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Study on the Sustainable Ability of Rural Tourism in Guilin City

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Abstract: Guilin, a world famous tourism city with marvelous water and hills, attracts a large amount of tourists from both domestic and overseas every year based on her excellent natural landscapes. The total amount of tourists visited Guilin in 2012 was 32.926 millions, among those 1.824 millions were overseas. There are large scales of rural areas around Guilin city. They are rich in rural tourism resources. It is significant to develop rural tourism in Guilin, because it can enrich the items of Guilin tourism, it can lighten the burden of tourists to Lijiang River Tourist Attraction in Guilin, it can help the local people to earn more money and to promote Guilin tour industry to a higher position. Using the Delphi method and the analytical hierarchy process, the sustainable ability of Guilin rural tourism is studied in this paper by setting a set of 20 indicators with four dimensions after three rounds of discussions by the panel members. The result shows that the sustainable ability of rural tourism in Guilin district is 84.244% at present, which is on the “almost sustainable development” level. According to the factors that affect the sustainable development of Guilin rural tourism, the author announced some countermeasures to promote Guilin rural tourism development, such as to make a total rural tourism plan for its development, to exploit rural tourism products in diversity, to improve and perfect the administrating system, to improve the environmental sanitations in rural areas and to pay more attentions to educate and to train the people who are engaged in rural tourism service and management.

Key words: Rural tourism; sustainable ability for development, guilin city, china

INTRODUCTION

Located in southern part of China, Guilin is a mountainous place with many marvelous hills. There are also many national parks and national natural preserved fields in Guilin district, for example, the Mao'er Mountain National Natural Preserved Area, the Zhiyuan-Bajiaozhai National Geological Park and the Longsheng Hot-spring National Forest Park, etc. There are varied topographies and various landscapes in Guilin. In fact, she has a large scale of areas of primitive forest, a lot of mountains and canyons and many famous streams, rivers and waterfalls. Specially, there are many rice terraces in mountains which are rare all over the world. Guilin has the typical natural hill-and-water landscapes in China with her typical karst topography and Lijiang River landscapes, which is admired as “green mountains, elegant waters, marvelous caves and beautiful stones”. Being in sub-tropical area, Guilin has higher temperature and much rain. The annual average temperature is 19.1°. The annual average rainfall is 1,627 mm. The annual average relative humidity is 80%. There is biodiversity in Guilin district (Xiao and Su, 2008).

Being China's historical and cultural city, China's excellent tourism city and one of China's most charming

cities in China, Guilin is also one of the best tourism destinations in China recommended by the World Tourism Organization. The area of Guilin district is 27,809km², with six city districts, 11 counties, 133 towns and 1,652 villages. The total population is 4.98 millions, among which 3.76 millions is engaged in agriculture, i.e., 75.50% of the people is engaged in agriculture. More than 90% of the areas are countryside. There are more than ten minorities living in Guilin district. So the characteristics of Guilin district are: ①with a lot of country and farmland; ②full of rich minority customs; ③with developed eco-agriculture; ④with many marvelous country landscapes.

Guilin is rich in tourism resources. Several kinds of tourism products, among which are natural hills-and-water tourism, historical and cultural tourism, folk-custom tourism, leisure and vacation tourism, business and conference tourism, have been developed since 1973. The total amount of tourists visited Guilin 2012 was 32.926 millions, among which 1.824 millions were overseas (Li, 2012). Rural tourism has been developed to some extent in Guilin district, which became one of the ways to solve the problems in the countryside (Huang, 2011) Investigation shows that there still exist many problems in rural tourism development in Guilin at present, which affect the quick,

healthy and sustainable development of the rural tourism. Therefore, this article studies on the sustainable problems of Guilin rural tourism, so that the following three problems are hoped to be solved: ①the sustainable ability of Guilin rural tourism so far; ②the main factors that affect the sustainable development of Guilin rural tourism; ③the possible measures to make Guilin rural tourism sustainable.

RELATED STUDY

Rural tourism was originated in France in 1885. While modern rural tourism was originated in Spain in around 1960. It developed in a large scale in developed countries such as the countries in Europe and in America, even in Japan in Asian. Those countries already develop and manage rural tourism normatively (Huang, 2011). There exist many literatures on the study of sustainable rural tourism development (Lane, 1994; Aronsson, 1994; Zhou and Hung, 2004; Sharpley, 2007; Xiao and Song, 2010; Fons *et al.*, 2011; McAreavey and McDonagh, 2011). But there exist little literatures about the evaluation of sustainable rural tourism development. One related research is by Park and Yoon (2011) who used Delphi technique and the analytical hierarchy process method and developed indicators that measure sustainable rural tourism development within a sustainable framework in Korea. Some other relevant researches are: ①Luloff *et al.* (1994) assessed rural tourism efforts in the United States; ②Liu (2005) set up rural tourism comprehensive evaluation models through quantitative and qualitative studies on the types and characteristics of rural tourism resources and also studied the applications of the models taking Su Zhou City and Yue Xi City in Anhui Province for example; ③Briedenham and Butts (2006), studied on the application of Delphi technique to rural tourism project evaluation in America.

There exist many literatures on Guilin rural tourism development, but most of them were published only in recent years. The earliest research was found in 90 ages of the 20th centuries (Lin, 1999; Huang, 2001; Wang, 2004; Cheng and Mei, 2004; Chen *et al.*, 2006; Huang, 2009; Zhao, 2009; Xie and Zhou, 2009; Qin, 2010; Deng and Su, 2011).

Through the above literatures about Guilin rural tourism we know that most of the researches are related to the micro fields of Guilin rural tourism, such as present status, existing problems and the countermeasures. Most of the researches are qualitative analysis and quantitative analysis is seldom. No literatures that study on the evaluation of sustainable ability of Guilin rural tourism development in quantitative analysis were found. Therefore, setting sustainable development of Guilin rural tourism as the target, using the Delphi method and the

analytical hierarchy process, this article studied on the sustainable ability of Guilin rural tourism development by setting a set of 20 indicators with four dimensions. The authors hope that some useful countermeasures and proposals can be tabled to sustainable Guilin rural tourism development.

THE METHODOLOGY

Using the Delphi Method and the Analytical Hierarchy

Process: The Delphi method has been in use over the last thirty years as a method that systematically combines “expert knowledge and opinion to arrive at an informed group consensus on a complex problem” (Donohoe and Needham, 2009). The method is structured to be a reflexive alternative to focus group interviews and other similar approaches. The Analytical Hierarchy Process (AHP) has also been used for at least thirty years in multiple-criteria decision-making and is a common application for performance evaluation (Hsieh *et al.*, 2008). AHP, a method combining qualitative analyses with quantitative analyses, is also widely used in tourism planning and tourism destination choice (Hsu *et al.*, 2009). It facilitates an approach to understanding decision factors and their relative weight or importance and is useful when used to evaluate expert decision-makers’ expressed preferences or opinions.

This study used both the Delphi method and the AHP method to identify important factors and their qualitative and quantitative bearing on indicators for evaluating sustainable rural tourism development in Guilin, China. The Delphi method has been used to survey major factors, to gather and categorize stakeholders’ attitudes and stated values concerning rural tourism and its effects. The AHP method has been utilized to evaluate top-down or expert-led perspectives on rural tourism sustainability and to define factors’ significance. The Delphi-AHP is applicable to a wide range of complex, multi-criteria decisions that require judgments about qualitative characteristics from a group of panels (Park and Yoon, 2011).

Data collection: As well as collecting correlative literatures by internet, we went to eleven counties in Guilin district to investigate present status of rural tourism development. Particularly, we went to the following eleven villages to get detailed information about their rural tourism development. They are: Gaozhai village in Xing’an county; Maozhoudao village and Liuchun village in Lingchuan county; Langshi village, xingping village and Fenglou village in Yangshuo county; Hongyan village in Gongcheng county; Heping village and Dazhai village in Longsheng county; Tianmen village in Zhiyuan county;

Wuxingchun village in Quanzhou county. In those villages, some 132 families have been visited at random to realize the status they took part in rural tourism; also some 256 questionnaires were sent to rural tourists in order to know their ideas about local rural tourism. Among the 256 questionnaires, 232 were taken back and the withdrawing rate is 90.62%. Moreover, some governors who were in charge of rural tourism development in the county governments and the town governments mentioned above were visited. Through the investigation, the firsthand data about Guilin rural tourism development have been got.

Construction of the indicator system: Most of the indicator systems for evaluating sustainable rural tourism development ability were set up within rural tourism, i.e., most of the indicators are about infrastructure, service and management of rural tourism (Park and Yoon, 2011; Li., 2004; Zhang, 2000), which narrow down the research scale. Stepping out from this restriction, the indicators in this study are set from outside tourism, including the conditions to develop rural tourism, the effect of rural tourism to local economy, to local society and culture and to local environment.

Based on the basic principle of AHP, the model for the evaluation of sustainable rural tourism development can be divided into three hierarchies. They are object hierarchy(O), code hierarchy(C) and action hierarchy(A). According to the principles of “overall considering”, “practicability” and “combining qualitative analyses with

quantitative analyses” (Liu, 2006), four dimensions such as conditions for rural tourism developing, effects of rural tourism to local economy, to local society and culture and to local environment were chosen as the code hierarchy. After three times of judging, 20 indicators have been chosen to compose the model of Guilin sustainable rural tourism development (Fig. 1).

Hierarchy analyzing model is a kind of hierarchy system composing of object hierarchy, code hierarchy and action hierarchy. Assuming that the relative weight of “n” dimensions to object hierarchy in code hierarchy is: $W(1) = [W_1^{(1)} \ W_2^{(1)} \ ... \ w_n^{(1)}]$, the relative weight of all indicators on action hierarchy to code hierarchy is: $W^{(2)} = [w_{11}^{(2)} \ w_{21}^{(2)} \ ... \ w_{nl}^{(2)}] (l=1, 2, ..., m)$, then the relative weight of “m” indicators on action hierarchy to object hierarchy is:

$$V_m^{(2)} = \sum_{j=1}^n w_j^{(1)} w_{mj}^{(2)}$$

and the corresponding complex weight is: $V^{(2)} = [V_1^{(2)} \ V_2^{(2)} \ ... \ V_m^{(2)}]$.

Object hierarchy: Taking the raising of Guilin sustainable rural tourism development ability as the general garget, the model was used to find out the current sustainable developing ability and the main effects that affect the sustainable developing ability of Guilin rural tourism, so that some corresponding strategies and countermeasures could be taken.

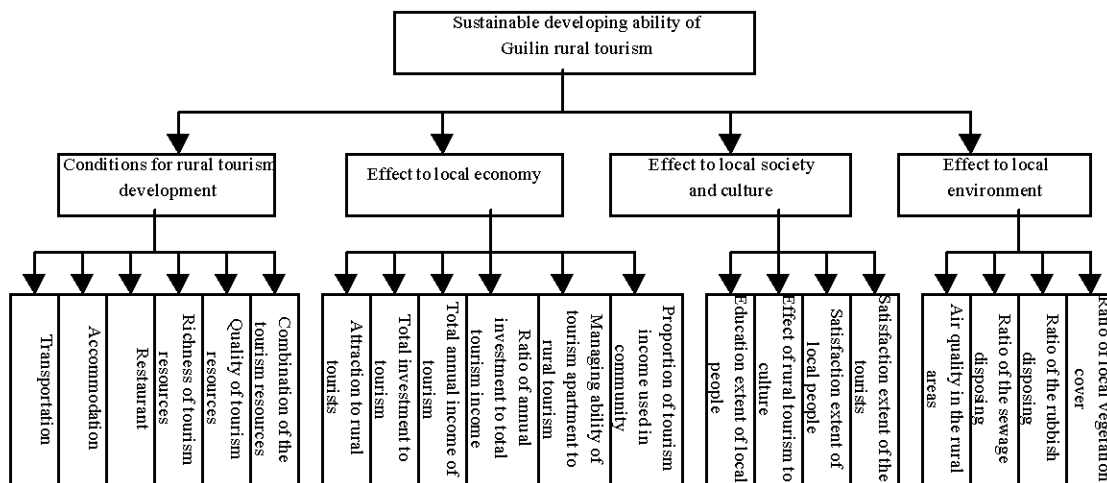


Fig. 1: Model of sustainable developing ability of Guilin rural tourism

Table 1: Indicator systems for the evaluation of Guilin sustainable rural tourism development

Object Hierarchy	Code Hierarchy	Action Hierarchy	Class of The Indicators	Points of The Indicators
Sustainable developing ability of Guilin rural tourism (O ₁)	Conditions for rural tourism development (C ₁)	Transportation conditions (A ₁)	Better	85
		Accommodation(A ₂)	Better	85
		Restaurant (A ₃)	Good	75
		Richness of the rural tourism resources (A ₄)	Excellent	95
		Quality of the tourism resources(A ₅)	Excellent	95
	The effect of tourism economy (C ₂)	Combination of the tourism resources (A ₆)	Better	85
		Attracting ability of the rural tourism(A ₇)	Excellent	95
		Total investment of the rural tourism(A ₈)	Common	65
		Total annual income of the rural tourism(A ₉)	Common	65
		Ratio of annual tourism investment to total tourism income of local people (A ₁₀)	Common	65
		Managing ability of tourism apartment to rural tourism development (A ₁₁)	Good	75
		Proportion of tourism income used in local community development (A ₁₂)	Better	85
		Education extent of local people(A ₁₃)	Good	75
		Effect of rural tourism to local traditional culture (A ₁₄)	Common	65
		Satisfaction extent of local residents (A ₁₅)	Better	85
	The effect of local society and culture (C ₃)	Satisfaction extent of the tourists(A ₁₆)	Better	85
		Air quality in the rural areas(A ₁₇)	Excellent	95
		Ratio of the sewage disposing (A ₁₈)	Good	75
		Ratio of the rubbish disposing (A ₁₉)	Common	65
		Ratio of local vegetation cover (A ₂₀)	Excellent	95

The correspondences of Class of the Indicators to Points of the Indicators are: excellent ≥95; better 94-85; good 84-75; common 74-65; worse ≤64

Table 2 The criterion for SRTDB

Extent of Sustainable development (%)	<50	50-70	71-85	>85
Criterion for the Sustainable Ability	Prepara-tion stage	Primary develop-ing stage	almost sustainable developing stage	sustainable developing stage

Code hierarchy: Some correlative literatures were referenced for the code hierarchy construction in this model^[12, 13]. Not only the basic conditions for rural tourism resources to be developed were considered but also the effect of rural tourism development to local economy, society and environment should be considered in the construction of code hierarchy, so that the sustainable ability of rural tourism development could be totally evaluated.

Action hierarchy: The general principles for the indicators to be chosen for action hierarchy are: ?typical representation; ?easy to be observed and measured; ?independent from each other and no relationship between indicators. According to these principles and also according to the possibility to get the data, by using the Delphi method, 20 indicators have been chosen to form the indicator system (Table 1).

Steps for analysis: The evaluation procedure of this study consists of several steps. First, we collected a series of evaluation indicators of Sustainable Rural Tourism Development Ability (SRTDB) from the literature related to rural tourism contexts, including sustainable rural tourism indicators used in Korea, UK and Sweden. Secondly, the Delphi technique was used to refine and identify the final indicators for SRTDB evaluation

according to the characteristics of our study case. Thirdly, the AHP method was applied to calculate the weight of each criterion after the evaluation criteria hierarchy was constructed (Table 1).

The evaluation of the SRTDB is a complex and comprehensive problem. Therefore, the solution requires the most inclusive and flexible method. Since the AHP is designed to systematize complicated problems, is easy to implement and integrates the opinion of multiple experts and stakeholders, it was selected to compute the weights for this study. In the main, the AHP weight was determined by the decision-makers, who conduct pairwise comparisons in order to reveal the relative importance of the criteria (Park and Yoon, 2011). In fact, some six experts were invited to do matrixes for the 20 indicators and then the mean scores were chosen for the 20 indicators. AHP analyzing software Yaahp 0.4.1 was used to count the weights and also the consistency check was done.

Criterion for the sustainable ability: According to related researches (Wang, 2001; Mei, 2011), the developing progress of sustainable rural tourism can be divided into four steps: 1) preparation step for sustainable rural tourism; 2) primary developing step for sustainable rural tourism; 3) almost sustainable rural tourism development step; 4) sustainable rural tourism development step (Table 2).

COUNTING RESULTS

Table 3 is the Judging matrix and complex weights of dimensions for SRTDB. Table 4 through 7 is the result of weight for different dimensions. Table 8 is the result of the consistency check. Table 9 is the complex weights for the evaluation (“ \bar{w} ” is the characteristic vector and “ w ” is the normative characteristic vector).

Table 3: Judging matrix and complex weights of dimensions for SRTDB

-	C ₁	C ₂	C ₃	C ₄	\bar{w}	w
C ₁	1.0000	2	3.0000	4.0000	2.2134	0.4961
C ₂	0.5000	1	0.5000	0.3333	0.5373	0.1204
C ₃	0.3333	2	1.0000	0.2000	0.6043	0.1354
C ₄	0.2500	2	3.0000	1.0000	1.1067	0.2481
-	-	-	-	-	4.4616	1.0000

Table 4: Judging matrix and complex weights for the dimension of rural tourism development conditions

C ₁	A ₁	A ₂	A ₃	A ₄	A ₅	A ₆	\bar{w}	w
A ₁	1.0000	3	2.0000	0.3333	0.2000	0.1429	0.6206	0.0698
A ₂	0.3333	1	0.5000	0.1429	0.2000	0.2000	0.3137	0.0353
A ₃	0.5000	2	1.0000	0.3333	0.2000	0.1429	0.4604	0.0518
A ₄	3.0000	5	3.0000	1.0000	0.3333	0.2000	1.2009	0.1351
A ₅	5.0000	7	5.0000	3.0000	1.0000	0.3333	2.3650	0.2661
A ₆	7.0000	5	7.0000	5.0000	3.0000	1.0000	3.9283	0.4419
-	-	-	-	-	-	-	8.8890	1.0000

Table 8 The result of consistency check

	Conditions for tourism development	Economic effect	Social and cultural effect	Environmental effect	Sustainable development
C.R	0.0721	0.0710	0.0431	0.0319	0.0944
Criterion	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000
Result	Passed	Passed	Passed	Passed	Passed

Table 9: The complex weights for the evaluation

	Dimension weights				Compound weights	Complex sustainable ability (%)	Ranking
	C ₁	C ₂	C ₃	C ₄			
	0.4961	0.1204	0.1354	0.2481			
A ₁	0.0698	-	-	-	0.0346	2.9434	10
A ₂	0.0353	-	-	-	0.0175	1.4885	15
A ₃	0.0518	-	-	-	0.0257	1.9273	14
A ₄	0.1351	-	-	-	0.0670	6.3672	4
A ₅	0.2661	-	-	-	0.1320	12.541	2
A ₆	0.4419	-	-	-	0.2192	18.634	1
A ₇	-	0.0668	-	-	0.0080	0.7641	18
A ₈	-	0.0460	-	-	0.0055	0.3600	20
A ₉	-	0.0964	-	-	0.0116	0.7544	19
A ₁₀	-	0.1513	-	-	0.0182	1.1841	16
A ₁₁	-	0.2377	-	-	0.0286	2.1464	12
A ₁₂	-	0.4018	-	-	0.0484	4.1120	5
A ₁₃	-	-	0.2000	-	0.0271	2.0310	13
A ₁₄	-	-	0.4000	-	0.0542	3.5204	7
A ₁₅	-	-	0.3000	-	0.0406	3.4527	8
A ₁₆	-	-	0.1000	-	0.0135	1.1509	17
A ₁₇	-	-	-	0.0986	0.0245	2.3240	11
A ₁₈	-	-	-	0.1658	0.0411	3.0851	9
A ₁₉	-	-	-	0.2527	0.0627	4.0752	6
A ₂₀	-	-	-	0.4829	0.1198	11.382	3
-	-	-	-	-	1	84.244	-

Table 5: Judging matrix and complex weights for the dimension of economic effect of rural tourism

C ₂	A ₇	A ₈	A ₉	A ₁₀	A ₁₁	A ₁₂	\bar{w}	w
A ₇	1.0000	2	0.5000	0.3333	0.3333	0.2000	0.5302	0.0668
A ₈	0.5000	1	0.3333	0.20000	0.5000	0.1429	0.3654	0.046
A ₉	2.0000	3	1.0000	0.3333	0.5000	0.2000	0.7647	0.0964
A ₁₀	3.0000	3	3.0000	1.0000	0.3333	0.3333	1.2009	0.1513
A ₁₁	3.0000	5	2.0000	3.0000	1.0000	0.5000	1.886	0.2377
A ₁₂	5.0000	7	5.0000	3.0000	2.0000	1.000	3.1881	0.4018
-	-	-	-	-	-	-	7.9354	1.0000

Table 6: Judging matrix and complex weights for the dimension of society and culture effect of rural tourism

C ₃	A ₁₃	A ₁₄	A ₁₅	A ₁₆	\bar{w}	w
A ₁₃	1.0000	0.5000	0.6667	2	0.9037	0.2000
A ₁₄	2.0000	1.0000	1.3333	4	1.8072	0.4000
A ₁₅	1.5000	0.7500	1.0000	3	1.3554	0.3000
A ₁₆	0.5000	0.2500	0.3333	1	0.4517	0.1000
-	-	-	-	-	4.5180	1.0000

Table 7: Judging matrix and complex weights for the dimension of environmental effect of rural tourism

C ₄	A ₁₇	A ₁₈	A ₁₉	A ₂₀	\bar{w}	w
A ₁₇	1	0.5000	0.3333	0.2500	0.4518	0.0986
A ₁₈	2	1.0000	0.5000	0.3333	0.7598	0.1658
A ₁₉	3	3.0000	1.0000	0.2000	1.1583	0.2527
A ₂₀	4	3.0000	2.0000	1.0000	2.2134	0.4829
-	-	-	-	-	4.5833	1.0000

CONCLUSION AND DISCUSSION

Conclusion

Conclusion one: According to the above counting, the extent of SRTDB in Guilin district is 84.244%. Compared with the criterion in Table 2, the rural tourism development in this district at present is in the position of “almost sustainable developing stage”.

For deep analyzing, in the code hierarchy, the weight of “conditions for rural tourism development” is 0.4961, which takes the first ranking. It means that “conditions for rural tourism development” is the main factor to affect Guilin sustainable rural tourism development. The weight of “Environmental effect” is 0.2481, which takes the second ranking. This means that environment is also an important factor in Guilin rural tourism development. In the action hierarchy, the weight of “combination of the tourism resources” is 0.2192, which takes the first ranking. It means that excellent combination of the tourism resources is vital for sustainable rural tourism development in Guilin district. The weight of “quality of the tourism resources” is 0.1320, which takes the second ranking. It means that “quality of the tourism resources” is also a very important factor to affect sustainable rural tourism development.

Conclusion two: To analyze from the complex weights, the top ten factors that affect Guilin SRTDB are: 1) combination of the tourism resources; 2) quality of the tourism resources; 3) rural environmental sanitation; 4) richness of the rural tourism resources; 5) proportion of tourism income used in local community development; 6) ratio of the rubbish disposing; 7) effect of rural tourism to local traditional culture; 8) satisfaction extent of local residents; 9) ratio of the sewage disposing; 10) transportation conditions.

Conclusion three: The main problems existing in Guilin sustainable rural tourism development are: 1) The lack of a total advanced rural tourism plan causes the result that the rural tourism products are reproduced and lack of local characteristics in the district; 2) The infrastructure is not good enough for rural tourism development and one of the important reasons is the lack of investment to rural tourism; 3) The environmental sanitation is not good enough in most rural areas in Guilin district and a better environment conservation needed; 4) The service and management level need to be raised and the cultural quality and service techniques of the practitioners need to be enhanced; 5) The administration for rural tourism is not standard and the supervision to rural tourism industry needs to be enhanced.

DISCUSSION

No matter from above counting and analysis or from our investigation, we realized that there still exist many problems that hinder Guilin SRTDA. The following measures should be made for the sustainable rural tourism development.

Make an overall and advanced plan: An overall and advanced plan is one of the vital measures for Guilin sustainable rural tourism development. The ideas of “conservation in developing” and “sustainable development” should be included in the plan. All the natural, economic and social factors should be considered and integrated and all the natural and human rural tourism resources should be used in the plan. Otherwise, two relationships should be well dealt with: 1) the relationship of rural tourism development and the conservation of local environment; 2) the relationship of the rural tourism development and the development of Guilin Lijiang River Tourist Attraction. There are also “two combinations” should be considered: 1) the combination of rural tourism development and the modern socialism country construction; 2) the combination of rural tourism development and the income-raising of the local people.

To develop different rural tourism products: To make Guilin rural tourism sustainable, it is vital that to develop different rural tourism products different from Guilin traditional tourism products, particularly form the products of Guilin Lijiang River Tourst Attraction. It is also necessary for the rural tourism products and the traditional tourism products to make up from each other. Concretely, all the rural tourism resources should be dredged up and be integrated to make different rural tourism products in Guilin district. It is also necessary to make a series of special rural tourism towns, to make rural tourism products broad in scale and to make out some famous rural tourism brands. Moreover, leisure and vacation rural tourism products should be pay great attention to, which would be the beneficial reparation for Guilin city tourism and for Lijiang River Tourist Attraction.

To perfect the supervision system for rural tourism: The present administration for Guilin rural tourism is not standard and perfect. Here are some of the phenomena: 1) lack of planning in management; 2) lack of integration in marketing; 3) lack of effective measures in supervision; 4) lack of professional techniques in guidance. Thus a great attention should be paid to perfect the supervision system for rural tourism marketing. Firstly, the leadership

to rural tourism development should be enhanced. Rural tourism development should be listed in the important tasks for local city and county governments. Secondly, the related policies should be followed in rural tourism development. Thirdly, the supervision to rural tourism developer should be enhanced so that destructive and repetitive development could be overcome. Lastly, the management to rural tourism tourists should also be strengthened so that civilized rural tourism style could be formed.

To improve the infrastructure for rural tourism: The infrastructure in Guilin city is pretty good, but it is bad in some of the country areas so far, which would affect the sustainable rural tourism development greatly. So some effective measures should be taken to improve the status. First of all, the city and county governments should pay great attention to the rural tourism development. They should combine the rural tourism development with the construction of modern socialism countryside and try to gain more investment to the infrastructure for rural tourism. Secondly, all the residents in the country should change their bad living habit and take care of their sanitation by making “country contracts of environmental sanitation”. Lastly, some big and excellent companies should be absorbed to invest to the rural tourism development using the chance that Guilin city has been determined to be “the national test area for complex tourism innovation”.

To train the practitioner for rural tourism: Most of the rural tourism service and administration level is not good enough in Guilin rural tourism spots nowadays and the cultural quality and service techniques of the practitioner need to be enhanced greatly. For one way, the leaders and staff in the city and county governments should learn some knowledge about rural tourism service and management themselves, so that they can guide the local people to do their jobs well. For the second way, some teachers from colleges and universities should be invited to give lessons to local people to increase their service and managing techniques. For the third way, some of the practitioners should be selected to study in colleges or universities to be better trained. For the fourth way, graduates majored in tourism management be accepted to work in the villages or in rural tourism spots. Generally speaking, talent people are one of the key factors for Guilin rural tourism to be sustainable. The city and county governments should pay great attention to it.

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REFERENCES

- Aronsson, L., 1994. Sustainable tourism systems: The example of sustainable rural tourism in Sweden. *J. Sustainable Tourism*, 2: 77-92.
- Briedenhann, J. and S. Butts, 2006. Application of the Delphi Technique to rural tourism project evaluation. *Curr. Issues Tourism*, 9: 171-190.
- Chen, N., Y. Liao and Y. Hu, 2006. Research on the problems and countermeasures of Guilin rural tourism development. *J. Educ. Sci. Res.*, 10: 39-40.
- Cheng, D. and H. Mei, 2004. Study on the patterns of agriculture tourism in Guilin suburb. *J. Guangxi Social Sci.*, 12: 177-179.
- Deng, H. and W. Su, 2011. Study on the food, beverage and accommodation in rural tourism in Yangshuo County, Guangxi, China. *J. Regional Econ. Ind. Econ.*, 50: 7-8.
- Donohoe, H.M. and R.D. Needham, 2009. Moving best practice forward: Delphi characteristics, advantages, potential problems and solutions. *Int. J. Tourism Res.*, 11: 415-437.
- Fons, M.V.S., J.A.M. Fierro and M. Gomez y Patino, 2011. Rural tourism: A sustainable alternative. *Applied Energy*, 88: 551-557.
- Hsieh, L.F., L.H. Lin and Y.Y. Lin, 2008. A service quality measurement architecture for hot spring hotels in Taiwan. *Tourism Manag.*, 29: 429-438.
- Hsu, T.K., Y.F. Tsai and H.H. Wu, 2009. The preference analysis for tourist choice of destination: A case study of Taiwan. *Tourism Manage.*, 30: 288-297.
- Huang, H., 2011. Research on the patterns of rural tourism in developed countries and areas. *J. HLJ Foreign Econ. Relations Trade*, 6: 112-114.
- Huang, J., 2001. Study and practice on rural tourism. Master's Thesis, Central South University of Forestry and Technology, Hunan, China.
- Huang, S., 2009. Present status and countermeasures of Guilin rural tourism development. *J. Anhui Agric. Sci.*, 37: 8260-8261.
- Lane, B., 1994. Sustainable rural tourism strategies: A tool for development and conservation. *J. Sustainable Tourism*, 2: 102-111.

- Li, T., 2004. Study on the Sustainable Tourism of China. Publishing Company of Nankai University, China.
- Li, Z., 2012. Annual working report of Guilin city government in 2011. Guilin City Government, China.
- Lin, B., 1999. Thinking about the development of Guilin rural tourism. *J. Social Scientists*, 4: 75-77.
- Liu, Q.Y., 2005. On rural tourism comprehensive evaluation models and their applications. *J. Nanjing Agric. Univ. (Social Sci. Edn.)*, 4: 56-60.
- Liu, Y., 2006. Study on the sustainable indicators and comprehensive evaluation system of tourism industry. *J. Front Econ.*, 6: 39-42.
- Luloff, A.E., J.C. Bridger, A.R. Graefe, M. Saylor, K. Martin and R. Gitelson, 1994. Assessing rural tourism efforts in the United States. *Ann. Tourism Res.*, 21: 46-64.
- McAraevey, R. and J. McDonagh, 2011. Sustainable rural tourism: Lessons for rural development. *Sociologia Ruralis*, 51: 175-194.
- Mei, L., 2011. Study on sustainable tourism development of Shandong province based on the analytical hierarchy process. *J. JiNing Coll.*, 3: 100-103.
- Park, D.B. and Y.S. Yoon, 2011. Developing sustainable rural tourism evaluation indicators. *Int. J. Tourism Res.*, 13: 401-415.
- Qin, Y., 2010. Study on sustainable tourism in Guilin City and its periphery in present situation. *J. Guilin Normal Coll.*, 9: 58-61.
- Sharpley, R., 2007. Flagship attractions and sustainable rural tourism development: The case of the Alnwick Garden, England. *J. Sustainable Tourism*, 15: 125-143.
- Wang, L., 2001. Study on the indicators and methods of evaluation to sustainable tourism development. *J. Tourism*, 16: 67-70.
- Wang, L., 2004. Study on the development of China suburb tourism. Master's Thesis, Guangxi Normal University, Guangxi, China.
- Xiao, M. and W. Su, 2008. Study on the status and conservation countermeasures of biodiversity in tourist attractions in Lijiang River basin. *J. Ecol. Econ.*, 4: 153-157.
- Xiao, X. and P. Song, 2010. The discussion on the interaction and integration of modern agriculture and rural tourism sustainable development. *Asian Agric. Res.*, 2: 49-52.
- Xie, M. and M. Zhou, 2009. Study on the exploiting and utilizing of information techniques in Guilin rural tourism. *J. Sci-Tech Inform. Dev. Econ.*, 19: 60-62.
- Zhang, L., 2000. Discussing about some problems on the function and policies of tourism industry to regional economy. *J. Tourism*, 1: 10-14.
- Zhao, J., 2009. SWOT analysis and countermeasures of Guilin rural tourism development. *J. Tech. Marketing*, 5: 87-88.
- Zhou, L.Q. and Z.H. Hung, 2004. Sustainable development of rural tourism in China: Challenges and policies. *Econ. Geogr.*, 4: 572-572.