International Journal of Sustainable Development and Planning
Vol. 20, No. 1, January, 2025, pp. 209-216
Journal homepage: http://iieta.org/journals/ijsdp

Exploring Local Communities' Attitude Towards Sustainable Tourism Development Using SUS-TAS

Kamshat Mussina*, Darken Seidualin, Aidar Mukanov, Lyailya Mutaliyeva, Olga Podsukhina

Tourism Department, L.N. Gumilyov Eurasian National University, Astana 010000, Kazakhstan

Corresponding Author Email: mussina_kp@enu.kz

https://doi.org/10.18280/ijsdp.200120

Received: 6 September 2024
Revised: 11 October 2024
Accepted: 15 October 2024
Available online: 24 January 2025

Keywords:
ecotourism, local community, tourism development, structural equation modelling, Ulytau region, Kazakhstan, central Asia

ABSTRACT

The study focuses on examining a set of factors that influence the attitude of the local community for the development of ecotourism in Ulytau National Natural Park. During the research, both qualitative and quantitative methods were employed, which included surveying residents of the Ulytau region from November to December 2023. The statistical package SMART-PLS 4.0 was used to analyze 389 valid responses and test formulated hypotheses. Furthermore, the Sustainable Tourism Attitudes Scale (SUS-TAS) was used to design questionnaire and examine residents' attitudes toward ecotourism development in the region. Based on structural equation modelling (SEM), the research findings revealed that maximizing local community participation, long-time planning, perceived self-benefits, sense of place, ensuring environmental sustainability, and promoting a community-centered economy directly and positively impact residents' support for ecotourism development in the region. Conversely, negative perception of the social impact associated with tourism development has a detrimental effect. Notably, the sense of place and the establishment of a community-centered economy were identified as the major factors in supporting the sustainable ecotourism development. Overall, local community expresses a positive attitude towards ecotourism development, particularly with regards of environmental sustainability, resource preservation, and conservation. Yet, concerns persist regarding the social costs of tourism development in the studied area.

1. INTRODUCTION

Tourism in developing countries represents a promising way to advance residents' standards of living through employment, higher revenue generation, economic diversification, environmental protection, and cultural promotion. Ecotourism development is vital to addressing pressure on national parks and promoting sustainable management of natural resources. Ecotourism, which offers the opportunity to create revenue from natural resources while preserving the environment, might contribute to the local economy, creating jobs and ensuring the region's sustainable development [1-3].

Recognizing the central role of public support in the success of tourism, the current study is dedicated to understanding the set of factors determining residents' support for developing ecotourism in the Ulytau region, Kazakhstan. While an increasing number of studies worldwide examine residents' attitudes for tourism development, limited number of them specifically address the context of national parks in Kazakhstan. Considering the region's biodiversity and unique ecosystems, including in the Ulytau National Park, the purpose of the current study is to identify factors that affect the support and involvement of residents in the ecotourism development in this park.

Moreover, the growth of ecotourism in less commercialized natural destinations has spurred interest, which has required a comprehensive understanding of its various aspects. This concept involves traveling to natural sites to experience wildlife and cultural experiences while preserving the environment. The thriving of ecotourism depends on the support of the local community, providing economic benefits to the inhabitants if properly planned and organized [4, 5].

Components critical to the success of ecotourism include planning, community participation, and sustainability. The integration of local communities into ecotourism enterprises, with a focus on sustainable livelihoods, is being promoted to ensure their control over the areas they live [5-9].

Ecotourism, as a research subject, originated in the late 80s of the last century. In the context of the current academic field, it is necessary to reconsider the future path of ecotourism development, considering the protection of the environment and the support of sustainable tourism with the involvement of the local community. Thus, the study results provide valuable information for government agencies involved in developing tourism in the region and for researchers [1, 3, 5].

Kazakhstan is a country with rich biodiversity and potential for developing ecotourism, this study examines the lack of specialized research in the ecotourism domain. Earlier, the issues of ecotourism development in national parks were

developed in the works, where the authors conducted a study of community-based ecotourism on the example of the Aksu-Zhabagly Reserve using a combination of field observations, expert opinions, and SWOT analysis, as a result of which strategic proposals for designing an ecotourism model based on the local community are identified [10].

In their work, Kumar and Shcheryazdanova [11] rightly note that research interest in developing ecotourism in Kazakhstan arose only in the early 2000s. Still, there are no sufficient results of applied research. Emphasizing the significance of research to explore the potential of ecotourism development in national parks, the study fills a significant research gap by offering insight into the current state and prospects of community-based ecotourism development in Kazakhstan.

By Government Decree No. 867 dated December 7, 2021, the Ulytau State National Nature Park was solemnly opened in the Ulytau district, known for its extraordinary natural beauty in the Central Kazakhstan region and revered as a sacred zone of the Kazakh people. Notably, it is the 14th largest national park in the country.

The creation of this park, as a specially protected natural area in Central Kazakhstan, is focused on the revitalization and protection of the region's ecosystems. This undertaking is designed to preserve the original natural features of the mountain-steppe massif of Ulytau, which will ultimately contribute to the growth of its tourist potential.

According to the Bureau of National Statistics of the Republic of Kazakhstan, the population of the Ulytau region at the beginning of December 2023 was 221,700 people, of which more than 79% or 175,500 people live in urban areas, while rural residents account for almost 21% or 46,200 people. Thus, this region has the lowest absolute number and population density in Kazakhstan.

Thus, while existing body of literature suggests extensive examination on the role of local community's support in sustainable tourism development, there is a certain limitation on research specifically addressing it in the context of Kazakhstani protected areas, which adds to the geographical diversity in sustainable tourism literature. Moreover, the study contributes to the existing literature through application of advanced quantitative approach to examine local community's support and suggests actionable insight for policymakers, which can be applied to promote sustainable development practices in ecologically sensitive areas.

2. LITERATURE REVIEW

2.1 Sustainable Tourism Attitude Scale (SUS-TAS)

Within the framework of this study, the SUS-TAS scale for examining the attitudes of residents toward sustainable ecotourism was adopted. Its role in measuring the subjective indicators of local community's attitudes towards sustainable development is key, while its reliability and validity have been confirmed in various studies.

A scale that includes seven sustainability constructs, such as environmental sustainability, economic benefits, sociocultural impact, community-level benefits, visitor satisfaction, long-term planning, and community engagement-has been widely used and endorsed in previous studies [2, 12-15].

The support of the local community is pivotal in the sustainable development of tourist destinations. The positive attitude of the inhabitants greatly contributes to the success of tourism development. This includes endorsing new construction of tourism infrastructure, acknowledging prominent role of tourism development for the wellbeing of the area, and approving increased investment by local tourism organizations. Residents' support for the development of tourism involves increasing awareness, engaging in tourism activities, supporting development initiatives, as well as cooperating in executing tourism development plans [2, 3, 16, 17].

Numerous studies have examined antecedents of local community's support for tourism development worldwide. For example, authors Nugroho and Numata found that the perceived economic benefits and participation of local community strongly impacted their support for tourism development in the National Park of Gunung Chiremai in Indonesia [18]. Conversely, negative perceptions have been identified as an obstacle to support from the community in Cappadocia, Turkey [19].

In countryside of Malaysia, the strongest predictors of satisfaction and support for tourism development were commitment and community affection [20]. Factors influencing the community's sustained support for rural tourism growth in the Republic of Serbia include attachment to local community, perceived benefits, as well as residents' quality of life [21].

Positive community empowerment has been found to impact supporting tourism development in northern Pakistan positively [22]. Economic and socio-cultural benefits were recognized as the most important factors affecting residents' attitudes for tourism development in rural Midwestern areas [23].

Vietnamese researchers also studied predictors of local community's support for tourism development. Social and environmental impacts have been identified as crucial factors in Ba Be National Park [24]. In the Phong Dien district of Can Tho City, residents' support was influenced by cost-benefit compromises, participation, social benefits, attachment to the community, and personal benefits [25].

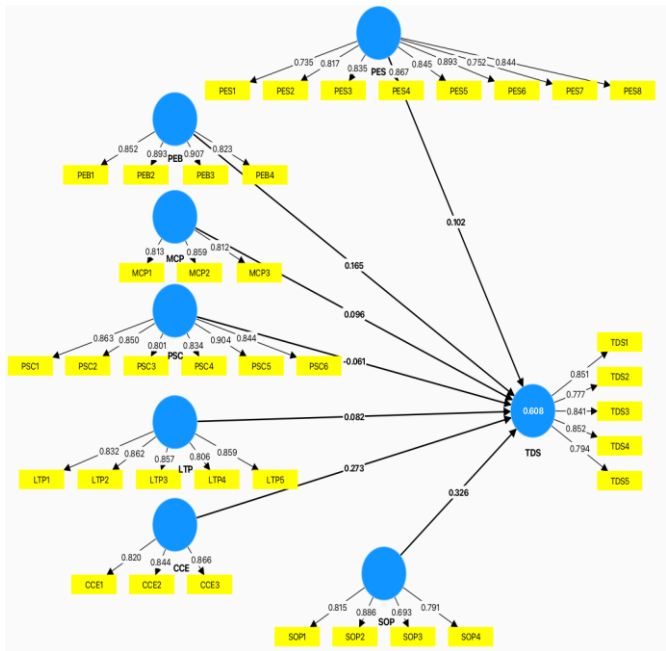

Figure 1. Research model
Note: Compiled by the authors

Based on these extensive literature reviews, hypotheses were formulated, creating a research model to examine the factors influencing local community's support for the development of ecotourism in Ulytau National Park, Kazakhstan (Figure 1). The formulated hypotheses focus on the positive impacts of community involvement, perceived personal benefit, positive perception, ensuring environmental sustainability, sense of place, and long-time planning, as well as the negative effects of the perceived social costs on residents' support for the development of ecotourism in Ulytau.

Ulytau region is characterized by its unique natural and cultural heritage, having significant opportunities for sustainable tourism development. However, the region's tourism infrastructure is not well-established at the moment, which affects the relevance and feasibility of certain research constructs. Given this context, it is essential to focus on constructs that better capture the local community's connection to the region and their support for future tourism initiatives. Therefore, adding a "Sense of Place" and removing "Visitor Satisfaction" are justified based on the following considerations:

"Sense of Place" (SOP)

"Sense of Place" indicates the emotional and psychological attachment that people have to a specific location, which includes their perceptions, experiences, and meanings associated with that place. Adding this variable is important because the Ulytau region is rich in cultural and historical heritage, which shapes the local community's identity and sense of belonging. Including "Sense of Place" in the research allows us to capture this emotional and cultural attachment, vital for understanding community support for tourism development. Likewise, studies have shown that a strong sense of place positively correlates with support for sustainable tourism initiatives. Residents who feel a deep connection to their locale are likelier to participate in and support efforts to preserve and promote it. This makes "Sense of Place" a critical construct for assessing the potential success of tourism projects in Ulytau. Also, understanding the sense of place can help tourism planners and policymakers design initiatives that resonate with the local community's values and expectations. This alignment can enhance community engagement and cooperation, which is essential in the process of sustainable ecotourism development.

Simultaneously, the authors removed “Visitor Satisfaction" from the study. This item refers to the degree to which tourists are content with their overall experience, including attractions, services, and facilities. This decision is substantiated by the context of developing ecotourism in Ulytau region, which currently lacks developed tourism infrastructure limiting the ability to measure visitor satisfaction accurately. Poor tourism development means there are few established attractions, services, or facilities to evaluate, making "Visitor Satisfaction" a less relevant construct for this study and removing the item that aligns with the primary aim of the research to explore the attitudes and willingness to support the sustainable tourism development by local community. Since the tourism infrastructure is underdeveloped at the moment, it is more pertinent to focus on factors that influence community support and involvement, rather than tourist experiences.

Authors believe that by adding "Sense of Place" and removing "Visitor Satisfaction," the research can better capture the local community's emotional and cultural connection to the Ulytau region, which is a critical factor for garnering support for sustainable tourism initiatives. This shift in focus aligns the research with the current realities of the area. It provides more actionable insights for developing tourism policies and practices rooted in community engagement and support. In this regard, the hypotheses of the research were articulated and described below.

Hypothesis H1: *Ensuring environmental sustainability (PES) positively impacts residents' support for the development of ecotourism (TDS) in the national park.*
Hypothesis H2: *Perceived Personal Benefit (PEB) positively effects residents' support for the development of ecotourism (TDS) in the national park.*
Hypothesis H3: *Maximizing Community Participation (MCP) has a positive effect on residents' support for the development of ecotourism (TDS) in the national park.*
Hypothesis H4: *The perceived social cost (PSC) negatively affects residents' support for developing TDS ecotourism in the national park.*
Hypothesis H5: *Long-time planning (LTP) positively impacts residents' support for the development of ecotourism (TDS) in the national park.*
Hypothesis H6: *Formation of a community-based economy (CCE) positively effect on residents' support for the development of ecotourism (TDS) in the national park.*
Hypothesis H7: *Sense of place (SOP) has a positive impact on residents' support for developing ecotourism (TDS) in the national park.*

3. RESEARCH METHODOLOGY

The research methodology used in the work includes a comprehensive mixed approach that integrates quantitative and qualitative approaches for assessing research hypotheses. This comprehensive mixed-method approach offers a robust framework to understand factors influencing community attitudes towards ecotourism development in Ulytau National Park. Combining qualitative insights with rigorous quantitative analysis allows to ensure the reliability and validity of the findings, contributing to informed decision-making in sustainable tourism planning.

As part of the qualitative study, a focus group discussion was conducted. This approach involved bringing together a group of experts to discuss perspectives, experiences, and attitudes toward ecotourism development.

The qualitative stage helped to determine the appropriate measurement scales for the research model. Through focus group discussions and interactions, the researchers gained insight into relevant factors and constructs that should be included in the quantitative analysis.

The quantitative step involved examining the reliability of the measurement scale developed on the results of the qualitative step through Cronbach’s alpha test. This test helps to determine the scale's internal consistency by measuring how closely a set of items is related as a group.

The study assessed convergent and discriminant validity to ensure the measurement scale accurately reflects the intended designs. Convergent validity evaluates the extent to which different measures of the same construct are correlated, while discriminant validity evaluates the extent to which the scores of different constructs are different [26].

Confirmatory factor analysis (CFA) assessed the correspondence among the observed data and the proposed measurement model. This analysis helps confirm the structure

of the measurement model and evaluates how well the observed variables represent the underlying constructs.

Structural equation modelling (SEM) was applied for testing the hypotheses of the study by examining the relationships between variables and assessing the model's fit. This allows us to simultaneously analyze relationships between several variables, providing insights into causal relationships and direct and indirect effects within a research model.

Overall, the mixed approach adopted in the study allowed the researchers to understand the factors influencing community attitudes towards ecotourism development in Ulytau National Park. Combining qualitative information with rigorous quantitative analysis provides reliable evidence to support the hypotheses. It contributes to informed policymaking in the process of developing ecotourism.

Rigorous qualitative and quantitative approaches were an integral part of the research methodology in this study. Focus group discussions informed the development of measurement scales, while the SUS-TAS scale was used to assess community attitudes quantitatively. To strengthen the reliability of our findings, we incorporated comprehensive survey techniques as demonstrated in the Fruška Gora National Part study, including a larger and more diverse sample size [16]. Additionally, advanced data analysis methods such as cross-loadings and bootstrapping were employed to validate the measurement model, drawing from best practices identified in global ecotourism research."

We can draw from various scholarly sources discussing these constructs and their importance in sustainable tourism to provide robust references for the items and survey questions in operationalizing the SUS-TAS (Sustainable Tourism Attitude Scale) items. Table 1 has each item and corresponding survey questions.

Table 1. Operationalization of the SUS-TAS (Sustainable Tourism Attitude Scale) items

Items		Survey Questions
Perceived environmental sustainability (PES)	PES1	Regulatory environmental standards are needed to reduce the negative impacts of tourism development in Ulytau
	PES2	The community environment of Ulytau must be protected now and for the future
	PES3	The diversity of the nature of Ulytau must be valued and protected
	PES4	Tourism in Ulytau needs to be developed in harmony with the natural and cultural environment
	PES5	Proper tourism development in Ulytau requires that wildlife and natural habitats be protected at all times
	PES6	Tourism development in Ulytau must promote positive environmental ethics among all parties that have stake in tourism
	PES7	Tourism must protect the community environment
	PES8	I believe that tourism in Ulytau must improve the environment for future generations
Perceived social cost (PSC)	PSC1	The quality of my life will deteriorate due to the further development of tourism in Ulytau
	PSC2	I often feel irritated by the development of tourism in the community
	PSC3	The development of tourism in Ulytau will lead to damage to the surrounding nature and rural areas
	PSC4	My community will be overcrowded due to the further development of tourism
	PSC5	I believe that the quality of social interaction in my community has deteriorated because of tourism
	PSC6	The development of tourism in Ulytau will lead to a change/loss of traditional culture.
Perceived economic benefits (PEB)	PEB1	The development of tourism in Ulytau will lead to an increase in investment, further development and improvement of infrastructure
	PEB2	The development of tourism in Ulytau will contribute to increasing the income and living standards of the local population
	PEB3	Tourism development in Ulytau will lead to increased employment opportunities for the local community
	PEB4	Tourism generates substantial tax revenues to the local government
Maximizing community participation (MCP)	MCP1	Tourism decisions must be made by all members of my community, regardless of a person's background
	MCP2	Full participation of everyone in the community in tourism-related decisions is a must for the successful development of tourism
	MCP3	Residents of Ulytau should have an opportunity to be involved in tourism development and management
Long-term planning (LTP)	LTP1	I believe that we need to take a long-term view when planning for tourism development in Ulytau
	LTP2	I believe that successful management of tourism requires an advanced planning strategy in Ulytau
	LTP3	I believe tourism development needs well-coordinated planning
	LTP4	I think residents must be encouraged to assume a leadership role in tourism planning committees
	LTP5	Tourism development plans should be continuously improved in Ulytau
Community-centered economy (CCE)	CCE1	I think tourism businesses should hire at least one-half of their employees from within the local community of Ulytau
	CCE2	The tourism industry should be required to obtain at least one-half of their goods and services from within the local community
	CCE3	The tourism industry must contribute to community improvement funds in Ulytau
Sense of place (SOP)	SOP1	Living in my community reflects who I am
	SOP2	It means a lot to me to live in this community
	SOP3	I am attached to the place where I live
	SOP4	I feel like I'm part of my community
Tourism development support (TDS)	TDS1	I will be happy to support tourism initiatives that are sustainable for my community
	TDS2	I am willing to take active participation in the creation of plans and strategies connected with tourism in Ulytau
	TDS3	I am ready to take part in the promotion of initiatives for environmental education and environmental protection in Ulytau
	TDS4	I would support the further development of tourism in my community
	TDS5	I would like Ulytau to attract more tourists

Adapted from [2, 12, 13]

4. DATA COLLECTION

A survey was utilized as a primary research tool for studying residents' perceptions of ecotourism development in the Ulytau National Park. A significant sample size was required according to the sample distribution theory to ensure the reliability of testing the SEM model. In line with the recommendation to conduct a minimum of 200 observations of the reliability of the structural equation model, a formal study was carried out during the period between November 2023 and December 2023. Residents living in the Ulytau region were surveyed. Using a random sample, an online questionnaire was performed using the Qualtrics platform, the link was distributed via social media. As a result, 389 valid survey responses were received after deleting responses that did not meet the reliability requirements [26].

The questionnaire consisted of socio-demographic characteristics and perceptions of ecotourism development based on adapted items of the Sustainable Tourism Attitude Scale (SUS-TAS).

Quantitative data were processed with the SMART-PLS version 4.0 package for structural equation modeling (SEM) and bootstrapping to test the hypotheses. The items of SUS-TAS scale, modified for ecotourism, were translated into Russian and Kazakh languages, which ensured its effectiveness by reverse translation and validation on a small sample (as part of the pilot testing of the questionnaire).

5. RESULTS OF THE STUDY

The study employs survey as its data collection method, chosen for its cost-effectiveness, broad reach, ability to maintain anonymity, and to minimize interviewer bias. Before the main study, a pilot-test with 50 participants was conducted for ensuring the suitability of the survey. Based on previous research, the recommended sample size for this study ranges from 100 to 150 participants for PLS-SEM analysis. While some studies suggest larger sample sizes for increased accuracy, a balance was struck based on these considerations. The survey consists of two blocks: demographics, covering variables such as gender, age, education, and employment, and the main research variables adopted from previous studies adapting SUS-TAS scale items. The SUS-TAS items were translated into Russian and Kazakh languages and were proofread by 3 professors. A 5-point Likert scale was chosen as the measurement scale for ease of interpretation and comparison. A total of 619 responses were collected, of which only 389 were found appropriate for further analysis. Table 2 presents the socio-demographic characteristics of respondents.

The scale reliability score, as shown in Table 3, indicates favorable outcomes, with Cronbach alpha values greater than 0.7 on all scales. The Tourism Development Support Scale has reached Cronbach's alpha of 0.882, highlighting the overall quality of the scales. Composite reliability meets the ≥ requirement of 0.7, providing reliability and convergent validity. the extracted mean-variance (AVE) across all measures satisfies the requirement ≥ 0.5, which indicates reliability and convergent validity, establishing the suitability of the scales for testing hypotheses.

The assessment of the Heterotrait-Monotrait ratio (HTMT) is one of the conservative measures in the analysis, with an acceptable level of less than 0.85 [26]. According to Table 4, the analyzed measurement model demonstrated adequate convergent and discriminant validity.

Since no critical problems with collinearity were found, the next step of validating the R^2 values of the endogenous construct was performed. As a measure of the model's explanatory power, R^2 estimates the variance explained by each endogenous construct [26]. Higher R^2 values, which range from 0 to 1, indicate greater explanatory power. R^2 values of 0.75, 0.50, and 0.25 are significant, moderate, and weak, respectively [26]. As a result, the model demonstrated a moderate degree of explanatory power. The authors conclude that the deviations explained are adequate (Figure 1). An R^2 of 0.608 indicates that the analyzed measures explain 60.8% of the variation in TDS.

Next, the reflexive measurement model evaluates the cross-load metrics of the indicators, with the recommended threshold being a load above 0.708, as this indicates that the design explains more than 50 percent of the variance of the indicator, thus providing acceptable reliability (Table 5).

Table 2. Socio-demographic profile of the respondents

	Percentage	Count
Gender		
Male	0.21	82
Female	0.79	307
Age		
17-20	0.05	19
21-30	0.2	78
31-40	0.54	210
41-50	0.12	47
51-59	0.07	27
60+	0.02	8
Education		
Lower secondary education	0.02	8
Secondary education	0.1	39
Secondary Vocational	0.08	31
College/ Undergraduate	0.67	261
Graduate	0.13	51
Monthly income		
less than 150 000 tenge	0.19	74
150 000-250 000 tenge	0.19	74
250 000- 400 000 tenge	0.29	113
400 000-600 000 tenge	0.17	66
more than 600 000 tenge	0.16	62
Employment		
Employee	0.26	101
Self-employed	0.27	105
Public servant	0.16	62
Temporarily unemployed	0.31	121

Table 3. Evaluation of structural reliability indicators

	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average Variance Extracted (AVE)
CCE	0.800	0.816	0.881	0.712
LTP	0.899	0.901	0.925	0.711
MCP	0.774	0.783	0.867	0.686
PEB	0.892	0.896	0.925	0.756
PES	0.933	0.940	0.944	0.681
PSC	0.923	0.929	0.940	0.722
SOP	0.808	0.821	0.875	0.638
TDS	0.882	0.888	0.913	0.678

Note: Compiled by the authors

Table 4. Discriminant validity test using Heterotrait-Monotrait ratio (HTMT)

	CCE	LTP	MCP	PEB	PES	PSC	SOP	TDS
CCE								
LTP	0.717							
MCP	0.703	0.736						
PEB	0.508	0.659	0.573					
PES	0.487	0.575	0.564	0.601				
PSC	0.109	0.150	0.052	0.103	0.183			
SOP	0.542	0.462	0.470	0.278	0.245	0.050		
TDS	0.745	0.659	0.645	0.574	0.511	0.142	0.680	

Note: Compiled by the authors

Table 5. Cross-loadings of the measuring model

	CCE	LTP	MCP	PEB	PES	PSC	SOP	TDS
CCE1	0.820	0.531	0.458	0.382	0.355	-0.058	0.296	0.485
CCE2	0.844	0.441	0.411	0.282	0.282	0.006	0.430	0.493
CCE3	0.866	0.574	0.535	0.426	0.438	-0.157	0.385	0.628
LTP1	0.475	0.832	0.495	0.535	0.416	-0.128	0.275	0.438
LTP2	0.508	0.862	0.545	0.516	0.481	-0.138	0.307	0.504
LTP3	0.513	0.857	0.545	0.533	0.490	-0.120	0.302	0.505
LTP4	0.526	0.806	0.518	0.415	0.374	-0.034	0.423	0.525
LTP5	0.563	0.859	0.511	0.488	0.472	-0.165	0.370	0.545
MCP1	0.438	0.469	0.813	0.357	0.369	0.026	0.291	0.372
MCP2	0.508	0.489	0.859	0.395	0.371	0.011	0.356	0.461
MCP3	0.444	0.569	0.812	0.434	0.458	-0.007	0.282	0.512
PEB1	0.355	0.534	0.434	0.852	0.466	-0.060	0.147	0.412
PEB2	0.384	0.508	0.441	0.893	0.516	-0.141	0.253	0.464
PEB3	0.418	0.534	0.456	0.907	0.536	-0.103	0.238	0.485
PEB4	0.354	0.468	0.342	0.823	0.384	-0.011	0.180	0.434
PES1	0.313	0.371	0.356	0.410	0.735	-0.083	0.138	0.308
PES2	0.316	0.435	0.369	0.480	0.817	-0.130	0.097	0.328
PES3	0.340	0.439	0.422	0.517	0.835	-0.172	0.144	0.365
PES4	0.300	0.398	0.383	0.434	0.867	-0.156	0.173	0.385
PES5	0.376	0.449	0.381	0.415	0.845	-0.175	0.200	0.403
PES6	0.404	0.492	0.420	0.490	0.893	-0.138	0.196	0.461
PES7	0.373	0.394	0.385	0.389	0.752	-0.147	0.225	0.423
PES8	0.398	0.498	0.480	0.490	0.844	-0.137	0.243	0.464
PSC1	-0.083	-0.121	0.054	-0.091	-0.136	0.863	-0.032	-0.115
PSC2	-0.091	-0.140	-0.005	-0.133	-0.154	0.850	-0.041	-0.110
PSC3	-0.023	-0.033	0.049	-0.010	-0.050	0.801	-0.017	-0.092
PSC4	-0.033	-0.099	0.030	-0.047	-0.118	0.834	0.036	-0.112
PSC5	-0.086	-0.125	-0.017	-0.089	-0.209	0.904	-0.016	-0.130
PSC6	-0.136	-0.170	-0.044	-0.090	-0.190	0.844	0.000	-0.118
SOP1	0.381	0.337	0.285	0.185	0.187	-0.012	0.815	0.468
SOP2	0.380	0.352	0.289	0.204	0.174	-0.040	0.886	0.512
SOP3	0.259	0.221	0.223	0.169	0.112	0.041	0.693	0.384
SOP4	0.372	0.358	0.391	0.201	0.224	-0.020	0.791	0.472
TDS1	0.570	0.540	0.438	0.425	0.385	-0.155	0.520	0.851
TDS2	0.434	0.353	0.331	0.324	0.245	-0.055	0.419	0.777
TDS3	0.468	0.433	0.430	0.390	0.307	-0.045	0.491	0.841
TDS4	0.580	0.541	0.523	0.472	0.492	-0.106	0.480	0.852
TDS5	0.562	0.560	0.511	0.491	0.508	-0.167	0.460	0.794

Note: Compiled by the authors

Cross loadings predict that each element will have a greater load on its parent structure than on any other study structure.

There are problems with discriminant validity if an object loads well into a different construct compared to its parent construct. Cross-loading of all elements meets requirements that do not threaten discriminant validity.

In Smart PLS 4.0, the Bootstrapping procedure was launched to test the hypotheses formulated in the study. For a hypothesis to be accepted, it must have t-values equal to or greater than 1.96 and p-values less than 0.05 (Table 6).

Table 6. Summary of hypothesis testing results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Note
CCE->TDS	0.273	0.265	0.054	5.036	0.000	Adopted
LTP->TDS	0.082	0.086	0.060	1.970	0.011	Adopted
MCP->TDS	0.096	0.094	0.055	1.730	0.044	Adopted
PEB->TDS	0.165	0.171	0.050	3.287	0.001	Adopted
PES->TDS	0.102	0.102	0.046	2.219	0.027	Adopted
PSC->TDS	-0.061	-0.059	0.030	2.027	0.043	Adopted
SOP->TDS	0.326	0.327	0.048	6.855	0.000	Adopted

6. DISCUSSION

***Hypothesis H1*:** Ensuring environmental sustainability (PES)

This hypothesis, adopted with a T-statistics value of 2.219 and a significant p-value of 0.027, highlights the positive relationship between perceptions of environmental sustainability and support for ecotourism development in the region. The findings are consistent with research highlighting that positive perceptions promote community engagement and sustainable tourism development. This result is also consistent with previous studies [18, 22, 26].

Hypothesis H2: Perceived personal benefit (PEB)

The results of the assessment show a positive correlation between perceived personal benefits and support for the development of ecotourism (T-statistics (3.287) and a significant p-value (0.001)). This finding aligns with prior research [20, 27].

***Hypothesis H3*:** Maximizing community participation (MCP)

The results of the assessment show a positive correlation between maximizing the participation of the local community and supporting the development of ecotourism (T-statistics (1.730) and a significant p-value (0.044)). The findings are in line with previous research [22, 27].

***Hypothesis H4*:** Perceived social cost (PSC)

The results confirm the inverse relationship between the negative perception of social cost and support for ecotourism development (T-statistics=2.027, p=0.043). Negative perceptions, which include concerns about rising prices, cultural changes, loss of tranquility, and environmental damage, create barriers to community support for tourism development. Previous research findings also highlight the negative impact of perceived social costs on local community support for ecotourism development [21, 27].

Hypothesis H5: Long-term planning (LTP)

The results of the assessment show a positive correlation between long-term planning of tourism development and residents' support of ecotourism development in the region (T-statistics (1.970) and a significant p-value (0.011)). The findings are in line with previous research [22, 27].

Hypothesis H6: Building a community-centred economy (CCE)

The hypothesis of the positive impact of forming a community-centered economy on supporting ecotourism development is accepted based on the value of T statistics (5.036) and a significant p-value (0.000). This factor is the second strongest factor influencing support, indicating that forming a community-centered economy correlates with higher support. This result is consistent with existing research that highlights the role of community participation in

promoting local support for tourism development. Consistent findings confirm a positive relationship between building a community-based economy and supporting ecotourism development [22].

Hypothesis H7: Sense of place (SOP)

The hypothesis of the positive impact of the sense of place on supporting ecotourism development is accepted based on the value of T statistics (6.855) and a significant p-value (0.000). This factor is the strongest factor influencing support, indicating that a sense of place is paramount in the intentions of residents to support tourism development in the region.

7. CONCLUSIONS

In the context of the Ulytau National Park under study, this study reveals the local community's perceptions of supporting ecotourism development in the region. Understanding these approaches is critical for tourism policymakers and destination developers to effectively assess the prospects for community participation in the sustainable development of the national park.

The conclusions obtained as a result of the study on the attitude of the local community of the Ulytau National Park regarding the development of ecotourism have the following practical significance:

1). In the context of policy development and planning for the development of ecotourism in Ulytau-the study emphasizes the importance of understanding the perspectives of local communities in the formation of tourism development policies and plans. This implies that local authorities and destination developers must actively involve local people in decision-making to ensure that tourism development aligns with the community's values and interests.

2). Use of the SUS-TAS Scale-Applying the Sustainable Tourism Attitude Scale (SUS-TAS) offers a reliable method for measuring residents' attitudes towards sustainable tourism. This tool can guide future research and policy-making efforts by providing a standardized framework for assessing community support for tourism initiatives.

3). Community Engagement and Governance-Recognizing the importance of involving the local community in governance structures and decision-making processes is crucial. Tourism management strategies must prioritize community engagement and collaboration to ensure the sustainable development of ecotourism initiatives.

4). Awareness and education – there is a need for education and awareness campaigns to inform the local population about the benefits of ecotourism and its potential social costs. This suggests that tourism policymakers should focus on promoting understanding and appreciation of ecotourism among residents to ensure continued support from the community.

The results of the study serve as the basis for the development of recommendations aimed at promoting ecotourism. Community involvement, personal gain, positive perceptions, and community attachment are positive support factors. Local authorities can use this information to develop strategies encouraging community engagement and support for sustainable tourism initiatives.

However, the study is not without limitations. The limited sample size calls for caution in generalizing the findings, urging future studies to expand coverage and increase representativeness. Incorporating additional factors, such as community assets, local policies into future research will further enrich the understanding of the dynamics shaping support for the development of ecotourism in national parks.

Research findings are consistent with the broader discourse on sustainable tourism, highlighting the crucial role of community engagement in ensuring the long-term viability of tourism development. This suggests sustainable tourism models prioritize community engagement to foster mutually beneficial relationships and preserve natural and cultural heritage.

The positive attitude shown by the Ulytau community towards the development of ecotourism provides an opportunity for collaboration between tourism planners and residents. By working together, stakeholders can contribute to the region's sustainable economic growth while preserving its unique heritage.

In summary, the study highlights the importance of community involvement, tolerance, and acceptance in the sustainable development of ecotourism. Its findings provide actionable insights to tourism planners and researchers to promote public engagement, improve policy effectiveness, and promote sustainable tourism development in Ulytau National Park and similar regions.

The findings of the research contribute to the broader discourse on sustainable tourism development through analysis of antecedents on local community’s perception and attitudes. The research addresses the gap in the sustainable tourism studies in Kazakhstan, as well as adds to the global body of knowledge showcasing the application of a data-driven model in prioritization of local community support factors.

ACKNOWLEDGMENT

The study is supported by the Science Committee of the Ministry of Science and Higher Education of the Republic of Kazakhstan ((Grant No.: AP19675023). "Management of the ecotourism development based on local communities in the Ulytau Nature Park").

REFERENCES

[1] Sokhanvar, A., Çiftçioğlu, S., Javid, E. (2018). Another look at tourism-economic development nexus. Tourism Management Perspectives, 26: 97-106. https://doi.org/10.1016/j.tmp.2018.03.002

[2] Hien, L.T.D., Phung, P.V., Hoang, T.H.L (2023). Sustainable eco-tourism development in national parks: An approach from local community’s support. Journal of Law and Sustainable Development, 11(9): e1146. https://doi.org/10.55908/sdgs.v11i9.1146

[3] Hasana, U., Swain, S.K., George, B. (2022). Management of ecological resources for sustainable tourism: A systematic review on community participation in ecotourism literature. International Journal of Professional Business Review, 7(1): e0269. https://doi.org/10.26668/businessreview/2022.v7i1.269

[4] Xu, L., Ao, C., Liu, B., Cai, Z. (2023). Ecotourism and sustainable development: A scientometric review of global research trends. Environment, Development and Sustainability, 25(4): 2977-3003. https://doi.org/10.1007/s10668-022-02190-0

[5] Sana, Chakraborty, S., Adil, M., Sadiq, M. (2023). Ecotourism experience: A systematic review and future research agenda. International Journal of Consumer Studies, 47(6): 2131-2156. https://doi.org/10.1111/ijcs.12902
[6] Atchombou, J.B., Shidiki, A.A., Tchamba, M.N., Alexis, K.S. (2022). Opinion of stakeholders on the management of ecotourism in the Benue national park of the north region of Cameroon. Open Journal of Forestry, 13(1): 92-109. https://doi.org/10.4236/ojf.2023.131007
[7] Diarta, I.K.S., Gde, P.I. (2022). Managing community-based ecotourism in Banyuwedang Bay Bali and its implications for visitor satisfaction. Media Konservasi, 27(2): 59-75. https://doi.org/10.29244/medkon.27.2.59-75
[8] Untachai, S. (2015). Modeling residents' perceptions on ecotourism in Upper Northeast, Thailand. International Journal of Business Tourism Applied Sciences, 3(1): 1-15.
[9] Tiarantika, R., Soemarno, Efani, A., Koderi. (2024). Developing a decision support system for sustainable management of community-based ecotourism: A case study of CMC Tiga Warna. International Journal of Sustainable Development and Planning, 19(6): 2205-2219. https://doi.org/10.18280/ijsdp.190620
[10] Akbar, I., Ibraeva, A., Assylkhanova, A. (2022). Research on design and management of community-based ecotourism model in Aksu-Zhabagly Nature Reserve of Kazakhstan. Journal of Geoscience and Environment Protection, 10(4): 33-48. https://doi.org/10.4236/gep.2022.104003
[11] Kumar, Y.A., Sheryazdanova, K.G. (2021). Ecotourism study in Kazakhstan: The past, present, and the future. Eurasian Journal of Ecology, 67(2): 10-25. https://doi.org/10.26577/EJE.2021.v67.i2.01
[12] Jeelani, P., Shah, S.A., Dar, S.N., Rashid, H. (2023). Sustainability constructs of mountain tourism development: Evaluating stakeholders' perception using SUS-TAS. Environment, Development and Sustainability, 25(8): 8299-8317. https://doi.org/10.1007/s10668-022-02401-8
[13] Zhang, Y., Cole, S.T., Chancellor, C.H. (2015). Facilitation of the SUS-TAS application with parsimony, predictive validity, and global interpretation examination. Journal of Travel Research, 54(6): 744-757. https://doi.org/10.1177/0047287514535848
[14] Sirakaya-Turk, E., Gursoy, D. (2013). Predictive validity of sustas. Tourism Analysis, 18: 601-605. https://doi.org/10.3727/108354213X13782245307957
[15] Choi, H.S.C., Sirakaya-Turk, E. (2006). Sustainability indicators for managing community tourism. Tourism Management, 27(6): 1274-1289. https://doi.org/10.1016/j.tourman.2005.05.018
[16] Obradović, S., Stojanović, V., Lukić, T. (2023). Geotourism and local communities: Measuring Residents' attitudes toward sustainable tourism in the Fruška Gora National Park. Geoheritage, 15(3): 90. https://doi.org/10.1007/s12371-023-00860-7
[17] Lai, P.H., Nepal, S.K. (2006). Local perspectives of ecotourism development in Tawushan Nature Reserve, Taiwan. Tourism Management, 27(6): 1117-1129. https://doi.org/10.1016/j.tourman.2005.11.010
[18] Nugroho, P., Numata, S. (2022). Resident support of community-based tourism development: Evidence from Gunung Ciremai National Park, Indonesia. Journal of Sustainable Tourism, 30(11): 2510-2525. https://doi.org/10.1080/09669582.2020.1755675
[19] Dedeoğlu, B.B., Karakuş, Y., Çalışkan, C., Aydın, Ş. (2023). A complexity perspective for antecedents of support for tourism development. Journal of Hospitality and Tourism Insights, 6(1): 191-221. https://doi.org/10.1108/JHTI-02-2021-0048
[20] Moghavvemi, S., Woosnam, K.M., Hamzah, A., Hassani, A. (2020). Considering Residents' personality and community factors in explaining satisfaction with tourism and support for tourism development. Tourism Planning & Development, 18(3): 267-293. https://doi.org/10.1080/21568316.2020.1768140
[21] Demirović Bajrami, D., Radosavac, A., Cimbaljević, M., Tretiakova, T.N., Syromiatnikova, Y.A. (2020). Determinants of residents' support for sustainable tourism development: Implications for rural communities. Sustainability, 12(22): 9438. https://doi.org/10.3390/su12229438
[22] Khalid, S., Ahmad, M.S., Ramayah, T., Hwang, J., Kim, I. (2019). Community empowerment and sustainable tourism development: The mediating role of community support for tourism. Sustainability, 11(22): 6248 https://doi.org/10.3390/su11226248
[23] Chia-Pin, Y., Cole, S.T., Chancellor, C. (2018). Resident support for tourism development in Rural Midwestern (USA) Communities: Perceived tourism impacts and community quality of life perspective. Sustainability, 10(3): 802. https://doi.org/10.3390/su10030802
[24] Huong, P.M., Lee, J.H. (2017). Finding important factors affecting local residents' support for tourism development in Ba Be National Park, Vietnam. Forest Science and Technology, 13(3): 126-132. https://doi.org/10.1080/21580103.2017.1354337
[25] Can, T.T.D., Nghi, N.Q. (2017). Factors affecting local Residents' support on tourism development in Phong Dien district, can Tho city. American Journal of Theoretical and Applied Business, 3(2): 31-35. https://doi.org/10.11648/j.ajtab.20170302.13
[26] Hair, J.F., Sarstedt, M., Ringle, C.M., Mena, J.A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. Journal of the Academy of Marketing Science, 40: 414-433. https://doi.org/10.1007/s11747-011-0261-6
[27] Hsu, C.Y., Chen, M.Y., Yang, S.C. (2019). Residents' attitudes toward support for island sustainable tourism. Sustainability, 11(18): 5051. https://doi.org/10.3390/su11185051