				

Note: *KN = Knowledge; EWE = Extreme weather experience; TIS = Trust in science; GSI = Green self-identity; RP = Risk perception; ACC = Attitudes towards climate change; PEB = Pro-environmental behaviour*

(Source: Author's analysis result)

In terms of mean values, most factors range from 3.5 to 4.4, indicating that respondents generally hold fairly positive perceptions and attitudes toward climate change. Among them, risk perception shows the highest mean scores (4.17–4.47) with the lowest standard deviations, reflecting strong and consistent agreement. Other factors such as attitude toward climate change, green self-identity, knowledge, extreme weather experience and trust in science also received relatively high scores, demonstrating positive awareness with moderate consensus. In contrast, Pro-environmental behaviour records the lowest mean values (especially PEB2: 3.57) with higher standard deviations, indicating greater variability in responses. Overall, while knowledge and risk perception appear to be stable and consistently acknowledged, pro-environmental behaviours remain the area with more dispersed views and lower agreement.

4.2. Quantitative results

According to Table 3, the reliability test results indicate that all constructs in the study achieved Cronbach's Alpha values above 0.7, demonstrating that the scales used are reliable and stable. Specifically, risk perception shows the highest reliability (α = 0.878), reflecting very strong coherence among its measurement items. Other constructs such as trust in science, green self-identity, and attitude toward climate change, pro-environmental behaviour also demonstrate high reliability, with Alpha values ranging from 0.814 to 0.835. Meanwhile, extreme weather experience and knowledge have slightly lower but still robust coefficients (α = 0.775 and 0.809, respectively).

Table 3. Reliability Statistics

Variable	Number of items	Cronbach's Alpha
KN	4	0.809
EWE	4	0.775
TIS	4	0.817
GSI	4	0.825
RP	5	0.878
ACC	4	0.835
PEB	5	0.814

Note: *KN = Knowledge; EWE = Extreme weather experience; TIS = Trust in science; GSI = Green self-identity; RP = Risk perception; ACC = Attitudes towards climate change; PEB = Pro-environmental behaviour*

(Source: Author's analysis result)

The results of the Pearson correlation matrix in Table 4 indicate that all variables are positively correlated and statistically significant at the 1% level. Pro-environmental behaviour shows the strongest correlation with green self-identity (r = 0.611) and attitude toward climate change (r = 0.523), suggesting that these two factors are the most important drivers of green behaviour. Variables such as knowledge, extreme weather experience, and trust in science mainly exert indirect effects through risk perception and attitude to promote pro-environmental behaviour.

Table 4. Correlations

		PEB	ACC	RP	KN	EWE	TIS	GSI
PEB	Pearson Correlation	1	0.523**	0.366**	0.378**	0.313**	0.406**	0.611**
	Sig.(2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000
	N	493	493	493	493	493	493	493
ACC	Pearson Correlation	0.523**	1	0.668**	0.437**	0.422**	0.515**	0.688**
	Sig.(2-tailed)	0.000		0.000	0.000	0.000	0.000	0.000
	N	493	493	493	493	493	493	493
RP	Pearson Correlation	0.366**	0.668**	1	0.464**	0.482**	0.459**	0.518**
	Sig.(2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	493	493	493	493	493	493	493
KN	Pearson Correlation	0.378**	0.437**	0.464**	1	0.411**	0.408**	0.426**
	Sig.(2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	493	493	493	493	493	493	493
EWE	Pearson Correlation	0.313**	0.422**	0.482**	0.411**	1	0.348**	0.414**
	Sig.(2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	493	493	493	493	493	493	493
TIS	Pearson Correlation	0.406**	0.515**	0.459**	0.408**	0.348**	1	0.534**
	Sig.(2-tailed)	0.000	0.000	0.000	0.000	0.000		0.000
	N	493	493	493	493	493	493	493
GSI	Pearson Correlation	0.611**	0.688**	0.518**	0.426**	0.414**	0.534**	1
	Sig.(2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	
	N	493	493	493	493	493	493	493

Note: *KN = Knowledge; EWE = Extreme weather experience; TIS = Trust in science; GSI = Green self-identity; RP = Risk perception; ACC = Attitudes towards climate change; PEB = Pro-environmental behaviour;* **: p-value < 0.001

(Source: Author's analysis result)

4.2.1. Exploratory Factor Analysis (EFA) for the independent variables

Table 5. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of sampling adequacy		0.869
Bartlett's test of sphericity	Approx.Chi-square	3289.001
	df	120
	Sig.	0.000

Table 6. Rotated Component Matrix

	1	2	3	4
KN3	0.802			
KN1	0.793			
KN4	0.722			
KN2	0.717			
GSI1		0.788		
GSI4		0.766		
GSI2		0.747		
GSI3		0.714		
TIS3			0.797	
TIS4			0.765	
TIS1			0.746	
TIS2			0.720	
EWE1				0.783

EWE2				0.747
EWE4				0.719
EWE3				0.692

Note: *KN = Knowledge; EWE = Extreme weather experience; TIS = Trust in science; GSI = Green self-identity; RP = Risk perception; ACC = Attitudes towards climate change; PEB = Pro-environmental behaviour*

(Source: Author's analysis result)

As shown in Table 5 and 6, the results of the KMO and Bartlett's Test indicate that the KMO value is 0.869, which is higher than 0.8, demonstrating that the data are highly suitable for Exploratory Factor Analysis (EFA). In addition, Bartlett's Test of Sphericity shows a Chi-square value of 3289.001 with a significance level of 0.000 (< 0.05), rejecting the null hypothesis that the variables are uncorrelated. This confirms that the observed variables are sufficiently correlated for factor extraction. All factor loadings exceed 0.6, indicating that the observed variables strongly contribute to their respective factors, and no cross-loading issues are present.

4.2.2. Exploratory Factor Analysis (EFA) for the mediating variables

Table 7. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of sampling adequacy		0.913
Bartlett's test of sphericity	Approx.Chi-square	2359.345
	df	36
	Sig.	0.000

Table 8. Rotated Component Matrix

	1	2
RP2	0.839	
RP1	0.818	
RP3	0.800	
RP4	0.747	
RP5	0.629	
ACC3		0.830

ACC2		0.792
ACC1		0.711
ACC4		0.701

Note: *RP = Risk perception; ACC = Attitudes towards climate change*

(Source: Author's analysis result)

The results of the KMO and Bartlett's Test show that the KMO value is 0.913, which is greater than 0.9, indicating an excellent level of sampling adequacy and confirming that the dataset is highly appropriate for Exploratory Factor Analysis (EFA). Bartlett's Test of Sphericity has a Chi-square value of 2359.345 with a significance level of 0.000 (< 0.05), rejecting the null hypothesis that the correlation matrix is an identity matrix. This result implies that the variables are significantly correlated and suitable for factor extraction.

4.2.3. Exploratory Factor Analysis (EFA) for the dependent variables

Table 9. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of sampling adequacy		0.831
Bartlett's test of sphericity	Approx.Chi-square	769.809
	df	10
	Sig.	0.000

Table 10. Component Matrix

Dependent Variables	Factor Loadings
PEB5	0.803
PEB3	0.801
PEB4	0.747
PEB1	0.741
PEB2	0.706

Note: *PEB = Pro-environmental behaviour*

(Source: Author's analysis result)

In Table 9, the results of the KMO and Bartlett's Test show that the KMO value is 0.831, which is higher than 0.8, indicating that the sample size and data are suitable for Exploratory Factor Analysis (EFA). Bartlett's Test of Sphericity yields a Chi-square

value of 769.809 with a significance level of 0.000 (< 0.05), rejecting the null hypothesis that the correlation matrix is an identity matrix. Additionally, all factor loadings exceed the acceptable threshold of 0.7 (Table 10), the scale demonstrates good convergent validity and reliability.

4.2.4. Regression analysis

Table 11. Regression analysis for the mediating variable RP

	Unstandardized Coefficients		**Standardized Coefficients**		
	B	Std.Error	Beta	t	Sig.
Constant	1.280	0.170		7.539	0.000
KN	0.178	0.038	0.191	4.677	0.000
EWE	0.213	0.035	0.244	6.094	0.000
TIS	0.148	0.038	0.164	3.865	0.000
GSI	0.226	0.040	0.247	5.650	0.000

Note: *RP = Risk perception; KN = Knowledge; EWE = Extreme weather experience; TIS = Trust in science; GSI = Green self-identity*

(Source: Author's analysis result)

According to Table 11, knowledge, extreme weather experience, trust in science and green-self identity all positively and significantly affect RP (α=0.000 < 0.05). Among them, green-self identity (β = 0.226) and extreme weather experience (β = 0.213) have the strongest influence and this result is consistent with the findings of Kahan et al. (2012), Bradley et al. (2020), Van Eck et al. (2020), Ai et al. (2024) and Whitmarsh & O'Neill (2010).

The regression equation for risk perception is therefore expressed as:

RP = 1.280 + 0.178 KN + 0.213 EWE + 0.148 TIS + 0.226 GSI

Table 12. Regression analysis for the mediating variable ACC

	Unstandardized Coefficients		**Standardized Coefficients**		
	B	Std.Error	Beta	t	Sig.
Constant	1.303	0.147		8.836	0.000
RP	0.666	0.033	0.668	19.915	0.000

Note: *RP = Risk perception; ACC = Attitudes towards climate change*

(Source: Author's analysis result)

In Table 12, the regression results reveal that RP exerts a positive and statistically significant influence on ACC (α=0.000 < 0.05), indicating that higher risk perception leads to a more favorable attitude toward climate change. This result is consistent with the findings of Masud et al. (2013) and Rasiah et al. (2020).

The regression equation for attitudes towards climate change is expressed as:

$$ACC = 1{,}303 + 0{,}666\ RP$$

Table 13. Regression analysis for the dependent variable PEB

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std.Error	Beta	t	Sig.
Constant	2.515	0.127		19.822	0.000
PEB	0.450	0.033	0.523	13.605	0.000

Note: *PEB = Pro-environmental behaviour*

(Source: Author's analysis result)

In Table 13, the results indicate that ACC positively and significantly affects PEB (α=0.000 < 0.05), suggesting that individuals with more positive attitudes toward climate change are more likely to engage in pro-environmental behaviour. This result is consistent with the finding of Masud et al. (2013).

The regression equation for pro-environmental behaviour is expressed as:

$$PEB = 2{,}515 + 0{,}450\ ACC$$

5. Conclusions and Recommendations

5.1 Conclusions

This study updates the latest context of Vietnam's climate policy, particularly the national commitment to achieving Net Zero emissions by 2050, and provides a comprehensive perspective on public awareness, trust, and pro-environmental behaviour. It addresses existing research gaps by developing an integrated theoretical model that combines psychological factors (such as trust in science and belief certainty in climate change) with green self-identity — a relatively new construct in Vietnam's research context. Using recent empirical data from 2025 with a reliable sample size, the findings offer high practical value for predicting and designing effective communication and educational campaigns on climate change adaptation. Our research results elucidate that knowledge, extreme weather experience, trust in science, and green self-identity exert positive impacts on climate change risk perceptions. As the results show, our analysis indicates that enhanced risk perceptions exhibit a significant positive correlation with attitudes towards climate change, which subsequently translate into pro-environmental behaviour among the Vietnamese population.

Table 5.1. Hypothesis assessment result

N	Hypotheses	Results
H1	Knowledge positively affects climate change risk perceptions	Accepted
H2	Extreme weather experience positively affects climate change risk perceptions	Accepted
H3	Trust in science positively affects climate change risk perceptions	Accepted
H4	Green Self-identity positively affects climate change risk perceptions	Accepted
H5	Climate change risk perceptions positively affect attitudes towards climate change	Accepted
H6	Attitudes towards climate change positively affect pro-environmental behaviour.	Accepted

(Source: Compiled by the research team)

Based on our findings, policymakers and environmental organizations can develop more effective strategies to strengthen climate change awareness and encourage adaptive behaviours among Vietnamese citizens, thereby facilitating the achievement of Vietnam's Net Zero 2050 targets. However, translating climate awareness into sustained pro-environmental actions remains challenging in Vietnam's context, particularly due to limited public access to scientific information, inadequate integration of climate education into formal curricula, and socio-economic barriers that hinder the adoption of green practices in everyday life.

5.2. Recommendations for Vietnam

The findings of this study demonstrate that green self-identity and extreme weather experience have the strongest positive influence on individuals' risk perception, which in turn positively affects their attitudes toward climate change and pro-environmental behaviour. This result is consistent with previous research such as that of Van der Werff et al. (2014), who emphasized that a strong green self-identity enhances consistency between environmental attitudes and actual behaviour; Spence et al.(2011), who found that personal experience with extreme weather events significantly increases awareness of climate risks.

In the current Vietnamese context, these findings hold significant implications. Vietnam has made a strong political commitment to achieve Net Zero emissions by 2050, as announced at COP26, and is actively implementing the National Climate Change Strategy 2021–2030. However, despite rising environmental awareness, the internalization of green self-identity among Vietnamese citizens remains relatively weak, particularly in non-urban areas. Many individuals still view pro-environmental behaviour as an external duty rather than an integral part of their self concept.

Meanwhile, extreme weather phenomena including prolonged heatwaves, floods, and droughts have become more frequent and severe in recent years, directly affecting livelihoods and highlighting the tangible risks of climate change. These contextual realities create both urgency and opportunity for behavioural-based climate action.

To strengthen public engagement, it is recommended that climate communication and education strategies in Vietnam focus on nurturing green self-identity and transforming experiences of extreme weather into behavioural motivation. Specifically, environmental campaigns should emphasize personal responsibility, moral identity, and pride in sustainable lifestyles, thereby framing "living green" as part of each individual's social and moral identity. Integrating identity-based narratives into school curricula, public communication, and community programs can help citizens internalize sustainability as a personal value. At the same time, communication initiatives should use emotionally engaging stories and real life experiences drawn from climate impacts such as the stories of flood victims or farmers facing drought to enhance climate risk perception and empathy-driven action (Akerlof et al., 2013).

These identity and experience-oriented approaches are particularly relevant to Vietnam's social context, where collective values and community identity are deeply rooted. By connecting environmental responsibility with national pride and shared experiences, policymakers and communication organizations can enhance public engagement with climate issues, bridging the gap between awareness and action. In doing so, Vietnam can more effectively mobilize its citizens toward sustainable behaviour change and make a meaningful contribution to the national goal of achieving Net Zero emissions by 2050.

6. References

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