

Effect of Sense of Place and Development Expectation on Perception of Tourism Impact of Residents of Tourist Destinations: Case Study of Jiuzhaigou Nature Reserve

Sha Liu

School of Law, Panzhihua University, Panzhihua, China

E-mail: 2953574@qq.com

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Abstract

Residents are the main factors that influence tourism development in a community. The integration of community residents into the overall development of local tourist attractions has attached significance to the study of the perception of tourism's impact on residents in tourist destinations. Sense of place reflects the unique emotional connection between people and the place and provides a fresh perspective for further research on residents' perception of tourism impact. A theoretical model of sense of place–development expectation–impact perception was established based on a sense of place and development expectation. This was verified through a case study of the Jiuzhaigou Nature Reserve in Sichuan Province. Residents with a strong sense of place have high expectations of tourism development and a great perception of tourism impact. Development expectation indirectly intensifies the effect of a sense of place on residents' perception of tourism impact. The overall development of community tourism is a critical factor that influences the perception and attitude of residents. This paper guides planning for the development of tourist destinations.

Keywords: Community Resident; Sense of Place; Development Expectation; Tourism Impact Perception; Jiuzhaigou Nature Reserve

Introduction

International tourism geographical studies of spaces, places, and communities (Gibson, 2008) have investigated the interaction and mode among tourists, residents, and tourist destinations from different perspectives. Studies of the perception and attitudes of residents emphasize the variation of people–place relationships during the development of tourist destinations and their effects. Perception refers to residents' subjective cognition of material, social, cultural, and environmental changes in their living space, whereas attitude refers to their positive response to changes in tourist destinations. The supportive attitude of residents is closely related to the perception of tourism impact (Nepal, 2008; Kuvan & Akan, 2005; Smith & Krannich, 1998), which is primarily manifested by the economic, social, and community environment (Mathieson & Wall, 1982). Additionally, differences in the perception and attitude of residents are correlated with various factors, such as involvement level (Keogh, 1990), community links (Besculides et al., 2002), the popularity of the tourist destination (Davis et al., 1988), distance to the tourist destination (Li & Zhang, 2008), demographic characteristics (Ritchie, 1988), the relationship between tourism and economy (Williams & Lawson, 2001), regional development level (Teye et al., 2002), and the category of tourist destinations (Tosun, 2002; Chrys & David, 2002; Lu et al., 2008). As the specific expression of attitude, the daily behavior of residents is directly determined by their attitudes toward tourism development. Widely considered by planners and managers, the attitude of residents not only critically influences the exploitation, operation, and sustainable development of local tourism but is also key to research on people–place interactions in human geography.

Human geography regards sense of place as the product of interaction between human beings and the environment (Tuan, 1977). As a product of continuous people–place interaction (Blizard, 2005), a sense of place is endowed by human beings and affects them in turn (Steele, 1981). Thus, different individuals in a specific shared space have different experiences and behaviors because of their different perceptions and feelings about the place. Therefore, the different beliefs and emotions of residents in tourist destinations determine their tourism perceptions and attitudes. A few studies involved the development expectations of residents in tourist destinations. Teye et al. studied two small towns in Ghana and found that residents and tourism workers had negative attitudes and behavior toward tourism development because they failed to form high tourism economic expectations (Teye et al., 2002). However, Teye et al. did not discuss the process and mechanism of development expectations that influence the perceptions and attitudes of residents. Expectation theory was proposed by Vroom in 1964. Vroom (1964) integrated individual behavior and expectation and hypothesized that behavior is shaped by individual expectation and is enhanced with increasing expectations. Expectation theory is widely used to interpret individual choice, satisfaction, and voluntary organizational participation (Davidsson, 1991).

Previous studies have discussed the differences in community residents' perceptions and attitudes toward tourism impact based on the spatial attributes of tourist destinations, such as distance to the main tourist area, stage of development, and type. Researchers have analyzed residents of tourist destinations with different attributes. Expectation reflects community residents' material, cultural, and space development requirements from the perspective of individual subjective perception and determine their different understandings and attitudes toward changes in tourist destinations. In underdeveloped regions in China, most tourism developments adopt the bottom-up mode, whereby residents expect to improve their living conditions and achieve local development through tourism. This study selected locations in the Jiuzhaigou area, which is a national area, and residents of the complex. The rapid development of tourism has had a great impact on the survival of local residents. The perceptions, attitudes,

and responses of tourist destination residents (The people most influential to tourism development) toward changes in their living environment are influenced by their expectations. Therefore, the development expectations of residents of tourist destinations should be analyzed as one major cause of their different perceptions and attitudes toward tourism impact.

Combined with a sense of place and the perception of tourism impact on residents of tourist destinations, the impact route and level of development expectation on their perception of tourism impact were investigated through structural equation modeling. This method not only allowed an effective interpretation of the process and mechanism of perception of tourism impact of residents of tourist destinations but also expanded the scope of theoretical research on the perception and attitude toward tourism impact with different properties.

Materials and Method

1. Study area

A questionnaire survey was conducted in Jiuzhaigou Nature Reserve from May 8, 2018, to May 13, 2018. Tourism in Jiuzhaigou has been the pillar industry since 1997, contributing more than 70% of the fiscal revenue of the county since 1999. Since the establishment of the administration bureau in 1984, all cultivated lands within Jiuzhaigou and surrounding areas have been gradually reforested, and many young adults have been turned into sanitation workers, scenery patrols, tour guides, and businessmen. Additionally, the increasing number of tourists in Jiuzhaigou has attracted many migrant workers. Sampling included local and migrant residents surrounding Jiuzhaigou: Longkang, Pengfeng, and Zhangzha. Jiuzhaigou has more than 6000 permanent residents. According to the requirement of 5% sampling, 300 questionnaires were sent; 261 valid questionnaires were returned, showing an effectiveness rate of 87%. The survey was conducted primarily through questionnaires and was supplemented by in-depth interviews. Interview data not only confirm and clarify the results of quantitative analysis but also enrich and deepen the theoretical explanation of the research results. The questionnaire had four parts. Part I inquired about background information, including gender, age, educational background, and career. Part II investigated residents' perception of tourism impact, whereas Part III investigated their sense of place. Part IV surveyed the development expectations of residents. The questionnaire used the five-Richter scale, where 1 represents "strongly disagree" and 5 represents "strongly agree."

2. Research hypothesis and theoretical model

2.1 Research hypothesis

Sense of place refers to the emotional connection between people and a place during interaction. Sense of place has been a hotspot of recreational, geographical, environmental, and psychological research in Western countries (Tang & Zhang, 2007). Sense of place directly influences the residents' perception of tourism impact (Dogan & Denney, 2004; Dogan & Claudia, 2002; Jurowski & Uysal, 1997). Therefore, the present study hypothesizes that a sense of place is significantly correlated with the perception of tourism benefits and costs (Aa and Ab). Williams (1992) proposed that the sense of place comprises place identification and dependence. Place dependence is a functional dependence between people and place, whereas place identification is an emotional dependence. Williams and Patterson (1992) designed a scale of sense of place according to place identification and place dependence to measure the emotional connection between humans and places. Sense of place, the structural model's first potential variable, includes place dependence and place identification.

The mesomeric effect is a causal chain. A free variable causes a mediated variable and influences the variation of causal variables (Kenny & Kashy, 1998). To test the mediating

effect of the expectation of tourism development, the current study hypothesizes that the sense of place of residents of tourist destinations significantly influences the expectation of tourism development (Ac). Such expectation represents residents' desire for local development changes, including tourism and community development. Therefore, development expectations in this study are classified into tourism expectations and community expectations.

Moreover, residents' expectations of tourism development significantly influence their perceptions of tourism benefits and costs (Ad and Ae). The perception of tourism benefits refers to residents' positive evaluation of tourism development, including its social, economic, and cultural benefits. The perception of tourism costs refers to residents' negative evaluation of tourism development, including its social, environmental, and economic costs.

2.2 Theoretical model

Based on the hypotheses above, the mediating effect of development expectation on the sense of place and the perception of tourism impact was investigated by using development expectation as the mediating variable and sense of place as the independent variable. A basic theoretical model of development expectation with 4 structural variables (2 potential independent or exogenous variables and 2 potential dependent or endogenous variables) and 10 measuring indices (Fig. 1) was established.

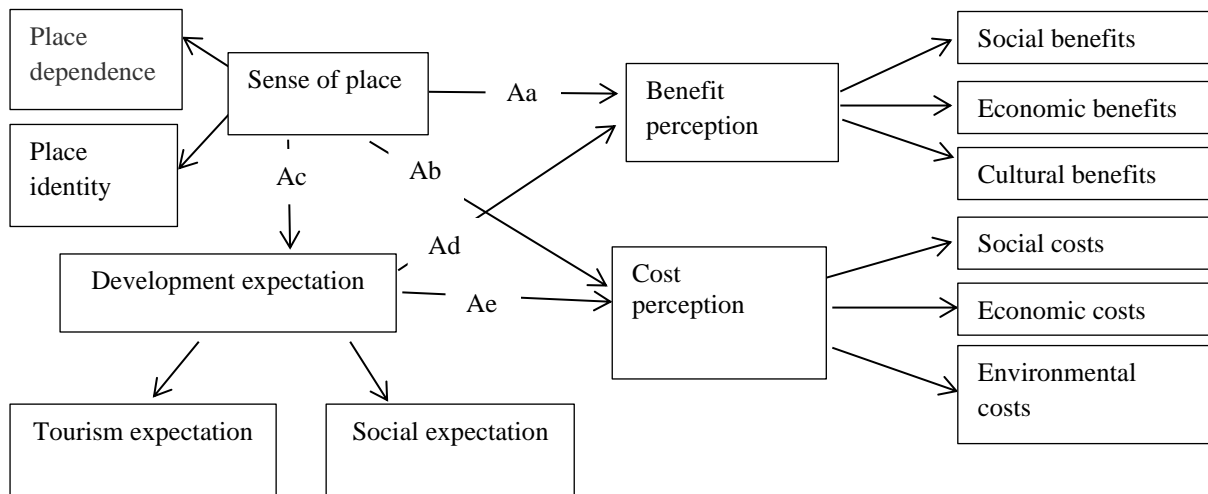


Fig. 1 Theoretical model of the relationship among sense of place, development expectation, and impact perception.

2.3 Questionnaire analysis

2.3.1 Reliability and validity test

The reliability and validity of 8 items on sense of place (Part III), 8 items on development expectation (Part IV), and 18 items on perceptions of tourism impact (Part II) were tested to determine the consistency and effectiveness of the questionnaire design. The reliability analysis and factor analysis functions in the scale module of SPSS were used for the analysis and testing. The minimum value of α was 0.724, the minimum value of Kaiser–Meyer–Olkin was 0.712, and $p < 0.01$ (significant), indicating that the scale had the desired reliability and structural validity.

2.3.2 Demographic survey

The demographic survey focused on males (79.6%). Of the respondents, 67.4% were young adults aged between 21 and 40. Rapid tourism development has attracted most young adults in Jiuzhaigou. Additionally, tourism development has attracted many migrant workers, who comprised 37.5% of the respondents. Although Jiuzhaigou was in the development stage of Butler tourist destinations, tourism workers accounted for only 53.7% of the local population. The other 46.3% were farmers and businessmen. Most respondents completed only middle school or lower education (Table 1).

Table 1 Statistical characteristics of sample population

Basic situation	Category	Number of samples	Percentage (%)	Basic situation	Category	Number of samples	Percentage (%)
Gender	Male	208	79.6	Age	Less than 20	17	6.5
	Female	53	20.4		21–30	119	45.6
Residence status	Native	163	62.5	Education	31–40	57	21.8
	Migrant	98	37.5		41–50	44	16.9
Occupational	Tourism	140	53.7	Education	More than 50	24	9.2
	Non-tourism	121	46.3		Primary and below	73	28
Annual family income	Less than 10,000	108	41.4	Education	Junior high	124	47.5
	10,000–20,000	75	28.7		Senior Secondary	45	17.2
	20,000–30,000	56	21.5		College and above	19	7.3
	More than 30,000	22	8.4				

2.3.3 Results of measurement of sense of place and development expectation

The result of the SPSS descriptive statistical analysis of the 16 measurement items of sense of place and development expectation demonstrated that residents have a close association with Jiuzhaigou and a strong sense of place. Residents expect to improve the local economy and facilitate community development through tourism development (Table 2).

Table 2 Results of measurement of sense of place and development expectation

Sense of Place	Mean	Development Expectation	Mean
My life is comfortable in Jiuzhaigou.	3.69	Take residents' comments on tourism development	4.33
We have common national habits.	3.74	Tourism development gets outside support	4.50
If we leave Jiuzhaigou, we will be sad.	3.90	Tourism development gets government support	4.48
We will protect Jiuzhaigou.	4.42	Sharing tourism development information	4.45
We feel very relaxed in Jiuzhaigou.	4.01	Residents participate in tourism development	4.57
Jiuzhaigou has spiritual significance for me.	4.14	Improve government efficiency	4.41
I am a Jiuzhaigou citizen; I belong to Jiuzhaigou.	4.61	Provide residents with a learning platform	4.42
We are a family.	4.59	Take the core interests of residents	4.50

2.3.4 Results of factor analysis of the perception of tourism impact

According to the factor analysis, the 18 perceptions of tourism impact were classified into benefit perceptions and cost perceptions. Benefit perceptions include economic, social, and cultural perceptions. Cost perceptions include economic, social, and environmental costs. Generally, the factors have a load of over 0.6 and an accumulative variance contribution of 60.902%, which can explain most variances and thus indicate high reliability (Table 3).

Table 3 Results of factor analysis of residents' perception of tourism impact

Factor	Factor Loadings	Cumulative Variance Contribution Rate
Factor 1: Social Benefits		11.834
Convenient buying and selling	0.645	
Convenient transportation	0.701	
Convenient education	0.765	
Factor 2: Economic Benefits		24.132
Increase in revenue	0.723	
Increase in employment opportunities	0.719	
Factor 3: Cultural Benefits		29.547
Protection of local culture	0.665	
Increase in places of entertainment	0.572	
Improvement of ideas of residents	0.810	
Conducive to traditional culture	0.739	
Factor 4: Social Costs		44.342
Crowded living space	0.681	
Increase in crime rate	0.653	
Destruction of local culture	0.710	
Disturbance to everyday life	0.541	
Change in residents' habits	0.751	
Factor 5: Economic Costs		52.915
Rising prices	0.864	
Income polarization	0.563	
Factor 6: Environmental Costs		60.902
Serious environmental pollution	0.564	
Increase in noise	0.869	

3. Data verification

3.1 Measurement model test

A confirmatory factor analysis of the structural factors and dimensions of the data sample was conducted to test the stability and reliability of the structural equation model. Together with the results of the factor analysis of eight items on sense of place and eight items on development expectations, two dimensions of sense of place (dependence and identification), two dimensions of development expectation (community expectation and tourism expectation), and two perceptions of tourism impact (cost perceptions and benefit perceptions) had the desired fitting results. The factor load of measurement variables ranged between 0.541 and 0.869, satisfying the basic requirement of the standard factor load (>0.4). The combination validity and discriminative validity of the measurement model were tested. All measurement variables were significant when $P < 0.01$ (except that the MI value of "villager advice on tourism development" was larger than 6.61), indicating that the measurement model had the desired discriminative validity.

3.2 Structural model test

The path coefficient of the structural model was calculated through maximum likelihood estimation. Sense of place significantly influenced the perception of benefits and costs. The path coefficients of these perceptions were 0.33 and -0.15 , respectively. Sense of place positively influenced development expectation (path coefficient = 0.51). Development expectation significantly influenced the perception of tourism impact (perception of benefits and costs) when $P < 0.05$. The path coefficients of both perceptions were 0.34 and -0.18 , respectively (Fig. 2). The fitting test of the structural equation model showed a high degree of fitting, which indicates a valid interpretation of variables to the measurement model.

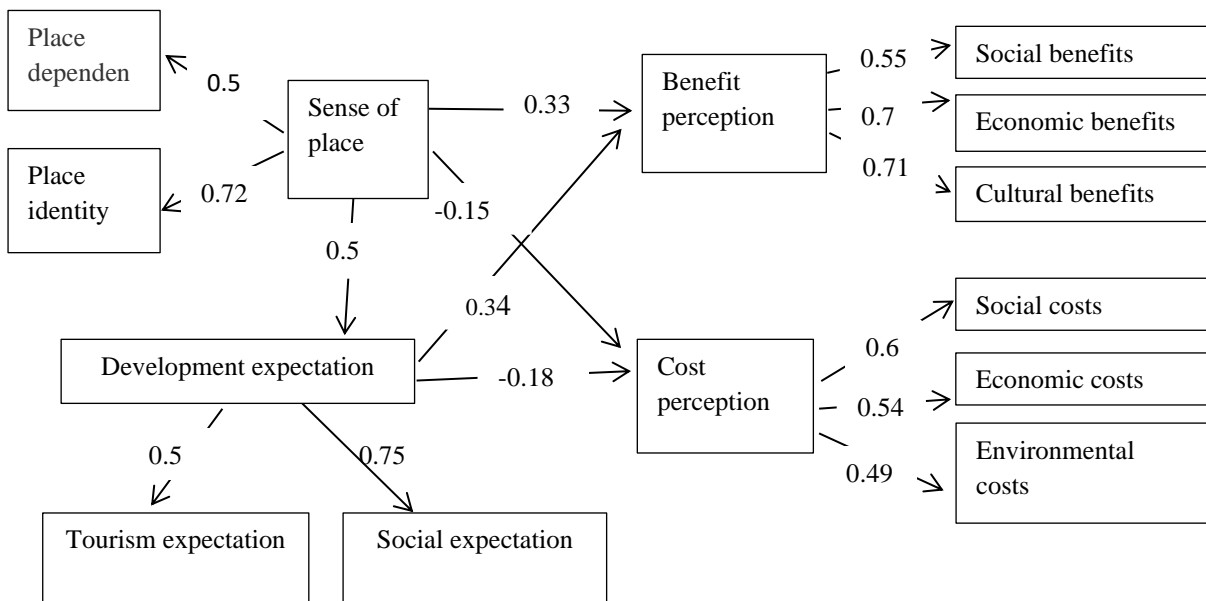


Fig. 2 Standardized results of the sense of place, development expectation, and impact perception model.

Table 4 Goodness-of-fit index of model of sense of place, development expectation, and impact perception

Fit Index	χ^2/df	RMSEA	NFI	RFI	TLI	CFI	IFI	PNFI	PCFI
Standard Index	<5.0	<0.1	>0.9	>0.9	>0.9	>0.9	>0.9	>0.5	>0.5
Index Value	1.634	0.043	0.906	0.908	0.913	0.930	0.929	0.667	0.722

Results

The hypothetical interior path mechanism of the effect of sense of place and development expectation on the perception of tourism impact (perception of benefits and costs) was observed by quantitatively studying structural equations.

(1) Both sense of place and development expectation influence residents' perception of tourism impact to different degrees.

For a sense of place, place identification (path coefficient: 0.72) and place dependence (path coefficient: 0.50) affect the perception of tourism impact differently. This result indicated that the stronger the sense of place of Jiuzhaigou residents, the more attention they paid to the positive and negative effects of tourism development and the more they expected to achieve economic prosperity through tourism development. As there is an emotional connection between people and place, place identification influences the perception of tourism impact more significantly than place dependence. On the one hand, compared with examples of place dependence, such as "My life is comfortable in Jiuzhaigou," examples of place identification, such as "We are a family," more easily arouse the responsibility and enthusiasm of residents in developing and protecting their hometown. On the other hand, Jiuzhaigou is in a mountainous area and isolated from surrounding large cities. Residents are integrated into Jiuzhaigou through history and customs. Residents are spiritually rooted in Jiuzhaigou despite the poor infrastructure and quality of life.

Additionally, residents of different ages and careers from different communities have different levels of place dependence and thus have different perceptions of tourism impact. Residents who live far from Jiuzhaigou Nature Reserve do not heavily depend on tourism development and thus have weaker perceptions of tourism impact. For example, Mr. Xu (a 53-year-old illiterate villager) said, "Tourism development is good for Jiuzhaigou, but I benefited nothing from it because I lived far away from Jiuzhaigou."

Development expectation also significantly influences residents' perception of tourism impact. The path coefficient of tourism expectation is 0.50, significantly lower than that of community expectation (0.75). This result indicates that residents positively pursue tourism development to advance economic, social, and cultural development. However, because Jiuzhaigou Nature Reserve remains in development, tourism development fails to benefit all residents. Several respondents even have no specific tourism expectations. Mr. Wang (a 35-year-old villager with only a middle school education) stated, "Tourism development benefits mostly hotels but few civilians. Local residents involved in the tourism industry mainly sell local specialty, while the rest of local residents mainly live on farming and working." This response reflects local residents' inadequate participation and capability in tourism development. The corresponding high path coefficient of community expectation reveals that residents desire dependence and support from the community.

(2) Residents' perception of tourism impact, especially tourism benefits, represents a significant difference.

Sense of place has a significantly different effect on the perception of benefits (0.33) and costs (-0.15). Residents with a strong sense of place pay considerable attention to the benefits of tourism development, especially its economic benefits (0.70) and cultural benefits (0.71). This finding echoes the residents' high expectations in Jiuzhaigou to improve economic development. The residents hope to facilitate the cultural exchange between Jiuzhaigou and the outside world through tourism development. The weak perception of costs reflects that tourism development in Jiuzhaigou has only marginally influenced the lives of local villagers and that

the negative effect of tourism has not been completely represented. For example, Mr. Liu (a 39-year-old illiterate villager) stated, "Local policies are good, and we haven't seen any negative effect. We have no idea about the difficulties of tourism development." Among the perceptions of economic, social, and environmental costs, social costs (0.6) are the most influential, followed by economic costs (0.54) and environmental costs (0.49). Different path coefficients are closely related to the mode of tourism development in Jiuzhaigou. Tourism in Jiuzhaigou primarily uses the top-down mode of development, which is dominated by the government and constructs many tourism infrastructures to influence residents' daily lives.

(3) Development expectation positively mediates the theoretical model of "sense of place–development expectation–impact perception."

The path coefficient of sense of place on development expectation is 0.51, indicating that residents with a strong sense of place have high development expectations, indirectly influencing their perception of tourism impact. Regarding cost perception, development expectation increases the effect of a sense of place on the perception of tourism impact. The influencing coefficient of sense of place on cost perception is -0.15 , and the path coefficient of development expectation is -0.18 . The disparity between development expectations and practical development increases residents' dissatisfaction. It thus increases their sense of responsibility over community development and their perception of the negative effects of tourism development. For example, Mr. Zhou (a 47-year-old with a technical secondary education) has been in the tourism industry for many years. He pointed out, "Jiuzhaigou has been focusing on tourism since 1984. I sold forest products and opened a tourism company in 1995. There are many people like me. They worked on a tree farm before and have now opened their own restaurants. We earn more now. Now, there's a forest protection team to prevent fire and environmental destruction caused by tourism development."

Discussion

Community residents are the main factors that influence tourism development. The integration of community residents into the overall development of local tourist attractions has attached significance to the study of the perception of tourism's impact on residents of tourist destinations. Sense of place reflects the unique emotional connection between people and place and provides a fresh perspective for research on the residents' perception of tourism impact. The theoretical model of "sense of place–development expectation–impact perception" is established based on the sense of place and development expectation and is verified through a case study of Jiuzhaigou Nature Reserve in Sichuan Province. This study explores the effect of a sense of place on the perception of tourism impact. The results demonstrate that residents with a strong sense of place have high expectations of tourism development and strong perceptions of tourism impact. Development expectation indirectly intensifies the effect of a sense of place on the residents' perception of tourism impact, especially of the costs of tourism. Development expectation intensifies the effect of a sense of place.

The overall development of community tourism is a critical factor that influences the perception and attitude of residents. Jiuzhaigou residents' perception of tourism impact represents a significant difference, especially in their perception of benefits, because Jiuzhaigou remains in the development stage of Butler tourist destinations. Thus, tourism development is perceived to have more positive effects than negative ones. Low education, a large number of original residents, and the dominance of government in tourism development made the residents of Jiuzhaigou pay considerable attention to the economic, cultural, and social benefits of tourism development. According to Doxey's attitude evolution theory,

residents are enthusiastic about tourism development and show no indifference, boredom, or hate.

With the increasing integration and effective participation of residents in the overall tourism development, the hospitality, sense of place, and development expectations of residents, as well as the positive and negative effects on tourism development, directly influence the development of tourist destinations. Future studies should explain how a sense of place and development expectations change with the development of tourist destinations. The case study of Jiuzhaigou demonstrates that sense of place, development expectation, and impact perception are closely related to residents, the main factor for tourist destinations. The theoretical model of "sense of place–development expectation–impact perception" has important application value. The research results provide suitable guidance for developing tourist destinations, especially of natural scenic spots.

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