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The Path to Ecotourism Intention: The Interplay of Ecotourism Attitude, Eco-Destination Image, and Environmental Belief

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Abstract
Drawing on the Value-Belief-Norm (VBN) theory, this study examines the mechanisms through which ecotourism attitude, eco-destination image, and environmental belief shape ecotourism intention. Data were collected from a sample of 410 international tourists visiting Loango National Park in Gabon and analyzed using structural equation modeling. The results reveal that ecotourism attitude positively influences ecotourism intention and eco-destination image. Eco-destination image also significantly affects ecotourism intention and mediates the relationship between ecotourism attitude and ecotourism intention. Furthermore, environmental belief moderates the link between ecotourism attitude and ecotourism intention, strengthening this association among individuals with stronger pro-environmental values. The study offers theoretical insights and practical implications for promoting ecotourism in emerging market contexts.

Keywords: ecotourism attitude, eco-destination image, ecotourism intention, environmental belief

1. Introduction

Ecotourism continues to grow as a response to the increasing demand for sustainable travel practices, yet understanding what drives tourists to intend to participate in ecotourism remains incomplete (Thi Khanh & Phong, 2020). Prior studies have pointed to various psychological and contextual factors (e.g. Hunitie et al., 2022; Huo et al., 2024), but the mechanisms that link these factors to intention are still underdeveloped in current research. Among these, ecotourism attitude has been frequently identified as a key predictor (Hultman et al., 2015; Hunitie et al., 2022). Studies suggest that individuals with more favorable attitudes toward ecotourism are more likely to consider engaging in such travel experiences. However, this relationship has not always been consistent across contexts, raising the question of what might influence or shape the way attitude leads to intention. Some researchers have argued that relying on attitude alone is insufficient to explain ecotourism behavior and that other variables, including cognitive and value-based elements, must be considered alongside it (Pham & Khanh, 2021; Thi Khanh & Phong, 2020).

Recent tourism research has increasingly turned its attention to the image of eco-destinations as a potential factor influencing travel decisions (Luong, 2023). A destination's image often reflects tourists' perception of environmental quality, conservation efforts, and sustainable management (Quynh et al., 2021). Some studies have suggested that a strong eco-destination image can enhance the effect of attitude on behavioral intention (Chi & Pham, 2024; Luong, 2023), while others have found that it acts as a direct predictor of intention on its own (Hunitie et al., 2022; Pham & Khanh, 2021). However, the possibility that eco-destination image might mediate between ecotourism attitude and ecotourism intention has not been explored in sufficient depth. Most models treat eco-destination image and ecotourism attitude as parallel predictors, without investigating whether tourists' positive evaluations of ecotourism lead to improved perceptions of destination image, which in turn strengthen their behavioral intention. This gap suggests the

need to test how destination image may explain the pathway through which ecotourism attitude leads to intention.

Environmental belief has been increasingly examined in ecotourism research as a meaningful predictor of pro-environmental behavior (Huang, 2016; Liobikienė & Poškus, 2019). Previous studies have established that environmental belief influences ecotourism attitudes and behavioral intention, often contributing directly to tourists' willingness to engage in environmentally responsible travel (Luong, 2023; Tran, 2022). More recent work has begun to incorporate environmental belief into integrated models that include cognitive, affective, and value-based components (Patwary, 2023; Xu et al., 2025). However, while its direct effects are now better understood, less attention has been given to its role as a moderating variable. Specifically, it remains unclear whether environmental belief alters the strength of the relationship between ecotourism attitude and intention. Tourists with stronger environmental beliefs may consistently align their attitudes with their behavior, while those with weaker beliefs may not (Patwary, 2023; Tarinc et al., 2023). Understanding whether belief functions as a conditional factor in this way could provide greater insight into when and for whom attitude is a reliable predictor of ecotourism intention.

This study addresses these issues by examining three interrelated questions: a) how does ecotourism attitude influence both ecotourism intention and eco-destination image; b) does eco-destination image influence ecotourism intention and mediate the link between ecotourism attitude and ecotourism intention; c) does environmental belief moderate the relationship between ecotourism attitude and ecotourism intention. These questions are designed to uncover the psychological and perceptual mechanisms that shape ecotourism decision-making and explain why some tourists translate their attitudes into action more effectively than others.

In light of the above, this study contributes to the literature by moving beyond linear models and testing a more integrated framework that reflects the complexity of ecotourism decisions. It highlights the importance of internal psychological dispositions and external destination perceptions, and explores how these factors interact. In doing so, the study offers theoretical insight into how intention is formed and provides practical recommendations for promoting sustainable tourism. By identifying the psychological and perceptual mechanisms that support ecotourism, this research offers direction for destination managers and policymakers seeking to encourage environmentally responsible travel.

The paper is structured as follows. The next section reviews relevant literature and introduces the conceptual model. The methodology section describes the research design, sample, measurement instruments, and data analysis. This is followed by a discussion of the results, which report the analysis findings. The final section discusses the theoretical and managerial implications of the study and offers directions for future research.

2. Literature and hypotheses

2.1 Value-belief-Norm (VPN) Theory

Initially developed by Stern et al. (1999), the **v**alue-belief-norm (VBN) theory explains pro-environmental behavior as a psychological chain linking personal values, environmental beliefs, awareness of consequences, and moral obligation. According to the theory, individuals with strong biospheric or altruistic values are more likely to develop ecological beliefs, experience a sense of personal responsibility, and ultimately engage in environmentally conscious behavior (Alashiq & Aljuhmani, 2025). In the context of ecotourism, VBN theory provides a meaningful lens for understanding how deeply rooted environmental beliefs influence behavioral intentions (Denley et al., 2020). Previous studies have applied this framework to a wide range of sustainable behaviors, including recycling, energy conservation, and green consumption (Latifiniya et al., 2022; Le et al., 2021). More recently, it has been used to examine nature-based tourism decisions, where personal norms and ecological concern play a central role (He et al., 2024; Sharma & Gupta, 2020).

From this perspective, environmental belief represents the internalized understanding that human actions affect nature, forming the cognitive foundation for eco-conscious attitudes (Ghazali et al., 2019). Ecotourism attitude captures an individual's evaluative stance toward participating in sustainable travel (Canlas & Karpudewan, 2023). Eco-destination image is introduced here as a contextual factor that may shape or reinforce belief-driven behavior (Alashiq & Aljuhmani, 2025). These constructs form a theoretical basis for explaining ecotourism intention, consistent with VBN's emphasis on internal motivation and moral norms.

2.2 Ecotourism intention

Ecotourism intention refers to a person's deliberate motivation to engage in travel that reduces environmental harm and supports sustainable practices (Luong, 2023). It reflects a growing personal commitment to ecological protection, cultural respect, and responsible tourism (Duong et al., 2022; Handriana & Ambara, 2016; Samal & Dash, 2023). As environmental awareness increases, more travelers are intentionally choosing options that align with their values (Streimikiene et al., 2021). This intention often leads individuals to plan trips that include observing natural habitats, supporting local communities, and minimizing ecological footprints (Meleddu & Pulina, 2016; Rafiq et al., 2022). It also involves seeking eco-certified accommodations, avoiding exploitative tourism, and practicing ethical wildlife interactions (Chai-Arayalert, 2020; Pham & Khanh, 2021). Expressing ecotourism intention signals a traveler's active role in conservation and environmental stewardship. Ultimately, it fosters deeper engagement with sustainability and a lasting commitment to protecting natural environments (Luong, 2023, 2024).

2.3 Ecotourism attitude and ecotourism intention

Ecotourism attitude refers to the psychological inclination toward the environment that results in favorable or unfavorable judgments (Vicente-Molina et al., 2013). According to Tao et al. (2004), it also reflects the consistency of an individual's stance on environmental matters. This attitude encompasses affective, cognitive, and behavioral components related to beliefs about sustainability, emotional connection to nature, and willingness to engage in eco-friendly practices (Vincent & Thompson, 2002). Individuals with a positive attitude toward ecotourism are more likely to translate that outlook into deliberate behavioral tendencies (Hultman et al., 2015). Such attitudes often shape how individuals evaluate travel choices, leading them to prefer options that align with their environmental values (Thi Khanh & Phong, 2020). The strength of one's ecotourism attitude significantly influences the likelihood of acting on those values through future travel decisions (Luong, 2023). As supported by existing literature, ecotourism attitude serves as a key predictor of ecotourism intention in behavioral models, indicating that the more favorable an individual's attitude toward ecotourism, the stronger their intention to participate in such practices.

For instance, Hultman et al. (2015) in a sample of Swedish and Taiwanese discovered a positive association between ecotourism attitude and ecotourism intention. Similarly, Luong (2023) in an investigation of 636 tourists in Mang Den, Vietnam, found a positive effect of ecotourism attitude on ecotourism intention. However, in a study of 309 tourists in Jordan, Hunitie et al. (2022) demonstrated that ecotourism attitude did not affect ecotourism intention. The mixed findings of previous research necessitate a further investigation into the association between ecotourism attitude and ecotourism intention. Thus, it is hypothesized that:

H1: Ecotourism attitude has a positive influence on ecotourism intention.

2.4. Ecotourism attitude and eco-destination image

Chi & Pham (2024, p. 320) defined eco-destination image as "tourists' holistic impressions of eco-destination sites". The growing demand for environmentally and socially conscious travel has led to a rising interest in the concept of eco-destination image in recent years (Luong, 2023). Tourists who endorse sustainability are more likely to focus on attributes such as biodiversity protection, green practices, and community empowerment when evaluating a destination (Chen et al., 2025; Luong, 2024). This evaluative lens shapes both the cognitive image (i.e. knowledge and beliefs about the destination's environmental efforts) and the affective image (i.e. emotional resonance and perceived authenticity) (Alashiq & Aljuhmani, 2025). According to VBN theory, individuals with strong biospheric and altruistic values internalize environmental beliefs and personal norms, manifesting as ecotourism attitudes that guide perception and moral engagement (Lee & Jan, 2018). Thus, ecotourism attitude becomes a psychological mechanism that frames destination attributes in ways that align with deeper value structures.

As a result, eco-destination image is not merely constructed from marketing or external cues, but is also shaped by tourists' internal ethical frameworks and environmental predispositions (Luong, 2024). Those with elevated ecotourism attitudes are primed to perceive destinations as more ecologically virtuous, reinforcing symbolic and emotional identification with place (Hultman et al., 2015; Lu et al., 2016). In this context, destination image becomes a reflection of personal meaning and identity congruence, rather than just visual aesthetics or service quality. Through the lens of the VBN model**,** this study argues that

ecotourism attitude mediates the effect of values and beliefs on image formation, turning perceived environmental responsibility into a source of positive destination appraisal. Therefore, this study hypothesizes that:

H2: Ecotourism attitude has a positive influence on eco-destination image.

2.5 Eco-destination image and ecotourism intention

Buhalis et al. (2006) assert that a destination is identified as an "eco-destination" based on its natural beauty, commitment to conservation, and implementation of sustainable tourism practices. These characteristics form the foundation of an eco-destination image, which plays a critical role in shaping tourists' perceptions and behavioral responses (Chi & Pham, 2024). Eco-destination image is a multidimensional construct encompassing tourists' cognitive and emotional evaluations of a destination's environmental attributes, authenticity, and sustainability efforts (Luong, 2024). A strong and positive eco-destination image not only enhances the attractiveness of a place but also builds trust and aligns with tourists' values, especially those inclined toward responsible travel (Thi Khanh & Phong, 2020). When travelers perceive a destination as genuinely committed to environmental protection and cultural preservation, they are more likely to form favorable impressions and develop a desire to visit (Basendwah et al., 2024; He et al., 2018). This evaluative process acts as a psychological filter that influences decision-making, guiding tourists toward destinations that resonate with their environmental and ethical expectations (Tang et al., 2025).

Pham & Khanh (2021), using a sample of 435 visitors to eight ecotourism destinations in Vietnam, found that eco-destination image positively influences ecotourism intention. Their results revealed that the more appealing an eco-destination appears to tourists, the greater the likelihood they will choose to visit it. Similar findings were reported by Hunitie et al. (2022) and Luong (2023), further confirming the favorable impact of eco-destination image on ecotourism intention. These studies collectively suggest that a well-developed eco-destination image can be a powerful motivator, converting positive perceptions into actual travel intentions. This is particularly relevant in ecotourism, where intention is closely linked to travelers' values, awareness, and emotional connection to nature (Tran, 2022). In light of this evidence, this hypothesis is proposed:

H3: Eco-destination image has a positive influence on ecotourism intention.

2.6 The mediating role of eco-destination image

According to the VBN theory, people with strong ecological values develop corresponding beliefs about human-environment interactions, which activate a sense of moral obligation to act in environmentally responsible ways (Denley et al., 2020). In ecotourism, a positive attitude reflects this internal value system and increases awareness of sustainability-related issues in travel decisions (Gulzar et al., 2024; Tang et al., 2025). However, this attitude alone does not always directly result in behavioral intention. The connection between attitude and intention often operates through a mediating factor that shapes how individuals interpret and evaluate potential travel choices. Eco-destination image serves this purpose by acting as a perceptual bridge, where travelers assess whether a destination aligns with their values and environmental expectations. A favorable attitude toward ecotourism can enhance the way individuals process information about destinations, making them more likely to view eco-destinations as attractive and consistent with their ethical concerns (Alashiq & Aljuhmani, 2025).

When travelers with strong environmental attitudes encounter information about a destination, they interpret and evaluate that destination based on its alignment with their values (Li & Wu, 2020). If the destination presents clear indicators of sustainability, conservation, and community engagement, these tourists are more likely to form a positive image of it. That positive image, in turn, enhances their intention to visit, as the destination is perceived as trustworthy, meaningful, and personally rewarding (Luong, 2023; Pham & Khanh, 2021). Within the VBN framework, this process illustrates how attitudes shaped by values and beliefs are funneled through a value-congruent evaluation before being translated into actual intention. Based on this reasoning, the study hypothesizes that:

H4: Eco-destination image mediates the relationship between ecotourism attitude and ecotourism intention.

2.7 The moderating role of environmental belief

Environmental belief refers to an individual recognizing the importance of preserving natural and cultural resources (Huang & Liu, 2017). Within the VVBN framework, environmental belief acts as a core driver

that translates personal values into behavioral norms (Ghazali et al., 2019; Luong, 2024). It functions as a belief structure and a cognitive filter that shapes how individuals interpret and respond to environmentally significant issues (Sanjaya et al., 2024). In the context of ecotourism, environmental belief may influence the strength of the connection between a traveler's existing attitude toward ecotourism and their intention to act on it (Thi Khanh & Phong, 2020). Individuals with strong environmental beliefs are more likely to convert favorable ecotourism attitudes into concrete behavioral intentions, as their belief system reinforces alignment between values, attitudes, and actions (Luong, 2024; Tran, 2022).

Empirical evidence shows that environmental belief is a key factor influencing the attitudes and behaviors of many tourists. For instance, Hultman et al. (2015) demonstrated that environmental belief directly enhances both ecotourism attitude and ecotourism intention. Similarly, Luong (2023) found a positive effect of environmental belief on tourists' attitudes toward ecotourism and their intention to engage in it. The study revealed that individuals who hold strong environmental values and favorable views about ecotourism are more likely to participate in conservation-related activities. Building on this, the current study proposes that environmental belief may serve as a moderator, strengthening the relationship between ecotourism attitude and ecotourism intention. Those with higher levels of environmental belief are expected to demonstrate a stronger and more consistent conversion of ecotourism attitude into ecotourism intention, while those with weaker beliefs may show a diminished or less direct connection.

H5: Environmental belief moderates the relationship between ecotourism attitude and ecotourism intention

The proposed hypothesized model is displayed in **Figure 1.**

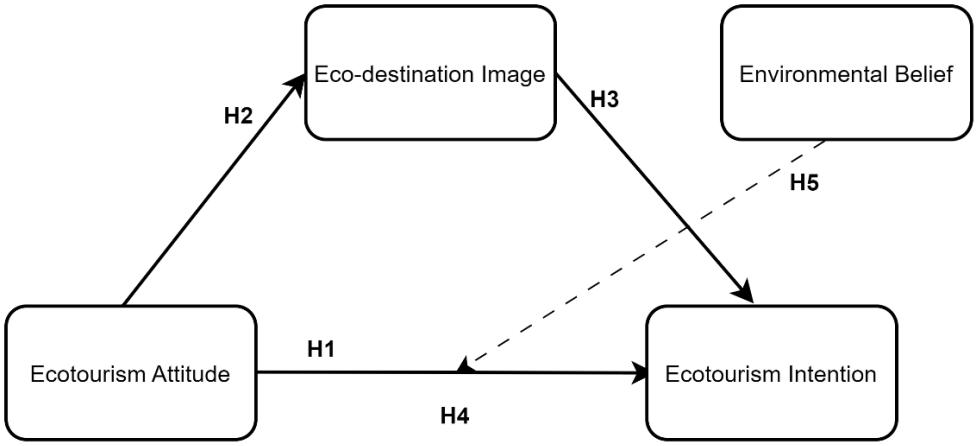

Figure 1. Research model

3. Methodology

3.1 Study context

Gabon is selected as the context for this study due to its globally recognized environmental significance and growing efforts to position ecotourism as a sustainable economic alternative. Situated along the west coast of Central Africa, Gabon is home to one of the most intact tropical forest systems on the continent, with approximately 88% of its land covered by rainforest and an extraordinary wealth of biodiversity, including forest elephants, gorillas, and over 700 species of birds (Mikissa et al., 2018). In response to growing environmental pressures and the volatility of its oil-dependent economy, Gabon has adopted an ambitious conservation agenda, setting aside 13 national parks that account for around 11% of the national territory (Yobo & Ito, 2016). These initiatives reflect the country's intention to transition toward a green economy, with ecotourism identified as a key sector for long-term growth.

As a relatively underexplored ecotourism destination compared to East African countries like Kenya or Tanzania, Gabon offers a unique empirical setting to examine the psychological and perceptual drivers of ecotourism behavior. While the country possesses the natural and institutional infrastructure to attract global eco-travelers, challenges persist in translating its ecological assets into sustainable tourism flows. Prior research has pointed to a lack of visitor-oriented studies in Central Africa, particularly in understanding how international tourists perceive the country's eco-identity and how these perceptions influence behavior (Jugmohan et al., 2016; Novelli, 2015). Moreover, Gabon's ecotourism sector remains in the early stages of

development, offering a real-world laboratory to test conceptual models of tourist behavior in a high-potential but underutilized setting.

3.2 Measurements

All questionnaire items in this study were adapted from validated scales in prior research, with modifications made to reflect the specific context of the study area. To ensure content validity, the draft questionnaire was reviewed by seven ecotourism experts. A pilot test was then conducted. Item analysis was performed for each question, and any item that failed to meet at least two evaluation criteria were removed. Additionally, based on feedback from the expert reviewers and pilot participants, several items were revised to enhance clarity and readability. Following these refinements, the finalized version of the questionnaire was prepared for data collection.

Four items from Huang & Hsu (2009) and Kim & Stepchenkova (2020) were used to assess ecotourism attitude. Five items from Luong (2023) and Thi Khanh & Phong (2020) were utilized to assess environmental belief. Again, four items each from Luong (2023) were utilized to measure eco-destination image and ecotourism intention. All questionnaire items were evaluated using a five-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The specific measurement items are presented in **Table 1**.

Table 1: Measurement items of constructs

Constructs	Items	Sources
		Huang & Hsu (2009), Kim & Stepchenkova (2020)
	Ecotourism Attitude (ECA)	
ECA2	I find ecotourism to be a pleasant experience	
ECA1	Ecotourism is fun and exciting for me.	
ECA2	I find ecotourism to be a pleasant experience	
ECA3	It is a positive experience that leaves me feeling fulfilled and satisfied.	
	Environmental Belief (ENB)	
ENB1	When humans interfere with nature, it often produces tragic consequences	Luong (2023), Thi Khanh & Phong (2020)
ENB2	The Earth is like a spaceship with limited room and resources	
ENB3	Nature's balance is fragile and can be easily disrupted	
ENB4	Although humans possess unique capabilities, we remain bound by the laws of nature.	
ENB5	Humans must live in harmony with nature to sustain their survival.	
	Eco-destination Image (EDI)	
EDI1	The landscape of Loango National Park is breathtakingly beautiful, making it a must-visit destination.	Luong (2023)
EDI2	Loango National Park has an excellent reputation as an eco-friendly destination among travelers.	
EDI3	The destination enjoys political stability, ensuring tourists' safe and secure trips.	
EDI4	Loango National Park boasts a pleasant climate.	
	Ecotourism Intention (ECI)	
ECI1	I prioritize choosing ecotourism in my travels.	Luong (2023)
ECI2	I intend to visit an eco-friendly destination like Loango National Park in the near future	

ECI3	I intentionally choose ecotourism tours that align with my values and beliefs.	
ECI4	I firmly believe that ecotourism represents a responsible and sustainable approach to travel.	

3.3 Data collection and sample

Data for this research were obtained through an online survey shared across widely used social media platforms, including X (formerly Twitter), Instagram, and Facebook. The study employed a convenience sampling technique, which was well-suited due to its efficiency and capacity to reach a broad audience within the limited timeframe. This approach allowed the study to recruit international tourists based on their availability and willingness to participate.

The survey was administered in English. At the start, participants were presented with a screening question: "Was your visit to Loango National Park motivated by ecotourism activities?" Only those who responded affirmatively were considered for the study. A follow-up filter question asked respondents how often they had visited the park. Those who indicated "0" were excluded to ensure all participants had actual experience with Loango National Park as an ecotourism site. Initially, 456 individuals completed the survey. After applying the eligibility criteria, such as removing respondents under 18 years old and those who had never visited Loango National Park, only 410 responses qualified for the study. These valid responses were used in the final data analysis.

3.4 Data analysis

Confirmatory factor analysis (CFA) was performed using Covariance-Based Structural Equation Modeling (CB-SEM) in SmartPLS version 4.1.0.0 to assess the measurement model's reliability and validity. Furthermore, the study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) within SmartPLS to analyze the structural relationships among the constructs, as recommended by (Hair et al., 2019). To strengthen the validity of the findings, a bootstrapping technique with 5,000 resamples was applied, allowing for the evaluation of the statistical significance of path coefficients and the construction of confidence intervals, following established guidelines by (Hair et al., 2019).

4. Results

4.1 Participants Profile

Demographic information indicates that the majority of the respondents were males (54.2%) and aged between 18-30 years (52.1%). In terms of marital status, 55.1% were married, and 44.9% made up those who were single. Education-wise, the majority held a bachelor's degree (46.1%), followed by a master's degree (36.6%) and a PhD (17.3%). Most respondents (46.8%) indicated annual spending between 1,500 USD and 3,500 USD for travel to Loango National Park, aligning with the expected cost range for international tourists. Concerning previous visits to Loango National Park, the majority of participants (53.1%) had been there once, while the remaining 46.9% had visited on two or more occasions.

4.2 Measurement model

The assessment of reliability indicated strong internal consistency, with Cronbach's alpha (α) and composite reliability (CR) values both exceeding the recommended threshold of 0.70 (Hair et al., 2020). Convergent validity was supported by average variance extracted (AVE) values, which ranged between 0.564 and 0.618, surpassing the minimum acceptable value of 0.50 (Hair et al., 2019), thus supporting the results of previous findings (Korankye et al., 2024) (**See Table 2**). Additionally, **Figure 2** shows that all factor loadings were above 0.6, aligning with the benchmark set by (Chin et al., 2008). These results support the findings of previous studies (Ahakwa, 2024; Odai et al., 2025).

Table 2: Reliability and validity

Constructs	Mean	SD	α	CR	AVE	√AVE
EDI	3.021	0.512	0.835	0.839	0.564	0.751
ECA	3.175	0.555	0.859	0.865	0.618	0.786
ECI	4.131	0.763	0.790	0.792	0.591	0.769
ENB	4.829	0.868	0.873	0.874	0.590	0.768

Note: EDI: Eco-destination image; ECA: Ecotourism attitude; ECI: Ecotourism intention; ENB: Environmental belief

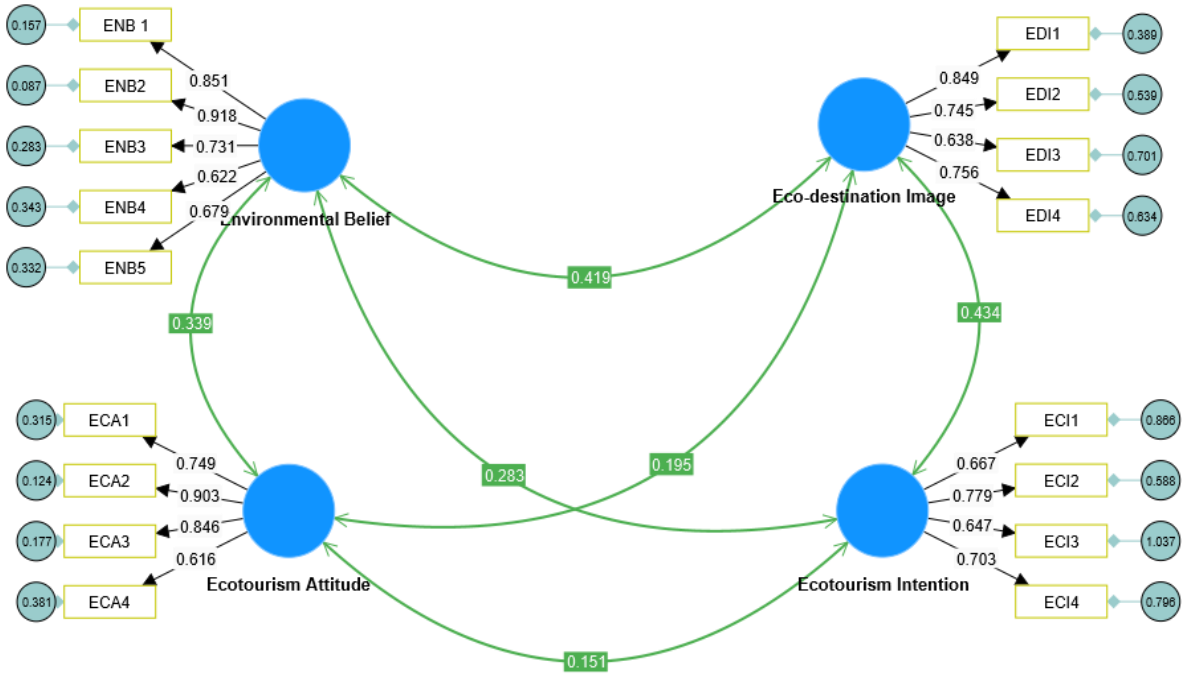

Figure 2. Factor loadings and correlations

Discriminant validity was assessed using the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio. Establishing discriminant validity is essential to ensure that the constructs measured in the study are genuinely distinct and not merely reflecting different aspects of the same underlying concept. This validation confirms that constructs designed to be separate do not exhibit excessively high correlations, thereby reinforcing the conceptual integrity of the model (Cheung et al., 2023). To evaluate this, the square root of the AVE for each construct was compared to its correlations with other constructs. As shown in **Table 2** and **Figure 2**, the square root of the AVE (i.e. √AVE) exceeded inter-construct correlations, supporting the model's discriminant validity in line with (Fornell & Larcker, 1981). Additionally, **Table 3** displays all HTMT values falling below the recommended cutoff of 0.85 (Henseler et al., 2015), further affirming the distinctiveness of the constructs.

Table 3: Heterotrait-Monotrait (HTMT) test

Constructs	EDI	ECA	ECI	ENB
EDI				
ECA	0.182			
ECI	0.429	0.149		
ENB	0.494	0.348	0.346	

Note: EDI: Eco-destination image; ECA: Ecotourism attitude; ECI: Ecotourism intention; ENB: Environmental belief; HTMT: Requirement <0.85

4.3 Multicollinearity and common method bias

Table 4 displays the results of the variance inflation factor (VIF) analysis used to evaluate potential multicollinearity among the study constructs. Kim (2019) noted that VIF values exceeding 5 suggest a multicollinearity issue, indicating that the constructs may be too highly correlated to be included in the same model. Conversely, VIF values below this threshold suggest no significant multicollinearity concerns. The results show that all inner and outer VIF values fall below 5, confirming that multicollinearity is not a problem in this model.

Additionally, diverse procedural and statistical measures were implemented to mitigate common method bias (CMB). First, the study ensured anonymity while collecting the data from the research participants.

Subsequently, Harman's single-factor test was carried out, revealing that the first factor accounted for only 26.13% of the total variance, well below the 50% threshold recommended by (Podsakoff et al., 2012). This finding suggests that cmb is not present in the model. Again, according to Bagozzi & Phillips (1982), correlation coefficients exceeding 0.9 between variables may signal the presence of CMB. As shown in **Figure 2**, all correlation values were below this threshold, providing additional evidence against such bias. Furthermore, Kock (2017) states that when all VIF values from a full multicollinearity test are at or below 3.3, the model can be considered free from CMB. **Table 4** presents the inner and outer VIF values for all constructs, all of which fall below 3.3, confirming the absence of CMB in this study.

Table 4: VIF multicollinearity values

Constructs	Indicators	Outer VIF values	Inner VIF values
Ecotourism Attitude	ECA1	2.183	1.510
	ECA2	2.848	
	ECA3	2.199	
	ECA4	1.542	
Ecotourism Intention	ECI1	3.185	-
	ECI2	2.949	
	ECI3	2.020	
	ECI4	1.783	
Eco-destination Image	EDI1	1.507	1.260
	EDI2	1.802	
	EDI3	1.466	
	EDI4	1.628	
Environmental belief	ENB1	3.057	1.536
	ENB2	2.113	
	ENB3	2.169	
	ENB4	1.607	
	ENB5	1.805	

4.4 Fitness test and predictive strength

Before testing the hypothesized relationships, assessment of model fit and predictive strength were conducted. From **Table 5**, using CB-SEM, the model fit was confirmed through multiple indices: CMIN/DF = 1.762, CFI = 0.953, TLI = 0.944, GFI = 0.915, and NFI = 0.911, all falling within acceptable ranges. Again, indicators such as SRMR = 0.054 and RMSEA = 0.057 also demonstrated adequate model fit, consistent with established guidelines by (Goretzko et al., 2024). Both R^2 (Cohen, 1988) and Q^2 (Geisser, 1975) values were employed to evaluate the model's predictive power. R^2 measures the proportion of variance explained in a dependent variable. In this study, the model accounted for 54.6% of the variance in ecotourism intention, surpassing the 0.26 threshold and reflecting strong predictive strength (Cohen, 1988). Again, a Q^2 value greater than zero signifies predictive power, while a value below zero suggests a lack of it. The Q^2 values obtained, 0.116 for eco-destination image and 0.295 for ecotourism intention, support the model's predictive strength (Geisser, 1975).

Table 5: Model fit indices

Measure	Estimated model	Threshold	Interpretation
χ^2	233.887	-	-
DF	113.000	-	-
χ^2/DF	1.986	Between 1 and 3	Excellent
RMSEA	0.057	<0.06	Excellent
GFI	0.915	>0.90	Excellent
SRMR	0.054	<0.08	Excellent
NFI	0.911	>0.90	Excellent
TLI	0.944	>0.90	Excellent

CFI	0.953	>0.95	Excellent

4.5 Hypothesis testing

The proposed hypotheses were tested using SmartPLS, as presented in **Figure 3**. The analysis of direct effects revealed significant support for H1 (β = 0.287, t = 5.145, p < 0.001) and H2 (β = 0.422, t = 9.276, p < 0.001). These results indicate that ecotourism attitude has a significant positive effect on both ecotourism intention and eco-destination image. Specifically, a one-unit increase in ecotourism attitude corresponds to a 28.7% increase in ecotourism intention and a 42.2% increase in eco-destination image. Moreover, H3 was also supported (β = 0.197, t = 3.623, p < 0.001), confirming a positive association between eco-destination image and ecotourism intention. This implies that a unit increase in eco-destination image results in a 19.7% rise in ecotourism intention.

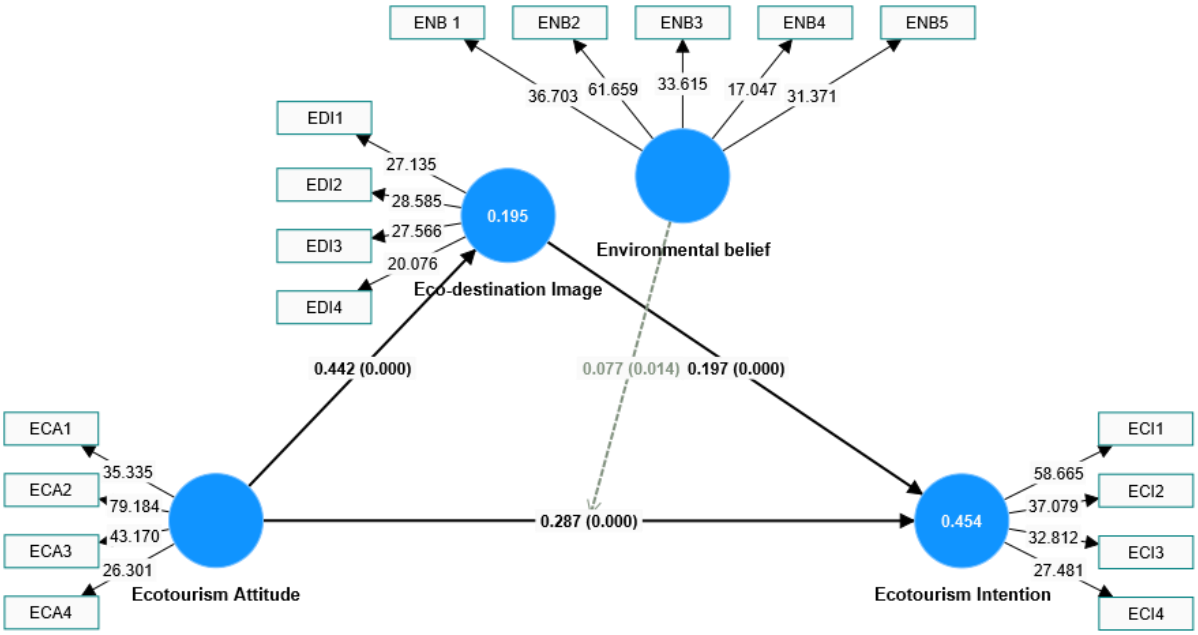

Figure 3. Path model

As indicated in **Table 6**, H4 was supported (β = 0.087, t = 3.370, p < 0.001), confirming that eco-destination image mediates the relationship between ecotourism attitude and ecotourism intention. This finding is reinforced by the confidence interval not including zero, further validating the mediation effect. Additionally, the moderation analysis results in **Table 6** supported H5 (β = 0.077, t = 2.463, p < 0.05), suggesting that environmental belief significantly moderates the relationship between ecotourism attitude and ecotourism intention. Moreover, the interaction term (ENB × EDI) was positive and statistically significant. The slope depicting this significant moderating effect is illustrated in **Figure 4**.

Table 6: Mediation and moderating results

Analysis	Explanatory paths	B	Std. Dev	t-statistics	p-value	5%CILL	95%CIUL
Mediation	ECA→EDI→ECI	0.087	0.026	3.370	0.000***	0.038	0.140
Moderation	ENB x EDI →ECI	0.077	0.031	2.463	0.014**	0.014	0.138

Note: *** p<0.001; ** p<0.05; t > 1.96. ECA: Eco-tourism attitude; EDI: Eco-destination image; ECI: Eco-tourism intention; ENB: Environmental belief

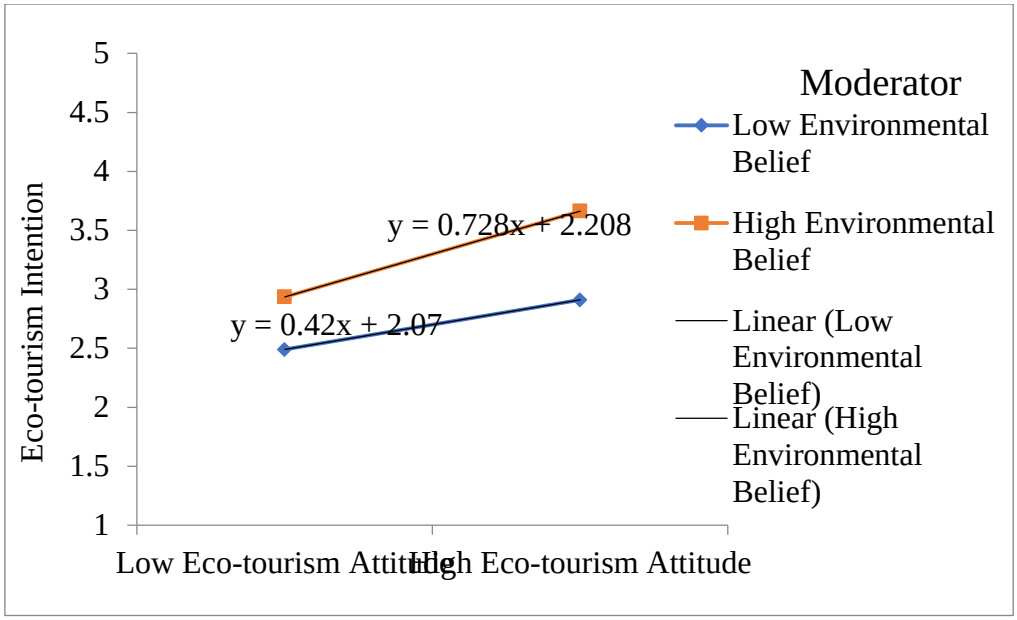

Figure 4. Environmental belief strengthens the relationship between ecotourism attitude and ecotourism intention

5. Discussion

The study results provide support for the first hypothesis as ecotourism attitude significantly influences ecotourism intention. This finding is consistent with the central proposition of the VBN theory, which emphasizes that individuals with pro-environmental attitudes are more likely to act in ways that reflect those values when personal norms are activated (Canlas & Karpudewan, 2023). Tourists who develop favorable attitudes toward ecotourism are thus predisposed to engage in environmentally conscious travel. This result aligns with prior research that has identified ecotourism attitude as a reliable predictor of ecotourism intention in various environmental and tourism contexts (Hultman et al., 2015; Luong, 2023). It reinforces the notion that internalized ecological attitudes are foundational in shaping behavioral outcomes and demonstrates that ecotourism intention is not random or purely market-driven, but value-driven.

Based on the findings, the second hypothesis is validated as ecotourism attitude significantly influences eco-destination image. This indicates that individuals who value ecotourism are more likely to form positive perceptions of destinations that align with sustainability principles (Chen et al., 2025). This relationship supports the VBN framework's assertion that beliefs and values filter how individuals interpret external stimuli. In this case, tourists with strong ecotourism attitudes are more attentive to environmental signals, thus constructing more favorable cognitive and emotional assessments of eco-destinations (Lee & Jan, 2018). This insight is valuable because it shows that eco-destination image is not solely shaped by marketing or third-party reputation but also by the tourist's internal belief system. As such, efforts to promote ecotourism should target attitudinal formation and reinforcement as much as destination branding.

The result supports the third hypothesis, confirming a positive link between eco-destination image and ecotourism intention. This aligns with existing research on consumer behavior, suggesting that a destination's perceived image has a direct and powerful impact on travel decisions (Hunitie et al., 2022; Luong, 2023; Pham & Khanh, 2021). Within the VBN lens, this effect reflects the transition from belief to behavior, where destination image serves as a mediating cognition that translates value-laden attitudes into action. Tourists are not only guided by what they value but also by how they perceive a destination to reflect those values. Therefore, the strength of intention is contingent on whether the destination image resonates with the tourist's belief system (Chi & Pham, 2024).

The confirmation of eco-destination image as a mediator between ecotourism attitude and ecotourism intention deepens our understanding of how pro-environmental attitudes translate into behavior. This result indicates that the influence of ecotourism attitude on intention is partially channeled through the cognitive-affective process of destination evaluation (Li & Wu, 2020). This result aligns with the VBN theory's position that activating personal norms and behavioral intent is contingent on belief-based appraisals of the situation (Denley et al., 2020). This suggests that strengthening destination image, especially in ways that

highlight ecological integrity and community involvement, can significantly enhance the conversion of favorable attitudes into concrete travel behavior.

The fifth hypothesis supports the finding that environmental belief moderates the relationship between ecotourism attitude and ecotourism intention. The strength of this relationship increases with higher levels of environmental belief, suggesting that belief systems serve as boundary conditions within the VBN structure (Ghazali et al., 2019; Luong, 2024). While ecotourism attitude is a critical precursor, its effect on behavior is more pronounced among individuals who possess a strong belief in environmental conservation (Tran, 2022). This supports the VBN model's assertion that the personal importance attached to ecological issues affects the activation of norms and behavioral responses (Sanjaya et al., 2024).

5.1 Theoretical implications

This study makes several significant theoretical contributions to the ecotourism and pro-environmental behavior literature, particularly through its application and extension of the Value-Belief-Norm (VBN) theory within an emerging market context. By integrating ecotourism attitude, eco-destination image, and environmental belief into a single predictive framework, the research deepens our understanding of how internal psychological drivers interact to shape sustainable travel intentions. First, the study advances the theoretical foundation of VBN by empirically validating its components in the domain of tourism behavior. While the VBN framework has been widely applied in environmental psychology, its use in ecotourism contexts remains limited. This research demonstrates that values and beliefs are relevant in abstract behavioral domains and instrumental in shaping tourism-specific decisions. In doing so, it confirms that the moral and normative elements emphasized by the VBN theory are transferable to behavioral models in travel and destination choice (Denley et al., 2020; Le et al., 2021).

Second, the study adds to the growing literature on ecotourism attitudes by demonstrating its direct effect on both behavioral intention and perceptual constructs, such as eco-destination image. The finding that ecotourism attitude significantly influences eco-destination image bridges a gap between psychological disposition and evaluative judgments in tourism (Canlas & Karpudewan, 2023). This expands theoretical models that traditionally treat attitude and image as separate constructs, showing instead that attitudes rooted in values directly shape how individuals cognitively and emotionally process tourism-related information.

Third, the identification of eco-destination image as a mediator adds theoretical depth to our understanding of the ecotourism attitude-ecotourism intention nexus. While previous studies have often focused on direct effects, this research emphasizes the importance of intermediate evaluative processes in translating values into behavior. By positioning eco-destination image as a central mechanism, the study reinforces the VBN principle that belief-based appraisals are critical in activating personal norms and intention formation. This mediation pathway highlights the dynamic interplay between internal dispositions and contextual perceptions in shaping sustainable behavior (Li & Wu, 2020).

Finally, the role of **e**nvironmental belief as a moderator introduces a boundary condition to existing VBN-based models. While previous studies have examined environmental belief as an antecedent or predictor, this study shows it also enhances or weakens the strength of the ecotourism attitude-ecotourism intention link. This moderating effect highlights the conditional nature of pro-environmental behavior and suggests that belief systems do not operate in isolation but interact with other psychological factors to shape decision outcomes. Including this moderating pathway offers a comprehensive and flexible application of the VBN framework and encourages future researchers to explore how other individual differences may moderate key relationships in sustainable behavior models (Luong, 2024; Tran, 2022).

5.2 Practical Implications

The findings of this study offer several practical insights for tourism stakeholders, policymakers, and destination managers seeking to foster ecotourism growth, particularly in emerging market contexts. By highlighting the interconnected roles of ecotourism attitude, eco-destination image, and environmental belief in shaping ecotourism intention, this research provides actionable guidance on how to design more effective ecotourism strategies. The strong influence of ecotourism attitude on ecotourism intention emphasizes the importance of fostering positive environmental mindsets among potential tourists. Public awareness campaigns, educational programs, and eco-conscious branding efforts should focus on cultivating favorable attitudes toward sustainable travel. Governments, NGOs, and tourism operators can collaborate to promote

the long-term benefits of ecotourism for the environment, local economies, and cultural preservation. Encouraging personal identification with environmental causes is key to shaping pro-ecotourism attitudes.

Moreover, the results suggest that improving how destinations are perceived is essential for converting favorable attitudes into actual visitation. Destination managers should invest in communication strategies that showcase ecological integrity, conservation practices, and community-based tourism efforts. Storytelling that emphasizes a destination's unique environmental assets and ethical practices can help strengthen emotional and cognitive connections with potential visitors. This is particularly important for destinations in emerging markets, where misperceptions or lack of information can inhibit intention, even among environmentally conscious tourists.

Additionally, the findings indicate that belief-based segmentation may be a powerful tool for market targeting. Tourists with stronger environmental beliefs respond favorably to ecotourism messaging and are more likely to act on their attitudes. Tourism marketers should consider tailoring messages to appeal to different belief levels. For those with low to moderate environmental beliefs, campaigns may need to focus more on value education, impact awareness, and the personal relevance of ecotourism. For high-belief individuals, highlighting authenticity, sustainability certifications, and conservation outcomes can reinforce intention and loyalty.

Furthermore, the implications extend to policy and infrastructure development**.** In contexts like Gabon and similar emerging markets, institutional actors must recognize that enabling ecotourism behavior goes beyond marketing. It requires systemic support, including environmental education in schools, visible and credible sustainability practices, community involvement, and the development of accessible and environmentally friendly tourism infrastructure. Policies that encourage local entrepreneurship, protect natural heritage, and certify ecotourism operators can further enhance the credibility of destination images and align them with the values of eco-conscious travelers.

5.3 Limitations and future direction

Given the outcomes of this study, certain limitations should be acknowledged. The use of convenience sampling may limit the extent to which the findings can be confidently generalized to other ecotourism destinations. Consequently, the insights drawn are specific to the context of Loango National Park in Gabon and may not fully represent experiences or behaviors in other locations. Additionally, the sample may reflect demographic imbalances, potentially influencing the interpretation of results. Future research should aim to include a broader range of ecotourism sites and participant profiles to better assess the applicability of the findings across various cultural and geographic contexts. Increasing the sample's size and diversity would also strengthen the external validity of future studies.

Beyond these considerations, the study's reliance on self-reported data introduces the risk of social desirability bias, where participants may overstate environmentally responsible attitudes or intentions. Incorporating behavioral data or mixed-method approaches could help validate and deepen understanding of the investigated associations. Moreover, the cross-sectional design captures only a snapshot in time, making it difficult to determine causal pathways among the variables. Longitudinal research or experimental designs would allow future studies to explore how ecotourism attitudes, beliefs, and destination perceptions evolve and influence intention over time.

6. Conclusion

Overall, this study confirms that ecotourism intention is a product of an integrated system of psychological factors, not isolated constructs. It highlights the importance of viewing sustainable travel decisions through a values-based lens, where attitudes, beliefs, and perceptual evaluations operate in concert. The use of the VBN framework provides a coherent explanation of how internal motivations translate into externally observable behavior and opens up future research opportunities to explore how contextual and cultural differences might alter these pathways in other emerging market settings.

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