Sustainable Tourism Development in Vietnam: Case Study in An Giang Province

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Abstract- Sustainable development is the goal of countries worldwide, including sustainable tourism development, which the Vietnamese government is implementing for socio-economic development. An Giang province is a locality in Vietnam oriented to build and develop the tourism industry to become a key economic sector; they want to become the tourism centre of the region and Vietnam. To achieve this goal, the local government of An Giang province has developed policies in the right direction. At the same time, it ensures development, exploiting natural advantages, and ensuring sustainable development. This study aims to examine factors affecting sustainable tourism development in An Giang province, Vietnam. The methods used include descriptive statistical analysis, exploratory factor analysis, and regression analysis (SEM). Data was collected from a survey of 341 domestic and foreign tourists to An Giang province from March to September 2023. Survey data was processed by SPSS 20 AMOS 24 software for analysis, evaluation of the scale, and testing of the hypotheses. Research results show that there are five factors affecting sustainable tourism development in An Giang province, Vietnam, including (1) socio-cultural, (2) living environment, (3) tourism products, (4) tourism services, and (5) infrastructure. From the research results, a discussion of proposed solutions for sustainable tourism development in An Giang province, Vietnam.

Index Terms- Sustainable development, tourism development, factors, An Giang province, Vietnam

I. INTRODUCTION

Tourism is a service industry with the potential to contribute significantly to economic development. Tourism development creates jobs, promotes financial restructuring, and motivates other sectors and fields to develop (Raymond & Hagchin, 2017). Tourism development brings many economic, cultural and social benefits to the country. *Sustainable tourism development* is a field related to many factors, including natural, economic, cultural, political and social (Stylidis et al., 2014). These elements are necessary to create diverse tourism products and brands to develop tourism (Nguyen & Nguyen, 2019). We should build tourism but not at the expense of natural resources, without negatively affecting the environment. It can be understood that sustainable tourism development will be the development trend of the tourism industry (Huong et al., 2020). Besides, tourism development should be environmentally friendly. Sustainable tourism should be approached in a way that recognizes the role of local communities (Phuong et al., 2020). We aim to maximize the economic benefits of tourism for local communities.

Tourism is vital to economic development in many countries worldwide, including Vietnam. Vietnam is a country with a high number of tourists because Vietnam has many landscapes and historical and cultural values (Truong, 2012). Besides, the Vietnamese government has a tourism development policy. An Giang is a locality in the Mekong Delta, Vietnam. This locality has had a high growth rate in tourist arrivals in recent years (Nguyen, 2022). An Giang province has several favourable conditions for the outstanding development of the tourism industry.

Regarding geographical location, An Giang Province has 104 km of border with Cambodia in the North and Northwest; The border line runs along the Vinh Te canal. The East borders Dong Thap province, with a length of 107,628 km. The Southeast borders Can Tho city. The southwest borders Kien Giang province for 44,734 km. Another advantage is that An Giang province is near the Southeast tourist region; this locality is 231 km from the economic centre of Ho Chi Minh City (General Statistics Office, 2019). This is an essential condition for forming and developing various types of tourism and attracting domestic and foreign tourists to An Giang province (Long & Kayat, 2011).

Regarding natural resources, An Giang province's terrain has outstanding characteristics compared to the vast plain landscape of the Southwest, which alternates between delta and mountainous terrain. An Giang province has the famous "Seven Mountains - That Son" land, which has many historical, cultural and religious relics. An Giang province is geographically located downstream of the Mekong River, which is an opportunity for the formation and development of all types of tourism (Nguyen et al., 2020). An Giang province has a diverse and rich ecosystem, including humanistic

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tourism resources. An Giang province has many historical relics and many cultural works. Among them, there are more than 27 historical and cultural relics ranked at the national level and more than 48 relics rated at the provincial level.

According to statistics, An Giang province has more than 41 festivals, including folk, religious, and historical festivals. Among them, there is one festival managed by the Ministry of Culture, Sports and Tourism and six festivals organised by the provincial level. Some typical festivals include the Ba Chua Xu festival, Chol Chnam Thmay festival, Don Ta festival, and Khmer ethnic cow racing festival (Huynh & Piracha, 2019). With favourable conditions, An Giang province has determined to develop tourism in An Giang province into a key economic sector in a sustainable direction. Thus, identifying factors affecting sustainable tourism development in An Giang province should be considered to ensure stability, balance and long-term growth (Le & Duong, 2019).

To date, there have been many studies related to sustainable tourism development. According to Vuong and Premkumar (2019), their research analysed factors affecting the sustainable development of Vietnamese tourism in the new period (Trang & Tu, 2021). Comments on sustainable tourism development trends in the new era and proposed appropriate solutions to develop the tourism industry are of interest (Huong & Lee, 2017). We do not harm the environment or local culture. Many studies have synthesised and presented three main factors affecting sustainable tourism, including society, economy and environment (Vuong & Premkumar, 2019).

According to research by Vu et al. (2020) research on factors affecting sustainable tourism development in Ba Ria-Vung Tau, Vietnam. Sustainable development, including tourism development, is a common trend of all economies. Orientation to build and develop the tourism industry to become a critical economic sector (Dong et al., 2020). The study examined the factors and their movements in sustainable tourism development in Ba Ria-Vung Tau province, Vietnam. Research results show four groups of factors significantly affect sustainable tourism development in Ba Ria-Vung Tau, including social factors, environment, tourism products and services, and Technical facilities (Vu et al., 2020).

Authors Dang and Le (2021) with research on factors affecting tourism development: A case study of the Southern Red River Delta region, Vietnam. Tourism development is vital in promoting socio-economic development in most countries (Tung, 2020). In particular, tourism development is the basis for promoting the development of other economic sectors (Lela et al., 2020). In the study, five factors have a positive impact and increase the number of tourists, including "Telecommunications infrastructure", "Tourism infrastructure", "Recovery services of tourism workers", "Services auxiliary", and "Time factor" (Dang & Le, 2021).

In researching the satisfaction of An Giang province's sustainable tourism principles through assessments of domestic tourists, many factors affect An Giang province's compliance with sustainable tourism principles, including Support local economic support and integrity in promoting destination image; Environmental protection, infrastructure investment, participation and benefits of local people, activities to change tourist behaviour; Training Employees; Use resources sustainably; Waste management and behaviour change activities of local people; Natural diversity; Cultural diversity (Nguyen, 2021).

II. HYPOTHESES AND RESEARCH STRUCTURE

Hypotheses

Available studies are the basis for conducting this study. To research sustainable tourism development in An Giang province, Vietnam.

Hypothesize (H1): What factors affect sustainable tourism development in An Giang province, Vietnam?

- H1.1: Does socio-cultural affect sustainable tourism development in An Giang province, Vietnam?
- H1.2: Does the living environment affect sustainable tourism development in An Giang province, Vietnam?
- H1.3: How do tourism products affect sustainable tourism development in An Giang province, Vietnam?
- H1.4: How do tourism services affect sustainable tourism development in An Giang province, Vietnam?
- H1.5: Does infrastructure affect sustainable tourism development in An Giang province, Vietnam?

Research structure

Based on previous research, we propose a sustainable tourism development model in An Giang province, Vietnam, with five factors, including (1) socio-cultural, (2) living environment, (3) tourism products, (4) tourism services, and (5) infrastructure.

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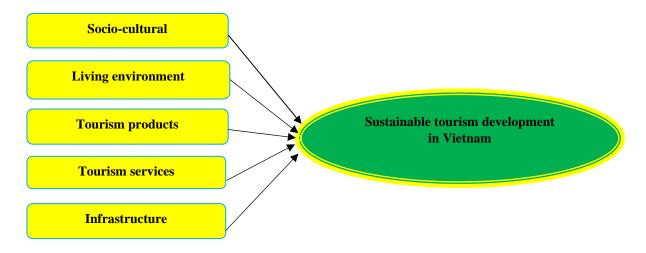


Figure 1. Overview of research structure

Table 1. Observable variables in the research structure

Factors in the model	Encode	Observed variables	
Socio-cultural	SOCU	(1) Improve income based on tourism; (2) People are reduced from poverty through tourism; (3) Social life is improved based on tourism activities; (4) Service prices increase rapidly when there is tourism; (5) Benefits from tourism are uneven; (6) Many local people get jobs from tourism.	
Living environment	(1) Nhiều rác thải từ khách hàng; (2) Rác thải chưa được thu gom và xử lý; LIEN Quán ăn thiếu hệ thống xử lý nước thải; (4) Missing nước sử dụng; (5) Ô nhi tiếng ồn, khói bụi hoạt động du lịch.		
Tourism products	TOPR	(1) Natural landscape; (2) Festivals; (3) Cultural and historical relics; (4) Craft villages; (5) Cuisine.	
Tourism services	TOSE	(1) Local specialities, arts and crafts; (2) Sightseeing tourism; (3) Ecotourism and resort; (4) Spiritual tourism; (5) Travel to learn about culture and history.	
Infrastructure	INFR	(1) Traffic; (2) Contact information; (3) Electricity and water system; (4) Tourism support management technology; (5) Tourism advertising and promotion technology.	
Sustainable tourism development in Vietnam	STDA	(1) Creating attractive destinations for tourists, (2) Addressing social impacts, (3) Level of control over tourism activities, (4) Waste management, (5) Product diversity tourism products.	

III. RESEARCH METHODS

To determine the factors affecting sustainable tourism development in An Giang province, Vietnam, we relied on a theoretical framework combined with literature research to build the research model in Figure 1. The methods used include descriptive statistical analysis, exploratory factor analysis and regression analysis to test the research model.

A questionnaire on sustainable tourism development in An Giang province, Vietnam, was developed. The method is that visitors answer directly to a questionnaire consisting of 38 Likert items. The questionnaire included demographic questions, including survey area, gender, occupation, age, education, monthly income, number of visits to An Giang province, and six scales of the sustainable tourism development model in An Giang province, Vietnam.

The Likert scale is used with a range of values from 1 to 5 to measure the survey subjects' level of feeling: (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, (5) completely agree. Data collection took place between March and September 2023. The study was conducted in An Giang province, Vietnam. Questionnaires were distributed to 350 visitors. There were 341 valid answer sheets collected, as shown in Table 2.

Table 2. Demographic characteristics

Characteristics and survey area	Number of visitors	Percentage
1. Survey area	341	100%
Long Xuyen	34	10.0

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IV. RESEARCH RESULTS AND DISCUSSION

The results of testing the reliability of the scales

The data processing results in Table 3 have shown that all six scales achieve high reliability. Cronbach's Alpha > 0.8 and Total variable correlation coefficient > 0.3 (Cronbach, 1951). It represents the appropriateness of the scale.

Table 3. Results of testing Cronbach's Alpha

Scales of measurement	Encode	No. of items	Cronbach's Alpha	Corrected Item-Total Correlation range	Mean
Socio-cultural	SOCU	6	.917	.709856	3.062
Living environment	LIEN	5	.844	.615683	3.410
Tourism products	TOPR	5	.855	.593800	3.713
Tourism services	TOSE	5	.899	.692815	3.961
Infrastructure	INFR	5	.946	.778909	3.682
Sustainable tourism development in An Giang	STDA	5	.953	.814890	3.813

Exploratory factor analysis (EFA) for the scales

The results of the KMO and Bartlett's tests show that the KMO value = .873 shows the appropriateness of the scales: Bartlett's test, Sig. Value = .000 (< .05) proves that the variables are correlated. The parameter Eigenvalues \geq 1 is kept in the model. Results from Eigenvalue = 1.364 (\geq 1) and six extracted factors have the best information. The sum of squares

of the cumulative factor loading coefficient is 73.111% ($\geq 50\%$), showing that the structure is appropriate (Hair et al., 2010). Therefore, the research structure keeps all six factors the same, as shown in Table 4.

Table 4. Rotated component matrix

	Component						
	1	2	3	4	5	6	
SOCU5	.872						
SOCU6	.837						
SOCU4	.790						
SOCU1	.783						
SOCU3	.782						
SOCU2	.770						
INFR4		.942					
INFR5		.925					
INFR3		.913					
INFR2		.871					
INFR1		.825					
TOSE5			.874				
TOSE4			.863				
TOSE2			.809				
TOSE1			.795				
TOSE3			.787				
STDA2				.828			
STDA4				.819			
STDA1				.793			
STDA5				.780			
STDA3				.710			
TOPR5					.841		
TOPR3					.766		
TOPR2					.766		
TOPR1					.740		
TOPR4					.671		
LIEN4						.804	
LIEN5						.791	
LIEN2						.758	
LIEN1						.747	
LIEN3						.724	

The results are in Table 3. The rotated matrix shows that 31 observed variables are divided into six factors; all observed variables have Factor Loading coefficients greater than 0.5, and there are no terrible variables (Hair et al., 2010). Therefore, all six factors are retained in the research structure.

Confirmatory factor analysis (CFA) in structure

Check convergent validity, discriminant validity and reliability. In Table 5, all composite reliability (CR) values > (.7) mean that the reliability of the scale is assured; all average variance extracted (AVE) values > (.5) ensure average convergence; and for all maximum individual variance (MSV) < (AVE), discriminability is also guaranteed

(Doll & Torkzadeh, 1994). The results of testing the scale also show that the Square Root of AVE (SQRT AVE) > correlation between constructs (Baumgartner & Homburg, 1996), shown in Table 5.

Table 5. Result of convergent validity

	CR	AVE	MSV	MaxR(H)	SOCU	INFR	TOSE	STDA	TOPR	LIEN
SOCU	0.918	0.654	0.282	0.932	0.809					
INFR	0.945	0.775	0.113	0.970	-0.025	0.881				
TOSE	0.899	0.643	0.157	0.913	0.270	0.076	0.802			
STDA	0.952	0.799	0.282	0.962	0.531	0.337	0.396	0.894		
TOPR	0.858	0.550	0.268	0.886	0.406	0.150	0.262	0.518	0.741	
LIEN	0.845	0.523	0.181	0.847	0.299	-0.022	0.221	0.425	0.271	0.723

Structural model testing (SEM)

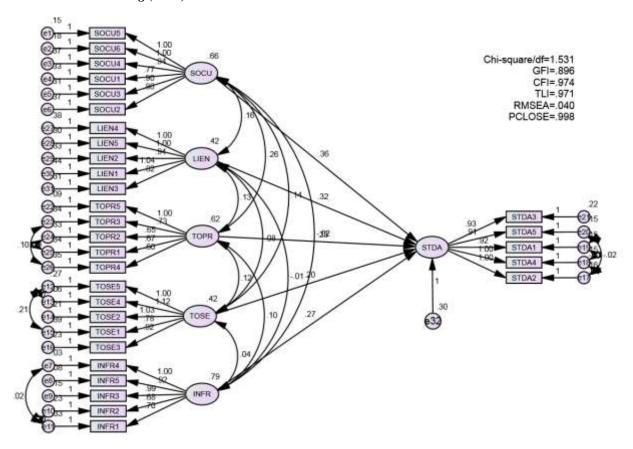


Figure 2. Results of research model

Results of data processing of sustainable tourism development model in An Giang province, Vietnam. The processing results are presented in Figure 2 and Table 6. The model has Chi-square/df = 1.531; CFI = .974; GFI = .896; RMSEA = .040; TLI = .971; PCLOSE = .998.

The results of testing the linear structure of the model are shown in Figure 2 and Table 6; the data shows the Sig value of the scales SOCU = .000 (<.05), LIEN = .000 (<.05), TOPR = .000 (<.05), TOSE = .000 (<.05), LIEN = .000 (<.05) (Hu & Bentler, 1999). Through Sig values, it shows that there is an impact relationship between the independent variable and the dependent variable.

The results of testing the relationship between concepts in the model are shown in Table 6. It shows that the larger the standardized regression coefficient, the stronger the independent variable. It substantially impacts sustainable tourism

development in An Giang province, Vietnam (STDA). Factors affecting sustainable tourism development in An Giang province, Vietnam, include SOCU = .355, LIEN = .249, TOPR = .222, TOSE = .154, and INFR = .284.

Table 6. Results of testing factors affecting sustainable tourism development in An Giang province, Vietnam

factors affecting sustainable tourism development in An Giang province, Vietnam	Estimates	Sig	Standardized estimates
SOCU> STDA	0.362	.000	0.355
LIEN> STDA	0.321	.000	0.249
TOPR> STDA	0.234	.000	0.222
TOSE> STDA	0.199	.000	0.154
INFR> STDA	0.265	.000	0.284

The results of testing the linear structure of the research model have R2 (Adjusted R squared) STDA = 0.562, meaning the model regression is appropriate (Nunnally & Bernstein, 1994). Describe and explain the independent variables that influence 56.2% of the dependent variable's variation on sustainable tourism development in An Giang province, Vietnam (STDA) in the model.

Testing the linear structure of the research model shows that the scales are reliable and valid, allowing the model to be evaluated. The findings of the study show that there are five factors affecting sustainable tourism development in An Giang province, Vietnam, including (1) socio-cultural, (2) living environment, (3) tourism products, (4) tourism services, and (5) infrastructure.

Based on the analysis of research model data, we would like to discuss some ideas for sustainable tourism development in An Giang province. We should invest in building and perfecting infrastructure and technical facilities to serve tourism. Infrastructure and technical facilities significantly affect tourist intentions (Giao et al., 2021); it shows professionalism in tourism activities (Almeida-Garcia et al., 2015). An Giang province should invest in selective upgrading of critical projects. Local authorities should evaluate and coordinate many economic sectors to participate in infrastructure construction. Besides, local governments should ensure the integrity of the environment and resources and avoid waste during implementation (Andrea & Dimitris, 2019).

The community receives many benefits from tourism activities, including improving family economics and ensuring life benefits (Asa et al., 2022). We should pay attention to employment issues, improve people's lives around tourist areas, and organize professional tourism activities (Bernadette, 2006). From there, indigenous people will be more aware of preserving natural resources and the environment. They will not gather and trade illegally in prohibited areas in tourist destinations, creating a friendly and attractive tourist environment (Choi, 2013).

Local authorities should propagate and open environmental campaigns at tourist destinations (Tsung et al., 2015). We should raise awareness and organize ecological protection activities, including mobilizing volunteers, pupils and students to pick up trash, Plant trees, and create clean and beautiful green landscapes at tourist destinations (Xu, 2022). We should propagate slogans about environmental protection to attract the attention of tourists to reduce waste pollution.

V. CONCLUSION

The hypothesized research model was tested on scales that showed the appropriateness of the construct. The research results have verified the model of sustainable tourism development in An Giang, Vietnam. Among them, five factors show the level of influence on sustainable tourism development in An Giang, Vietnam, including (1) socio-cultural, (2) living environment, (3) tourism products, (4) tourism services, and (5) infrastructure. Thus, the results achieved in the study have satisfied the set objectives.

Some discussed contents have been proposed to help policymakers understand the relationship between independent factors and sustainable tourism development in An Giang, Vietnam. Policymakers should adjust investment in developing infrastructure and technical materials for tourism. Local governments should improve people's lives in tourist areas, link economic development with social and environmental protection, and develop markets and tourism products. In addition, the findings in the study also help researchers carry out further investigations; they should collect more samples over a wider area for a comprehensive assessment of sustainable tourism development.

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