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BEYOND WILLINGNESS: COMMUNITY READINESS FOR PARTICIPATION IN COMMUNITY-BASED ECOTOURISM IN KAMPUNG ROSOB, SABAH

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Abstract

Community-based ecotourism (CBET) is widely promoted for sustainable development, yet participation remains uneven in rural contexts. This study addresses this gap by distinguishing between willingness and readiness in explaining community participation. Focusing on Kampung Rosob, Sabah, it adopts an explanatory sequential mixed-methods design. The quantitative phase (n = 153) applies an integrated Theory of Planned Behaviour–Norm Activation Model (TPB–NAM). It is analysed using PLS–SEM, followed by qualitative interviews to contextualise the statistical findings. Results show that perceived behavioural control, reconceptualised as community readiness, is the only significant direct predictor of willingness to participate. Readiness serves as a mediator between attitudes and moral norms, increasing willingness to participate. In contrast, subjective norms are not significant. Qualitative findings highlight the role of structural and institutional constraints in shaping readiness. The study contributes to rural tourism planning by demonstrating that community readiness enables willingness to participate in CBET.

Keywords: Community-based Ecotourism; Community Participation; Community Readiness; Community Willingness; TPB–NAM

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INTRODUCTION

Community-based ecotourism (CBET) is widely promoted as a sustainable approach that integrates biodiversity conservation with local socio-economic development through community participation (Guerrero-Moreno & Oliveira-Junior, 2024). It aims to empower communities by involving them in decision-making, strengthening local capacities, and creating sustainable livelihoods (Zanudin et al., 2024). CBET's success depends not only on the potential of natural resources but also on effective community participation in tourism planning and implementation (Kunjuraman, 2021; Zanudin et al., 2024).

In Malaysia, ecotourism is central to national development strategies, as reflected in the National Tourism Policy (2020–2030) and the National Ecotourism Plan (2016–2025) (MOTAC, 2016, 2020). Sabah, known for its rich biodiversity and indigenous heritage, is a key area for CBET development. In 2023, the state contributed RM13.1 billion to the tourism sector and continues to receive investment in rural tourism and diversification (DOSM, 2024; Sabah State Government, 2019), making it an important context for examining community-based initiatives.

Despite strong policy support, many CBET initiatives face implementation challenges. While communities often show willingness to participate, actual involvement is frequently constrained by financial limitations, inadequate training, weak governance, and bureaucratic barriers (Chan et al., 2021; Kunjuraman, 2021). This gap highlights a critical issue in community-based tourism planning and implementation, where willingness to participate does not necessarily translate into actual participation. Participation in the community should be distinguished from the preceding behavioural processes. Willingness reflects motivation to engage, whereas actual participation refers to observable involvement in CBET activities (Kurniati et al., 2024; Lucrezi & Cilliers, 2023). Between these two stages lies community readiness, which reflects the capacity, resources, and institutional support required for effective participation (Kurniati et al., 2024; Oetting et al., 2014). Existing studies often examine these factors independently, with limited attention to their interactions. Understanding these relationships is crucial for explaining why willingness does not always translate into meaningful community participation in CBET.

To address this gap, this study examines how community readiness influences willingness to participate in CBET in Kampung Rosob, Sabah. It applies an integrated framework based on the Theory of Planned Behaviour (TPB) and the Norm Activation Model (NAM) to investigate how cognitive, social, and moral factors interact with community readiness to shape willingness to participate. The study is guided by three research questions: (i) What motivates community willingness to participate in CBET? (ii) What barriers affect

community readiness? (iii) How does readiness influence the translation of willingness into participation?

This study contributes to rural tourism planning by highlighting the role of readiness as a prerequisite in enabling participation in CBET. It provides planners with a context-based understanding of how capacity, resources, and governance conditions shape community involvement before implementing community-based ecotourism initiatives. The findings further support community-based resource management and protected-area governance by highlighting community readiness as an essential planning consideration for strengthening community engagement in conservation-oriented CBET.

LITERATURE REVIEW

Community Participation as a Behavioural Outcome

Community participation has long been recognised as essential to the success of CBET, particularly where local livelihoods depend on environmental stewardship (Lijun & Ahmed, 2024). Traditionally, the literature has conceptualised community participation in terms of stakeholder involvement, institutional arrangements, and collaborative decision-making (Dangi & Petrick, 2021; Oedl-Wieser et al., 2020). However, participation can also be understood as a behavioural outcome influenced by individual motivations, moral values, and perceived capability (Tao et al., 2021).

This behavioural perspective complements structural explanations by recognising that participation may depend not only on opportunities created through planning and governance, but also on individuals' willingness and readiness to participate. Accordingly, behavioural frameworks such as the Theory of Planned Behaviour (TPB) and the Norm Activation Model (NAM) provide useful insights into how motivation, moral obligation, and perceived control influence participation in CBET. Therefore, this study distinguishes between willingness (behavioural intention), readiness (an enabling condition for participation), and community participation (behavioural outcome).

Theoretical Foundation: TPB–NAM

The Theory of Planned Behaviour (TPB) explains behavioural intention in terms of attitude (ATT), subjective norms (SN), and perceived behavioural control (PBC) (Ajzen, 1988). In CBET, these factors reflect how individuals evaluate participation, perceive social expectations, and assess their ability to engage.

While PBC often reflects an individual's perceived capability to perform a behaviour (Ajzen, 2002; Ajzen, 2019b), CBET participation in a complex rural setting depends on broader factors beyond self-confidence. These include skills and knowledge, access and facilities, opportunities for participation, time availability, and financial capacity (Tao et al., 2021). To

capture both perceived ability and the enabling variables that determine whether participation is viable, this study conceptualises PBC as an indicator of community readiness within the CBET context.

However, TPB gives limited attention to moral obligation (Tao et al., 2021). The Norm Activation Model (NAM) addresses this by introducing personal moral norms as a key driver of pro-social and pro-environmental behaviour (Schwartz, 1977). Integrating TPB and NAM provides a more comprehensive framework by combining cognitive, social, and moral factors with readiness to explain, thereby improving understanding of willingness to participate in CBET (Tao et al., 2021).

Conceptual Framework and Hypotheses Development

Figure 1 presents a conceptual framework that integrates ATT, SN, PMN, and PBC to explain willingness to participate (WTP) in CBET. In this study, community readiness is operationalised as a formative construct through PBC, as its indicators collectively define the construct rather than reflecting a single underlying characteristic (Tao et al., 2021).

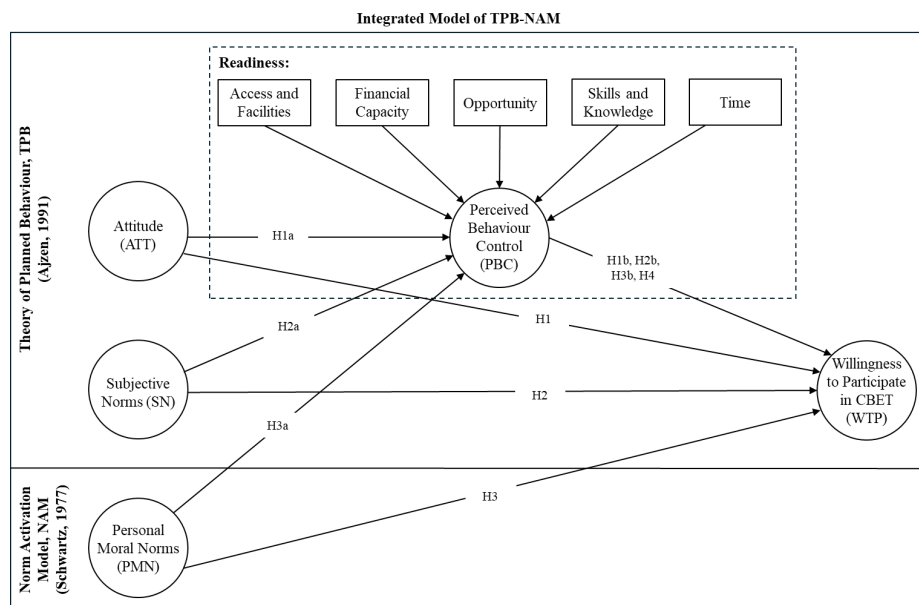


Figure 1: Conceptual Framework
 Adapted from Ajzen (2019b) and Schwartz (1977)

The framework proposes that ATT, SN, and PMN influence WTP both directly and indirectly through PBC. This reflects the idea that willingness depends not only on favourable perceptions, social influence, and moral

commitment, but also on whether individuals feel capable of participating under existing conditions. PBC is therefore positioned as both a direct predictor of willingness and a mediator linking cognitive, social, and moral factors to WTP. Accordingly, the following hypotheses are proposed:

H1: ATT positively influences WTP in CBET.

H1a: ATT positively influences PBC.

H1b: ATT positively influences WTP via PBC.

H2: SN positively influences WTP in CBET.

H2a: SN positively influences PBC.

H2b: SN positively influences WTP via PBC.

H3: PMN positively influences WTP in CBET.

H3a: PMN positively influences PBC.

H3b: PMN positively influences WTP via PBC.

H4: PBC positively influences WTP in CBET.

RESEARCH METHODOLOGY

This study adopted an explanatory sequential mixed-methods design comprising a quantitative phase followed by a qualitative phase. The integrated TPB–NAM framework guided the quantitative analysis, while follow-up interviews explored perceptions of readiness and contextual factors influencing participation. This approach enables deeper interpretation of statistical findings through qualitative insights (Creswell & Plano Clark, 2018).

Study Area: Kampung Rosob, Sabah

The study was conducted in Kampung Rosob, Pitas, Sabah, located within Tun Mustapha Park (TMP), a protected marine area and lies within Class I Protection Forest Reserve (Sabah Forestry Department, 2024), highlighting its conservation and ecotourism potential.

Kampung Rosob has 548 residents across 143 households, with livelihoods spanning government service, private sector employment, fishing, agriculture, small businesses, and village-based services (Ministry of Rural and Regional Development Sabah, 2023). This reflects both a traditional resource base and emerging income diversification. The Rosob Mangrove Pitas Boardwalk, developed in 2020 as a tourism initiative, was later discontinued due to limited institutional coordination. Figure 2 shows the comparison of the ecotourism site in 2020 and 2024. Despite this, the *Kawasan Rukun Tetangga* (KRT) has expressed interest in future management. This provides a relevant context for examining community readiness and governance challenges.



Figure 2: Comparison of Rosob Mangrove Pitas in 2020 and 2024
 Source: (a) Sabah Malaysian Borneo Travel Blog (2020); (b) Fieldwork, 2024

Quantitative Phase

A structured questionnaire based on standard TPB/NAM guidelines (Ajzen, 2019a; Schwartz, 1977) was distributed door-to-door to residents of Kampung Rosob, along with a consent form. Items were adapted from validated studies on community-based tourism, pro-environmental behaviour, and rural participation. Responses were measured using a five-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree).

Sampling and Analysis

To ensure relevance, purposive sampling was applied. Respondents were residents aged 18 and above who had lived in Kampung Rosob for at least 10 years and were familiar with the CBET initiative. The questionnaire data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) in SmartPLS4. PLS-SEM was selected due to its ability to analyse complex models involving reflective and formative measurement specifications and is appropriate for prediction-oriented research (Hair et al., 2022). The analysis comprised two stages. Firstly, the PLS algorithm assessed the measurement and structural models. Subsequently, hypothesis testing utilised a bootstrapping procedure with 5,000 resamples, a two-tailed test, and a significance level of 0.05 to evaluate the significance of path coefficients, outer weights, and indirect effects (Hair et al., 2022). Sample size was calculated based on Cohen (1988) and Westland (2010), as presented in Table 1 below:

Table 1: Sample Size Calculation

SEM Sample Size Parameter	Value
Kampung Rosob population	548
Anticipated effect size	0.3
Desired statistical power level	0.8
Number of latent variables	5

SEM Sample Size Parameter	Value
Number of observed variables	32
Probability level	0.05
Minimum sample size to detect effect	150
Minimum sample size for model structure	269
Recommended minimum sample size	269
Sample size obtained	153

Source: Author's Calculation

Although the sample size obtained ($n = 153$) exceeded the minimum required to detect the anticipated effect, it did not reach the recommended sample size of 269 for estimating the full structural model. This limitation reflects the relatively small population of Kampung Rosob and the limited number of eligible respondents who met the study's sampling criteria. Nevertheless, PLS-SEM remained appropriate because it is well-suited to prediction-oriented research involving complex structural models and formative constructs, particularly when sample sizes are constrained (Hair et al., 2022). As a result, the findings should be viewed as context-specific to Kampung Rosob instead of statistically generalisable to other rural communities. Future research should use larger samples from several CBET sites to validate the proposed framework.

Qualitative Phase

Semi-structured interviews were conducted after the quantitative analysis to explain and contextualise the statistical findings. The interview guide was developed based on significant statistical results to help participants share their experiences and views on community participation in CBET. Interviews lasted 30–40 minutes, were audio-recorded with consent, transcribed verbatim, and analysed thematically to support the interpretation of the quantitative results.

Participant and Sampling

Five participants were purposely selected from the quantitative phase to provide insights into experiences and perceptions of community participation in CBET. Rather than aiming for statistical representativeness, qualitative participants in explanatory sequential mixed-methods designs are chosen to contextualise and comment on statistical findings. The sample included the village head, a village committee representative, and three community members to capture perspectives from both governance and community levels.

RESULTS

Respondent Profile

With a total of 153 valid responses, the respondents have a balanced gender distribution (49.7% male; 50.3% female). Most respondents (approximately 75%) had resided in Kampung Rosob for more than 20 years, reflecting extensive

familiarity with the local community. Household income levels were generally low, with 33.3% of respondents reporting a monthly household income of RM1 to RM1000. Only 3.3% reported previous involvement in CBET, indicating that ecotourism remains a relatively new activity within the village.

Measurement Model Assessment

Reflective Constructs

As shown in Table 2, the measurement model results demonstrated acceptable reliability and validity. Composite reliabilities for reflective constructions ranged from 0.877 to 0.952, indicating strong internal consistency. Meanwhile, convergent validity was demonstrated because average variance extracted (AVE) values exceeded the suggested criterion of 0.50, ranging from 0.643 to 0.792. Although two indicators (SN_4 and PMN_4) exhibited outer loadings below 0.70, they were retained because the corresponding constructs satisfied the recommended thresholds for composite reliability and AVE, and their removal was not theoretically justified (Hair et al., 2022; Tao et al., 2021).

Table 2: Results of Convergent Validity and Cronbach's Alpha Coefficients (α)

Latent Variable	Observed Indicators	Outer Loading	CR	AVE	α
ATT	ATT_1	0.720	0.952	0.690	0.943
	ATT_2	0.746			
	ATT_3	0.892			
	ATT_4	0.836			
	ATT_5	0.750			
	ATT_6	0.890			
	ATT_7	0.885			
	ATT_8	0.863			
	ATT_9	0.868			
SN	SN_1	0.899	0.886	0.665	0.823
	SN_2	0.841			
	SN_3	0.894			
	SN_4	0.587			
PMN	PMN_1	0.809	0.877	0.643	0.811
	PMN_2	0.902			
	PMN_3	0.834			
	PMN_4	0.639			
WTP	WTP_1	0.891	0.920	0.792	0.868
	WTP_2	0.924			
	WTP_3	0.854			

Source: Author's Calculation

Heterotrait–monotrait ratio (HTMT) was used to assess discriminant validity. As shown in Table 3, two construct pairs (ATT–PMN and SN–PMN) slightly exceeded the recommended threshold of 0.90, indicating a degree of conceptual overlap. However, slight HTMT exceedances do not necessarily

indicate a lack of discriminant validity and should be interpreted alongside theoretical justification rather than as a definitive criterion for construct removal (Franke & Sarstedt, 2018). In this study, the constructs were retained because they represent theoretically distinct concepts derived from the TPB–NAM. Given the nature of CBET, moderate conceptual overlap among these constructs is theoretically reasonable while they remain conceptually distinct.

Table 3: HTMT Values for Each Construct

	ATT	PMN	SN	WTP
ATT	-			
PMN	0.926	-		
SN	0.796	0.971	-	
WTP	0.712	0.761	0.740	-

Source: Author's Calculation

Formative Construct

As shown in Table 4, the significant indicators of the formative construct PBC are only from the opportunity and time availability to participate. The remaining indicators were retained because formative indicators should not be removed solely on the basis of non-significant outer weights when they represent theoretically essential dimensions of the construct (Hair et al., 2022). Furthermore, all indicators demonstrated acceptable collinearity ($VIF < 5$), indicating no multicollinearity issues and preserving the content validity of community readiness as a multidimensional construct.

Table 4: Results of Outer Weights, Significance Thresholds, and VIF Value

Indicator	Outer Weight (β)	t-value	p-value	VIF
PBC_AF_1	0.038	0.523	0.601	2.014
PBC_AF_2	-0.098	1.516	0.130	1.753
PBC_FC_1	-0.035	0.535	0.593	1.989
PBC_FC_2	0.034	0.487	0.626	2.257
PBC_FC_3	-0.023	0.443	0.658	1.169
PBC_O_1	0.243	3.211	0.001*	3.161
PBC_O_2	0.077	0.848	0.396	3.904
PBC_O_3	0.445	4.524	0.000*	4.106
PBC_SK_1	-0.071	0.951	0.342	1.987
PBC_SK_2	0.124	1.865	0.062	1.571
PBC_T_1	0.225	2.431	0.015*	2.514
PBC_T_2	0.294	4.246	0.000*	2.280

Notes: * in p-values indicate significant indicator at $p < 0.05$, VIF stand for variance inflation factor

Source: Author's Calculation

Structural Model Assessment and Hypothesis Testing

Figure 4 illustrates the structural model obtained from SmartPLS 4 bootstrapping. The model comprises exogenous constructs (ATT, SN, and PMN) and

endogenous constructs (PBC and WTP). The structural model showed satisfactory explanatory power, with R^2 values of 0.665 for PBC and 0.662 for WTP, indicating that approximately 66% of the variance in both endogenous constructs was explained by the proposed model.

As shown in Table 5, all VIF values within the inner matrix were below the recommended threshold of 5, indicating no multicollinearity concerns (Hair et al., 2022). Effect size (f^2) analysis showed that PBC produced a significant influence on WTP ($f^2 = 0.512$), while PMN had a small effect on PBC ($f^2 = 0.129$). The remaining predictors exhibited negligible to minor effect sizes. Blindfolding further yielded Q^2 values of 0.232 (PBC) and 0.496 (WTP), indicating satisfactory predictive relevance, as both exceeded zero (Hair et al., 2022).

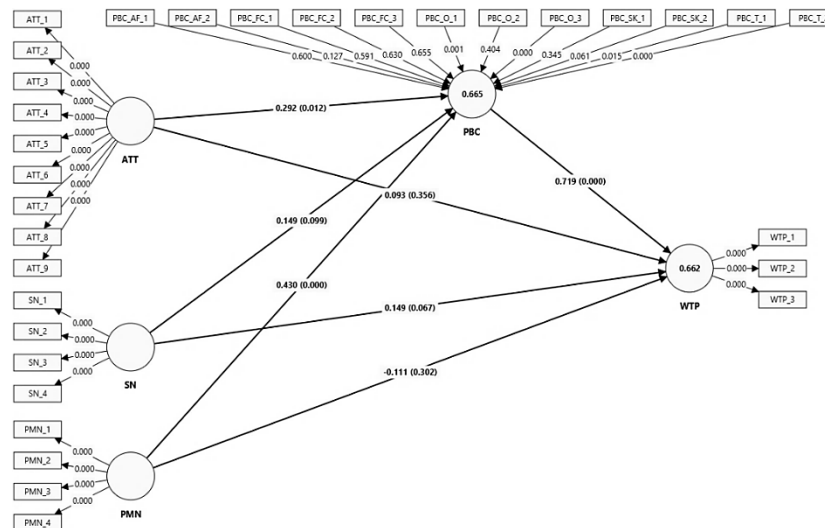


Figure 3: Structural model with path coefficients
 Source: Author's Computation

Table 5: VIF and f^2 Values for Endogenous Constructs

Predictor	VIF		f^2	
	PBC	WTP	PBC	WTP
ATT	3.312	3.567	0.007	0.007
SN	2.779	2.845	0.024	0.023
PMN	4.288	4.842	0.129	0.008
PBC	-	2.989	-	0.512

Source: Author's Calculation

The structural relationships were subsequently examined through hypothesis testing. As presented in Table 6, H1a, H1b, H3a, H3b, and H4, were supported, whereas H1, H2, H2a, H2b, and H3 were not. PBC exerted a strong and significant direct effect on WTP ($\beta = 0.719$, $p < 0.001$), making it the

strongest predictor of WTP. ATT and PMN influenced WTP indirectly through PBC, indicating full mediation. Specifically, favourable attitudes and stronger personal moral norms enhanced community readiness, thereby increasing willingness to participate. In contrast, SN exhibited neither a significant direct nor an indirect effect on WTP, suggesting that social expectations played a limited role in influencing participation in the Kampung Rosob context.

Table 6: Results of Path Coefficients and Hypothesis Testing

	Hypothesis	Effect type	β	t-value	p-value	Decision
H1	ATT → WTP	Direct	0.093	0.924	0.356	Not Supported
H1a	ATT → PBC	Direct	0.292	2.515	0.012*	Supported
H1b	ATT → PBC → WTP	Indirect	0.214	2.325	0.020*	Supported
H2	SN → WTP	Direct	0.149	1.833	0.067	Not Supported
H2a	SN → PBC	Direct	0.149	1.650	0.099	Not Supported
H2b	SN → PBC → WTP	Indirect	0.113	1.564	0.118	Not Supported
H3	PMN → WTP	Direct	-0.111	1.032	0.302	Not Supported
H3a	PMN → PBC	Direct	0.430	4.079	0.000*	Supported
H3b	PMN → PBC → WTP	Indirect	0.319	3.339	0.001*	Supported
H4	PBC → WTP	Direct	0.719	7.811	0.000*	Supported

Notes: * in p-values indicate significant indicator at $p < 0.05$

Source: Author's Calculation

DISCUSSION

Community Readiness as the Enabling Condition

The quantitative findings highlight community readiness, as measured by PBC, as the primary determinant of participation. Participants in the qualitative phase constantly confirm that readiness is shaped by access to resources, skills, infrastructure, time availability, and institutional support, as well as constraints such as bureaucratic complexity and unclear governance structures. This finding corroborates previous research in Sabah, indicating that infrastructure, financial support, and training are crucial for ecotourism participation (Chan et al., 2024). Cooperative models like KOPEL and KOPSTAY improve readiness by enhancing governance and benefit-sharing (Walai Tokou Kundasang Berhad, 2020). The main barrier is not a lack of interest but a lack of practical readiness. Strengthening capacity, coordination, and support is crucial. KRT and community leaders should organise local participation and identify locals willing to participate, who may need assistance. Local authorities and Sabah tourism agencies can increase readiness by offering training, small-scale funding, and technical assistance. At the same time, conservation agencies should integrate CBET capacity-building into protected-area governance and community-based resource management.

Motivation Without Capacity

Although residents have positive attitudes toward ecotourism and strong environmental values, these factors influence willingness only indirectly through readiness. Qualitative findings reveal that while community members recognise the benefits of CBET, participation remains limited due to perceived constraints, including insufficient skills, unclear opportunities, weak institutional support, and project discontinuity. This supports prior research showing that motivation alone does not lead to action without enabling conditions (Han, 2021; Savari et al., 2023). The main challenge is not awareness, but a lack of mechanisms to turn motivation into action. These findings suggest that local authorities and tourism organisations should prioritise developing readiness by providing entrepreneurship training, mentorship, financial support, and structured participation pathways to translate willingness into active involvement.

Limited Role of Subjective Norms

Subjective norms did not significantly predict participation, suggesting that decisions are based on feasibility rather than social expectations. One explanation is that CBET in Kampung Rosob is not yet socially institutionalised. Although community members support ecotourism, participation is viewed as voluntary rather than expected. The discontinuation of the mangrove boardwalk project likely weakened the development of shared participation norms. In contrast, stronger social influence happens where participation is part of the community. For example, Latifinia et al. (2025) found that local norms affected conservation behaviour in Iran, whereas in Kampung Rosob, they did not. This comparison shows that Kampung Rosob lacks an established culture of participation. To foster meaningful change, participation must be boosted through stronger governance, effective leadership, and consistent engagement opportunities. Collaboration among KRT, community leaders, and conservation agencies should be tailored to foster inclusive participation and benefit-sharing, thereby enhancing collective ownership of CBET initiatives.

CONCLUSION

This study indicates that the community's willingness to participate in CBET in resource-constrained rural areas is primarily shaped by perceived readiness. Attitudes, moral commitment, or social influence play a lesser role. Using an integrated TPB-NAM framework, the research shows that individuals are willing to participate only when resources, skills, time, support, and governance are available. In Kampung Rosob, the key barrier is insufficient readiness, rather than a lack of awareness or support. Consequently, CBET planning should focus on enhancing community readiness through capacity-building, technical training, accessible funding, governance support, infrastructure enhancements, equitable

benefit-sharing arrangements, and effective management of community-based tourism. These interventions can better enable local communities to participate effectively in conservation-oriented tourism initiatives.

The findings should be interpreted within the context of Kampung Rosob, as this single-village case study limits the generalisability of the results to other CBET settings. Future studies should examine multiple rural communities to validate the proposed framework across different planning and governance contexts. Additionally, the minor role of subjective norms may indicate that informal social dynamics were not fully captured. Future studies could use social network analysis to clarify how informal social structures affect engagement.

In conclusion, by positioning community readiness as the enabling mechanism linking motivation to willingness to participate, this study provides a planning-oriented framework for designing more inclusive and sustainable community-based ecotourism initiatives in rural conservation landscapes.

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ETHICAL CONSIDERATIONS

This study obtained Universiti Malaya Research Ethics Committee approval under project ID #IF052-2024 (Reference No.: UM.TNC2/UMREC_3958).

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