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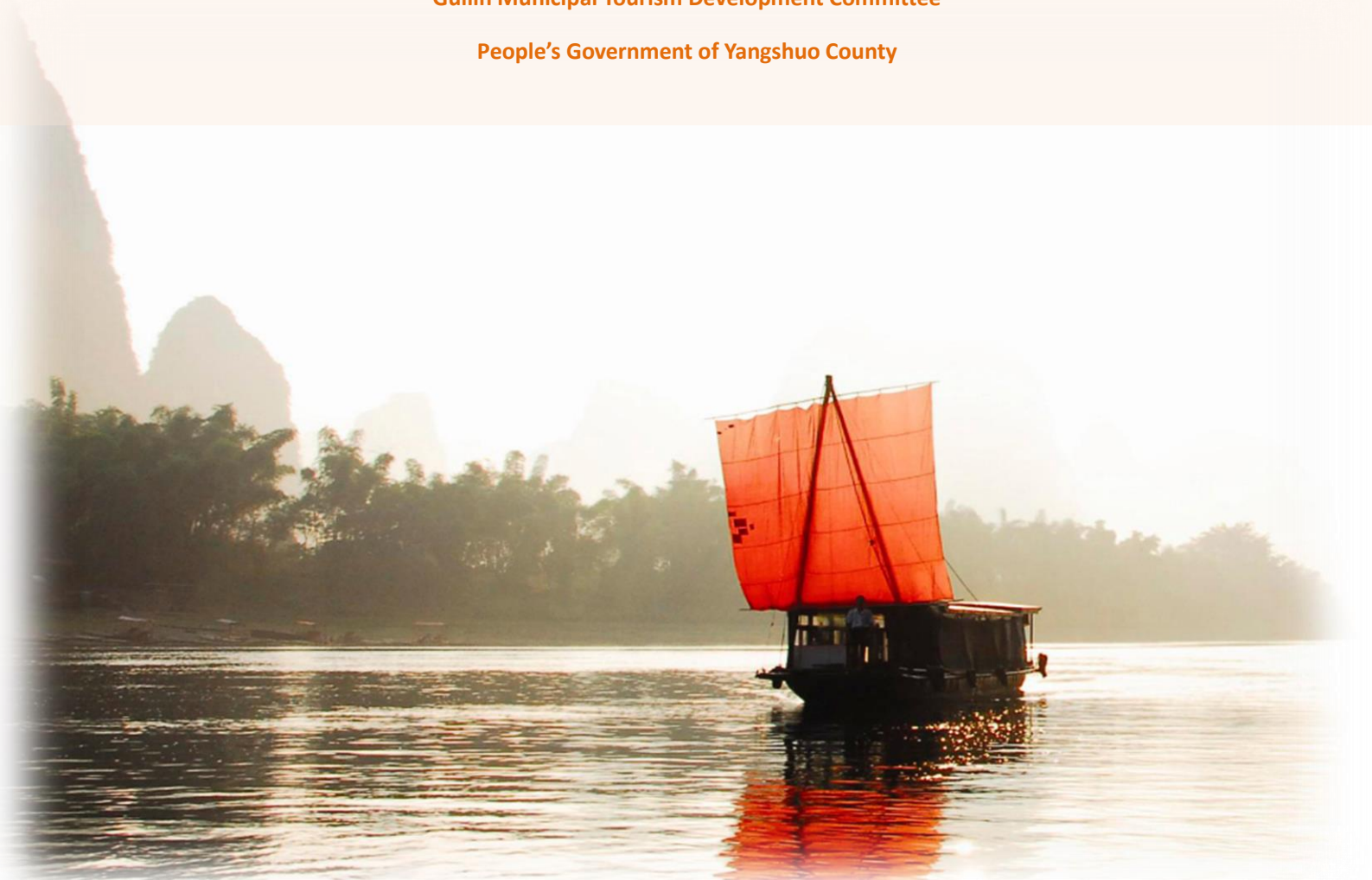
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2017 Monitoring Report on the Sustainable Tourism Development of Yangshuo

Monitoring Centre for UNWTO Sustainable Tourism Observatories

Guilin Municipal Tourism Development Committee

People's Government of Yangshuo County



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Acknowledgement:

People's Government of Guilin City, Guilin Tourism Development Committee, People's Government of Yangshuo County, Yangshuo County Tourism Bureau, Statistical Bureau of Yangshuo County, Industrial and Commercial Bureau of Yangshuo County, Quality Inspection Bureau of Yangshuo County, Human Resources and Social Security Bureau of Yangshuo County, Land Resources Bureau of Yangshuo County, Investment Promotion Bureau of Yangshuo County, Public Security Bureau of Yangshuo County, Meteorological Bureau of Yangshuo County, Local Taxation Bureau of Yangshuo County, Environmental Protection Bureau of Yangshuo County, Hydroelectric Board of Yangshuo County, Price Bureau of Yangshuo County, Transportation Bureau of Yangshuo County, Culture and Sports Bureau of Yangshuo County, Construction and Planning Bureau of Yangshuo County, Center for Disease Control and Prevention of Yangshuo County, Employment Service Center of Yangshuo County, Literary Federation of Yangshuo County, Rosewood Chain Stores, Yangshuo Outside Inn, Lisa Hotel, Snow Lion Riverside Resort, Mango Villa, Country Garden Hotel, Loushi Boutique Inn, Riverview Hotel, Secret Garden Inn, Riverside Retreat hotel, Yunzhihui Bo'ai Health Boutique Inn, Banyan Tree Yangshuo, XY YunHouse, Master Beer Fish Restaurant, Ms. Xie Beer Fish Restaurant.

And all those who helped with the monitoring work.

1. Foreword

1.1 The origin of the monitoring

In 2004, Guilin signed a cooperation agreement with the World Tourism Organization to put tourism data of Yangshuo into the "World Tourism Organization (2012), Indicators of Sustainable Development Tourism Destination - A Guidebook, UNWTO, Madrid). On July 26, 2005, the world's first sustainable tourism observatory was formally established in Yangshuo and an inauguration ceremony was held in October 2009, marking the start of Yangshuo's long-term sustainable tourism monitoring. In September 2010, the United Nations World Tourism Organization signed a cooperation agreement with Sun Yat-sen University to establish UNWTO MCSTO, which is responsible for the management and monitoring of sustainable tourism observatories in China and even the Asia-Pacific region in the future to ensure the continuous, comprehensive and effective monitoring work. This marked the formal completion of the physical establishment of the monitoring center and marked that the cooperation between Sun Yat-sen University and UNWTO in promoting the sustainable development of global tourism has entered into a substantive phase. Since August 2006, the Tourism Development and Planning Research Center of Sun Yat-sen University has successfully completed the monitoring of the sustainable development of tourism in Yangshuo from 2006 to 2016 according to the indicators and methods of the World Tourism Organization's GOST project. MCSTO pays special attention to the indicators of tourism's impacts on Yangshuo's natural resources, ecological environment, social culture and the like. In addition, it also analyses the development conditions of Yangshuo's tourism industry, timely spotting the existing problems of tourism development and taking according corrections and strategies. MCSTO's efforts have been fully recognized by UNWTO and have promoted the sustainable tourism development of Yangshuo and all other tourism destinations.

1.2 Monitoring process

The monitoring period is from July 10 to July 18, 2017. The team consisted of 21 members, including 1 teacher from the Tourism Development and Planning Research Center of Sun Yat-sen University, 4 PhD students, 3 master students and 13 undergraduates. The monitoring team

conducted on-the-spot visits to West Street and Ten-mile Gallery (Moon Hill and Banyan Tree), Yulong River, Xanadu, Xingping Ancient Town and carried out a questionnaire survey among Chinese and foreign tourists, community residents, small business owners and employees. In total, 1017 tourist questionnaires were distributed. 781 questionnaires were sent out for domestic tourists with 773 questionnaires returned, resulting in a valid rate of 98.97%; 236 questionnaires were for foreign visitor questionnaires, of which 232 were valid, resulting in a valid rate of 98.3%; 507 were for residents questionnaire, including 504 valid questionnaires, the effective rate was 99.41%; 177 questionnaires were for staff with 176 valid ones, and the valid questionnaire rate was 99.44%; 75 copies of the questionnaire were for small business owners and 74 valid ones were returned, resulting in a valid rate of 98.67%. In addition, the monitoring team conducted census of more 2230 shops along 27 main and secondary arterial roads in Yangshuo County, recording and analyzing the changes of its business operations. This monitoring also added a special survey of Yangshuo's catering, and the research object was the famous specialty, beer fish. 176 valid questionnaires were issued, and in-depth interviews with the beer fish restaurant operators were conducted.

The monitoring team completed the 2017 Monitoring Report on the Sustainable Tourism Development of Yangshuo, referring to the contents and indicators of *Indicators of Sustainable Development for Tourism Destinations: A Guidebook*, and based on a comprehensive analysis of field investigation data, interview materials, questionnaire data and second-hand materials. The report can be divided into two parts: general report and special report. The general report includes: tourism and community, tourist satisfaction, health and safety, tourism planning and control, tourism economic benefits, tourism and resources and environmental protection, tourism products and services. The special report is about Yangshuo's catering.

2. Tourism and Community

The 2017 monitoring conducted a simple random sampling within the Yangshuo county and conducted a sampling questionnaire survey with local residents. In total, 504 questionnaires were sent out for residents with 504 valid ones returned, achieving a valid rate of 99.41%. The questionnaires were distributed in several specific sites, including: West Street within Yangshuo

county, Yitian West Street, Shenshan Road, Longyue Road, Diecui Road, Pantao Street, Jiangjun Road and Yangshuo Park, as well as their surrounding scenic spots, such as Yulong River, Banyan Tree, Heavenly Land and Xingping Ancient Town. The gender ratio of survey population was similar to previous years, with male to female ratio of 1:2, accounting for 34.7% and 65.3% respectively. The age distribution mainly concentrated in 15-44 years old, accounting for 90.1%. Among them, residents aged 15-24 accounted for 52.2%; residents aged 25-44 accounted for 37.9%; residents aged 45-60 accounted for 5.4%; while residents under 15 and those over 60 years only accounted for 9.9%. In terms of education level, nearly half of the respondents were with high school or junior technical secondary school degree (45.8%). Residents with junior middle school degree, bachelor degree or junior college degree all accounted for 25% respectively. Most residents would not learn English during spare time (64.7%). In terms of incomes, 45.6% of the respondents earned 2001-3000 yuan monthly; 28% of them had a monthly income of less than 2000 yuan; and 26.4% of them had a monthly income of more than 3000 yuan. In addition, 79.2% of the respondents had lived in Yangshuo for over 10 years, which indicated that most resident questionnaire were quite representative.

2.1 Indicator analysis

(1) Resident's general perception and evaluation of tourism development

Most residents think that the tourism industry is good for local development and thinks that they can profit from it. At the same time, residents are satisfied with and supportive of the local tourism development. Compared with 2016 data, residents' general evaluation of tourism development is better in 2017, especially their evaluation of local tourism development. Inferred from interviews with residents, most residents think that they can benefit from tourism. Meanwhile, we also learn from the interviews that affected by the storm and flood in July, the number of tourists to Yangshuo had a significant decrease compared with previous years. In addition, due to intense competition in similar services, many residents engaging in the tourism business confessed that "2017's business is even more difficult to run". Besides that, some residents also mention the commercialization of scenic spots, such as West Street, which has more or less negative impacts on the attractiveness of Yangshuo's tourist destination. As a result of that, Yangshuo countryside farmhouse or Yunnan,

Guizhou and other destinations are more attractive to tourists, especially foreign tourists.

(2) Resident's perception of impacts on tourism environment

More than half of the residents think that tourism development has brought more serious air, water, noise and waste gas pollution to the local environment and the traffic becomes more crowded. In addition, residents generally think that tourist number has increased dramatically in recent years, which is the main cause to the deteriorating environment quality. On the whole, residents' negative perception of the impact on the tourism environment is more prominent. Except for the decreasing living quality associated with environment, residents also worry that the deteriorating environment would affect the attractiveness of Yangshuo and as a result the number of tourists would drop and the tourism income would decrease.

(3) tourism participation

In terms of the distribution of respondents' occupations, residents' participation in the tourism industry is not very high. Tourism-related occupations are concentrated in catering, tourism store, tour guides, hotel industry workers and self-employed (mainly for tourists) etc., the technical content of work is not high, there is still much room for improvement. On the other hand, residents have little access to government's policy information, and thus it is hard for them to convey their opinions and suggestions. Most residents think that they do not receive enough assistance from community or government while participating in tourism activities. Compared with 2016 data, residents still remain their enthusiasm of participating in tourism, but their participation capability and access are still limited and remain to be improved. On the whole, though residents show relatively high participation willingness, they cannot participate deeply in the tourism industry. However, in contradistinction to the high willingness to participate, residents' suggestions and decision-making power to participate in decision-making are inadequate. Residents still have a big obstacle in obtaining information on policy guidelines. Improving residents' accessibility and capability to participate in tourism remain to be the goal of the community and government, which calls for continuous hard work.

3. Tourist Satisfaction

During the monitoring period, the monitoring team conducted a survey on domestic and foreign tourists at all major tourist destinations in Yangshuo County and places where visitors are more concentrated. A total of 1017 questionnaires were sent out. Among them, 781 questionnaires were for domestic tourists, and 773 valid ones were returned, achieving an effective rate of 98.97%; 236 questionnaires were for foreign tourists, and 232 valid ones were returned, achieving an effective rate of 98.3%.

3.1 Tourist behavior characteristics

In terms of the travel style, both Chinese and foreign tourists are enthusiastic about self-help travel. Compared with 2016, the proportion of independent tourists shows a rising trend. Correspondingly, the proportion of group tourists who join individually or join with relatives and friends, as well as those who are travel with organizations or for conference investigation has shown a declining trend as a whole. In order to meet the needs of independent tourism development, Yangshuo should devote more efforts to the planning of tourism routes and should provide tourists with comprehensive and detailed travel information.

In terms of tourism information, both Chinese and foreign tourists have two major ways to gather tourism information: Internet and recommendation of relatives and friends. Newspapers, television broadcast and tourism guidebooks are playing less and less part in spreading tourism information. As a result, when Yangshuo is promoting its tourism image, it should pay more attention to Internet promotion and word-of-mouth promotion. Meanwhile, since Chinese and foreign tourists have different information requests and preferences, Yangshuo should provide tailored tourism information for different tourists.

In terms of tourism motivation, Chinese tourists have similar tourism motivations, such as: sightseeing tour, leisure vacation and local cuisine tasting tour. Contrarily, foreign tourists have diversified motivations, including: sightseeing tour, leisure vacation, local cuisine tasting tour, adventure tour and photography tour. Therefore, based on tourists' different tourism motivations, Yangshuo can design different tourism products to attraction different types of tourists.

In terms of transportation, all tourists have various ways of transportation, but Chinese and

foreign tourists show different preferences. Chinese tourists arrived in Yangshuo mainly by train and coach, and they mainly choose walking and self-driving while traveling in Yangshuo. Differently, foreign tourists arrived in Yangshuo mainly by train, plane and coach, and they mainly choose cycling and walking while traveling in Yangshuo. Comparatively, foreign tourists' means of transportation are more environmentally-friendly and healthy.

In terms of length of stay, both Chinese and foreign tourists stay for short period. Compared with last year, in 2017, tourists stay for longer time in Yangshuo, and more foreign tourists are willing to stay long in Yangshuo.

In terms of accommodation facilities, Chinese tourists mainly choose family hotels and star hotels while foreign tourists prefer to choose youth hotels, which shows contrary preferences. In addition, on the whole, both Chinese and foreign tourists show diversified preferences of accommodations.

In terms of consumption level, Chinese and foreign tourists have a lower level of spending in Yangshuo, but the overall trend shows an upward trend. Domestic tourists spend more than foreign tourists.

3.2 Tourist satisfaction level

In terms of tourism resources, both Chinese and foreign tourists speak highly of Yangshuo's natural landscape and cultural landscape, but they had low evaluation on the water quality. In particular, foreign tourists have an overall low evaluation on Yangshuo's water quality. Therefore, on the basis of protecting the existing landscape, Yangshuo should devote more efforts to improving water quality. In addition, Yangshuo should pay close attention to water pollution or water quality degradation.

In the aspect of tourism service, "tourists' evaluations of tourism services vary, and Chinese and foreign tourists shows differences". Tourists mainly pointed out the following problems of tourism services: (1) the efficiency of complaint handling is not high and tourism toilets need improvement; (2) Chinese and foreign tourists have different consumption level, and some tourists reflect that there

exists problems of unreasonable catering prices and price cheating; (3) The traffic signing system needs to be more clear and perfect; (4) The evaluation of accommodation service is higher, and foreign tourists have higher evaluation than domestic tourists; (5) Chinese tourists concerned about the similarity of commodities, and foreign tourists expects more diversified and colorful entertainment activities.

In terms of tourism environment, Chinese and foreign tourists have different perceptions. Due to the large number of tourists, scenic areas become very crowded. Foreign tourists have low evaluation of the crowdedness. On the other hand, Chinese tourists have more obvious perception of commercialization, and foreign tourists are more tolerant about the commercialization of Yangshuo than Chinese tourists.

In terms of folk customs experience, foreign tourists' evaluation is significantly lower than Chinese tourists, which to a certain extent reveals the problem that Yangshuo has little ethnic minority experience activity and thus it is hard for tourists to experience the unique folk customs and cultures.

In terms of satisfaction and willingness to revisit, the satisfaction of foreign tourists is higher than that of domestic tourists, and more foreign tourists confess that their Yangshuo tour is better than what they have expected, and thus they are more willing to recommend Yangshuo to their relatives and friends. However, at the same time, Chinese and foreign tourists differ in their willingness to revisit Yangshuo. Although foreign tourists have higher satisfaction level and willingness to make recommendation, their willingness to revisit is lower than that of domestic tourists. The reason for it may be the distance limitation and geographical restrictions.

3.3 Tourist compliant handling condition

Yangshuo tourist complaints mainly concentrate in five aspects: tourism promotion, tour guides, prices, deception, service attitude and level. According to the previous data of complaint and the handling results, except for the high index of 2014, from 2011 to the first half of 2015, the number of

effective complaints remained stable, but the volume of economic loss retrieved for tourists has declined, which to some extent indicates that volume of argument-associated economic loss has declined. Even so, market monitoring remains to be strengthened so as to protect tourists' rights and interests, and to reduce unnecessary complaints and arguments.

4. Health and Safety

At present, Yangshuo's health and safety conditions are above average. Most tourists are satisfied with Yangshuo's food safety, accommodation safety and public security conditions. However, foreign tourists have lower satisfaction towards these indicators than Chinese tourists, which indicates that Yangshuo government should pay more attention to foreign tourists' health and safety conditions in Yangshuo.

Among the indicators of resident perception, residents are not very satisfied with local environment pollution problems and hygiene conditions, which indicates that Yangshuo should lay more emphasis on environment remediation. Contrarily, residents relatively satisfied with local security and medical conditions. In addition, government departments make remarkable efforts on improving food and water safety, environmental hygiene conditions, medical conditions and security conditions, which effectively guarantees the health and safety of Yangshuo residents and tourists and thus establishes good and comfortable living and travelling environment.

5. Tourism Planning and Control

Tourism resources planning and control are important components of tourism development plan as well as important strategies to guarantee tourism industry's continuous, stable and coordinated development.

(1) Maintaining the original focus of tourism resources planning and control, and effectively coping with the problem of excessive concentration of people

At present, Yangshuo tourism development still needs to concentrate on its unique natural tourism resources, trying its best to avoid natural resources destruction and over-exploitation. In

addition, Yangshuo should satisfy Chinese and foreign tourists' different requests. For Chinese tourists, Yangshuo should strengthen the exploitation and development of customs and cultures. For foreign tourists, Yangshuo should maintain the originality and authenticity of communities, and thus focus on the development of community tourism. With the development of tourism, the number of Yangshuo tourists has increased year by year. In addition to tourist flow control in crowded scenic areas, Yangshuo should also strengthen the scenic area maintenance and tourism crisis prevention. At the same time, it should increase publicity of other scenic spots in Yangshuo and strengthen the construction of "Internet + tourism" system and smart tourism system. In addition, it should also speed up the improvements of the basic reception facilities of all scenic spots, the construction of tourism distribution centers, the upgrading and reconstruction projects of various scenic spots, and the development of "comprehensive tourism".

(2) The use of tourism land must strictly comply with current planning, and must avoid excessive proportion of tourism land

The rapid tourism development brings economic benefits to local society, and thus more and more lands are transferred into tourism lands. Due to the scarcity of land, Yangshuo's land use should strictly comply with current planning. Great attention should be paid to the contradictions and conflicts in the use of land planning. Due to the development of tourism, there are contradictions and conflicts in the land acquisition in many towns and villages in Yangshuo. Therefore, while developing tourism industries and protecting the environment, special attention should be paid to the reality needs and satisfaction of local residents.

In general, Yangshuo's tourism planning and control must be based on its own actual conditions. Yangshuo should make sustainable, realistic and feasible planning, and then should strictly control and monitor the implementation of the planning.

6. Economic Benefits of Tourism

6.1 Tourism promotes Yangshuo's economic development

In recent years, Yangshuo County's tourism revenue continues to grow. Tourism promotes the

economic development of Yangshuo, and becomes a pillar industry in Yangshuo. However, according to the current data, Yangshuo government's fiscal revenue is in a slow growth state. The benefits brought by tourism do not contribute greatly to the organization's financial revenue. Paid-in funds of investment is not enough. The project is still in its infancy. The contribution of tourism income to government's fiscal revenue will increased year by year and will become more obvious.

6.2 Tourism triggers great structural changes to Yangshuo's three industries

Since Yangshuo vigorously developed its service industry with tourism industry as the lead, it has made tremendous changes in the structure of its three industries. In the meantime, the added value of the three industries has also increased. In the primary industry, agriculture has transformed from traditional rice farming agriculture into characteristic agriculture. In the secondary industry, Yangshuo County insists on protecting ecology, supporting the development of industrial enterprises associated with service industry, shutting down some polluting enterprises, subsidizing the technological transformation of some enterprises and actively promoting information construction. In the tertiary industry, tourism has narrowed down the distribution divergence of business format areas and streets.

6.3 Tourism attracts investments, driving the development of fundamental facilities and tourism industry

In recent years, Yangshuo continues to attract foreign capital through tourism. Meanwhile, Yangshuo government departments also continue to strengthen tourism investment in Yangshuo. Investment projects mainly concentrate in tourism products and infrastructure construction, which to a certain extent are directed at residents and tourists respectively. The external transportation in Yangshuo has been continuously improved. With the opportunity of new rural construction, the road conditions in the area have also been improved. At present, most existing business owners are also optimistic about the tourism investment potential of Yangshuo.

6.4 Tourism promotes the structural adjustment of business format

After comparing the data of shop types and shop orientations from 2015 to 2017, we can see

that the total proportion of tourist-oriented shops and tourist-and-resident-oriented shops has relatively obvious fluctuations. However, tourist-and-resident-oriented shops have gradually become the mainstream business format, which indicates that Yangshuo commercialization conducts self-adjusting as the tourism trend changes. Among the seven major categories of shops that are closely related to tourists, the proportions of restaurants and tourist services have slightly increased. Besides that, the proportions of all other shop types have declined slightly, which also indicates that as Yangshuo's tourism trend and tourist specific demands change, the business formats of tourism shops would make corresponding adjustments.

6.5 Entrepreneurs' awareness of sustainable development remains to be improved

Entrepreneurs generally believe that Yangshuo's local social environment and investment environment have declined compared with previous years, but they are relatively satisfied with local natural environment. This indicates that entrepreneurs do not have enough understanding and knowledge about environmental sustainable development. When comparing the data of owners' energy-saving behaviors in 2016 and 2017, we find that owners' energy-saving strategies have declined and their awareness of energy-saving has also declined. In addition, we also find that they mainly gain understanding of sustainable development through public media. In conclusion, entrepreneurs' awareness of sustainable development remains to be improved.

7. Tourism and Resources Environment Protection

7.1 Environment protection

Yangshuo's sustainable tourism needs to pay special attention to air and water environment protection. The improvement of air and water environment can not only provide a good living environment for local residents, but also provide a pleasure leisure and entertainment environment for tourists. Therefore, it is the top priority of Yangshuo's sustainable tourism development.

7.2 Noise control

There is too much noise within the West Street area. The cries of the traders, radio and bar

music make the entire West Street full of noise, which not only interferes with the surrounding residents and tourists, but also reduces tourist satisfaction. This situation will be bad for the development of West Street; therefore, it is necessary to control the major sources of noise.

7.3 Hygiene management

The most direct impact of the increasing number of Yangshuo tourists is the destruction of the environment and increase of solid waste. While developing tourism, it is necessary to pay enough attention to the environmental sanitation in the scenic area. At the same time, due to the flooding in Yangshuo this year, soil erosion, building damage and garbage disposal caused by post-disaster reconstruction will adversely affect the local environment if the treatment is untimely.

7.4 Landscape maintenance

Landscape maintenance and visual impact are components of sustainable tourism development. Residents still do not have sufficient awareness of landscape maintenance. At the same time, some residents still do not agree with the importance of landscape maintenance; therefore, it is still necessary to continue to publicize and educate local residents.

7.5 Energy saving

Enterprises do not understand the importance of energy and they also lack funds or equipment to realize energy-saving. The government should devote more efforts to promote the concepts of energy conservation and energy saving. Meanwhile, the government should also take certain measures to encourage small enterprises to implement energy-saving, for example, providing assistance and subsidies, so as to promote the implementation of energy management and ultimately realize sustainable development.

8. Tourism Products and Services

(1) sightseeing and leisure vacation are the major travel motivations of Yangshuo tourists

According to the analysis results, we can see that both Chinese and foreign tourists would first

go for sightseeing tour and leisure tour. The landscape of Yangshuo is its core attraction, but other auxiliary products can be further promoted, such as adventure tour, photography tour, local cuisine tour and culture tour. The combination of major products and auxiliary products not only helps promote the overall attraction of Yangshuo tourism products, but also meets the special demands of some certain tourists and thus enhances the overall tourist satisfaction.

(2) tourists have various choices of travel transportation and they have different preferences for accommodation services

In terms of transportation, Chinese tourists prefer to choose trains and cars. Therefore, it is important to strengthen cooperation between train station and bus station and to constantly improve and upgrade relevant transportation services. For foreign tourists, they frequently choose airplanes and trains. Therefore, it is also necessary to continue to strengthen the cooperation to increase airplane and train routes to Yangshuo. In addition, it is necessary to improve international service facilities and thus enhance tourist satisfaction during commuting. In terms of accommodation services, Chinese tourists prefer family hotels while foreign tourists prefer youth hostels, which indicates that we should choose appropriate marketing strategy based on the difference preferences of Chinese and foreign tourists.

(3) Yangshuo's popular attractions are concentrated

Due to geographical and policy reasons, Lijiang River rafting and West Street are two most popular attractions in Yangshuo. Although the concentrated distribution of attractions contributes to increasing tourists' overall length of stay and travel expenses, it is not beneficial to tourist diversion and order stability. In addition, it is also not conducive to the sustainable development of other tourist attractions. Therefore, Yangshuo tourism should integrate mature tourist routes, improve the situation according to the advantages and disadvantages of different scenic spots, and promote tourism development in surrounding areas of Yangshuo.

(4) The locality and uniqueness of tourism products remain to be improved

Yangshuo tourism products lack enough local characteristics and elements, and a number of

shops sell similar souvenirs. It is suggested that Yangshuo use the history and production processes of local souvenirs as a marketing highlight, increasing the mystique and authenticity of souvenirs in the eyes of tourists. While constructing a new tourism souvenir, the practical value and commemorative value of the product must be taken into account. Tourism souvenir represents the local characteristic of a destination. Therefore, the design and construction of Yangshuo souvenir must combine its practical function with Yangshuo's unique landscape culture. Only in this way can a unique Yangshuo tourism souvenir be created.

9. Conclusions

(1) Tourism and Community: residents have high willingness to participate in tourism decision-making, but their participation level and capability remain to be improved

Overall, Yangshuo residents generally believe that the development of Yangshuo tourism has largely contributed to the development of the local economy. They claim that they can benefit from tourism and they are willing to support the development of Yangshuo tourism. Tourism has plenty positive impacts, including: promoting the construction of fundamental facilities, bringing more job opportunities, improving local incomes and attracting more investment and consumption. Meanwhile, residents also have some perception of the negative impacts of tourism, such as the rising prices and the destruction of the local natural environment.

Yangshuo residents have strong willingness to participate in the tourism. However, due to the limited knowledge and skills, residents are mostly engaged in tourism with low-technical and low-paid jobs. Residents' actual participation level and capability remain to be improved. In addition, residents also show strong willingness and enthusiasm to participate in tourism decision-making; however, the current situation is that most residents have not been deeply involved in the decision-making of the tourism industry. Therefore, the community and government still need to work on the participation accessibility and capability of the residents.

(2) Tourist Satisfaction: tourists are most satisfied with Yangshuo's natural environment, and their evaluations of tourism services vary

Both Chinese and foreign tourists agree that Yangshuo is rich in natural resources and has beautiful scenery and unique landscapes. On the other hand, both of them have relatively low evaluation of the water quality of Lijiang River and Yulong River, because the water becomes muddy after the flooding. In general, Chinese and foreign tourists give a high evaluation of Yangshuo's cultural landscape, which needs to be maintained. Tourists also suggest that such beautiful natural landscapes need to be under better protection, especially the water quality which requires better treatment and preservation. Besides that, Yangshuo should step up improve its resilience to disasters.

Tourists in Yangshuo have different preference and evaluation of tourism services, showing a diversified trend. The efficiency of complaint processing in scenic areas should be improved, and the tourism toilets and transportation services also remain to be improved. Tourists are generally satisfied with accommodation and catering services, but they further improvements. In addition, the high degree of commercialization and lack of enough folk experience indicate that Yangshuo needs further improvements.

(3) Health and Safety: the environment is good, but Yangshuo still needs to create an environment where tourism can develop safely

At present, the health and safety condition of Yangshuo fall into middle and upper levels. Tourists are relatively satisfied with Yangshuo's catering hygiene, accommodation safety and public security conditions. Among residents' perceptions, residents are not very satisfied with local environmental pollution and environmental hygiene, which indicates that Yangshuo County needs to strengthen its environmental remediation work. Contrarily, residents are satisfied with local security conditions and medical conditions. In addition, relevant government departments have made great efforts in guaranteeing food and water safety, environmental sanitation, medical treatment and public security, which effectively guarantee the health and safety of Yangshuo residents and tourists, and effectively creat a good and comfortable living and traveling environment.

(4) Tourism Resource Planning and Control

Standardized management of inter-county traffic: further improve the construction of traffic signs and greenways in the county; improve the level of mass tourism in Yangshuo; enhance the

connection between Yangshuo high speed railway station and Yangshuo's counties, making use of high speed railway's positive impacts on tourism; and build a comprehensive tourism transportation system. Tourism resources planning and control should maintain the original focus, effectively dealing with the problem of excessive concentration of people. The use of tourism land must strictly comply with the current plan, so as to avoid excessive proportion of tourism land. Yangshuo tourism planning and control must be based on its own actual situation. Yangshuo should make sustainable, realistic and feasible planning, and then should strictly control and monitor the implementation of the planning.

(5) Economic Benefits of Tourism: tourism drives the economic development of Yangshuo and the industrial structure is under adjustment

Tourism plays an extremely important role in the economic development of Yangshuo, since it promotes the overall social and economic development of Yangshuo. In terms of investment, in recent years, Yangshuo continues to strengthen Yangshuo's tourism investment through attracting investment. With more tourism investment, Yangshuo promotes tourism products and infrastructure construction and improves the external traffic environment in Yangshuo. In terms of industrial structure, since Yangshuo vigorously developed its service industry with tourism industry as the lead, its industrial structure has undergone significant changes. At the same time, the added value of its industrial added value has also increased with structural changes. In the primary industry, agriculture has transformed from traditional rice farming agriculture into characteristic agriculture, and famous fruit brands such as kumquat and sugar tangerine have been cultivated. In the secondary industry, Yangshuo County insists on protecting ecology, supporting the development of industrial enterprises associated with service industry, shutting down some polluting enterprises, subsidizing the technological transformation of some enterprises and actively promoting information construction. In the tertiary industry, tourism has narrowed down the distribution divergence of business format areas and streets.

(6) Tourism and Resources Environmental Protection: energy-saving awareness remains to be improved, solid waste and noise pollution should be under control

Overall, Yangshuo County's tourism resources and environmental protection are relatively good. However, residents have obvious perception of Yangshuo's air pollution, water pollution, noise pollution and solid waste pollution. Therefore, while developing tourism, it is imperative to pay equal attention to the environmental hygiene within scenic areas. In terms of scenery and landscape, thanks to the policy and measures of the government departments, the landscapes of scenic areas can maintain at a pleasant level; therefore, both residents and tourists have good perception of Yangshuo's landscapes. However, some residents do not have enough awareness of landscape maintenance and energy saving. Therefore, the government should strengthen publicity to promote residents' awareness of landscape maintenance, and thus promoting the implementation of energy management and ultimately achieving sustainable development.

(7) Tourism Products and Services: tourism products should be tailored for different demands of Chinese and foreign tourists, avoiding over-concentration of service facility areas

Both Chinese and foreign tourists would first go for sightseeing tour and leisure tour. The landscape of Yangshuo is its core attraction, but other auxiliary products can be further promoted and become new highlights, such as adventure, rock climbing and photography.

Yangshuo has various types of service facilities, but their regional distribution is not reasonable. In areas where commercial atmosphere is strong and tourists are highly concentrated, the shops are over-concentrated. While in areas where residents concentrate or tourists and residents mix together, the shops for tourists are limited, which makes these areas less attractive to tourists and thus is bad for tourist diversion. Although tourism development would not cause too much negative impacts on residential life, it will obviously increase the operating pressure in the area centering West Street. Therefore, it is suggested that Yangshuo could integrate well-established tourist routes and then conduct comprehensive planning on them.

2017 Monitoring Report on the Sustainable Tourism Development of Huangshan

Monitoring Centre for UNWTO Sustainable Tourism Observatories

Mt. Huangshan Administrative Committee



Acknowledgement

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LIU Fangfang, REN Longyang, WANG Haoru, WANG Long, XIE Mei, ZHOU Wentao

Acknowledgement:

Mt. Huangshan Administrative Committee

And all those who helped with the monitoring work.

1. Foreword

1.1 The origin of the monitoring

Huangshan is an outstanding representative of China's mountain tourism destination. As a tourist destination that integrates China's first batch of ten scenic spots, world's cultural and natural heritage, and world's geological parks, and many other international and domestic championships, Huangshan's sustainable tourism development has attracted attention from both China and the world. On February 26th, 2008, the World Tourism Organization (UNWTO) and UNESCO formally established the Observatory of Sustainable Tourism in Huangshan(GOST) and the Observatory of World's Heritage Site Sustainable Tourism Development (Huangshan). The purpose is to conduct long-term monitoring through a number of indicators such as the perception and satisfaction of tourists and the impact of tourism on the community, and to collect data on multiple indicators for the sustainable development of tourism in Huangshan, so as to explore the development modes, with which the maximization of tourism economics in the world heritage sites and maximize the benefits to the community can be realized. And the modes can also minimize negative environmental impacts. On May 30th, 2011, the Huangshan Scenic Area Management Committee of China and Sun Yat-sen University formally signed a cooperation agreement for the construction of observatory, and formally joined the technology evaluation system of the United Nations World Tourism Organization's GOST project. From July 6th to July 13th, 2017, under the strong support and active cooperation of Huangshan Scenic Area Management Committee, the Huangshan Scenic Area Monitoring Team of the Tourism College of Sun Yat-sen University completed this year's monitoring task. It is hoped that by comprehensively investigating the environmental, social, and economic impacts of tourism development in Huangshan Scenic Area, we will summarize its management experience for sustainable tourism development and promote it globally.

1.2 Monitoring Method

1.2.1 Monitoring Process

The monitoring scope of the current period is the overall planning scope (2006) and buffer zone of the Huangshan Scenic Area, including the 160.6 square kilometers listed in the Huangshan Scenic Area, and the surrounding five towns (Tangkou Town, Tanjiaqiao Town, Sankou Town, Gengcheng Town and Jiaocun Town. The total administrative area of these towns is about 490 square kilometers.)

Based on the review and summary of the previous five-year monitoring results, from July 6th to July 13th, 2017, a professor, a doctoral student, two master students and nine undergraduates from Sun Yat-sen University are merged into a monitoring team, which participated in the monitoring activities. Through questionnaire surveys, field surveys, and government interviews, they completed: (1) Huangshan tourism and resource environmental protection assessment; (2) The Survey on Huangshan tourism's Social and Economic Impact on buffered five towns environment; (3) Residents' satisfaction with Huangshan Tourism in five buffered towns; (4) Visitors' perceptions and satisfaction of scenic spots and other regular project monitoring. And they also completed: (5) earthcheck and sustainable development of Huangshan; (6) Analysis of the travel restrictions of residents in Huangshan surrounding communities; (7) Construction status of the east gate of Huangshan Scenic Area.

In this monitoring, a total of 420 tourist questionnaires were issued, of which 398 were valid questionnaires; And there are 375 valid questionnaires that were issued to communities; Interviews were conducted with buffered village and town government agencies, small business owners and community residents, etc., and collected relevant secondary information through relevant Management Committee.

1.2.2 Major Issues and Indicators Screening

Combining the World Tourism Organization (WTO) index method, the “Huangshan Scenic Area Tourism Master Plan” and the actual situation of Huangshan Scenic Spot tourism development, the basic indicators for the sustainable development of tourism in Huangshan Scenic Spot were formulated on the basis of past monitoring experience. See Table 1-1 for details.

Table 1-1 Summary of Main Problems and Basic Indicators for Monitoring Sustainable Tourism Development in Huangshan Scenic Spot

	Major Issues	Basic Monitoring Indicators	Whether Regular Monitoring Exists?	Suggested Monitoring Frequency
Tourism and Resource Environment Protection	Biodiversity Protection	1. Number of national key species	Yes	Five Years
		2. Endangered Species; Quantity	No	Five Years
		3. Number of old and famous trees; Distribution status; Protection level	Yes	Five Years
		4. Forest coverage	Yes	Five Years
		5. Names of scientific research cooperation projects for resource protection; Tasks; Cooperative institutions; Duration	No	One Year
		6. New protection measures	No	Two Years
	Cultural Resources Protection	7. The number and protection status of stone cliffs and cultural relics	Yes	Five Years
		8. Funds and its Proportions for Cultural Relics Protection (Restoration, Protection and Maintenance)	No	One Year
		9. New Policies and Protection Measures	No	Five Years
	Segregation of Visitors	10. Percentage of visitors entering each gate	Yes	One Year
	Water Environment	11. Surface Water Quality Standards	Yes	One Year
		12. Drinking Water Quality Standards	Yes	One Year
		13. Annual total of domestic sewage treatment; Peak value of daily treatment	Yes	One Year
	Sound Environment	14. Living and traffic noise compliance	Yes	One Year

	Major Issues	Basic Monitoring Indicators	Whether Regular Monitoring Exists?	Suggested Monitoring Frequency
	Atmospheric Environment	15. Air quality compliance	Yes	One Year
	Solid Waste	16. Total solid waste production per year	Yes	One Year
		17. How to deal with waste	Yes	Five Years
		18. Percentage of total waste recycled	Yes	One Year
	The Reputation of Main Landscape	19. The reputation of main landscape	No	Three Years
	Covered Area of Protected zone	20. Area of construction and concentration in protected zones	Yes	Three Years
Tourism and Community	Tourism Development Level	1. Total population in the community (both local and foreign)	Yes	Three Years
		2. Number of scenic spots	Yes	One Year
		3. Number of accommodation facilities	Yes	One Year
		4. Number of visitors received	Yes	One Year
		5. The overall impact of tourism on the local community	No	Two Years
	Residents' attitude and perception	6. Residents' overall attitude toward tourism development (questionnaires)	No	One Year
		7. Residents' perceptions of the economic, social, and cultural impacts of tourism	No	One Year

	Major Issues	Basic Monitoring Indicators	Whether Regular Monitoring Exists?	Suggested Monitoring Frequency
	Community Involvement and Awareness	8. Proportion (number) and main types of community residents' being engaged in tourism-related work	No	One Year
		9. The perception of community residents about their participation in tourism	No	One Year
		10. Perceiving of the concept of "sustainable development" by community residents	No	One Year
		11. Residents' concerns about tourism development	No	One Year
	Business Partners' Satisfaction	12. Satisfaction of tour guides and travel agencies	No	One Year
Visitors' Perception and Satisfaction	Tourists' Satisfaction Level	1. Visitors' level of satisfaction with Huangshan resources, services, overall tourism environment and other aspects	No	One Year
		2. Overall satisfaction of visitors	No	One Year
		3. Visitors' perception of whether their travel experience is in line with expectations	No	One Year
		4. Visitor's re-visit rate and recommendation	No	One Year

	Major Issues	Basic Monitoring Indicators	Whether Regular Monitoring Exists?	Suggested Monitoring Frequency
		5. Tourists' complaint rate in Huangshan Scenic Area	Yes	One Year
	Tourist safety	6. Incident rate of tourists	Yes	One Year
		7. Tourists' perception of security in Huangshan Tourism	No	One Year
	Tourist Education	8. Percentage of tourists participating in commentary education activities in Huangshan Scenic Area	No	One Year
The Economic Impact of Tourism	Tourism income	1. The total number of visitors received by Huangshan Scenic Area	Yes	One Year
		2. Tourism statistics (total tourism income, number of beds, overnight stay, per capita cost, etc.)	Yes	One Year
		3. Visitors to the surrounding low mountain attractions	Yes	One Year
		4. Tourism statistics of surrounding low mountain attractions	Yes	One Year
	Tourism Seasonality	5. The ratio of the number of tourists in the busy month and the slack month	No	One Year
	Tourism and Employment	6. Employment created by tourism	No	One Year
		7. Satisfaction of tourism practitioners	No	Two Years
	The Economic Driving Role of Tourism	(Special study)	No	Three Years

	Major Issues	Basic Monitoring Indicators	Whether Regular Monitoring Exists?	Suggested Monitoring Frequency
Organization and Management	Organization Management Achievements and Social Recognition	Recognition in the industry and society	No	Three Years

2. Tourism and Resources, Environmental Protection

2.1 Biodiversity Conservation Assessment

Huangshan has 323 species of vertebrates (including 28 species of protected animals) and 1805 species of higher plants (of which 37 species are protected at national level). It contributes 7% of the total number of animal and plant species with only 0.13% of land area. It is praised as The “Natural Zoo and Botanical Garden” and it has also been identified by the World Conservation Union as one of the 108 biodiversity centers in the world and is identified as one of 35 priority areas of protection in the China Biodiversity Conservation Strategy and Action Plan (2011-2030). In 2016, the Management Committee invested 321 thousand yuan in the restoration and protection of ancient and famous trees, formulated the task decomposition table for the protection of ancient and famous trees in 2016, strengthened the decomposition and implementation of work tasks, and established repair programs to complete the tree restoration of 17 ancient and famous trees and other rejuvenation work like site environment improvement. In the aspect of forest fire prevention, the "three-whole" (whole mountain, whole-year, whole-person) fire prevention system was implemented, and a 14-kilometer-long, high-altitude fire prevention water network was built to achieve continuous forestless fires for 36 years. In the prevention and control of pine wood nematode disease, the “three defenses” project was implemented, a circular bio-isolation belt with a width of 4 km and a length of 100 km was built to strengthen quarantine monitoring and logistics supervision, and successfully prevented the intruding of pine wood nematode disease in Scenic area. In addition, the work of forest

vegetation tending, environmental remediation, soil and water conservation, wildlife protection and habitat protection has been carried out. In the first phase of the database construction project of the Huangshan Scenic Area Ecological Environment Monitoring System, two computer software copyrights have been obtained: Huangshan Scenic Area Eco-environment Survey Library Software and Huangshan Scenic Area Biodiversity Survey Library Software. In July of 2016, the “Huangshan Scenic Area Ecological Environment Monitoring Network Construction Project based on Internet +” was approved by the Ministry of Environmental Protection and was listed in the fifth batch of national environmental service pilot projects. It is the only project selected in Anhui Province. The investigation of the background resources of the biological diversity of the Huangshan Scenic Area was carried out, and the “Investigation Report on the Background of Biodiversity in Huangshan Scenic Area” was printed and formed.

2.2 Cultural Resources Assessment

Huangshan cultural relic resources include ancient cultural sites, ancient buildings, ancient roads, ancient tombs, ancient stone carvings, ancient and modern historical sites and representative buildings and other immovable cultural relics, as well as important historical objects, artworks, ancient books, manuscripts, book materials, representative objects and other movable cultural relics.

In 2016, Huangshan Scenic Area did the following work on cultural relics protection: First, it was the first time to implement the digital management of “one ancient (period) with one file”; second, it was also the first time to establish a combined protection and protection mechanism for cultural relics; and third, the implementation of a number of immovable cultural relics protection projects. Fourthly, it was the first time to establish a census database for movable cultural relics and complete the first national survey of movable cultural relics in Huangshan Scenic Area.

2.3 Environmental Protection Indicators Monitoring

This period of monitoring shows that Huangshan's environmental indicators have been maintained in a good level. In terms of water environment, in 2016, the standard rate of water quality testing of outbound surface water and Wuliqiao Reservoir, Yungu Reservoir, Tianhai Reservoir, and Xihai Reservoir turned out to reach 100%. In terms of domestic sewage, the site has a total of 15 sewage treatment stations with a total designed capacity of 6,300 tons per day. The average annual sewage treatment capacity is approximately 500,000 tons, and the length of the main control network is approximately 11 kilometers, basically achieving wastewater collection and slicing within the

scenic area. In terms of air quality, the major air quality indicators for scenic spots in 2016 were all better than the national ones.

2.4 Solid Waste Treatment

The annual output of domestic garbage is relatively stable, generally 4000-4500 tons per year. There are 8 garbage transfer stations, 17 garbage transfer points, 130 classified garbage bins and 1480 various garbage bins in the scenic spot. Thirty groups of classified trash cans were set up in the living area, and garbage collection facilities were gradually improved. Waste plastics, waste paper, and waste glass are arranged for human resources to be transported down the mountain for recycling and use to reach more than 20% of the output of household waste.

3. Tourism and Community

3.1 The Status of Community Economic Development

The five surrounded towns in the Huangshan Scenic Area, with the exception of Tangkou Town, are mainly based on agriculture and service industries. Other towns basically take agriculture as the pillar industry, service industry and industry are in the development stage, and foreign investment is also a very important component, which can be reflected on the investment of fixed assets. The infrastructure investment in Tanjiaqiao Town is relatively high, close to the total agricultural production value of the year, but there is a certain degree of oversupply, and at the same time, the “East Huangshan International Small Town” project will also bring about considerable investment for Tanjiaqiao Town.

3.2 Tourism Development

Among the five townships in the Huangshan buffer zone, Tangkou Town was given an opportunity to develop due to its location advantage in Nanmen, and tourists, tourism products, and tourism development in Tangkou Town were all ahead of those in other towns. The transformation from traditional tourism products to leisure resort products is the major problem that Tangkou Town needs to solve currently. The construction of the Huangshan East Gate and the building of the East Huangshan International Town have brought an important opportunity for the development of Tanjiaqiao Town. Jiaocun Town, Sankou Town, and Handan Township all have certain tourism resources, but due to the lack of tourists, the lack of development efforts, the richness and maturity of tourism products, and the average level of tourism development have stagnated. At present, the three

towns are actively looking for ways to take advantage of beautiful rural construction, global tourism, to create ancient village tours, agricultural leisure tourism, RV camp, hotel and leisure complex and other tourism products.

3.3 Residents attitude and perception in Buffer Zone

A total of 398 questionnaires were distributed for this monitoring, of which 375 were valid. The research on residents' attitudes and perceptions of buffers in the sustainable development of Huangshan Mountain involves the residents' economic, social, cultural and environmental impacts as well as residents' attitudes towards Huangshan tourism development. The questionnaires are mainly distributed to the residents of five towns and villages around Huangshan Mountain. In the design of the questionnaire scale, the Likert 5 scale design model was adopted, which gives 5 alternative answers to each question in the scale. The five answers are arranged in ascending order of consent and assigned a value of 1, 2, 3, 4, and 5 respectively. Finally, a descriptive statistical analysis of the questionnaire results will be conducted.

3.3.1 Statistics of Community Questionnaire on Demography

Variable	Category	Number of people	Percentage (%)
Gender	Male	178	48.11
	Female	1192	51.89
Age	Under 15 years old	2	0.54
	15-24 years old	50	35.4
	25-44 years old	186	50.27
	45-60 years old	101	27.30
	Over 60 years old	31	8.38
Education	Primary school and below	29	7.84
	Junior high school	137	37.03
	High school or secondary school	124	33.51
	University or junior college	78	21.08
	Master degree and above	2	0.54
Monthly Income	1,000 yuan and below	35	9.86
	1001-2000 yuan	49	13.80
	2001-3000 yuan	114	32.11
	3001-5000 yuan	84	23.66
	5001-10000 yuan	54	15.21
	Over 10000 yuan	19	5.35

3.3.2 Resident Perception of the Economic, Social, Cultural and Environmental Impacts of Tourism

Buffer residents' perception of the influence of on tourism was measured. The indicators of tourism impact perception were divided into four categories: economic, social, cultural, and environmental.

The indicators with the highest perceiving mean and rate of approval are: "Tourism development enhances local awareness", "Tourism development is local residents' awareness of the value of Huangshan's natural heritage", "Tourism development promotes local economic development" and "Tourism development Brings more employment opportunities to the local area", the perceptual averages are higher than 3.80, and the approval rate is over 80%;

The indicators with the lowest perceiving mean and rate of congruence are: "Tourism development worsens the local security situation", "Tourism development deteriorates the local social climate", "Tourism development destroys local folk and traditional culture", "The development of tourism has caused conflicts between tourists and local residents," "tourism development has disturbed residents' lives, and has caused problems for residents". "Tourism development has changed the local population structure (proportion of men and women, ethnic composition, etc.)", and the average perceptions are below 2.80, the rate of approval is below 22.0%. These six indicators are all negative indicators. The low perceptual mean and the rate of approval indicate that residents' perception and recognition of the negative impact of Huangshan tourism development is not obvious.

3.3.3 Community Residents' Perception of Tourism Participation

Overall, the average value of the seven indicators of community residents' perception of tourism participation was above 3.5, and the rate of approval was above 58%. It can be seen that most community residents are positive about their participation in Huangshan tourism. However, it is worth noting that the "a lot of contribution were made by Huangshan tourism development for local development" and "I am satisfied with the development of Huangshan tourism" are relatively low in terms of mean value and approval rate, and for the "I hope local tourism continues to develop" indicator, the average value and the rate of approval are as high as 4.04 and 88.5%. The average and approval rate of "I will continue to support the development of tourism in Huangshan" is as high as 4.09 and 87.1%. This means that the vast majority of residents hope that the local area will continue

to develop tourism, but there are some local residents are not satisfied with the current tourism development status of Huangshan Mountain and the contribution of tourism to local development. During the interview, it was also found that some residents were unsatisfied with the development of Huangshan tourism due to the negative impact of tourism on Huangshan's local economy and environment.

From the data collected in the sub-regions, we can see that Tangkou Town has the lowest rate of approval. The location of Tangkou Town is very good because Tangkou was first developed and the economic development was the best. And it is also the region that enjoys the most dividends in tourism development in Huangshan. But Tangkou Town can be seen as the least satisfied with Huangshan Tourism Development.

3.4 Summary

The monitoring results show that residents are aware of the positive economic, social and cultural impacts of Huangshan tourism, such as increasing income, increasing employment opportunities, promoting economic development, enhancing local reputation, ensuring good local security, and promoting foreign culture exchanges. At the same time, they also perceived the negative economic and environmental impacts of Huangshan tourism development, such as increasing the cost of living, increasing the prices, widening the gap between the rich and the poor, bringing about noise, water and air pollution, and increasing the amount of garbage. Effective measures should be taken to control the negative impact of tourism development in Huangshan so that it can sustainably develop and win broad support from residents. There are differences in the degree of recognition and satisfaction of the residents of the five towns in Huangshan tourism, which is related to the geographical location of the five towns, the attraction of tourism, and the difference in tourism development.

4. Visitors' Perception and Satisfaction

4.1 The Basic Situation of the Survey on Visitors

Questionnaires were used to count three aspects of tourist demographic characteristics, tourist

behavior and tourist satisfaction. The demographic characteristics present the information of tourists such as gender, age, origin and education, income, occupation, etc.; tourists' behaviors were reflected through visitors' memories and restatement of the tour route, which helps us to understand their visits to the scenic spots and corresponding stays and better understand the way they travel, the frequency of their visit and the duration of their stay. Visitors satisfaction includes a total of nine evaluation items, namely the destination landscape, accessibility, scenic consumption, tourism information, environment and health, security, tourism experience, tourism education and overall satisfaction. Each evaluation project consists of a number of evaluation subprojects, and there are a total of 40 evaluation subprojects. Visitors used Rickett's scale 5 for the evaluation of these indicators. A total of 420 questionnaires were distributed and 398 questionnaires were returned. The questionnaires were distributed over 6 days respectively in Huangshan Scenic Area, Ciguangge Visitor Center, Yungu Temple Visitor Center and transfer center terminal.

4.2 Statistics of Visitors's Demography

Table 4-1 Survey on tourists' perceptions and attitudes of Huangshan Scenic Spot

Variable	Category	Number of people	Percentage (%)
Gender	Male	225	56.5
	Female	173	43.5
Age	Under 15 years old	25	6.3
	15-24 years old	203	51.0
	25-44 years old	133	33.4
	45-60 years old	32	8.0
	Over 60 years old	2	.5
Education	Primary school and below	39	9.8
	Junior high school	76	19.1
	High school or secondary school	63	15.8
	University or junior college	186	46.7

	Master degree and above	34	8.5
Occupation	Civil Servant	13	3.3
	Employee	87	21.9
	Farmer/Worker	23	5.8
	Individual Industrialists and Businessman	25	6.3
	Institution officers	49	12.3
	Student	175	44.0
	Soldier	2	.5
	The Emeritus and Retired	3	.8
	Other	13	3.3
Income	1,000 yuan and below	145	36.4
	1001-2000 yuan	42	10.6
	2001-3000 yuan	38	9.5
	3001-5000 yuan	56	14.1
	5001-10000 yuan	77	19.3
	Over 10000 yuan	39	9.8

4.3 Visitors' Source

Visitors come from 26 provinces, and the tourists from Anhui province accounted for the highest proportion, accounting for 17.1%. This may be due to the proximity of travel distances and the system of exemption from voting for the counties and counties in Anhui Province. Followed by Guangdong Province, accounting for 11.3%. The remaining provinces are relatively evenly divided.

4.4 Tourists' Behavior

4.4.1 Traveling Mode

Among the interviewed visitors of Huangshan, there were more DIY tourists than Package tourists. On the whole, visitors from the Huangshan Scenic Area gradually shifted from package tours to DIY tours. DIY travel increased year by year, and most of them were sightseeing and leisure tourism. And the number of travellers are mainly two.

4.4.2 Visits and Duration of Stay

Most of the tourists came to Huangshan for the first time, accounting for 85.7% of the total number of tourists. It can be seen that the revisit rate among Huangshan tourists is not high. The vast majority of tourists stayed between one and three days (96%), of which more than half chose to stay in Huangshan Scenic Spot for two days (55.2%).

4.4.3 The Transportation to Scenic Spot

Visitors mostly take tourist buses and public transportation to enter the scenic area, accounting for 89.7% of the interviewed population. The rest of the tourists enter the scenic spot by taking a taxi or driving by car.

4.5 Tourists' Satisfaction

4.5.1 Tourists' assessment of the landscape of their destination

Tourists are highly satisfied with the evaluation of the Huangshan's landscape. The average value is more than 4. Visitors generally reflect that Huangshan is beautiful, spectacular, and full of scenery. There are many people who have neutrality and objections to the convenience of traffic in the interior scenic area of Huangshan. Coupled with feedback from tourists, the author can analyze that many tourists give up a lot because of insufficient time and lack of direct access to deep scenic areas.

4.5.2 Tourists' evaluation of accessibility and travel information

Tourists' average satisfaction of the three aspects of the accessibility of the scenic spot, that is, the convenience of transportation, is 3.91, 3.97, and 3.79, which are greater than 2.5. Overall, they are satisfactory, but in fact, they are not that satisfied with the external traffic for the scenic spot and

the interior of the scenic spot for all kinds of people.

4.5.3 The analysis on tourists' satisfaction on Huangshan tourism consumption

The customer's satisfaction with all aspects of the scenic area price exceeds the average value of 2.5 and is basically satisfactory, but it is not optimistic. Most tourists think that the prices of tickets and transportation are relatively reasonable, but they think that the price of catering and souvenirs are not reasonable. More than two-thirds of the tourists are neutral and opposed, indicating that these two areas urgently need improvement, that is to reduce costs and profits and thus reduce the price. And further give visitors a better travel experience.

4.5.4 The analysis on tourists' satisfaction with Huangshan tourism information

Tourists' satisfaction with the information acquisition of the scenic spots and the signs and presentations of the scenic spots exceeds 3.5, which indicates that the overall satisfaction is high. The average satisfaction level of tourism information and scenic spots reached 3.9 of 4, and the majority of tourists being satisfied with them. However, about one-third of the neutrality and dissatisfaction of the tourist attractions, maps, brochures, and information on the road signs and signage of the scenic spots is clearly expressed. Some visitors indicated that they are easily lost in Huangshan and have rarely received brochures, indicating that Huangshan is still lacking in these two aspects, and this is a relatively easy to do and improve. I hope that Huangshan could do a good job in this aspect as soon as possible.

4.5.5 The analysis on tourists' satisfaction on tourism safety guarantee in Huangshan

Visitors are equally satisfied with Huangshan tourism experience. Most people have maintained a neutral attitude towards Huangshan's souvenirs, handicrafts, and food. Although overall tourists are generally satisfied with these two aspects, compared with other items, visitors find that the price of Huangshan's souvenirs, handicrafts, and foods are not reasonable. Combined with interviews with some tourists, it is known that tourists think that the price of Huangshan's food and crafts and souvenirs is too high, and the unreasonable price is a major cause of low satisfaction among tourists.

4.5.6 The analysis on tourists' satisfaction with Huangshan tourism education

Visitors' satisfaction with tourism education in Huangshan is very high. The objections of tourists in all items are less than 8%, and the overall objection rate is also at a very low level of 3%. It can be concluded that Huangshan has been successful in tourist education.

4.5.7 Visitors' overall satisfaction

The overall satisfaction of tourists visiting Huangshan Tourism is very high, indicating that Huangshan has given them a very good travel experience. When asked whether tourists will return to Huangshan, about 6% of tourists said they would not come back, which has increased slightly. Combined with interviews with tourists, the reasons for this include the tiredness of climbing up Huangshan, the fact that tourists have been there many times and that they don't want to come back because the distance is too far.

4.6 Summary

On the whole, the proportion of tourists visiting Huangshan is balanced, with young people as the dominant group and fewer elderly people; most of them come from Anhui, Jiangsu, Zhejiang, and Shanghai provinces. The people from Inland neighboring provinces and the coastal provinces of Guangdong and Fujian are their main sources of tourists. The tourists to Huangshan have higher overall academic qualifications, and most of them have bachelor degree or above; the income level is in the mid-high position, and the employees, individual industrial and commercial households, and public institutions are the main visitors. In addition, student tourists also occupy an important position.

After the excursion, visitors highly praised Huangshan Scenic Area's own landscape and environment. However, the evaluation of the tourism experience is not as high as its landscape and environment, especially in respect of congestion, food and souvenirs. In addition, tourists think that accessibility and information acquisition are not perfect, which also affects their experience and needs to be improved. At the same time, most tourists think that the current consumption of Huangshan Scenic Spot in all aspects is high and urgently needs adjustment. During the excursion, most tourists felt that they were safe and recognized the safety of the infrastructure of the scenic spot, but there was still room for improvement in medical care and rescue. After the excursion, most tourists received the education of Huangshan Scenic Area in terms of cultural heritage, ecological environment, and sustainable development. However, many tourists believe that the education of Huangshan Scenic Area is still not good enough; but from the effect, it is still good. Most of the

tourists expressed after their visit that they would pay more attention to the protection of the ecological environment and traditional cultural heritage. Overall, most visitors are very satisfied with the trip to Huangshan and are willing to recommend Huangshan to relatives and friends and come back to visit again.

5. The Economic Impact of Tourism

According to the data obtained during this period of monitoring survey, Huangshan Scenic Area received a total of 3,305,800 tourists in 2016, with year-on-year increase of 118,000 and an increase of 3.71%. Among them, Yungu Temple (South Gate) received 1.796 million people, accounting for 54.43% of the total. Ciguangge (South Gate) received 110.08 million visitors, accounting for 33.35% of the total; Songguan (North Gate) received 40.31 visitors, accounting for 12.21%. The southern gate is still the main entrance for tourists. Compared with 2015, visitors to Yungu Temple have declined by approximately 14.70%, while Ciguangge has increased by 62.48%.

6. Special report I: Earthcheck and the Sustainable Development of Huangshan Scenic Area

6.1 Background

Huangshan Scenic Area launched Earthcheck's sustainable destination certification in 2016 and successfully achieved the bronze level of "Benchmark Evaluation" certification. Huangshan Scenic Area is the first destination in mainland China to achieve the certification of this project. Its efforts to achieve sustainable development at the destination have been internationally recognized.

The Earthcheck indicator system was originally used to quantitatively evaluate the sustainability of the tourism industry. Because the indicator system is universal in terms of environmental and sustainable development evaluation, it can be widely applied in all fields and at all levels of society. The indicator system is a series of special and key management implementation areas for sustainable development, including: energy efficiency, conservation and management; greenhouse gas emissions; air quality protection, noise control and light pollution; freshwater resource management; waste water management, drainage And streams; ecosystem conservation and management; land use planning and development; transportation; solid waste management; management of environmentally harmful substances; culture and social management; economic management, with a total of 12 fields.

6.2 Research Process

The main purpose of this project is to investigate Huangshan Scenic Area as the first destination in mainland China that has completed the earthcheck certification and has successfully passed the “benchmark evaluation bronze grade” certification. In 2017, Huangshan Scenic Area is actively applying for “benchmark evaluation silver grade” certification. After years of development, Huangshan Scenic Area has established a complete system of administrative institutions and management systems, and has formulated a regional development master plan, a detailed control plan for special resources, and scenic area management regulations, which helps to form a systematic management standard. Huangshan Scenic Area is currently implementing the following planning: "Huangshan Scenic Area General Plan (2005-2025)", "The 13th Five-year Development Plan for Huangshan Scenic Area", "Huangshan Scenic Area Environmental Health Special Plan (2011-2025)", “Comprehensive Plan for Disaster Prevention and Mitigation of Natural Disasters in Huangshan Scenic Area (2014-2025)”, “Mid-term and Long-term Plan for Forest Fire Prevention in Huangshan Scenic Area (2014-2025)” and “Water Resources Conservation and Utilization Plan for Huangshan Scenic Area (2015-2025)”, “Specialization Plan for Sewage Project in Huangshan Scenic Area (2015-2025)”, “Ecological and Environmental Protection Plan for Huangshan Scenic Area (2005-2025)”, “Geological Disaster Prevention Plan for Huangshan Scenic Area (2005-2025)”, “Huangshan Scenic Area Management Regulations” and etc., which include both general overviews of the overall plan and professional plans for the development of a certain aspect. These plans laid the foundation for the sustainable development of Huangshan and pointed out the direction for future development. Huangshan has not only received advanced foreign experience in sustainable development, but also embodied Chinese characteristics. The Earthcheck project is currently one of the most well-known projects in the world to promote sustainable development, and it has been realized in many international destinations and multinational companies. With an ideal result, Huangshan is the first destination in China to introduce this project. Therefore, the purpose of this topic is to analyze the development of the earthcheck project in Huangshan Scenic Area. The topic used the collection of second-hand data and interviews to analyze the earthcheck project and the sustainable development of Huangshan Scenic Area.

6.3 Earthcheck’s Indicators and its Sustainable Development in Huangshan

(1) Energy’s Efficiency, Conservation and Management

According to the requirements of the earthcheck, the performance of Huangshan Scenic Spot in terms of energy is measured in following aspects: 1) In the aspect of energy use efficiency, the core scenic spot has achieved a fuel-based pattern supplemented by electricity and liquefied gas. This reasonable energy structure provides a guarantee for the sustainable development of Huangshan Scenic Area; 2) In terms of energy sustainability, the current energy structure of Huangshan Scenic Area is mainly based on electricity and supplemented by liquefied gas, and the whole mountain has eliminated the use of timber and coal; 3) Currently Huangshan Scenic Area only allows the entering of environmentally friendly and eco-friendly coaches that use clean fuel. These eco-friendly coaches are powered by ethanol gasoline, which is clean energy. Huangshan is not feasible in developing and using solar energy and wind energy because of the weather conditions and geographical location; 4) All the power supply of Huangshan Scenic Spot comes from the National Grid of Huangshan City, not non-green power; 5) In terms of energy management, Huangshan Scenic Area actively creates "green hotel" and advocates "green business, green consumption." The energy use situation in Huangshan Scenic Area is better than the best practice level.

(2) The Release of Greenhouse Gas

Huangshan Scenic Area's efforts in response to greenhouse gases include: 1) For energy conservation and its emission reduction, Huangshan Scenic Area adopts a series of environmentally-friendly low-carbon measures; 2) Huangshan is located in a subtropical monsoon climate zone, with an average of 7.8 degrees Celsius on the mountains and the mountain climate in summer is very cool, so the use of air-conditioning is kept at a relatively low level of usage. In addition, Huangshan Scenic Area is also phasing out old air conditioners with high energy consumption; 3) Regarding carbon offset, the forest coverage rate in Huangshan Scenic Area is as high as 98.29%, which can better compensate carbon emissions; 4) In terms of corporate greenhouse gas monitoring, companies are required to create green hotels. In addition to March, the greenhouse gas emissions in Huangshan Mountain Scenic Spot in 2016 are better than the best practice level in all other months, and greenhouse gas emissions also have seasonal similarities with energy consumption.

(3) Air quality protection, noise control and light pollution

The current situation of air quality in Huangshan Scenic Area: The scenic spot has launched the publication of the air quality index of Huangshan Scenic Area. The current situation of the sound environment in Huangshan Scenic Spot: The noise in Huangshan Scenic Area mainly comes from

hotels, restaurants, shops, cultural and recreational facilities, residents' lives, tourist activities, and vehicle operations. The noise is categorized into living noise and traffic noise. Through the monitoring of environmental noise in five areas of Songshan, Tianhai, Tangkou, Xiaoyao, and hot springs in Huangshan Scenic Area, 13 of the 16 monitoring points in the daytime have met the standard limit values. On the whole, the increasing amount of tourists and the increasing traffic volume each year have brought certain negative impacts on the sound environment of the scenic spot, disturbing tourists' visits and rests in the scenic spot, affecting tourists' experience, and the normal activities of the animals in the scenic spot. Light pollution in Huangshan Scenic Area: Common light pollution is mostly caused by the reflection of mirror buildings and unreasonable lighting at night, which affects natural scenery and living environment. The light pollution in Huangshan Scenic Area mainly comes from LED display screens and indoor architectural lighting. The improper use of lights will not only waste energy and cause light pollution, but also causes adverse effects on many plants, animals and humans. However, there is no tourism activity at night in the scenic spot, so the light pollution is not serious.

(4) Freshwater resource management

The water consumption of Huangshan Scenic Spot in each month in 2016 was higher than the best practice level. The water consumption in January, February, August and September was higher than the average practice level, indicating that Huangshan Scenic Area still has a great space in water conservation. The water-saving efficiency of Huangshan Scenic Area is higher than 76%.

(5) Wastewater management, drainage and streams

With regard to sewage treatment, the current situation of Huangshan Scenic Spot is: the sewage from the scenic spots is self-contained, discharged to the standard, networked and processed in a centralized manner. Sewage from Huangshan Scenic Area has been included in environmental protection supervision in both provincial and municipal level, and the discharge standards must meet Class A of the national standard. According to the “Regulations on Environmental Protection of Anhui Province” and the “Regulations on Environmental Protection of Drinking Water Sources in Anhui Province”, Huangshan Scenic Area Environmental Protection Office and the Sanitary and Anti-epidemic Station are responsible for monitoring surface water quality. All water quality monitoring reports will be publicized on the official website of Huangshan Scenic Area.

(6) Protection and Management of Ecosystem

The current situation of the ecological system and management of Huangshan Scenic Spot is: Huangshan Scenic Area Management Committee has set up a special agency, and the Bureau of Landscape Management takes over the management of forest resources and ecosystem protection. There are more than 260 specialized personnel engaged in protection and management work, including more than 30 professional and technical personnel. The Bureau of Forestry consists of the Forest Public Security Bureau (Fire Prevention Office), Resource Protection and Management Division (Forest Pest Control and Quarantine Station), Environmental Protection Office, and other functions and district management departments of Hot Springs, Yuping, Tianhai, Fusong, Fishing Bridge District. And conduct strict protection and management of scenic forest resources and ecosystem protection from the aspects of forest resources investigation, forest fire prevention, forest pest prevention and control, forest plant quarantine, forest management, environmental protection, biodiversity conservation, soil and water loss control, protection of ancient and famous trees.

(7) Land use planning and development

The current situation of land use in Huangshan Scenic Area: According to the “General Plan for Huangshan Scenic Area”, the planned area of the Huangshan Scenic Area is 160.6 square kilometers, of which the jurisdiction area of the Administrative Committee is 128.1 square kilometers. Within the jurisdiction area of Huangshan Administrative Committee, the nature of the land can be roughly divided into four categories: forest land, scenic spots and special land, land for water conservancy and water conservancy facilities, and bare land. According to survey statistics, the forest coverage rate and forest greening rate in Huangshan Scenic Area reached 98.29% and 98.53% respectively. According to the “Regulations on the Management of Huangshan Scenic Area,” forestry harvesting and agricultural production are strictly prohibited in the scenic area, so the land use in the Huangshan Scenic Area is very limited. At present, the buildings on Huangshan Mountain are mainly tourist facilities and environmental monitoring buildings. Among them, the tourism buildings include parking lots, viewing platforms, cableway and cable car lifts, four first-class tourist service centers, two second-level tourist service centers, thirteen tourist service stores, three camping sites, and ten hotels (including 7 four-star hotels). The state-owned and collectively-owned land in the scenic spot has not been expropriated.

(8) Transportation

The current traffic situation of the Huangshan scenic spot is: Currently, there are three types of

traffic in the Huangshan Scenic Spot: motorized sightseeing highways, walking sightseeing roads, and cableways. The motorized traffic lanes in the scenic area only allow the use of environmentally friendly coaches that use clean fuel inside the scenic spots, and logistic vehicles are allowed to enter except for the special time period (19:30pm-4:30am on peak days and 18:00-6:00am on non-peak days). These motorized lanes are Class 4 roads and the speed of driving must be controlled within 30 kilometers per hour. At present, the maximum one-way passenger capacity of motor vehicle lanes during the day is about 10,000 passengers. Walking tours include the Yungu Temple to Beihai section, Ciguang Pavilion to Yuping Building, Danxia Peak Hiking Trail, Tiandu New Road, Lianhua Peak Cycle Road and Xihai Grand Canyon Trail. Huangshan Scenic Area includes Yungu cableway, Taiping cableway and Yuping cableway, as well as the Xihai Grand Canyon sightseeing cable car. Yungu cableway has a capacity of 600-800 people per hour. The Taiping cableway has a one-way capacity of 600 people per hour. The Yuping cableway has a one-way capacity of 1,000 people per hour. The scenic cable car has a one-way capacity of 800 people per hour. In conjunction with the construction of Huangshan National Park, consideration is being given to the construction of walking and cycling paths around the Huangshan's crest line.

(9) Solid waste management

The solid waste generated on Huangshan Mountain is mainly garbage generated by tourism activities, including construction waste, domestic waste, and hazardous solid waste. There are 8 garbage transfer stations, 17 garbage transfer points, 130 classified garbage bins and 1480 various garbage bins in the scenic spot. The treatment of domestic garbage in the scenic spot is based on the "Special Plan for Environmental Sanitation in Huangshan Scenic Area", that is, steadily advancing the work of "disposal of garbage on the mountain will be tackled outside the mountain". The comprehensive treatment mode of "centralized disposal outside the mountain" is to establish a garbage collection station and a transfer station at the district level to collect, transport, and dispose of the household garbage. The recyclable garbage is classified and reduced and then transported out of the scenic area for recycling. Organic waste from the core area is treated biologically in site, residues and non-recyclable garbage are packaged and transported to the outside of the scenic spot (Huangshan City Waste Disposal Center) for centralized disposal.

(10) Management of Environmentally Hazardous Substances

The environmentally harmful substances produced in Huangshan Scenic Area are mainly hazardous solid wastes, including medical wastes, waste transformers, waste batteries, and lamp tubes. Disposal of hazardous solid waste is subject to departmental classification. Medical waste shall be disposed by the Department of Hygiene and Epidemic Prevention in accordance with the “Regulations on the Management of Medical Wastes”; waste transformers shall be handled uniformly by the power supply department; waste reagents shall be disposed of by relevant units; waste toner cartridges and ink cartridges shall be urged by the production unit to be recycled by the supplier; The hazardous wastes such as batteries, waste lamp tubes, waste pesticide bottles, and waste paint cartridges shall be uniformly disposed of by the environmental sanitation department. The sanitation department set up hazardous waste collection points in the hot springs, Beihai, Xihai, Tianhai and Laodaokou, and established a final storage site in the Baiting outside the scenic area.

(11) Cultural and Social Management

Earthcheck’s cultural and social requirements mainly include three aspects. The first is the protection and propaganda of the destination culture and cultural relics; the second is the status of the community development of the destination; and the third is the safety level of the destination. The status quo of Huangshan culture is as follows: Huangshan Scenic Area was selected as a World Cultural Heritage in 1990. Huangshan Cultural Relics Resources include: ancient cultural sites, ancient buildings, ancient roads, ancient tombs, cliffs, ancient and modern historical sites and representative buildings and other immovable cultural relics , as well as important artifacts, artwork, ancient books, manuscripts, books and materials, representative objects and other movable cultural relics in various historical periods. The status quo of Huangshan cultural resources protection: The collections of cultural relics (including handicrafts) and cultural heritage in the Huangshan Scenic Area are limited to exhibitions and research according to law, and are prohibited from being sold, traded, or given as gifts. In order to ensure long-term, stable, and adequate funding sources for resource protection, tourist management, or community coordination, Huangshan Scenic Area has set up special funds. Status of the Huangshan Community is as follow: The buffer zone of the Huangshan Scenic Area including adjacent five towns and one forest: Tangkou Town, Tanjiaqiao Town, Sankou Town, Yucheng Town, Jiaocun Town and Yanghu Forest in Huangshan District, The economic activities of whose residents are driven by the radiation development of tourism in Huangshan Scenic Area. The government has strengthened the investment and construction of community infrastructure and tourism service facilities, creating opportunities for the development of community tourism in rural areas, and promoting the participation of community residents in local

tourism development, with which residents benefit from gaining higher income than traditional agriculture. Huangshan Community Security status is as follow: The establishment of a functional department has been conducted to maintain political stability and social stability in Huangshan Scenic Area and Tangkou District - Huangshan Scenic Area Public Security Bureau, is at the level of establishment, administratively affiliated with Huangshan Scenic Area Administrative Committee, and is subject to the business of Huangshan. Municipal Public Security Bureau leadership, including political offices, offices (police protection office), security office (army police active establishment) and other three internal agencies and intelligence centers, command centers, police inspectors, domestic security guards, police security detachment, criminal police detachment (drug detachment), legal detachment (letter office), exit-entry management detachment (domestic security section), cyber security detachment (consultation communications section), technical reconnaissance detachment, traffic police detachment and 11 directly-affiliated institutions. There are 6 dispatched agencies such as Namdaemun, Onsen, Yungu Temple, Beihai, Yuping Building, and North Gate, etc. There are 8 police stations at Ciguangge, Banshansi, Tianhai, Xihai, Baieiling, Jinsheng Pavilion, Songgu, and West Gate.

(12) Economic Management

Huangshan Scenic Area is the first tourist destination to introduce a market mechanism in China, achieving breakthroughs in business awareness and fund raising. Scenic Area created “Huangshan Tourism Development Co., Ltd.” in 1996, and further established “Huangshan Tourism Group” in 1999. The Group's main businesses include scenic area management, cableway, cable car, hotel, travel agency, and Hui Dish catering. In 2015, Huangshan Scenic Area received 3,182,800 tourists and realized operating income of 2.525 billion yuan and per capita consumption of 793.32 yuan; in 2016, Huangshan Scenic Area received 3.3 million tourists, tourism revenue of 2.83 billion, and per capita consumption is 857.58 yuan.

6.4 Summary and Suggestions

Through the assessment of the earthcheck project, there are still some aspects in the Huangshan scenic spot that need to be improved: 1. There is still a certain gap between individual indicators and best practices. Specific action plans need to be formulated for indicators such as water consumption and per capita waste volume. The practice in the future will be continuously improved and the best

practice level will be achieved as soon as possible. 2. According to the benchmarking provided by earthcheck, there are still some indicators in Huangshan Scenic Spot that have not yet been quantified, such as the recovery of water resources, the use of paper products, the site maintenance fund, and the safety of the destination. One aspect of these indicators that has not been quantified is that, in the practice of Huangshan, it is still impossible to quantify certain indicators, such as the use of paper products; on the other hand, although there is no measurement method corresponding to the above indicators in Huangshan, the scenic spot has relatively strict control in these areas, for example, for destination safety, earthcheck used crime rates, theft rate of crime and other indicators to measure. In the management practice of Huangshan Scenic Area, there are impeccable social security regulations and systems, which requires the conversion of these indicators and the indicators required by earthcheck according to the actual conditions of Huangshan.

7. Special report II: A Research Report on the Travel Condition and Travel Restrictions of Community Residents in Huangshan District

7.1 Background

The purpose of this study is to understand the travel conditions and travel constraints of community residents around Huangshan, and to analyze the travel conditions and the differences of travel constraints in different tourism development levels, so as to provide practical suggestions for promoting residents to travel, improving the well-being of residents, and ensuring sustainable development of destination tourism.

7.2 Research process

This topic mainly uses questionnaire survey method to collect data, and through in-depth interviews to understand residents' travel decision-making process and experience. The target of the survey was residents of five towns in Huangshan buffer zone. A total of 400 questionnaires were distributed and 398 questionnaires were recovered, with a recovery rate of 99.5%. Among them, 23 were invalid questionnaires, 375 were valid questionnaires, and the effective rate was 94.2%.

7.3 Analysis on the travel conditions of the residents living in the surrounding areas of Huangshan

The residents of Tangkou Town and non-Tongkou Town have traveled more than once in the past year, indicating that “traveling out” has become one of the most important recreational choices for residents in the surrounding communities of Huangshan. At the same time, it has been found that there was no significant difference between the numbers of residents who have “traveled for the past one year” and who have “traveled for the past three years”, indicating that residents’ traveling has seen a relatively large increase during the past year.

At the same time, whether in the “trips in the past year” or in the “trips in the past three years”, residents of Tangkou Town and residents of other towns have significant differences. The number of outing trips of Tangkou Town residents is significantly higher than that of other residents. Tourism development has promoted the residents' willingness and ability to travel, and has a positive effect on the happiness of residents and the improvement of personal business skills.

Travel behaviors of residents are affected by a series of restrictive factors. Physical, psychological, interpersonal and structural factors may affect residents' travel behavior. Understanding the factors that restrict residents' travel and providing specific recommendations is of great significance to improving the number of residents traveling and improving the happiness of residents. Therefore, the second study of this topic is the "Analysis of Travel Restrictions of Residents in Huangshan Surrounding Community."

7.4 Analysis of Travel Restrictions of Residents in Huangshan Surrounding Communities

(1) Travel Constraints

The residents in the communities around Huangshan have not been severely constrained by travel restrictions; the structural constraints are the highest, indicating that structural constraints such as family responsibilities, time, and economic income are the most likely obstacles to residents’ travel behavior. Shortage of leisure time is a major factor that hinders the residents of destination from traveling.

(2) Analysis of travel restrictions of different communities

The residents of Tangkou Town and non-Tangkou Town have no significant differences in “psychological constraints”, “physical restrictions” and “personal restrictions”, and there are significant differences in the "structural constraints", because the "structural constraints" of the residents in Tangkou Town are significantly lower than those in the non Tangkou towns. The impact

of tourism development and community residents' extensive participation in tourism on residents' travel behavior is mainly reflected in the reduction of "family responsibilities", "time", and "economic conditions" in the decision-making process of residents, which may be due to: 1) Compared with the traditional industries such as agriculture, the tourism industry tends to be busy during the busy season. The demand for labor in the off-season is significantly reduced. Residents can choose to travel in the off-season; 2) the development of tourism increases the income of the destination residents, and more residents can afford the economic and time cost of travel.

7.5 Summary

The purpose of this topic is to understand the travel conditions and travel restrictions of the residents living in the surrounding communities of Huangshan. The study found that: 1) The residents of Huangshan surrounding communities travelled more than once per person in the past year. Traveling has become one of the most important leisure choices for residents in the surrounding communities of Huangshan. Compared with Tangkou Town, where the level of tourism development and community residents participating in tourism, residents of other towns travel less frequently. Tourism development promotes residents' travel to a certain extent; 3) The average of community residents around Huangshan being affected by physical, psychological, social, structural factors, and other constraints is less than "3", indicating that residents in the communities around Huangshan can make relatively free travel decisions; 4) There are no significant differences in physical, psychological and social constraints between the residents of Tangkou Town and non Tangkou Town, and there are significant differences in structural constraints. "Family responsibility", "time", "economic conditions" and other structural factors may be the main factors that lead to the difference of travel behavior between residents in Tangkou Town and non Tangkou Town.

Traveling is an important way to improve the well-being of residents. To encourage and promote the residents' travel to destinations, enhance the happiness of destination residents and the ability to manage tourism, and achieve sustainable development at destinations, we need to understand the factors that hinder residents' travel and take measures to reduce key barriers.

At the same time, we need to see differences between different communities and take some measures to reduce differences. The difference between residents' travel is a reflection of the economic and cultural level of different communities. At the same time, it may be paid more attention to the social unfairness that is caused by the way how these differences affect the well-being of the residents and the evolution of personal skills.

In addition to traveling, residents' daily leisure also has a strong sense of relaxation, self-consciousness, self-discovery and other individual values, as well as the social value of political, cultural, economic and other aspects, which need to be paid attention to by the relevant organizations of the destination management. Guaranteeing enough space for daily leisure activities, enriching the daily leisure choices of the residents, and guiding the community to carry out collective leisure activities will be beneficial to the participation of residents' leisure activities and the realization of personal values, to improve the well-being of the residents and to achieve the sustainable development of the destination.

8. Special report III: Investigation Report on the Construction of the East Gate of Huangshan Scenic Area

8.1 Background and Significance

The provincial government of Anhui Province and the municipal government of Huangshan proposed the strategic concept of “opening the four gates of Huangshan ”. For a long time, Tanjiaqiao Town has been relatively backward in terms of tourism development, but it retains simple customs, harmonious living conditions and a large amount of land resources, making it a relatively valuable virgin land around Huangshan Scenic Area. In addition, Tanjiaqiao Town has a unique relationship with Shanghai, which makes it an important ecological resort to Shanghai. With the implementation of the strategic concept of Huangshan East Gate, the leisure and vacation market will further develop. The Tanjiaqiao Town will also carry out in-depth development of tourism projects. Its development orientation is important for both the tourism space development of Huangshan Scenic Area and the tourism and leisure industry upgrading of Huangshan.

8.2 Research Methods

This special survey was conducted mainly through interviews and questionnaire surveys. The surveyed visitors were tourists who had already visited Huangshan and were ready to leave. At the same time, interviews were also conducted with some residents of Tangkou Town and Tanjiaqiao Town, as well as relevant staff of Tanjiaqiao Town Government.

According to the content of the special study, a questionnaire was designed based on the conditions of the Huangshan Scenic Area. The main part of the questionnaire can be divided into three parts: 1. Activity log questionnaire, understanding the time of entering and leaving the scenic

spot, visiting attractions, and the duration of staying in each attraction; 2. Basic information, understanding of the tourists' gender, age, education information as well as occupation, income, etc., and travel information related to visits to Huangshan, like duration of staying, DIY tour/group tour, and amount of peers; 3. Cognition of East Gate: When entering the path of Huangshan Scenic Area, whether tourists understand the situation of Huangshan East Gate and its surrounding scenic spots.

The questionnaire was distributed at Huangshan Scenic Area Transfer Center, Ciguangge Visitor Center, and Yungu Temple Cable Car Station. A total of 420 questionnaires were distributed and 400 were returned, of which 398 were valid questionnaires.

The interview section included interviews with tourists, staff of the government's tourism planning department in East Gate (Tangkou Town), and residents of Tangkou Town. It is intended to understand the development status of the construction of the Huangshan East Gate area and the awareness and attitudes of various parties.

8.3 Cognition of East Gate Construction by Tourists in Huangshan Scenic Area

(1) Analysis of tourist generating region

Visitors from the eastern provinces and cities accounted for 21.6%. Although this value is not high relative to the northwestern position, Huangshan Scenic Area itself is located in the southeast of China, the amount of provinces and cities in other directions is large, so the value accumulates. And this figure does not include the cities and counties on the east side of the scenic spot in Anhui Province. The values of the 6 provinces in the east have already reached the level of 10 provinces in the north (northwest) region, so judging from the location of tourist generating region, the construction of the Huangshan East Gate is still relatively important. The construction of the East Gate means that it will be more convenient for tourists to enter Huangshan Scenic Area from the east, which will help increase the further market development for the main source of tourists.

(2) The access to scenic area

Southern Gate (Tangkou Town) is still the main access to Huangshan Scenic Area. On one hand, due to the early development of Tangkou Town, the transfer facilities and the cable car and other transportation facilities are relatively comprehensive. It is the route chosen by the general tourists. On the other hand, this data also reflects the fact that despite the fact that there are entrances on all sides of Huangshan Scenic Area, due to insufficient planning and development, insufficient publicity,

and other reasons, the route for tourists to enter the scenic spot is relatively uniform, which will easily cause congestion during the tourist season. Traffic congestion will affect the experience of tourists. Over-density tourist groups will also have certain adverse effects on the natural ecology and environment of Tangkou Town in Southern Gate.

(3) Degree of tourists' understanding of the construction of East Gate in Huangshan Scenic Area

In “Huangshan East Gate Planning General Text _Graph 02-1”, the four spots that need to be developed in East Gate are not well-known at present. Of the 398 visitors, 292 even said "completely unclear", which accounts for 73.4% of the total sample. It can be seen that under these circumstances, it is difficult for these scenic spots in East Gate to be complementary to the resources in Huangshan Scenic Area, and it is also difficult for it to play a role in diverting visitors. So further planning and development are needed.

8.4 Summary and Suggestions

The Huangshan East Gate (Tanjiaqiao Town) is one of the most important entrances to Huangshan Scenic Area. Due to the frequent traffic jams and dense visitors during the busy season, the south-eastern visitors from Zhejiang, Jiangsu, Shanghai, and Guangdong Provinces, the development of Dongdaemun is particularly important. The development plan for East Gate (Tanjiaqiao Town) is still in the preliminary stage of finalization, and the relevant planning blueprints are still being finalized. At present, it has not started its propaganda. Tourists visiting Huangshan Scenic Spot have few knowledge of it. Most tourists still choose to enter Huangshan Scenic Area from South Gate (Tangkou Town). The residents and merchants of Tanjiaqiao Town still hold a wait-and-see attitude. They need to wait until the East area is officially opened and the East Gate can become one of the main attractions.

In the process of development and construction of East Gate, the balance between Tangkou Town and Tanjiaqiao Town should be taken into consideration. On one hand, tourists need to be diverted from South Gate to Tanjiaqiao Town, and Tanjiaqiao Town itself will also be built into the high-end leisure resort area of Huangshan Scenic Area. On the other hand, it is necessary to take into account the specific conditions of the residents of the two places and choose the appropriate treatment in the development process.

The survey involves a relatively shallow level. In addition, there is a limited sample of interviewees. The problems reflected are not necessarily comprehensive and objective. What is more, we still have not carried out quantitative surveys on residents' and tourists' attitude toward East Gate, and this may be one of the themes for follow-up research. In addition, the ecological environment is the largest advantage of Huangshan Scenic Area, and it is also the basis for the sustainable development of Huangshan. The development of East Gate (Tanjiaqiao Town) in Huangshan Scenic Area must take ecological and environmental protection as a prerequisite and fundamental for all work. Developers need to adopt various technical means to further strengthen environmental monitoring. For projects that will be developed and transformed, developers must carefully assess their environmental impact, reduce the scope of environmental impact brought about by development activities, and do a good job in ecological restoration. To protect the object as much as possible to cover the various components of the scenic ecosystem, as well as associated natural heritage and cultural heritage resources. With the concept of long-term effective ecological protection and measures, developer could achieve the sustainable development of scenic area.

2017 Monitoring Report on the Sustainable Tourism Development of Xidi Village

Monitoring Centre for UNWTO Sustainable Tourism Observatories

People's Government of Yi County, Huangshan City



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Acknowledgement:

Yixian Country People's Government, Huangshan Tourism Committee, Yixian Country Tourism Committee, Zhongkun Investment Group, Xidi Village Committee

And all those who helped with the monitoring work.

1 Introduction

1.1 Background of monitoring

With the growing awareness of environmental protection, promoting sustainable tourism development has become the global consensus. Sustainable tourism development needs long term of influence monitoring and adopts necessary method of precaution and correcting. Finding specific method of monitoring sustainable tourism development has become a focus. From 2006, SYSU has established cooperative relationship with WTO and been dedicated to apply the sustainable development index of tourism destination that designate by WTO to the practical operation.

In 2012, the monitoring center started to set up an observation point in Xidi, Yi County, and southern Anhui. 8 kilometers from the center of the town, Xidi Village was built in the Northern Song Dynasty, emperor Yuo years (AD 1049 ~ 1054), with nearly a thousand year of history. The whole village is in the shape of a ship, with 124 intact ancient dwellings preserved. It now has more than 300 households and the population is more than 1,000. Xidi is honored as "a microcosm of Chinese traditional culture" and "China Ming and Qing Dynasties Folk House Museum". On November 30, 2000, Xidi was listed into the World Cultural Heritage List with Hong village because of its well-preserved ancient residential buildings. The following year on May 5, Xidi scenic area was awarded the "national 5A-class tourist attraction" by the National Tourism Administration.

The monitoring of Xidi in 2017 was mainly based on an on-the-spot investigation of ancient villages, to understand the way in which the dwellings changed during this period and to file in detail. According to the trend of change, we summed up the problems, challenges and experiences of heritage protection and explored the sustainable development mode of heritage sites; At the same time, we investigated the perception and satisfaction of tourists, behavioral intentions, monitored the impact of human activities such as residents and tourists in tourism on the construction and village environment, and sought protection measures to reduce negative impacts.

1.2 Monitoring Method

The Xidi Monitoring Team has a total of 12 members and the monitoring time is from July 8th to

July 12rd in 2017. The contents of monitoring include the archives of ancient names, residents' perceptions of the impact on tourism and tourists' satisfaction. For the archiving of ancient dwelling houses, the members of the monitoring team carried out subdividing, numbering, household survey. The household survey was mainly about structured interviews, which was supplemented by photographing and photography to record the status quo of the houses and residents' living styles. In the end the group completed the numbering work and file construction work of 64 buildings. Among them, Dalu Street and Qianbianxi had archived 38 buildings, while Qianbianxi and the middle of Houbianxi had 18 buildings. As for the perception of tourism impact on the community, the monitoring adopted the method of questionnaire, which focuses on the some streets in Xidi scenic area, such as Qianbianxi Street, Dalu Street, Zhi Street, Henglu Street and Memorial Archway. The final amount of community questionnaires was 150 and there were 142 effective ones, with the effective returning rate of 94.67%. In respect of visitor experience and satisfaction, this survey was mainly based on questionnaires and supplemented by interviews. 200 visitor questionnaires were distributed to tourists in Xidi core scenic spots and 198 valid questionnaires were collected, with an effective returning rate of 99%. In addition, the monitoring also conducted special research and reports on environmental protection, commercialization, community resilience, and the development of homestays.

2 The status quo of ancient dwellings

2.1 The government's protection policy of ancient dwellings

The government has corresponding protection measures for residential houses in Xidi Village. Neither the old buildings of the Qing Dynasty nor the newer buildings built in the 1980s and 1990s can be repaired. Smaller common problem like house's being leaking can be handled by residents themselves. However, if the structure of the house needs to be modified, it must be reported to the government. With the permission of the government, the government will send design personnel to carry out the repair and reconstruction of the house. In addition, the houses that have been proved by the government to be repaired are generally damaged and are at risk of collapse.

2.2 The basic information of ancient dwellings

There are 38 ancient dwellings along Dalu Street and the middle of Qianbianxi, of which 17 are ordinary dwellings and 21 are for protection. There are densely populated dwellings in the middle of Qianbianxi and Dalu Street. The ownership of the dwellings is mainly for residents' own use. The use of dwellings is also more diverse. It includes tourism-related facilities such as tourism accommodation facilities and catering facilities, and also includes agricultural facilities such as silkworm rooms and vegetable gardens. There are more protected dwellings in the archived area of Dalu Street and Qianbianxi. Their function is based on residents' dwelling, and a few have commercial functions. The residents' household economic sources are relatively diverse. There are situations in which they work for other people, work in agriculture, self-employment, or have two sources of income at the same time.

There are 26 ancient dwellings along Qianbianxi and the middle of Houbianxi, of which 16 are ordinary dwellings, 3 are for protection and 3 for key protection. Most of the dwellings in Qianbianxi and the middle of Houbianxi are for self-occupation, a few of them are for rent. In general, the houses built in Qianbianxi and the middle of Houbianxi are basically equipped with residential functions. Many of these houses are also involved in tourism and business activities, and are mainly based on hotel operations. The income of residents mainly comes from self-employment in agriculture and tourism.

2.3 The status quo of ancient dwelling protection

Most of the dwellings in Dalu Street and the middle of Qianbianxi are relatively uniform in appearance, and are traditional Hui-style architecture. In some older buildings, the walls were darkened, and the outer walls had cement smears. The newly built exterior walls were tidy and mostly painted with white ash. In terms of internal structure, the internal structure of new-style buildings and traditional Hui-style buildings is very different. Most of new-style buildings have no structure such as patios, and some older buildings have also undergone interior renovations. The more common scene is that residents use plastics sheds to seal the patio, and that the interiors were refurbished for painting. There were also residents who converted the slate slabs that connected the

drainage channels below the patio to fish ponds. Whether it is a new construction or a traditional old building, the interior basic facilities such as toilets and bathing rooms are relatively complete. Most of the dwellings in Dalu Street and the middle of Qianbianxi are relatively uniform in appearance, and are traditional Hui-style architecture. In some older buildings, the walls were darkened, and the outer walls had cement smears. The newly built exterior walls were tidy and mostly painted with white ash. In terms of internal structure, the internal structure of new-style buildings and traditional Hui-style buildings is very different. Most of new-style buildings have no structure such as patios, and some older buildings have also undergone interior renovations. The more common scene is that residents use plastics sheds to seal the patio, and that the interiors were refurbished for painting. There were also residents who converted the slate slabs that connected the drainage channels below the patio to fish ponds. Whether it is a new construction or a traditional old building, the interior basic facilities such as toilets and bathing rooms are relatively complete.

The 13 ancient dwellings set up in Qianbianxi and the middle of Houbianxi have different preservation statuses. Basically, each ancient dwelling house experienced some minor changes. On the one hand, some ancient dwellings were renovated earlier, but at that time, the tourism of d Xidi was not developed and the related protection regulations were not yet perfected. Therefore, at that time, the ancient folk dwelling repairs are more in accordance with the wishes of the residents and residents are free to add some modern elements to their dwellings. On the other hand, although the ancient government-guided renovation of ancient dwellings maintains a primitive architectural style and maintains the appearance of white walls and blue tiles, the internal halls, wing—rooms, patios and other Hui-style architecture are remodeled greatly too. Most of the ancient dwellings that were guided by the government to repair had become lower. The sheds are built on the patio or the patios are directly removed. And the original position of the greenstones in the courtyard is changed for other uses. Big changes have also taken place in the internal structure of the houses. Most houses have the problems with leaks on the roof and poor lighting. At present, residential buildings are basically equipped with televisions, telephones and other modern living facilities, with additional sanitation facilities to improve living conditions in the residential areas. Some residents indicated that the government will issue a corresponding amount of repair fees each year according to the proportion of the residential areas. The fees will be determined by the residents. However, some

residents have indicated that they will be responsible for the cost of repairing the houses.

During the visit, the residents reported that the government had strict maintenance regulations for the buildings in the entire Xidi Village. Apart from the fact that the houses had collapsed due to disrepair and other conditions that endangered the personal safety of the residents, the residents were not free to repair the houses at will. However, for the common problems like roof leaking, residents feel free to repair. At the same time, some residents responded that government's approval of repairing houses this year has become easier.

2.4 The status quo of ancient dwelling use

During the field visits, we discovered that apart from being vacant or of unknown use, some residential houses in Dalu Street and the middle of Qianbianxi are divided into three categories: one for residents' own use, the other for commercial use, and the third for farming. Among them, 'for residents' own use' occupies the majority. This shows that although Dalu Street and Qianbianxi are relatively close to the tourist route, the geographical location of these dwellings is not very favorable because these dwellings are located in the middle part of the two streets. Therefore, most residents do not use their own homes for developing business. But at the same time, we can also see that tourism still exerts a certain impact on this area, because some residents still use their own homes as tourism accommodation facilities, catering facilities and shops. A small number of people's dwellings have become farms due to its collapse or other reasons. This can be seen as a new use of the house after the collapse of the house.

Most of the dwellings in Qianbianxi and the middle of Houbianxi have residential functions, and a small amount of them is used for tourism business activities. Most of dwellings with residential functions participate in tourism and commercial activities at the same time no matter they are located in a popular area or unpopular area. The way they participate in tourism business activities is mainly the operation of the hotel, and some dwellings, which are located in popular area, also have catering services, store operations and tourist attractions.

3 Survey for Community's Perception

3.1 The basic situation of the questionnaire

The questionnaire for community residents consists of five parts. The first part is a survey on “residents' perception of tourism's impact”. The survey uses the five scale of Likert to measure and assign from 1 to 5 with “strongly disagree”, “disagree”, “no feeling”, “agree” and “strongly agree”, and the specific monitoring indicators are the same as in 2016; the second part is the survey of “residents' perception and attitude toward the development of tourism”; The third part is the investigation of "residents' perceptions and suggestions on heritage protection"; the fourth part is the survey on "residents' perception of current living conditions", which also uses Likert's five-grade scale; And the last part is the statistics of the basic information of the surveyed people. While distributing questionnaires, we also use interviews as a supplement to data and information.

Of the 142 residents surveyed, 66 were males and 76 were females, with a relatively balanced male-female ratio. In the age group, people aged from 25 to 60 were the main surveyed population. Most of the respondents' academic qualifications are mainly concentrated in high schools or secondary schools, and the overall level of their education is relatively low. 64.8% of the respondents lived in Xidi for more than ten years. As for the surveyed residents' occupations, the surveyed individuals were mainly private individuals, which accounted for 61.3%. Surveyed residents engaged in tourism-related industries accounted for about 70%, and more than half of the surveyed residents had monthly incomes of less than 3,000 yuan. From the perspective of the total number of households, the residents in the Xidi scenic area are mainly small families of 3 to 5 people, which reach 73.9%. In most families, there will be 1 or 2 family members participating in tourism work.

3.2 Community's perception of tourism's impact

In addition to the indicator of “tourism development is conducive to narrowing the gap between the rich and the poor of local residents”, the average value of other indicators is above 3.5, which shows that residents agreed with the fact that the development of tourism had exerted positive impact on economy. Among them, residents have the strongest sense of identity

with the three indicators of “tourism greatly promotes local economic development”, “tourism development improves local living standards” and “tourism development increases local house prices and rents, etc.”, accounting for 90.9%, 85.9% and 83% respectively. As a whole, the surveyed residents generally agreed that tourism had led to local economic development, improved living standards, brought more employment opportunities, attracted more investment and consumption, but at the same time, it also caused commodity prices and house prices to rise, which to a certain extent narrowed the gap between the rich and the poor.

In terms of the residents’ perceptions of the social impact of tourism, the residents generally have a positive attitude towards the social impact of tourism. Most residents think that tourism improves local infrastructure construction while tourism has little or no negative influence on the local traffic conditions, population density, social atmosphere, life order and other conditions. In terms of demographic structure, half of the respondents stated that the development of tourism did not affect the local population structure. 27.5% of the respondents stated that the development of tourism has caused a change in the demographic structure, mainly due to the increase in the number of migrants. Compared with the data over the years, the residents' perceptions of the influence of tourism on society fluctuate less and remain relatively stable.

In terms of the residents’ perception of tourism's impact on culture, the overall view of residents is that tourism of Xidi’s has good influence on cultural promotion. Tourism makes local residents aware of the value of Xidi cultural heritage, enhances local residents’ cultural pride, and promotes local and foreign exchanges. These positive indicators have achieved an average of 3.5 or higher and even 4.0 or higher, indicating residents’ positive assessment on tourism's impact on culture. Only 23.9% of the residents believe that the development of tourism has damaged the traditional culture, techniques, and customs of Xidi, indicating that most residents do not think that the development of tourism has caused damage to Xidi’s traditional culture, skills, and ethnic customs, on the contrary, tourism has promoted the development of Xidi's culture.

In terms of residents’ perception of tourism's impact environment, in addition to that the average value of the indicator of “tourism declines air quality” is below 3.0, the average value of other indicators are above 3.0, indicating that tourism development has no or little impact on air

quality, but that the noise pollution and water pollution are aggravated, which makes the management of solid waste more difficult. The construction of tourism facilities destroys the natural environment and the water pollution is the most serious.

3.3 Community's attitudes and perceptions of tourism development

There are three manifestations of residents' attitudes and perceptions on tourism development. First, residents generally showed supportive and positive attitude towards Xidi's development of tourism. More than half of the residents are willing to actively communicate with tourists and provide suggestions for tourism development. More than 87.3% of residents expressed their willingness to support Xidi's tourism development. Second, the residents' satisfaction with the government's implementation of tourism development has improved, but it is still at a relatively low level. Thirdly, as far as the current status of Xidi tourism development is concerned, only 42.8% of the residents are satisfied. Residents who expressed dissatisfaction or no sense still account for the majority. This indicator is basically the same as in 2016. Compared with 2015, the indicator has obviously declined. It shows that from the perspective of residents, the development of tourism in Xidi has encountered bottlenecks and has caused dissatisfaction among residents. Some shops have reflected that this year's business is hard, which is also one of the reasons why residents are dissatisfied with the status quo of tourism development in Xidi.

Residents' dissatisfactions are most concentrated in government, tourists, and the environment. The main problems are: (1) unfair phenomena in government management; (2) insufficiency of tourism development and lack of long-term planning; (3) insufficient publicity and promotion; (4) problems with the quality of tourists, littering, and smearing doodles; (5) causing pollution and damaging the ecological environment; (6) local prices, house prices rising, reducing the residents' sense of well-being

3.4 Residents' perception of heritage protection

As a whole, the residents are more satisfied with the current status of heritage protection in Xidi. Compared with 2016, residents' satisfaction has increased. About 45% of respondents indicated that they would take initiative to repair ancient dwelling houses. Only 2% of the respondents said they

would not go to repair ancient dwellings. The major problems that have caused the residents the greatest problem in the protection of the Xidi heritage is that the maintenance of the houses needs government's approval and it takes long time. Second, there are too many other restrictions, but most residents understand the restrictions on housing maintenance and call it an important mean of protecting cultural heritage. In comparison, more residents want to set up tourism facilities such as tourist accommodations and shopping outside the heritage site, without destroying the original features of the site. Residents' opinions and suggestions on the heritage protection of Xidi are mainly concentrated on the integrity of cultural heritage and the effectiveness of government management. The opinions of residents are relatively uniform.

3.5 Living conditions of residents

Overall, 73.7% of respondents were generally satisfied with their current living conditions. Through interviews, we also found that most residents are optimistic about life and have a higher sense of well-being. 55.3% of the residents expressed that their life are in line with expectations; in terms of current living conditions, most of the residents stated that their current living conditions have been greatly improved, but due to the unsatisfactory development of tourism business in recent years, the living conditions have not yet reached their ideal level; up to 83.5% of the respondents hope to change their lives in the future, which is consistent with people's desire for a better life.

Specifically, most of the residents were basically satisfied with their current social relations, working conditions, leisure and entertainment, self-health, and public services. In particular, they had the highest degree of satisfaction with social relations, and the average of the indicators reached above 4.0. However, in terms of consumption status, residents have low satisfaction with local price levels and housing prices. 49.6% of respondents think that the local price level is relatively high, and 28.9% of respondents stated that local housing prices are not reasonable enough and it has been too high.

4 Visitors' experience and satisfaction

4.1 The basic situation of the questionnaire

The questionnaire on visitors' experience and satisfaction consists of four parts, namely, the satisfaction of tourists on Xidi tourism, the attitude of tourists on Xidi tourism, the behavior of tourists, and the demographic characteristics of tourists. Tourists' satisfaction and attitude toward Xidi tourism were measured by the Likert 5 scale and the numbers of 1,2,3,4,5 were assigned to match "disagree strongly", "disagree", "neutral", "agree", "agree strongly". From July 8 to July 11, the survey team randomly distributed tourist satisfaction questionnaires to visitors in Xidi. A total of 200 questionnaires were distributed, of which 198 were valid, and the questionnaire had a return rate of 99%.

The proportion of males and females surveyed was similar among the tourists surveyed, and female tourists were slightly more. In terms of age, Xidi's tourists are generally young, mainly concentrated between 15-44 years old. Among them, tourists who are from 15 to 44 years old are the most, accounting for 52%. These tourists consist of students who sketch, college students and young couples. The overall level of education of the tourists is also relatively high, with 66.7% of the tourists with bachelor degree or above. Compared with previous years, these tourist characteristics are not much different.

Compared with last year, there have been some changes in the characteristics of tourists' occupation and source of tourists. The number of tourists whose occupations are public institutions has increased, and the proportion of students has declined. Through a combination of travel mode analysis, it was found that the proportion of taking DIY tour among the tourists who work in public institutions was relatively high, reaching 76%. Compared with 2016, the source market of Xidi tourists in 2017 was more diversified, and the market concentration decreased. The proportion of tourists from Anhui Province between 2015 and 2017 continued to decline. Guangdong Province ranked third in the number of visitors in 2016 and it dropped to sixth in 2017. In 2016, Hunan, Hubei, and Shaanxi were not the top ten in the number of tourists, but they are now the top ten in 2017, ranking much higher than before. Visitors from these three provinces basically travel with travel

agency in groups.

4.2 The travel features of tourists

In the way of obtaining information, the channels for tourists to obtain tourism information are mainly introduced by the network or recommended by relatives and friends, and the percentage of relevant information obtained through television, broadcasting and newspapers and magazines is relatively low. This is similar to the results of the survey conducted in 2016, which further validates that the introduction of the network and the recommendation of friends and relatives are the main channels for the travel information of Xidi to transmit.

In terms of travel methods, 58.88% of the interviewed tourists chose group tours, and 41.12% chose DIY trip. The proportion is not much different from that of 2016. However, only 50.63% of the tourists choose to follow the tour guides, which is a drop from previous years. This shows that the guided tour services may not have been able to keep pace with the needs of individual travelers. The proportion of DIY-trip tourists who stayed and dine in Xidi was higher than that of team-tourists, while the proportion of group tourists who purchased souvenirs was higher than that of DIY-trip tourists. 89.23% of visitors in Xidi are visiting Xidi for the first time. Only 10.77% are revisitors. Compared with 2016, the proportion of tourists who have visited the city has increased slightly.

In terms of residence time, visitors stay in Xidi mainly for half a day and below, followed by one day. At the same time, 66% of the tourists who stay for more than two days are students.

In terms of the tour activities, tourists mainly take part in the visit of ancient dwellings and idyllic scenery, most of the tourists visited the most characteristic ancient dwellings in Xidi under the guidance of the tour guide, and then they would visit some other ancient dwellings. However, the proportion of tourists living in Xidi, dining and shopping is not high, they are 28.79%, 33.84% and 38.38% respectively.

4.3 Travel Experience and Perception

In terms of then evaluation of destination's landscapes and excursions, the interviewed

tourists were generally satisfied with the landscape and tourism in Xidi. Among them, their satisfaction of Xidi's traditional Hui-style dwellings was the highest, followed by Xidi's pastoral scenery. The above situation is basically the same with that in 2016.

In terms of the perception of the environment in Xidi, the interviewed tourists were generally satisfied with Xidi's environment, among which the satisfaction with the air quality of the scenic spot was the highest, and 92.9% of the surveyed tourists were satisfied, which was an increase compared to 2016. Tourists on the whole are not very satisfied with the business atmosphere in Xidi. They think that the existing business atmosphere of Xidi is a bit strong. Tourists are also less satisfied with the congestion in the Xidi scenic spot. Xidi's roads are relatively narrow, and the roads are not even. People are more likely to get clogged once there were a lot of people. Therefore, the scenic area should reasonably plan the tourist route of the scenic spot and work on the evacuation of tourists to avoid the situation where the scenic spot becomes too crowded.

In terms of the perception of infrastructure, the surveyed tourists have low satisfaction with the infrastructure of the scenic spot. It takes the form of that the satisfaction of public transport facilities is relatively low, and that the satisfaction with public transport is the lowest. For DIY-trip tourists, public transport is particularly important, so Xidi wants to upgrade its own public transport facilities. Compared with 2016, tourists' satisfaction of the completeness of public toilets, the conditions of public rest facilities, and guidelines in the scenic spots has improved.

In terms of the perception of the service in the scenic spot, the satisfaction of the surveyed tourists with the scenic spot service is also low. 18.4% of tourists believe that the price of tickets to Xidi is unreasonable, because of the fact Xidi's travel activities are too simple, and that tourists have a short tour time, which makes it easy for tourists to feel that the fare is not worth. Comparing with the data in recent years, the availability of tourism information and the satisfaction of the scenic area signage system are relatively low and need to be further improved.

In terms of the perception of safety and health in the scenic spot, the surveyed tourists were not satisfied enough with the local security facilities and local security conditions. 48.1% of the visitors expressed that the local medical equipments are not good enough and 34.9% of the visitors

expressed that the local security facilities are not good enough either. However, tourists are satisfied with the public security situation in the area.

In experiencing the diversity of the activities related to the attractions, the visitors are fully satisfied with the diversity of experiences and activities related to the attractions. Tourists' satisfaction on the value and charm of Xidi's traditional Hui-style dwellings, rich history and culture, residents' traditional living conditions, and simple folk customs is relatively high. Tourists' satisfaction with local souvenirs and catering is relatively low. Satisfaction with Xidi's rich and diverse tourism projects is the lowest. 40.3% of tourists think that the tour is not good enough.

In terms of perception of heritage protection, tourists' perception of the heritage of Xidi is relatively high. 84.3% of the interviewed tourists know that Xidi is a World Heritage site. 92.7% of the interviewed tourists agree that Xidi's ancient residence should be protected, 75.3% of the interviewed tourists were satisfied with the protection status of ancient dwellings in Xidi.

In terms of the perception of local people's attitudes, the surveyed tourists are generally satisfied with the attitude of the local people. Most tourists are satisfied with the local staff's service and are willing to chat with the locals. More people think that the locals are warm and friendly. Compared with previous years, tourists' perception of local residents' enthusiasm increased slightly.

4.4 Overall satisfaction

The surveyed tourists have a higher overall satisfaction with Xidi tourism. Among them, 81.2% of the interviewed tourists expressed satisfaction, and 78.8% of the interviewed visitors said they would recommend Xidi to their relatives and friends. However, tourists' willingness to visit again was relatively low. 10.1% of the interviewed tourists stated that they would not come to Xidi again in the future, and 60.6% of the interviewed visitors thought that they would come to Xidi in the future.

Tourists' impressions of Xidi are mainly about ancient dwellings, historical culture, simple folk customs, rural scenery and the beautiful environment, which is not much different from that in 2016. Tourists' suggestions for the development of Xidi tourism mainly include infrastructure construction, tourism projects and heritage protection. First of all, many tourists think that the tourism facilities in

the scenic spot are insufficient, especially the transportation is not convenient, and the environmental sanitation of the whole scenic spot needs to be improved. Tourists reflect that the water inside the Xidi scenic spot is not clean, the trash can is dirty, and the wild dogs are everywhere. Many tourists feel that the roadmap and signposts in the scenic area are insufficient, which remains the same as in 2016, but it has not yet been well resolved. Secondly, for Xidi's tourism development, due to the relatively simple tourism activities in Xidi, it only costs half a day to travel in Xidi. Many tourists believe that Xidi's ticket is not worthy, and there should be more tourism projects added. Or there should be some relaxing facilities for visitors to rest. In addition, some tourists think that Xidi's tourism products are less variety and lack Xidi's local characteristics. Finally, it is about the issue of heritage protection. Many tourists believe that Xidi should promote the protection of ancient buildings, renovate old abandoned dwellings, and control the commercialization of scenic spots.

5 Conclusion

(1) The overall preservation of dwellings is good, and more of them have been commercialized.

Due to the requirements and restrictions of heritage protection, the overall protection of ancient houses in Xidi is in good condition. The characteristic parts of traditional Hui-style architecture such as gatehouses and patios are well preserved and there are some subtle changes in details. There are two main reasons for housing changes: First, the long-lost repair of the housing leads to the damage of the house; the second is that based on modern living and business needs, the internal structures of the ancient residential building need to be renovated and the modern facilities need to be introduced in order to meet the needs of modern life.

With the development of tourism in Xidi, ancient dwellings have begun to become tourist attractions, and they have also been developed for commercial use while maintaining their residential functions. Due to frequent commercial activities, residential houses facing the street have basically completed commercial development. Some of the residences are used for the tour guide to make introduction, which makes it full of tourists. And more and more commercial activities come to exist.

(2) Residents generally support tourism but still believe that it exerts some negative influence

Overall, Xidi residents are positive about tourism development and believe that tourism has a positive impact on economy, culture, society and the environment. The most recognized is the role of tourism development in promoting the local economy. Before the development of tourism, Xidi was dominated by agriculture. However, due to geographical restrictions, for example, there are many hills and few flat lands leading to unfavorable agricultural development; Xidi's economy fell behind. So tourism brought new vitality to Xidi, introduced foreign investment and consumption, created new employment channels, and accelerated infrastructure construction. At the same time, the ancient dwellings became tourist attractions of Xidi, which makes residents aware of the heritage value of traditional Hui-style architecture, which further strengthens residents' sense of pride and belonging to the culture. So heritage protection has also been supported by the residents.

However, tourism development has also exerted a negative impact on local residents, first of all reflected in the process of economic restructuring. From the self-sufficient agricultural production to the tourism economy, the increase in local prices and rents has increased the incomes of residents, and has also increased the burden on residents. The lack of economic strength and knowledge and skills has caused residents to be unsatisfactory in the process of tourism participation. What comes next is the impact on the environment. After tourists and students who do sketching entered Xidi, they have a certain impact on the local ecological environment, mainly because of the paint pollution brought by the students. Finally, some residents reflect that they have different idea with government on the protection and use of ancient residential areas. Residents put forward their opinions that the government should improve the approval procedures for housing repairs, increase the development of tourism projects in Xidi, and expand publicity efforts.

(3) The type of tourism is mainly sightseeing, and this type of tourism needs to be further developed

The monitoring results show that Xidi's tourists are highly satisfied with the local Hui-style architecture and natural scenery. They are also satisfied with the community environment and folk

customs. Xidi ancient residences are important tourist attractions. Visitors here are mainly engaged in sightseeing tours and rely on guides or DIY explanations to understand the Hui-style architectural culture. However, this kind of tourism has a lower sense of participation and experience for tourists. Although the first visit to Xidi will be praised because of the exquisite ancient buildings, tourists' willingness to return to the second time or the rate of re-visit is not high. When visiting buildings, visitors are more likely to fly around, and the structure of houses is similar. If tourists only take appreciating Hui-style buildings as the purpose of travelling, tourists only need to travel on the main tourist routes, which will lead to a situation where the form of tourism is too simple. So now, there are only the students who come here to sketch will stay overnight, which is detrimental to the development of the local economy.

Xidi should improve tourism development in two aspects: First, the development of tourism projects. Xidi should get rid of the situation where attraction of tourism relies solely on Hui-style architectures, pay more attention to alternative functions and competitive strength of similar ancient village heritage sites such as Hongcun, so as to enhance tourists' cultural recognition and participation experience of Xidi, which might help to extend the residence time of tourists and increase the revisit rate; Second, the foundation of tourism. At present, Xidi still has issues such as unclear signage systems and incomplete tourist information. The investment in local construction should be increased, and the leisure service facilities such as maps, tourist toilets and tourist service centers should be improved; in the construction of marketing and promotion platforms, successful development of tourism destinations should be used for reference; Multimedia construction should be done to promote the external expansion of tourism.

6 Special report I: Environmental Protection of Xidi

The topics of Xidi's environmental protection are mainly divided into six aspects: waste disposal, food waste, water pollution, noise pollution, toilets, and energy consumption.

6.1 Garbage disposal

There are a total of 30 trash cans decorated by flowers boxed, 30 metal box trash cans, and 44 plastic trash cans in Xidi scenic area. And there are a total of 11 cleaning personnel, including 4 garbage transporters, 6 cleaning personnel, and 1 inspection personnel in the scenic area. The cleaning personnel clean the garbage and dump it into the trash can. Then the garbage transport personnel transport the garbage to the transfer station outside the village. The transfer station garbage is sent to the county garbage disposal center every morning and afternoon. Although the number of rubbish bins increased compared to 2016, some villagers and merchants still placed foam boxes and plastic drums at the entrance to store rubbish. As the cleaners get off work at 5 pm every day, the garbage generated after 5 pm will not be cleared, and there will be some solid waste around the trash at night.

According to the interviews with 14 villagers, the owners of shops, restaurants, and homestays, they have different treatment methods in terms of the processing of kitchen waste, which are dependent on the amount of kitchen waste generated. For restaurants and homestays that produce more kitchen waste, kitchen waste is mainly used for feeding their own pigs or for feeding pigs of other people's homes. For inns, shops, and villagers who produce less kitchen waste, some of the kitchen waste will be used to feed on poultry and livestock; if there is no poultry or livestock, the waste will be dumped into the trash cans.

6.2 Food waste

In interviews with 14 residents, and the owners of bars, inns, restaurants, and shops, it is not difficult to find that food waste happens the least among residents or inns that do not provide food, followed by bars and cafes. The one that wastes most food is the restaurant with many guests. Due to the group's meal in the tour, the food was wasted a lot, and the average waste of each person was about 250 grams. The family meal can effectively control the amount of food and food wasted. Bars and coffee shops only provide snacks, so food waste is very little.

6.3 Water pollution

The waste water in Xidi scenic area is mainly generated by tourists and residents. The waste water generated by visitors includes paint waste water and domestic sewage. The main waste water produced by residents is domestic sewage, kitchen waste water, toilet waste water and washing water.

Table 6-1 Water use in Xidi scenic spot

	2017.1	2017.2	2017.3	2017.4	2017.5	2017.6
Number of visitors (person)	21182	82785	67331	119869	79421	59258
Total water consumption (tons)	7737		3543	7104	5684	5287

The growth of tourists has led to an increase in water consumption in Xidi scenic area, which has led to an increase in the volume of oil and sewage scenic area. There are two main methods for the treatment of oily waste water. The first is to directly discharge it into the stream through the sewage pipeline. The second is to drain it into the roadside ditches and let it naturally decompose or flow into the streams.

Due to the fact that students in sketching classes has decreased, and that the pigment slops have increased, and that students' awareness of protecting water has been strengthened, there is little situation where pigment sewage is poured into streams. However, in the process of pigment sewage treatment, the pigment water in the transfer station is just simply filtered, and it is discharged directly along the ditches, which eventually lead to the pollution of the environment.

6.4 Noise pollution

The social life noise in Xidi scenic area includes the horns of tour guides, the buzz of tourists, and the oud music of bars. These noises mainly occurred on the tour routes, namely the Paifang square, Dalujie Hengjie, Xiulou, Zhijie, temple of Qianbianxi, and the bar of Qianbianxi and

Houbianxi. Other noises include sounds of construction and motorcycle sounds, which are intermittent noises. On the whole, community residents and tourists have a weak perception of noise pollution in Xidi scenic spot, and they have an indifferent attitude toward it. However, some residents are still disgusted with the sound of construction and the loud music of bars and shops.

6.5 Toilets

There are three toilets for tourists in Xidi scenic area, which are located at the entrance of the parking lot, the street opposite Zhijie Xiulou, and the village committee beside the temple. Toilet facilities are in good condition. And since tourists are few, they can meet the needs of tourists, and also, tourist toilets are installed in places with large amount of tourists. With the geographical location being relatively convenient, tourists are quite satisfied with the toilets.

There are three main forms of feces disposal in Xidi. One is to discharge it through pipelines, such as toilets for tourists; the other is to build useful septic tanks under the dwellings and then discharge the feces into the septic tanks. With natural decomposition and infiltration in the septic tanks, it will finally be removed; and third, use it as fertilization.

6.6 Energy consumption

Xidi scenic energy use mainly includes electricity, gas, coal, firewood, solar energy and air energy. In all energy consumption of Xidi Village, electricity is the most important energy consumption for residents, restaurants, bars, hotels, and shops.

Table 6-2 Electricity usage of Xidi in the first half of 2017

	2017.1	2017.2	2017.3	2017.4	2017.5	2017.6
Electricity consumption (degrees)	114237	193491	141276	140093	150702	122901
Number of visitors	21182	82785	67331	119869	79421	59258

Source: Electric Power Company, Huihuang Company

6.7 Conclusions and analysis

Based on the investigation of environmental protection in Xidi, the following is a summary of environmental protection in Xidi:

(1) The garbage treatment system of Xidi is operating well and basically meets the current sanitation requirements of the scenic spot and is recognized by residents and tourists. However, household-made dumpsters such as foam boxes and plastic buckets affect the appearance. Kitchen waste is generally used as food for livestock and poultry, and the overall treatment is relatively environmentally friendly. However, some of the kitchen waste is still poured into the trash.

(2) Food waste: a lot of hotel food is wasted, and food waste is less in bars, households, and inns. Xidi has not yet formed an atmosphere of reasonable ordering and reasonable dining. Through propaganda, visitors and students can be made more aware of reducing food waste.

(3) There are still problems in the sewage treatment system: First, the problem of residents' domestic sewage discharge has not been effectively solved, which has a negative impact on the environment and image of the Xidi scenic spot. Second, the pollution of water and soil caused by pigment water is serious, and secondary pollution is still caused by the discharge after filtration at the transit station. Third, business sewage seriously affects the scenic environment. It is recommended that relevant departments speed up the construction of sewage pipe networks and sewage treatment factories, and encourage qualified hotels to install sewage purification devices themselves.

(4) The noise pollution in Xidi scenic spot is concentrated on the tourist route, mainly from the tour guides and tourists, but tourists and residents have weak perception of noise pollution. The loud music of bars and shops caused residents' resentment due to its long duration.

(5) The facilities for tourist toilets are good. They are mainly located in areas with concentrated traffic and are managed by special personnel. However, there are still private toilets that charge in scenic spots. It is suggested that small-sized tourist toilets be arranged along non-tourism routes.

(6) In terms of energy consumption, the use of traditional energy coexists with the use of new energy. Electricity is the most important energy consumption. The use of air conditioning has a great influence on the power consumption in Xidi. It is suggested that the management of saving electricity should be implemented in the hotel and inn, and the card should be installed to realized the power switch.

7 Special report II: Business Situation of Xidi

7.1 Business monitoring method

The investigation of Xidi Business was based on observation and interviews to obtain the information. The scope of monitoring was five major streets in the village—Yonglu Street, Zhijie Street, Dalu Street, Qianbianxi, and Houbianxi. The monitoring content was mainly for the village. The shops in the streets are coded, located, and classified as business types. The distribution maps of Xidi shops are plotted. Shop information is registered according to the numbers, including the basic information of the operators, the ownership of the shops, the original use, the type of business, the date of opening the shop, etc. Information analysis is the simple statistics and status analysis of the obtained data. The purpose of commercial monitoring is to organize, archive Xidi's business information, and to strive to establish a complete database for Xidi business information. The monitoring results showed that 232 profiled stores' information was profiled. The basic information was relatively complete, but some of the information in some shops was missing. In addition, during the process of counting merchant information, each store door photo was photographed for the analysis of store names' feature, and a total of 179 storefronts were photographed.

7.2 Basic information of stores

(1) Business distribution characteristics

Dalu Street is the main road of Xidi Village. It is the only way for tourists to get in and out of Xidi Scenic Area. Therefore, there are altogether 86 shops in this street. The main business types are mainly tourist souvenirs. The streets are relatively narrow, but due to the hot lines of the tour guides, the shops are very densely distributed. Among them, there are 15 shops in Henglu Street and 38

straight streets. The business types in the two streets are mainly snacks and tea sales, and there are very few accommodation facilities. The front side of the river is relatively long. The east and west ends are mainly residential and farmland. The business is mainly concentrated in the middle section, with a total of 61. The type of business is relatively diversified, and accommodation and catering are relatively large. There are 36 accommodations and catering categories, 26 of which provides both accommodation and dining, 3 of which restaurants, and 7 of which provides accommodation. Houxixi Street is a long area and is the main area for the villagers to live in and it is also the main area of agricultural production. Because they are not included in the regular tour route, few tourists will arrive there. And also there are few shops, a total of 16. And most of them are inns or hotels, a total of 11, accounting for more than half of the entire Houxi Creek shops. From this we can see that the business distribution of Xidi heavily depends on the tour route led by tour guides.

(2) Analysis of business characteristics

Among all business types in Xidi, there are mostly souvenirs, up to 67, accounting for 28.9% of the total commercial volume, 33 specialty shops, mainly tea shops, 18 accommodation and service facilities, mostly self-employed by residents. But there are fewer chain hotel chains. And the number of catering service facilities is about 20. But taking restaurants, beverage shops, and restaurants that have been transformed from ancient residential areas, as well as government-owned booths on both sides of the road providing accommodation for rent, and operate accommodation and catering in to account, there are 40 service facilities providing accommodation and catering in the same time. In addition, there are 6 community stores in the scenic area, mainly selling drinks, daily necessities and simple foods.

The proportion of men and women who is engaged in tourism business shop is relatively balanced. And the age of the operators is mainly concentrated in 30-60 years old, accounting for 80.2%, mainly young and middle-aged. A small number of elderly people participate in it. In general, the majority of commercial operators are people in Xidi Village, accounting for 67.7%. 18 people are from other provinces, accounting for 9.4%. And 47 people are from other regions in the province, accounting for 24.5%. In general, Xidi's commercial operators are still dominated by Xidi locals. However, in the past two years, many Xidi natives have bought houses in the town. And they would

operate shops in the scenic area during the day and return to the county in the evening or off-season. In the past two years, more and more people in other places outside the Xidi Village operate business in Xidi.

Regarding the property rights relationship between commercial operators and their houses, 47.3% of the houses used in Xidi shops are owner-owned, and 48.3% are rented by shopkeepers. Only a small portion of shopkeepers buys houses to operate, accounting for 3.9%. Compared with 2016, the proportion of self-owned houses increased (39.4% in 2016), and the proportion of rented houses also increased (38.8% in 2016), which indicates to some extent that the change of store house operators is relatively large. May be due to the change in the rental price of the house itself, a part of the residents choose to rent the house to get more profits.

7.3 Store name situation

(1) Store name characteristics

The name of the Xidi store is mainly carved on wooden boards, with the form of plaques hanging horizontally above the store or hanging on both sides of the store. There are also shops that hang the plaques on the outside and are more eye-catching. Some stores make metal brackets and will engrave the name of the store on it. A wooden board or billboard is fixed on the metal bracket on the door. The background color of placards or billboards is mostly black. The gold or yellow characters are engraved on it, the font is mostly carcass, and the overall tone is commensurate with the color of the Hui-style architecture. In addition, the Hui-style architecture was used to inlay placards at the entrance. Therefore, most of the shops in Xidi will hang their placards at the entrance. There are also some stores that are remote and there are no other shops on either side of the street. Placards are placed in prominent locations on the streets to guide customers to their stores or they will pace multiple plagues on the side of the road or at corners to guide customers. In addition to plaques, lanterns are also commonly used as their placards for Xidi businesses, while newly-opened stores pay more attention to distinctiveness and consider the overall style of color matching. For the ancient buildings and ancient dwellings used for visits, the government is tying a uniform style name plaque next to the doorway. On both sides of the sign is a more primitive style, with a metal plaque

in the middle, and a world heritage logo on the upper left corner. The font highlights the building's name and the WeChat QR code is under the name to introduce the building.

(2) Store name analysis

The name of the accommodation store can directly reflect the operation content of the store. The accommodation facility is generally named as an inn or a house or the words related to the accommodation, such as “home” and “room”, showing the business content. The business content is also marked on the card, and the common labeling content is "accommodation and meals."

Native products are mainly tea, wine and various carvings (including stone carvings and root carvings). The name of the shop in the specialty shop is relatively straightforward, and it is generally a certain tea (Zhuang), a certain wine (fang), and a certain carving.

The souvenirs are mainly postcards, key pendants, ornaments with Jiangnan characteristics. Some names of shops are postcards or souvenir shops. Some stores do not have names but products placed at the doorway and that makes it easier to identify the type of goods sold.

The names of coffee and bar shops are more distinctive and poetic. It is difficult for people to identify what it is only from the name.

Snacks shops are mainly distributed in the southeast of Houbianxi and Dalujie. There are no names for those snack stores with simple sheds. The seller will peddle when the tourists are passing by.

Visitors pass by when the tourists pass by. Snack stores without simple sheds usually have plaques, on which they will note their varieties of snacks.

The names of supermarket stores are relatively common, because they are mainly consumed by local residents. Generally, the names of supermarkets are not very special, and some even do not have names or are directly linked with plaques with business categories but do not have store names.

7.4 Summary and analysis

7.4.1 Overall analysis of business

(1) mainly depending on the tour route

The shops in Xidi are mainly distributed on both sides of important Xidi route, including Hengluo Street, Zhijie Street, West Section of Dalu Street, and the middle section of Qianbianxi. And they form a commercial hot spot. But the routes that tourists travel less pass by, including Houxi River, the eastern section of Dalu Street and the east and west ends of the front stream, form a commercial cold area. The obvious difference between the hot and cold areas is not conducive to a balanced business income among the residents of the entire Xidi scenic area, which may easily lead to conflicts between the residents in the hot and cold areas and among residents in the cold areas, the government and tourists.

(2) same business types

As for the business types of the five streets, souvenir shops, accommodation, and food and beverage outlets are the main types. But the types are too single, especially for souvenirs, snacks, and other food and beverage supplies. The reason is that the small-scale business is easy to imitate and differentiate. The possibility of innovation is small. Native products are dominated by tea, wine, and sculpture, but the products provided by different stores have little difference. The souvenirs are mainly postcards and pendants, and the types of goods are not enough. However, compared with the past, Xidi owners have become more and more aware of their differentiated operations. Xidi's businesses are also moving away from homogeneity and pursuing differentiation and uniqueness.

(3) increasing proportion of owner-occupied and rented houses, frequent changes in property rights

Compared with 2016, the proportion of rented houses and self-owned houses of Xidi shops have significantly increased, which indicates to some extent that the changes in store operators are relatively large, which may be due to changes in the rental prices of the Xidi housing market. Some Xidi Village outside the business operators enter, economically competent shopkeepers will choose to buy houses directly for commercial operations. On the other hand, local residents participating in tourism operations will increase significantly. Xidi's successful application for world heritage will make more residents aware of the ancient dwellings. Especially, after seeing the residents who have earlier invested in tourism are getting profit, they would like to participate in tourism development if the funds permit, and profit from the development of tourism.

(4) stable business model

The distribution of the age of Xidi is more in line with the general business growth cycle. There are 38 "old stores" that have opened more than 20 years, and there are also 20 stores that have opened for 10-20 years and shops that have opened within 10 years. A total of 119 companies, accounting for 67.2% of the total number of shops, increased by approximately 23% compared to 2016 (44.8%). The increase in the proportion is mainly due to the significant increase in the number of shops opened during the year, which also indicates that the number of residents newly added to Xidi tourism has increased. And under the law of the survival of the fittest in the market, some excellent businesses have survived, and others have been eliminated under the influence of market competition, subletting or changing their operating products.

(5) the complicate Residential protection law, difficulties in housing renovation

The houses used in commerce are mostly converted from old residential buildings. In the process of housing renovation, it will involve the compliance of the regulations for the protection and protection of ancient residential buildings, the related supervision and law enforcement agencies. The unclear management regulations and the unsuccessful implementation of lower-level management

personnel have led to dissatisfaction of the villagers with the government, but the villagers themselves lack feedback channels, which is not conducive to the improvement of the efficiency of government administrative work. These policies have a relatively large impact on the owners of operating accommodation.

7.4.2 the summary and analysis of shop names

(1) store names' carrier is similar, but some new owners are seeking innovation

The carrier of the Xidi store name was dominated by plaques. The plaques in the early stores were mostly black and with gold characters on it to echo the hue of the Huizhou architecture, but it was difficult to find those plaques from those buildings. In recent years, the owner of the store had had a different awareness. In recent years, the store name carrier has become more and more diversified, with different fonts and designs, but the overall tone is similar. Differentiation is mainly reflected in the design of the fonts and plaques. The abundant design of plaques allows visitors to have a deep impression on specific stores, and it also allows visitors to bring a variety of experiences to Xidi stores and enrich visitors' experience.

(2) more different features in name between different stores providing different services

The characteristic of the names of accommodation, specialty products, and snack shops is not very obvious. Basically, they will entitle based on their services or they will have some character to show their services. Some stores will mark the contents of the business or the services provided on the plaque. The names of drinks and souvenir shops are relatively literary and characteristic. It is more difficult to know what products the store operates by using only the store name, and these two types of shops are less marked on the plaque, but can be understood through store decoration or other auxiliary billboards.

(3) characteristic store name or design can impress tourists more

Although there are only 300 households in the Xidi Ancient Village, the number of storefronts has reached 232, and the commodity market has become saturated. How to get out of the business

requires the owner to carefully design in all aspects, including the name of the store and the design of the plaque. Distinctive design can impress tourists more and then can make them willing to stop in the process of the tour and buy more things. The names of the shops selling liquor and tea are the most similar. If each store can entitle according to its own unique characteristics, it is easy for consumers to remember. We believe that there will be more customers in the business process.

8 Special report III: the Community Resilient

8.1 Research background

Community resilience is defined as the ability of the community and its members to perceive changes in social, management, environmental, and economic factors, and to respond to the external pressures and disturbances brought about by these changes based on existing knowledge and conditions. This survey measures community resilience based on subjective perceptions of actors. The Community Resilience Scale (CRS) includes four dimensions: economic, social, institutional, and ecological. Economic resilience mainly refers to local economic leakage effects. Social resilience includes network relationships and trust among community members. Institutional resilience includes institutional flexibility, local leadership's control and rights sharing, and ecological resilience mainly refers to the local infrastructure.

8.2 Research methodology

The monitoring community resilient uses a combination of qualitative and quantitative methods. A total of 150 questionnaires for community residents were distributed, 142 were returned, and the effective recovery rate was 94.67%. Twelve interviewees were selected and the interviewees were between 25 and 70 years old, including individual and private owners, service workers, and retirees. Interview time is more than 30 minutes.

8.3 Dimension interpretation

8.3.1 Economic Resilience

Community residents generally believe that after the development of tourism, local economic activities began to be diverse and abundant, and most people in the village make a living mainly depending on tourism. However, residents think that there are still many obstacles in the process of the tourism industry. For local residents and shop operators, due to the small scale of local supply, they mainly purchase goods from the town. This shows that most of the local economic activities are centered on tourism, and the economic development in daily life consumption is still at a backward level. .

Due to the high degree of dependence on the tourism industry, for the development of tourism, residents generally believe that this should be a matter for the government and tourism companies to consider. Many residents are facing a passive situation. When asked about how to respond if tourism is sluggish or where competition is becoming more and more intense, many residents choose to “change their business if they don’t do well” or “go outside to work”. Others say that they have never thought of living in the future, and they are always on the move and they are always in the comfortable and happy mood. In summary, Xidi’s economic resilience is low, and the adaptability of the livelihood transformation is poor.

8.3.2 Institutional resilience

The fragility of the community comes from the uneven distribution of rights and resources. Institutional resilience focuses on the ability and efficiency of community management agencies to respond to unexpected situations, and the degree of participation of community residents in management and decision-making is also a key factor. According to the results of the questionnaire analysis, there is still much room for improvement in the ability and efficiency of village leaders to handle matters. Some residents have chosen “do not to understand the work of village leaders”. The residents of the community have a low degree of recognition of local people's participation in management. This means that residents think that their right to speak and control of resources and sharing decisions in community development are still not met. The reason why most residents express neutrality is that they never think about it. They don’t think they are capable enough to participate in the management decisions of community development. And they think that it should be the matter of the government and the experts.

In conclusion, Xidi's institutional resilience is slightly lower. On the one hand, it is because the government's allocation of management functions is not clear. The one-way communication during the implementation of the policy makes the residents have a sense of alienation from the government. This causes the asymmetric information between the government and the community. On the other hand, the residents are not involved. The sense of management and ability also weakened the institutional resilience.

8.3.3 Social resilience

The villagers believe that villagers who are members of family members in village management committees and other community management departments can often obtain more comprehensive information on tourism development and community trends. Community residents will form different restrictions on their social interaction and circle due to differences in their social identities and industries. As a result, it may be difficult for tour operators to communicate with government officials. Interest-oriented government-civil relations replace community members become the main communication method among members of different social identity communities. Different social identities did not fully play an active role in promoting, but instead deepened the gap between official status and other identities in the network of community members.

Overall, Xidi's social resilience is at a relatively low level. Villagers have a sense of belonging to the community and agree with community culture. However, there are certain gaps in the individual communication of villagers in the community, and the degree of trust among villagers will be greatly affected by the interests. Most villagers are accustomed to the existing living conditions, and the overall community members have not linked tightly with each other. Therefore, they are vulnerable to face with changes in social, management, environmental, and economic factors. For change, people's coping attitudes are mostly negative, and they are often passively adaptive. Under the influence of the ageing phenomenon of community members and the characteristics of community members, most of these residents are risk-averse. Facing with changes, they are not willing to make big changes

8.3.4 Ecological Resilience

Ecological resilience mainly revolves around the two key points of the community's natural environment and its protection. The villagers reflected that the government had invested in the construction of infrastructure, but the construction of streetlights and other infrastructure was insufficient. And the firefighting project had no substantive effect. The villagers' own strong awareness of prevention reduced the serious impact of disasters such as fire on Xidi Village. The development of community tourism leads to more waste, but the overall environment of the tourism community has become cleaner due to effective waste management regulations and measures. However, the pollution of Xidi water sources by tourists and students is still serious.

In general, Xidi community members have strong ability to cope with ecological changes. Xidi Village and tourism companies have taken certain measures to deal with changes in the ecological environment, but they are not comprehensive. The villagers did not experience significant changes in the overall ecological environment of the community. They were aware of water pollution but lacked effective countermeasures. In terms of infrastructure, the villagers are aware of the lack of infrastructure construction and management in the village. However, due to their low dependence on them and their strong autonomy and resilience, the lack of infrastructure has not impacted too much on residents' lives.

8.4 Summary

In summary, Xidi's community resilience rating is low. For the tourism industry, due to the lack of cultural education, the lack of understanding of this emerging industry makes it difficult for residents to cope with sudden changes in tourism development. They also lack the ability and awareness to participate in community management decision-making, and face a passive position in the face of tourism shocks. The government also lacks the necessary guidance for the development of community tourism in the development of tourism in Xidi, leading to the disorder and unity of residents in tourism management. Community residents should actively seek the possibility of tourism management and improve their own awareness and ability to participate. At the same time, the government should also strengthen exchanges with residents and jointly provide advice and suggestions for the development of tourism in Xidi.

9 Special report IV: The Basic Development of Xidi's Homestay

9.1 Monitoring method

The object of this monitoring survey was Xidi Homestay. The information collection method was interview and observation. The content of the interview was based on the basic information of the hotel, environmental sustainability, and brand development. The observations were mainly about the hardware and software design of the hotel and the surrounding environment. The purpose of this monitoring is to improve commercialization information, and to provide information support for the brand development of Xidi's homestay in the future. A total of 24 host owners were interviewed for the monitoring and the information was more complete.

9.2 Basic information on homestay

In terms of the motives for opening a business, most of the owners stated that running Inn is mainly for the sake of making money. And very few owners of the hotel are operating the inn for the sake of feelings. Influenced by the restrictions on the protection of buildings in Xidi Ancient Residence, Xidi homestay has a variety of guest rooms, and the number of rooms is concentrated in 6-10 rooms. As for the pricing of rooms and the positioning of hotels, there is a significant price difference between high season and off-season. The inns are basically budget hotels. Some of them are middle and high-grade hotels. Many hotels in the off-season have lower prices, about ¥100-250. However, the occupancy rate is poor and the competition between the homestays is fierce.

9.3 Environmental sustainability

For their own inn, most of the owners of the hotel mentioned that the way to protect the environment is to use energy-saving lamps and air energy. In terms of waste and sewage treatment, almost all of the hotels chose to throw garbage directly into the trash can in the village, and they did not pay much attention to sewage treatment. In particular, the Moshang Juwei Hotel is the first homestay in Xidi to install a sewage purification system. The environmental protection measures of the homestay will provide a reference for other hotels to implement environmental sustainability concepts. In terms of water and electricity consumption and costs, most of the water fees paid by the

hotels are within ¥100.

The electricity bills varies from homestay to homestay, as well as varies form season to season. The electricity bill of the general hotels in low-seaon is around ¥500. But in high season it will be around ¥1000. In terms of educating tourists, most of the owners of the hotel reminded those tourists with weak awareness on environmental protection. Actually, environmental protecting behaviors depended mainly on the consciousness of tourists.

With regard to the overall environmental problems of Xidi, the owner of the hotel concerned about the impact of solid waste and water pollution on the development of the hotel and Xidi. The poor quality of local villagers, the weakness of some visitors' self-control, the lack of quality of students of sketching students, and the desire to facilitate the work of environmental sanitation workers are the major causes of environmental problems in Xidi. Although the owner of the homestay mentioned lots of Xidi's environmental problems, he actually relied more on the government in his actual actions and he hoped that the government would solve the problem. Actually he did not consider the overall environmental protection issue from his own point of view.

9.4 Brand development

The owner of the property has a vague understanding of the differentiated service of the inn. He believes that his old residential building with Huizhou architectural characteristics is the most unique element. In terms of room design, it is "almost" similar to other homestays. And there isn't any distinctive services at all. Of course, some owners are still good at excavating their own characteristics to attract tourists. In the decoration design, most of the owners of the property valued the hardware facilities but did not have too many ideas in the software design. Over one-third of the hotels in the interview had undergone a new round of renovations. Their common features were that they had already operated their homestay more than ten years. Upgrading the hardware facilities and remodeling will have a temporary influence on turnover. In terms of publicity channels, Xidi homestay's single propaganda means rely on online OTA and attracting visitors offline. Regarding the difficulty in operating the homestay, the drop in occupancy rate was a problem for most of the owners. The lack of financial resources and energy of owners, the presence of foreign investors, the

increasing homestay in Xidi and the overall status of Xidi's tourism development are the main reason for occupancy decrease.

In the owner's opinion, the homogenization of the hotel and the relationship among the villagers, the government, and the travel company are the major difficulties for the inn. The lack of returning visitors and weak propaganda are the major problems in the development of Xidi tourism. This has increased the operating difficulty of the inn. In other words, to build a co-branded inn will be a long road.

9.5 Conclusion and analysis

Based on the understanding of the development of Xidi homestay, a summary of the status quo of the development of the hotel is as follows:

(1) Single operating structure

Most of the homestays in Xidi are run by local villagers. They are family business. Their main function is leisure and catering. And they regard accommodation as an auxiliary and supporting property, so they do not constitute a typical accommodation format. The benefit chain of the tourism service products provided by the owner of the hotel is simple, the added value of the products is low, and the product form always stays at a low level.

(2) Weak environment sustainable development ability

Due to the development phase of Xidi homestay, the owner of the hotel lacked the awareness of sustainable management. Most of the owners did not consider the use of energy-saving and environmental-friendly facilities to protect the environment and reduce pollution. They also did not remind tourists of the need to save resources and energy. This increased their operating costs to a certain extent, and it also made a negative impact on sustained development in Xidi.

(3) Weak brand awareness

Most of the owner of the property considered the homestay as a business, not a feeling, which

led to the lack of a unique soul. Many of guest rooms have very similar decoration styles, with wooden structures as the mainstay. So they lack of uniqueness. The owner of the homestay only hangs his own housing information on the OTA, but does not know how to make full use of resources. They passively waits for tourists to visit and lacks brand marketing awareness. Therefore, the brand development of Xidi homestay still requires long-term efforts and persistence.

(4) Fierce competition due to the presence of foreign investors

In recent years, more and more non-Xi Di villagers have acquired ancient dwellings through renting or purchasing to operated inns or home stays. Due to the development of macro-tourism and the poor management of their own homestays, many local villagers have signed a partnership with foreign investors and chose to rent their homestays in order to earn a stable rental fee. This means that in the future, the competitiveness of Xidi's homestay will become increasingly fierce, but the possibility of brand building will increase.

2017 Monitoring Report on the Sustainable Tourism Development of Hongcun Village

Monitoring Centre for UNWTO Sustainable Tourism Observatories

People's Government of Yi County, Huangshan City



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Acknowledgement:

Yixian Country People's Government, Huangshan Tourism Committee, Yixian Country Tourism Committee, Zhongkun Investment Group, Hongcun Village Committee

And all those who helped with the monitoring work.

1. Preface

With the concept of sustainable development going deeper, promoting the sustainable development of tourism has become a global trend. It already becomes the focus in today's world to find specific techniques and methods to monitor the object in the long term, and to take necessary precaution and correct measures.

For ancient village scenic spots, the impact of tourism development on ancient villages is not only reflected in the tangible architecture, but also affects the intangible culture. The Hui-style architecture is one of the most important schools of traditional architecture in Han nationality, possessing great value to protect. Therefore, the monitoring center began to establish observation sites in Xidi and Hongcun ancient villages in Yi County, Anhui Province in 2012, and carried out continuous tourism monitoring work. Its main purpose is to record the changes of dweller through the inspection, and summarize problems, challenges and experience in protection according to the current trend, so as to explore the sustainable developing mode in heritages' tourism.

2. Hongcun Heritage Protection Status

The monitoring mainly focused on residential houses on the two sides of the tourist route and unpopular residential areas. Among them, Qianjie, Chahanglong, and Shangshuizhen are located in the western part of Hongcun, which is the popular area on the main route of the tourist route. And Dongbianjie, Houjie, Dongbianjing are located in the unpopular area of the eastern part of Hongcun. Dongbianjie area: 8 dwellings are archived. Houjie area: 3 are archived. Qianjie area: 8 are archived. Shangshuizhen District: 12 are archived. Dongbianjing area: 1 are archived. Chahanglong area: 2 are archived. Area along the river: 3 are archived.

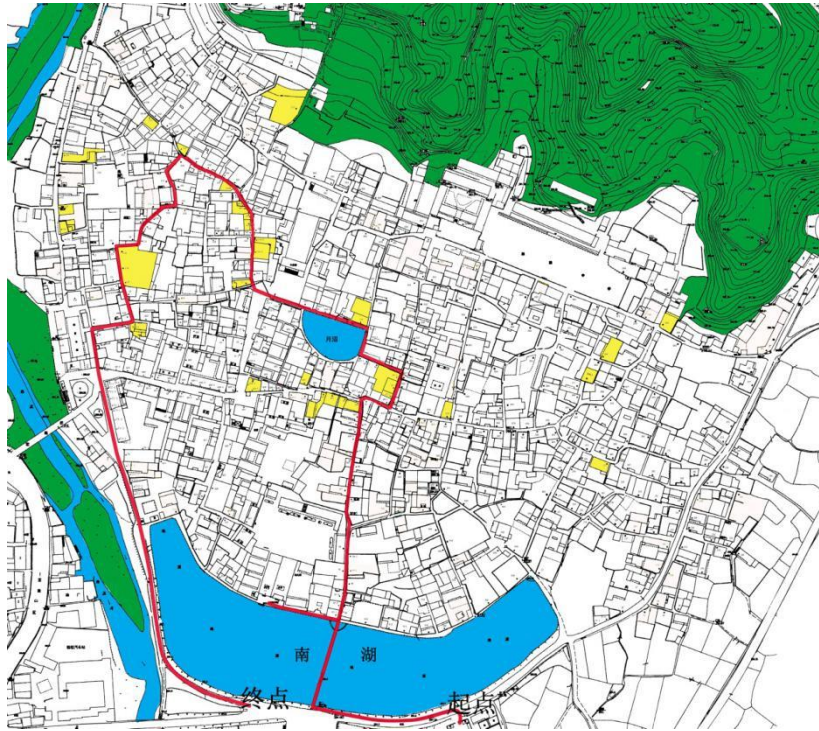


Figure 2-1. Range of archive in Hongcun (marked as yellow)

Through monitoring, it can be seen that there is a certain degree of new construction and renovation of residential buildings in the Dongbianjie. At the same time, as some houses have been converted into homestays, the functional structure of the houses has also changed. For example, residential houses with tourist accommodation function are changed to guest rooms, or the original room layout is changed, and many rooms are added. These rooms are all equipped with independent sanitary ware and other infrastructures for improving living standards; the location of the kitchen is also changed. In the process of tourism development and villagers' living, in order to improve their own living environment and conditions, or to make better use of residential areas to be invested in tourism development, there is generally a certain transformation and improvement in the use of traditional residential functions; there are also some shops transformed from the pig house or vegetable plot in the residential area. It has only basic infrastructure such as electricity, and some residential houses have been transformed to the shops, which preserve the layout of the shop in front and residence behind.

In addition, the boom of buildign homestays in Hongcun has been relentless. Many ancient dwellings have completed or are undergoing a process of transformation to homestays. Through the

government's series of policies for repairing ancient dwellings, the ancient residential architectures in Hongcun village are protected to some extent. Homestays in Hongcun share the problem of high homogeneity, such as the lack in distinctive brand identity, stereotyped structure and style, and few activities, which makes the competition in the homestay market not optimistic. It also reveals the problem of reducing the number of staying guests in many homestays. With more and more experienced non-natives investing in the construction of distinctive homestays, the locals are more conservative in their traditional homestay style and management way, resulting in insufficient competitiveness.

Moreover, with the increasing income from tourism, more residents are willing to participate in the development of tourism. However, in the process of reconstructing their own houses, if there is unreasonable change and building, it might cause unrecoverable damage or other adverse effects to the tourism. Therefore, reasonable and scientific reconstruction of residential areas becomes necessary.

3. Tourism and Community

At present, Hongcun is mainly engaged in tourism activities in areas such as Nanhu, Nanhu Academy, Yuezhaoh, Cunkou Dashu, Leigangshan Shurentang, Chengzhitang, Wangshi Zongci and Taoyuanju. The Hongcun community monitored the residents who lived in the Hongcun scenic spot and the people who worked in the Hongcun without staying there. The residents included are not only the native residents of the Hongcun family, but also non-natives such as migrant workers. The survey was mainly conducted through a questionnaire. A total of 144 questionnaires were distributed and 144 were returned, of which 139 were valid and the effective rate was approximately 96.52%.

Chart 3-1 Community monitoring index

Contents	Problems	Monitoring index
The impact of community on tourism perception	The economy affect perception	The local economic development; employment opportunities; investment and consumption; living standard; price; cost of living; housing price; poverty gap
	The society affect perception	Infrastructure; medical care and service quality; crime rate; morality; trust; conflicts between tourists and residents
	The culture affect perception	Cultural exchange; traditional culture; festival and activity; language learning
	The environment affect perception	Air pollution; noise pollution; water pollution; solid waste; the damage to nature caused by tourism
	Residents' attitude and action	Residents actively communicate with tourists, and are satisfied with government's implementing ability on tourism development. Residents actively give advice to the tourism development in Hongcu, and support keeping tourism development.
The perception and advice of residents to tourism development		Live at the area along the travel route or not; welcome tourists to visit home or not; the way of participating tourism development; dissatisfaction in tourism development; specific opinions and advice to tourism development.
The perception and advice of residents to heritage protection		The degree of satisfaction to the current heritage protection in Hongcun village; property of house; attitude to repairing the ancient residential buildings; the biggest problem in heritage protection; the ways of agreeing to protection and reforming; advice to heritage protection
Assessment of residents to	Family and social relations	Family relations; Neighbor relations; Friends relations

Contents	Problems	Monitoring index
the current living situation	Work status	Working strength; salary; working environment; working flexibility.
	Entertainment	Recreation time; facilities for family entertainment; local recreational infrastructure
	Self development	The communicative ability with others; the ability of getting information and learning
	Health	Medical resource; the price; health; mental health
	Consumption	The local housing price; consumption capacity; the local price level; shop availability
	Public service	Infrastructure; environmental quality; security
	Overall situation	Life generally meets the expectation; life is very good; Not willing to change anything in life; generally satisfied with the current life
Resident's information		Gender; age; education; residence time; occupation and its relevance to tourism; monthly salary; total family population and its number related to tourist occupation

3.1 Community's perception of tourism's impact

In terms of economic impact perception, residents' perceptions are more objective and true. They not only acknowledged the positive driving role of tourism in economic development, but also expressed concern about rising tourism prices and rising housing prices. At the same time, there are still many community residents who perceive the gap between the rich and the poor. However, compared to the last year, the attitude of residents this year has been improved, indicating that more community residents may participate in tourism and make profits in tourism, and that the perception to the rich-poor gap will narrow.

In terms of the perception of tourism's social impact, Hongcun's residents' perception of infrastructure improvement over last year has increased; their differences in the evaluation of tourism's negative impact on social culture have been greater. Most residents perceive and agree with

the negative influence of traffic jams but do not agree with the deterioration of security. In terms of the conflict between tourists and residents, there may be conflict between residents and tourists, but it is not common, and the most tourists perceived by the residents are friendly. However, compared to last year's data, conflict between tourists and residents of this year are even larger. This may reveal that the conflicts between residents and tourists this year is more than that of last year.

In terms of residents' perception of tourism's cultural impact, Hongcun's residents have a very positive perception of the impact of tourism development on culture. Tourism has increased the awareness of local residents on the value of cultural heritage, increased their cultural pride and foreign cultural exchanges, which is conducive to the transmission of traditional culture. In the same time, most residents believe that the tourism industry also has a positive impact on promoting and developing traditional culture. However, some residents said that traditional folks such as the Nuo opera have disappeared and been destroyed.

In terms of residents' perception of tourism's impact on environment, most residents perceive the negative impact of tourism development on the environment, but the degree of perception is quite different. Among them, the perception of water pollution and solid waste is the strongest, but the perception of air quality is not obvious. The water canal in the village is contaminated by the residents and tourists. The main reason is that the wastewater of many inn's kitchens is drained into the dikes without disposing, and a few students pour paint into the water, and some septic tanks drain directly to the water. Residents believe that the arrival of a large number of tourists will inevitably produce a large amount of solid waste, but they said that through effective management and the efforts of cleaners, there will be no severe negative impact. Noise pollution is mainly reflected in the noise caused by the redecoration of commercial facilities.

In terms of residents' attitudes, most residents support Hongcun to continue developing tourism. Hongcun residents are generally satisfied with the tourism development status, and most of them are willing to communicate with tourists. Most of the residents are willing to provide suggestions for tourism development, but there is still some dissatisfaction with the government's enforcement efforts, mainly reflected in the ability of weak administrative support and that the repairs are too expensive.

3.2 Resident's perception and advice on tourism development

The overwhelming majority of residents can accept tourists to visit their own houses. Nearly half of the residents have a welcoming attitude; a small number of residents maintain neutral. The interviews show that because tourists often break in and take picture without asking, or they go to toilets in residents' house, residents will feel uncomfortable. Most residents live in the original area and participate in tourism through running their own shops or inns; in addition, the local residents participate in tourism also by becoming guides, working for local village committees or traveling companies.

In general, Hongcun's residents are most concerned about the government's policies and management issues. For example, the construction and repair rules of residential buildings are too strict, the government's inaction and some policies make residents feel unfair. The second is environmental sanitation. Residents are most dissatisfied with the water pollution produced during tourism development and the lack in good protection for water systems. Then comes the problem of tourists. The quality of some tourists is bad, and the conflicts between tourists and residents cause troubles. In terms of community interests, residents who are not well benefited from tourism reflect the problems that commodity price is too high; residents in unpopular areas are poor, and that tourists have not been brought into the craft market. In addition, some residents pointed out that they are not satisfied with the current status of Hongcun's over-commercialization and competition.

The residents' suggestions for tourism development mainly focus on the protection of the environment, heritage and local features; development efforts, and management of scenic spots and etc. Among them, water pollution and other environmental and ecological issues have become the most concerned and most sensitive issues for residents. In terms of tourism development, besides suggesting that the government should conduct planned and regular development, and consider the long-term tourism——sustainable development, many residents suggest government to develop new tourism projects, such as developing the canal sightseeing cruise project. In terms of tourism management, many residents believe that Hongcun currently has a large number of homestays, causing fierce competition, and unregulated management. It is proposed to standardize the management of the entire Hongcun homestays. Among them, few residents advise government to

reduce the homestays by half.

3.3 Residents' perception and advice on heritage protection

The vast majority of residents are satisfied with the current heritage protection, but there are also a small number of residents who worry heritage protection, mainly reflected in the repair of some non-key protected buildings, and the problem of the local cultural characteristics being influenced by the commercial atmosphere. There are also a small number of residents who do not care about heritage protection, but the overwhelming majority of residents are very concerned about heritage protection.

In terms of maintenance, the vast majority of residents will repair ancient dwellings, and only a very few residents choose not to repair. However, there are different situations in the maintenance of residents, and a considerable proportion of residents will choose to repair ancient dwellings, because most of the ancient dwellings are now used for building homestays, farmhouses, or self-accommodation, so there is a need for maintenance. However, there are still a lot of residents who say that, they will only repair only if the government compensates for the maintenance.

According to results of the survey on residents, the biggest problem in ancient dwellings maintenance is that it takes a long time for maintenance and approval. Due to the fact that it is a cultural heritage, it cannot be repaired and reconstructed before being approved, which has caused great difficulties for residents to maintain their houses. Secondly, due to the narrow roads in Hongcun and the large number of tourists, the entry of motor vehicles is very inconvenient. This has caused great obstacles to transport the materials for maintenance of building. It is also worth noting that some villagers think that the maintenance of the house asks for high fees, but they are in lack of subsidies and funds from government. Due to Hongcun residents' little commercial awareness and business knowledge, tourism development income is still not enough for residents to become rich. They find it difficult to endure such a large expenditure on housing.

3.4 Residents' assessment on the current living condition

In terms of family and social relations, most of the interviewed residents are harmonious with

family, neighbors and friends. In terms of work, the highest satisfaction goes to work intensity, which perhaps because it is related to the characteristics of the tourism industry. In terms of entertainment, residents have the highest satisfaction with leisure time and have the lowest satisfaction with local entertainment facilities. In terms of self-development, residents have the highest satisfaction with their ability to communicate with others, which is perhaps because the residents need to communicate with tourists when they are engaged in tourism. In terms of health and medical care, residents surveyed are not satisfied with local medical resources and medical prices, but very satisfied with their physical and mental health. In terms of consumption, residents are most satisfied with their own consuming capacity, but little satisfied with the local price level and housing price level. In terms of public services, they are satisfied with public facilities, environment and security, but there is still a lot of room for improving public facilities. In general, the residents are most satisfied with the current living conditions, and generally agree that the expectations are basically consistent with the current living conditions, and still hope that the quality of life can be further improved.

4. Community's Resilience

4.1 Hongcun community' resilience

Chart 3-2 The monitoring index for community's resilience

Contents	The index
Relations with others in the village	Villagers can help me; learn new things and new knowledge through chatting; learn new things and new knowledge through observation; equal opportunities to use community resources; equal opportunities for success; we are members of the village; people in the village are trustworthy and willing to exchange ideas; help each other; know most people in the village

Community leadership	Leader's work: Learn from experience; good teamwork; decision-making authority; adjust in time. Locals: Have right to speak; to control the community's resources; to negotiate with leaders.
The ways of making a living	Ways of making living; employment opportunities; different enterprises; difficulty of starting new business; purchase daily commodities from the local; enterprises and businessmen purchase materials from the locals; tourist purchase goods from the locals; almost bosses are the locals; employment opportunities are more than before.
Social environment	Nature environment comparison: tress and wild animals are less; roads, buildings, houses and enterprises are more

The relationship among Hongcun residents is good, and the internal communication is good, also a completed communication social system has been established. At the same time, through the daily communication, they have a certain degree of learning ability and a sense of belonging to Hongcun. However, they think that the fairness of the community is insufficient, and that the perception of equal use of community resources and equal opportunities for success is weak. At the same time, the community has a good system of mutual trust and mutual assistance, making the community more harmonious.

In terms of community leadership, residents' discourse right on the community is significantly weak. Although residents do not complain much about the work of the village leaders and are generally satisfied with the working ability and work coordination of them, they think that the decision-making power held by the village leaders is too strong, and that residents cannot participate in the management and decision-making of the community. At the same time, autonomous organizations lack the right to speak and govern, and have not been effectively authorized, which cause residents' little community participation.

In terms of ways of making a living, most residents feel the increase in job opportunities and

opportunities for earning money, and there are more job opportunities than before. However, at the same time, because the types of shops in the village are basically for tourists, it is very difficult for local people to purchase the materials locally. Although there are many types of local businesses (shops), most of them are hotels and restaurants. Residents' way of getting resources and forming economic activities are relatively single, and they are more dependent on traditional resources.

In terms of community environment, residents pay insufficient attention to the local natural environment, and they have weaker perception of the changes in the natural environment caused by tourism, but they have stronger perception of the changes in architecture. Residents' memories and emotions about Hongcun's natural environment are weak, and some residents think that tourism has not caused too much impact on the natural environment. Therefore, their abilities to cope with the changes in the natural environment also need to be strengthened. However, for the buildings that can produce economic benefits, residents will pay more attention to them.

4.2 Resilience of Jicun

4.2.3 The basic situation of Jicun's resilience

Jicun is affiliated to Hongcun, Yi County, Huangshan City, and it is on the opposite side of world heritage site of Hongcun. The village has a total area of 13.2 square kilometers. There are 9 villagers' groups and 457 households with 1,400 people. Jicun is the place where Hongcun town government locates, but there is small number of tourists, mainly with students who sketch here. As an auxiliary region for tourism development in Hongcun, Jicun has been particularly affected by the development of tourism in Hongcun, and this impact not only includes economic growth and transformation, but also includes resource occupation, residents' psychological and economic impact. Therefore, in the great development of tourism in Hongcun, whether the residents of Jicun village have enough resilience ability is a worthwhile issue to be discussed.

For the relationship between residents, most of the residents in the village are positive. In the village, the residents have strong social skills and learning abilities, and the residents have strong connections between each other. As a result, a relatively mature social network has formed, and they

also have a strong emotional connection with the village. However, the villagers also believe that the rights of each person in the village and the fairness of the opportunity still need to be improved. In addition, the degree of mutual help among the villagers may not be high due to busy work, or taking into account the identity of others, or paying attention to the opinions of others.

In terms of community's leadership, residents mostly have a neutral attitude towards the work of the village leaders, and at the same time it reflects the lack of participation of local people in community management. Combined with the contents of the interview, we believe that this phenomenon may be due to the fact that some residents do not care about the public affairs of the village and have little contact with the village leaders. Therefore, they cannot make judgments. On the other hand, the demolition of the village in the past two years led to increased dissatisfaction among some residents. The main reason is that the village leaders did not consult with the residents for construction, and residents felt that they had little right to speak in the community.

In terms of perceiving the way in which the community earns a living, residents basically agree with positive evaluations in the indicators. The vast majority of residents believe that the village's way of earning money and employment opportunities have increased significantly, and the types of businesses have also increased. However, many of them are mainly for tourists, providing limited goods and services, and the prices are high; most of the owners of the companies (stores) are locals, indicating that most of the economic benefits from tourism belong to locals.

In terms of the perception of the community environment, through the analysis of data, we found that the residents' perception of the human environment is obviously stronger than the perception of the natural environment. On the one hand, the number of visitors to the village is relatively small and there is no pollution of water system. Therefore, the damage to the natural environment caused by tourism has not been clearly felt by the residents. In addition, there are few tourists in the Jicun, which did not cause too much damage to the local environment. On the other hand, the increase in man-made buildings directly reflects the status of local tourism and has the most direct connection with the residents' income and life.

4.2.3 Impact of Tourism Development

From the data compiled by the statistics, it is found that residents' perceptions of the positive and negative effects of tourism development are very strong. They support the development of tourism because tourism provides more employment opportunities for the villages, which leads to more companies serving local residents, improving their living environment, and their living standards, and increasing their entrepreneurial opportunities. However, at the same time, they also know that the development of tourism will also cause environmental pollution and ecological damage, and will also drive local prices and land prices to increase due to economic development. What is more, the gap between the rich and the poor will be expanded.

4.2.3 Satisfaction on Community and Life

In terms of the satisfaction with life in Jicun, the data shows that residents are basically satisfied with the living environment and living conditions of the village. They believe that the village is a place suitable for living, and they are full of confidence in the future development of the village and are willing to stay in the area to work. At the same time, they are generally satisfied with their current living conditions, but it has not reached their ideal state and they believe that their lives can be better.

5. Visitors' perception and satisfaction on tourism

5.1 Tourist Information

Surveys of tourists' perceptions and satisfaction on tourism were conducted by questionnaires and interviews as supplements. A total of 200 questionnaires were distributed to visitors and 192 valid questionnaires were returned. The effective rate of recovery was 96%. In terms of personal information, the proportion of men and women in gender is basically the same; in terms of age, most of the tourists are young or middle-age; in terms of geography, they mainly come from the province and surrounding areas and also from more developed areas; in terms of occupation, most of them are students, management staff and corporate staff; in terms of the access to tourism information, tourists' access to tourist information is mainly the network and the recommendation of friends and

relatives; in terms of the way for trip, tourists prefer DIY trip to group trip; and more than three-fourths of tourists follow the tour guides; the revisit rate is low; the tours mainly involve leisure-related activities.

5.2 Visitor perception and satisfaction on tourism

Table 4-1 Indicators for measuring tourists' perceptions and satisfaction on tourism

Content	Questions	Indicators
Characteristics of tourists	Tourists' personal information	Age, gender, origin, education, occupation
	Tourism's information	Access to tourism information; way to travel; the situation of revisit; stay time of the trip; the activities during the trip
Satisfaction	The sightseeing of the destination	Tourists' evaluation on the sceneries, Hui-style dwellings, attractions' appreciation, attractions' comfort, and residents' enthusiasm.
	The environment of the destination	Tourists' evaluation on scenic spots' business atmosphere, the degree of crowded, noise pollution, water quality, air quality, overall sanitary environment and environmental management.

Content	Questions	Indicators
	Infrastructure	Tourists' evaluation on the scenic spots' convenience, comfort and price of public transportation, sanitary condition of public toilets, the completeness of public rest facilities and the guiding system of garbage collection.
	Service on scenic spots	Tourists' evaluation on scenic spots' ticket price, tour guide, richness of tourism information carrier, access to tourism information, clarity of signal system and the degree of being crowded.
	Safety and health	Tourists' evaluation on scenic spots' safety facilities, medical equipment and public order situation.
	Experience the variety of the activities related to scenic spots	The value and charming of Hui-style dwellings; riche historic culture; local residents' traditional living conditions; simple folk customs; local souvenirs and handicrafts; characteristic dining and snacks; variety of excursions
Perception and attitude	The perception of heritage	Have knowledge about the fact that Hongcun is world heritage ; ancient dwellings should be protected; satisfied with the protection of ancient dwellings
	The attitude towards local people	The good attitude of local people; willing to chat with local people; local people are friendly and hospitable
	Overall satisfaction	Satisfied with the whole trip; will recommend Hongcun to friends and relatives; will revisit Hongcun

Tourists are more satisfied with the experience of the destination landscape and tourism. Among them, the satisfaction of rural scenery and traditional Hui-style dwellings is relatively high. In terms of its environment, tourists think that Hongcun has a more commercial atmosphere, more crowded scenic spots, and poor environmental quality and environmental protection; in terms of tourist infrastructure, tourists are more satisfied with the public transport to the destination, less satisfied

with the public toilet facilities, and less satisfied with the guidance system; in terms of tourist services, tourists are satisfied with the reasonable price level, less satisfied with the crowded degree of the area, but they agreed that the guide commentary and the scenic spot signage system are relatively good. In terms of safety and health, the tourists think that the security situation and safety facilities of Hongcun are generally low. In comparison, their satisfaction with the local medical equipment is low; And they are quite satisfied with Hongcun's traditional Hui-style dwellings and the historical culture, but they are less satisfied with the rich variety of tourism items and souvenir.

In terms of tourists' perception on Hongcun's being world's heritage, tourists have high ratings. Most tourists have a high level of knowledge of Hongcun as a World Heritage site. They also believe that ancient dwellings should be protected, but tourists' satisfaction with the protection of ancient dwellings is low. In terms of locals' attitudes, tourists' satisfaction with the communication with locals is slightly higher than the satisfaction with the friendly attitudes of local services personnel and residents. In general, tourists are more satisfied with this trip, but their willingness to visit again is lower, which is a significant decline from 2016.

5.3 Tourist Impressions and Suggestions

In addition, in the open questions, we learned about the tourists' deepest impressions and suggestions on Hongcun. In terms of impressions, visitors were more impressed by the Hui-style dwellings, developed water systems, pastoral scenery, and ancient village environments. The number of people who mentioned these was relatively large, but they had negative impression on the crowded and toilet problems. In terms of the suggestions, tourists believe that scenic spots should pay more attention to the development and protection of ancient dwellings, reduce the degree of commercialization, restore the original features of ancient villages, carry out reforms in infrastructure, especially public toilets, improve the tour guide system and implement guide services on different routes, improve environmental sanitation and water resources and increase investments, etc.

6. Commercialization

6.1 Shops' Distribution and its Features

In 2017, there are 456 tourist commercial facilities in Hongcun scenic spot, of which 111 are the handicraft markets, and the remaining 345 stores are scattered in the core area of Hongcun. Due to the low degree of inspection of the handicraft market as a purely commercial market, and the fact that during the inspection period it was an off-season, many stores did not open, therefore, the information of the stores that did not open retained the information collected last year. The monitoring also focused on shops in the core area (non-artificial markets).

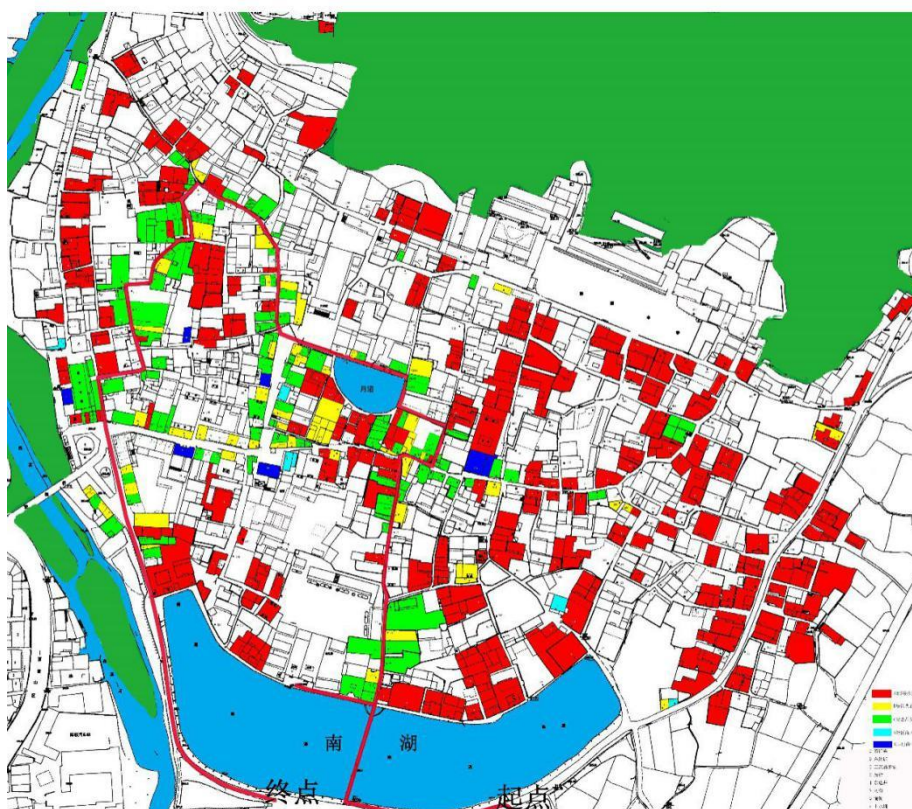


Figure 5-1 The Distribution of Commercial Areas in Hongcun

Among the 345 shops of the core scenic spots, there are 178 tourism reception facilities (Type A), accounting for 51.59%; 53 restaurants (B Type), accounting for 15.36%; 103 souvenir stores, accounting for 29.86%; 5 community stores (Category D) and 6 of other commercial facilities (category E), accounting for 1.45% and 1.74% respectively. Judging from the types of business

operations, the commerce of Hongcun tourism mainly focuses on tourism reception facilities and souvenir shops. The proportion of these two exceeds 80%.

Comparing the characteristics of Hongcun's commercial business in 2016 and 2017, the total number of shops in Hongcun has increased by 9 this year, and the commercialization has been accelerating. At the same time, tourism in Hongcun has attracted more foreign investors, and the management awareness of villagers has gradually increased, which promotes most investment in Hongcun to be concentrated in tourist reception facilities (category A). And its number in 2017 has increased by 9.20% compared to last year. The most important form of the hotel's increase was the owner's redevelopment of his own residence, and that some shopkeepers squeezed out accommodation and catering or closed the original catering and small shops to squeeze out more space to run the hotel. The number of souvenir stores (categories C) decreased by 6.36% compared to the previous year. The operations has changed. The number of shops operating bamboo carvings and wood carvings has decreased, and the number of shops operating tea has increased significantly.

From the perspective of the distribution area, Qianjie, Shangshuizhen and Dongbianjie are the most concentrated commercial areas of Hongcun scenic area. The number of shops in these three regions accounted for 53.91% of the total number of shops in nine regions. The reason why it happens is that these areas are located in the densely populated areas in the central area of Hongcun. The main business operations in each region are different. Among them, Chahanglong and the Shangshui districts are based on souvenir products. Dongbianjie, Houjie, Dongbianjing, Nanhu, Qianjie, and Yanhe are mainly based on the tourism reception facilities. In these areas, the distribution of catering was even. However, commercial areas mainly concentrate on the places like Qianjie, Shangshuizhen and Tingqian, where there are a lot of tourists.

Through the ratio of “number of stores / total number of buildings in the area”, we provide a reference for the assessment of commercialization degree in Hongcun. Currently there are 451 buildings in Hongcun, of which 281 are conducting at least one kind of commercialization, and the commercial penetration rate of the whole village has reached 62.31%. There is a slight increase compared to that in 2016. The highest commercial penetration rate is in Qianjie, Tingqian, Chaxingnong, Nanhu, and Shangshui, all reaching over 66%, and all of them are on the tour route.

6.2 Features of Stores' Names

Most signboards of shops in Hongcun are still based on horizontal signboards, and the most used ones are plaques. Most of them are wooden, simple in color, and traditional in style. They are also equipped with wooden couplets, which matches the style of Hongcun's traditional and classical styles. In addition to the basic signboards, the merchants will also assist in the use of various forms of signage, such as vertical wall-type signboard, hanging signboard. Signboards are more varied in style.

The regular script is the most used font on stores' signboards in Hongcun, followed by the handwriting font. The regular script is the common Chinese characters in handwriting. Its fonts are widely recognized by people and have a more humanistic temperament. They are also closer to the writing habits of each Chinese. However, the writing style of the hand-written font can better highlight the characteristics of shops.

The most used pattern in signboard is four-syllable pattern, followed by tri-syllable, five-syllable, two-syllable, and six-syllable patterns. There are fewer signboard taking seven-syllable pattern. This is because the use of tri-syllable and four-syllable patterns can not only fully reflect the business information of shops, but also follow the economical and simple principles that shops should be named. The most used word in the signboard is the generic name "Ju", followed by "Tang", "Fang", "Lou", and "Xuan" which have strong classical flavor, in line with Hongcun's architectural features and a long history of culture.

7. Tourism Environmental Protection

7.1 Garbage disposal

The main methods of handling solid waste in Hongcun are: fixed-point stacking, manual cleaning, regular clearing, unified recycling, and transferring to Yi County. Zhongkun Company is responsible for cleaning up the solid waste in the popular zone. There are 25 cleaning personnel, 21 of them are responsible for the cleaning work, the other 4 are responsible for the removal of garbage and pulling the garbage truck to the garbage transfer station 3 miles away from the scenic spot. The

four garbage removal personnel are responsible for four different areas, each with 4 vehicles, at least 3 round-trips per day in the flat season and 2 round-trips per day in the off-season, and for the peak season, they usually spend five or six round-trips. The road cleaning area includes the parking lot, the area around and within the tourist route. There are a total of 4 sweeping personnel and they clean twice a day in the morning and afternoon. Waste is not sorted during collection and disposal. Recyclable garbage and non-recyclable waste are mixed together.

The large-capacity domestic waste bins are almost all distributed in the cold area.

The classification bins are all distributed on tourist routes in the popular zone. The number of garbage bins in the popular area is very small. It is inconvenient for residents to put in garbage and they often share garbage bins with tourists. There are lots of commercial behaviors on the Commercial Street, but there are only two trash cans on the street, and the trash cans are often filled up.

There are more than 100 shops of catering, accommodations, and farmhouses in Hongcun. These shops produce a lot of kitchen waste. It can be learned from the interview that each of these stores had a bucket. Every day, there will be bucket trucks to collect swill once or twice a day, or there will be pig raisers in the Jicun to collect it. Some of them will be used to feed their own poultry, and the rest will be recycled in a unified manner. Although kitchen waste was not completely re-used, it did not have a major impact on Hongcun's environment.

7.2 Water pollution

Hongcun's land is gravelly and it is easy for the water to percolate into the ground. If the oil sewage is directly discharged without treatment, the sewage will infiltrate into the underground water and enter the water path and enter Yuezhaoh and Nanhu. Floating oils and smells can also affect tourists' assessment of scenic spots. A total of 11 shops involving food and beverage in Hongcun were surveyed and 10 of them have installed separation tank for oil. Wastewater treatment in popular area uses separation tank or other special personnel to collect the oil. The unpopular area directly discharges oily water to the water tank.

At the same time, landscape sketching also brought water pollution to Hongcun. Sewage bins for collection of pigment waste are set up in the scenic spot. Wastewater pools for collection of pigments are set outside the scenic spots and the waste of pigments are collected and removed by special personnel. Each student holds a student's card for sketching, which is issued by the scenic area. The student's card has the "Sketch Notes" warning that students are prohibited from cleaning brushes and pouring paint buckets in the scenic water system. Upon discovery, the sketch card will be confiscated and a fine of 200 yuan will be imposed. It also stipulates areas where student sketching is prohibited. A fine warning was also posted on the wall of the village committee's tourist toilet.

On the edge of Nanhu, at the entrance of the post office, near the village committee, there are sketching students, and there are also scattered sketch students in the unpopular area. Through interviews with 35 students, it can be known that all of these students knew that the paint water could not be directly poured into Hongcun's water system. They would pour in special paint buckets, bring them back to the hotel, or pour into the toilets, but if it had not been handled properly, it would still have an impact on the environment

There are two kinds of sewage buckets in the scenic area, one is the domestic sewage bucket and the other is the special bucket for paint. There are 11 special paint buckets, 9 of which are located in the student gathering area on the banks of Nanhu. The post office is also an area where students from the sketching classes gather. The only special paint bucket here is still covered with lids. There are stains on the barrel and lid. That is the reason why no students are willing to unscrew them. In the unpopular area, some sketch students are also scattered near Dongbianjing and Dongbianjie. However, there is no special paint bucket for these places. The students will pour paint water into the nearby domestic sewage bucket. There are also 11 domestic septic tanks, mainly distributed in the intersections of unpopular regions. These are public sewers used to collect domestic sewage, and residents dump the accumulated sewage from their homes into slops.

7.3 Noise pollution

One of the noises in Hongcun is the noise generated by tourists and guides. The guide uses

high-decibel loudspeakers to ensure that their own speeches could be heard by the tourists. When the guide passes, the noise can reach 82 decibels. There are sometimes three or four tour groups around Yuezhao. Tourists' conversational sounds and tour guides' aloud explanations make Yuezhao a very noisy place. Hongcun tourist attractions mainly consist of laneways and ancient dwellings. The narrow roadways make the noise stronger, and the walls of ancient dwellings surround the noise and cause discomfort to tourists. The second kind of noise is the noise from motor vehicles. There are electric vehicles, motorcycles, minivans and tricycles in the residential area of Hongcun. Noise can reach 83 decibels when the tricycle whistles. The third kind of noise is the renovation and construction noise. The main noise generators are chainsaws and nail guns whose sound can reach up to 80 decibels. People are building roads at the entrance of the village, and the sound of electric drill makes that place even more noisy.

Most of the tourists noticed the noise in the area, mainly the voice of the tour guide and the voice of the motor vehicle. Visitors state that noise does cause some negative emotions. Local residents expressed that the noise caused by tourists and tour guides should have been endured out of the development of Hongcun's tourism. Noise and the development of Hongcun accompany each other, so there is nothing to complain about.

7.4 Toilets

Toilets include residents' toilets and travel toilets. Among the 11 households surveyed, 1 was an old-style toilet and the remaining 10 all used septic tanks. The organic sludge in septic tanks can be used as fertilizers. And after sedimentation and decomposition, the things in septic tanks can reduce water pollution, kill mosquitoes and fly. The septic tanks in the village are connected to the village's pipelines to transport the sewage. Some residents will regularly use sludge as fertilizer, and some residents will find someone to clean up and pick them up every year. There are also residents who do not know that septic tanks should be regularly cleaned of sludge, so their septic tanks have never smashed sludge for 4 years.

Hongcun has a total of 4 tourist toilets: toilets in village committee, toilets in handicraft market, toilets in parking lot, toilets in Chengzhitang. There is a big difference in the conditions of each toilet.

Among them, the conditions for the toilets in the parking lot are the best: the amount of toilet seats and washbasins is the largest, the type of toilet seat is complete, and the degree of hygiene is the highest. The toilet in handicraft market is the poorest because there are few toilet seats. And some toilet seats lack doors. The sanitary conditions are poor, and the surroundings emit odors.

In addition to the entrances and exits to the scenic spots, there are only 2 inconspicuous toilets on the 2-hour tour route. Tourists report that there are too few toilets in the area; even a public toilet is not available in the unpopular area. Some tourists cannot find toilets in the area so they will borrow toilets from local residents, on which local residents and tourists have greater contradictions.

8. Summary

In addition to monitoring the existing 156 residential buildings that have already been archived, the survey added new data of 37 dwellings, of which 24 households are ordinary dwellings, and their mainstay is B&B Inns. The situation is similar to that of 2016. From the archives of the dwellings, it can be known that the transformation of residential dwellings into accommodation facilities is more common than before. Through the government's maintenance policies and measures, the ancient dwellings have received certain protection, but the intensity of reforming of Suzi and dwellings has been strengthened, and ancient dwellings still face greater challenges in protection.

In terms of the tourism and community, there are positive and negative perceptions of residents on the tourism's impact on economy, community, culture, and the environment. Most of the residents are satisfied with the current tourism situation and most of them support the development of Hongcun's tourism. In addition, the residents who express dissatisfaction also reflect that the administrative support capacity of government departments and scenic development companies is weak in the development of scenic spots and heritage protection and that repair plans cost too much.

Regarding the resilience of the community, the residents of Hongcun built a better social system for communication. However, they did not have strong feelings for the community's natural environment and local spirit. The self-organizing ability of the community was weak, and the leaders at the higher levels did not fully understand the opinions of the grassroots. The resident authorization

is absent and community participation is very low; the economic activities and livelihoods in the community are relatively single, and residents are unable to get rid of dependence on single resources and traditional models. Relatively speaking, the Jicun's community resilience level is even worse than that of Hongcun. Although residents of Jicun have better internal communication mechanisms, they lack communication with higher levels of government and external communities; And residents lack the ability of learning from the outside world, and they have weak self-organizing ability and low degree of community involvement. What is more, their economic activities and livelihoods in the community is relatively uniform. In general, the adaptability of Jicun in responding to challenge is also poor and is affected by the development of Hongcun Tourism to a large extent.

In terms of tourists' satisfaction, visitors are more satisfied with the destination's landscape and tourism experience. And their satisfaction with the destination's environment, infrastructure, scenic services, safety, and health is relatively low. In addition, tourists' perceptions of heritage are strong; their impression on local people's attitudes and overall satisfaction are neutral and partial. For the experience of travelling in Hongcun, tourists also put forward some suggestions to some aspects, such as the development and protection of ancient dwelling houses, commercialization, facilities, services, and environmental protection.

The commercialization degree of Hongcun's Tourism is relatively high. We adopted the method of “commercial penetration rate = the number of buildings participating in commercial activities/the total number of buildings” to find out that the commercial penetration rate of Hongcun is 62.31%, and over 60% of buildings are used for commercialization. Business practices have increased over the past two years, and the commercial atmosphere is strong. In recent years, there has been an increase in the number of accommodation businesses and catering industries, and the number of souvenir shops has continued to decrease. This may be due to fierce competition, serious product homogeneity, and less profits.

In 2017 monitoring, environmental protection is still another major topic that Hongcun currently faces. The current environmental problems in Hongcun are mainly garbage pollution, water pollution, and noise pollution. Garbage includes solid waste and kitchen waste. Among them, the treatment of solid waste in the popular area is highly efficient. Solid waste in the unpopular area is

not treated in a standardized manner and sanitary conditions are poor. The treatment of kitchen waste is not uniform and the kitchen waste has not yet been fully utilized. Water pollution includes operating oily water and paint water. At present, the treatment of oily sewage in the scenic spot is still not efficient enough, and the direct discharge of oily sewage still exists. The management of the students' sketching in the scenic spots has been improved, and students' awareness of environmental protection has been strengthened. However, the scenic spots still do not effectively handle the paint water. The noise pollution situation in Hongcun is serious and visitors have a clear perception of it, but residents take an attitude of tolerance. In Hongcun, the feces has not been completely decontaminated and there is still no treatment of the feces, which will further contaminate the soil and water quality. The number of toilets in the area is too small, and there is a wide gap in the conditions of different toilet facilities.

2017 Monitoring Report on the Sustainable Tourism Development of Zhangjiajie

Monitoring Centre for UNWTO Sustainable Tourism Observatories

People's Government of Zhangjiajie City



Acknowledgement

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鸣谢单位:

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And all those who helped with the monitoring work.

1 Foreword

From August 21st to August 31st, 2017, led by Zhang Chaozhi, the deputy dean of the School of Tourism Management of Sun Yat-sen University, a associated research fellow, a doctoral student, three master's students, and 18 undergraduates went to Zhangjiajie for a 10-day monitoring activity. With the active cooperation of the People's Government of Zhangjiajie City, the Yongding District and Wulingyuan District People's Government, the monitoring team visited the relevant government departments and focused on the main scenic spots and communities in Zhangjiajie.

Through monitoring over the past six years, a relatively mature monitoring program has been formed at the Zhangjiajie monitoring site. This monitoring is the seventh monitoring of the observation sites in Zhangjiajie and follows previous monitoring procedures. It mainly focuses on three major research objects: tourists, residents and the government. Based on past monitoring, this monitoring activity focuses on effective monitoring of tourism and community, tourist behavior and satisfaction, tourism economic impact, tourism marketing, tourism environment and protection. Through a comprehensive survey of the status quo of Zhangjiajie tourists, community residents, resources and environment, etc., we follow up with the latest developments in the sustainable development of tourism in Zhangjiajie, summarize its management experience in tourism development and promote it globally.

We conducted resident surveys in Wujiayu Road, Baofeng Road, Gaoyun Road and Suo Xiyu Tujia Minority Xiangyujiazui under the jurisdiction of Residential District Waijundi outside the scenic spot and Yuanjiajie, Yangjiajie, Tianzishan Dingxiangrong and Laowuchang communities under the jurisdiction of the Zhangjiajie Forest Park Management Office within the scenic area. At the same time, surveys were conducted on scattered local residents in the scenic area. A total of 500 questionnaires were distributed, of which 493 were valid and the effective rate was approximately 98.6%. Tourists research was conducted in Zhangjiajie National Forest Park, Suoxiyu Nature Reserve, Baofeng Lake, and Tianzishan. A total of 800 questionnaires were distributed in Chinese. 788 questionnaires were returned of which 742 were valid. The overall effective rate was 92.8%. There were 100 English questionnaires, 97 questionnaires and 97 valid questionnaires. The overall effective rate was 97.0%. Based on the questionnaire survey, the monitoring group also interviewed tourists, residents, and tourism practitioners (including local restaurants, hotels, scenic spot staff, etc.)

to supplement the data analysis for the specific issues observed during the survey.

2 Tourism and Community

2.1 Community Residents' Attitude towards Tourism Development.

Most community residents expressed support for tourism development. The data shows that 95.9% of the residents think that the development of tourism is conducive to local development, 79.9% of the community residents think they can benefit from the tourism industry, and 92.9% of the residents said they will continue to support the development of tourism in Zhangjiajie. Most residents are more satisfied with the development of tourism in Zhangjiajie at this stage, and they also support Zhangjiajie in continuing to develop tourism. A small number of residents have a negative attitude towards the development of tourism in Zhangjiajie because of traffic congestion, traffic control, and community relocation.

2.2 Residents' Perception of Tourism Impact

First, the positive perception of the impact of the residents on the tourism economy is obvious, and there are also certain perceptions of negative factors. In terms of the positive economic impact of tourism, there are three indicators: “Tourism brings us more employment opportunities”, “Tourism attracts more investment” and “Attracts more foreign consumption” and community residents' degree of recognition on these is around 4.2. 77.1% of community residents think that their living standards have improved. It can be seen that the vast majority of residents affirmed the positive impact of tourism on the economy. At the same time, the negative impact of community residents on tourism also has a certain degree of perception, and the average degree of recognition on the two negative effects “causing price increases” and “resulting in price increases” is more than 3.9. Some residents think that the arrival of tourists has increased the level of local consumption, but the income status of local residents has not improved, and they are in a situation of “stuffing beyond our means”. As for the rise in housing prices, some young groups believe that with the development of tourism, housing prices in Zhangjiajie are constantly rising. However, many residents believe that not all of the increase in housing prices is caused by tourism development. Housing prices are related to the overall market environment and are affected by many factors. At present, the housing price level in Zhangjiajie is still relatively reasonable. In general, residents affirm the economic benefits brought by tourism development, and they also hope that their living

standards can be further improved.

Second, most residents believe that the negative impact of tourism development on social culture is not obvious. On the one hand, we have opposition and neutrality among the three negative impact indicators: “the tourism industry has caused an increase in criminal incidents”, “the tourism industry has disrupted our original rhythm of life,” and “the tourism industry has destroyed the folk and traditional culture.” The residents of the opinions accounted for 81.1%, 71.2%, and 67.7% respectively. And the residents' average attitude towards negative indicators was not high, being 2.7, 3.0, and 3.0 respectively. On the other hand, out of the six positive impact indicators, the proportion of residents who agree with the opinions exceeds 50.0%, and the average values of residents of all indicators are above 3.6. Among them, the “Industry has improved road facilities”, “Tourism has greatly improved medical facilities and services,” and “Tourism has caused the demolition of old houses”, the average values of attitudes are 4.1, 3.7, and 3.9 respectively. In the three indicators related to community cultural changes, “Tourism promotes the protection of cultural traditions,” “Tourism increases cultural activities or traditional festivals,” and “Tourism allows more people to participate in the transmission of traditional culture”, the average residents' attitudes were 3.9, 3.7, and 3.6, respectively. In general, residents recognize that tourism has improved the living conditions of local residents and at the same time has protected local traditional culture.

Finally, some residents believe that tourism development will undermine the local environment. In the four indicators of “Tourism makes traffic more crowded,” “Tourism increases noise pollution,” “Tourism increases environmental pollution,” and “Tourism undermines our natural environment,” residents' degree of recognition is higher than 3.4. Most of the local residents are relatively satisfied with the existing urban outlook and health environment, and are proud of the local air quality. However, a small number of residents point out that although the streets of the city are very clean and hygienic, the health condition within the community is very poor. Residents generally believe that it is very important to protect the natural environment. The proportion of residents who agree with the “protection of the natural environment” indicator is as high as 89.1%. This shows that local residents basically reached the consensus that “protecting the natural environment is important”.

2.3 The awareness and participation of community residents in tourism.

The overall perception of community participation by community residents in tourism development is relatively positive. It can be embodied in four aspects: economic interests, traditional culture, natural environment, and the degree of cooperation with the scenic spot and the government. In terms of economic benefits, nearly 80% of the residents perceive “can benefit from tourism”; in traditional culture, 71.0% of people agree that “more people participate in the promotion of traditional culture”; in the aspect of natural environment, 88.8% of people agreed that “I think it is very important to protect the natural environment”; 71.8% of people agree with the scenic spot that “I’m willing to actively propose for the development of the scenic spot”, and the survey shows that only 44.4% of the people agree. “The scenic spot will listen to our opinions when making some decisions”. This shows that the degree of cooperation between the community residents and the scenic spot is limited. The scenic spot did not fully consider the residents' suggestions and did not make full use of the residents' community wisdom to improve the tourism development of Zhangjiajie; in cooperation with the government, Only 43.2% of the respondents agreed that “the government's enforcement efforts are satisfying to me” and 37.3% agreed that “I have obtained relevant information on the policy guidelines implemented by the government”. These all indicate that the government’s opinions on the local residents in the tourism development in Zhangjiajie Or the importance of the proposal is not enough, this phenomenon may reduce the enthusiasm of local residents to participate in tourism development. In general, residents' awareness of tourism participation is strong, and the accessibility of community participation in decision-making is general. This requires that scenic spots and governments should take into account the interests of the community while developing the tourism industry, and improve the level and ability of community participation in decision-making so as to motivate residents. Actively participate in the development of tourism in Zhangjiajie, increase the enthusiasm of residents to participate in tourism, and promote the sustainable development of scenic spots.

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participate in the promotion of traditional culture”. In the aspect of natural environment, 88.8% of people agreed that “I think it is very important to protect the natural environment”. In cooperation with the scenic spot, 71.8% of people agree with the scenic spot that “I’m willing to actively propose for the development of the scenic spot”, and the survey shows that only 44.4% of the people agree that “The scenic spot will listen to our opinions when making some decisions”. This shows that the degree of cooperation between the community residents and the scenic spot is limited. The scenic spot did not fully consider the residents' suggestions and did not make full use of the residents' community wisdom to improve the tourism development of Zhangjiajie. In cooperation with the government, only 43.2% of the respondents agreed that “the government's enforcement efforts are satisfying to me” and 37.3% agreed that “I have obtained relevant information on the policy guidelines implemented by the government”. These all indicate that during the tourism development in Zhangjiajie, the government didn’t pay much attention to local residents'opinion or proposal. This phenomenon may reduce the enthusiasm of local residents to participate in tourism development. In general, residents' awareness of tourism participation is strong. But the accessibility of community participation in decision-making is not enough. This requires that scenic spots and governments should take into account the interests of the community while developing the tourism industry, and improve the level and ability of community participation in decision-making in order to motivate residents to actively participate in the development of tourism in Zhangjiajie, increase the enthusiasm of residents to participate in tourism, and promote the sustainable development of scenic spots.

Tourism employment has become the main form of tourism participation of community residents and has been widely recognized by residents. In terms of the impact of tourism on community employment, residents’ attitudes in the following three indicators are all above 4.0, showing a positive attitude. Among them, the residents who agreed to adopt the two indicators of “Tourism attracted more investment” and “Tourism attracted more foreign consumption” reached 89.7% and 93.3% respectively. Compared with 86.2% and 85.7% last year, it has a slight increase. Combined with the interviews, it can be seen that the vast majority of residents are optimistic about the employment prospects of the tourism industry in Zhangjiajie, affirming the positive impact of tourism on community employment. In addition, locals are mostly engaged in operating family hotels or restaurants, operating specialty shops, tour guides, ticket sellers, ticket collectors, sanitation workers, scenic area security, drivers, elevators, shop guides, etc. 69.9% of the residents of the community earn

between 2,000 yuan and 5,000 yuan. Age concentrated in 25-44 (57%). Male-female ratio is more balanced. Education is mostly high school or secondary school (40%), followed by college or college. Most people who work in tourism-related jobs lived locally for more than 10 years, accounting for 65% of the total.

2.4 Community Residents' Views on Tourism Development.

Residents are most concerned about issues involving their own interests, such as “consumer spending”, “residents’ living standards”, “urban development”, “local development”, “elderly life”, “environmental pollution”, “house demolition”, “roads” construction” and so on. In addition, residents are still concerned about the regulation of the tourism market, the construction of reception facilities, public health construction, the quality of scenic spots and community services, the amount of tourists, rising prices, and the living standards of community residents. It is worth mentioning that in terms of the sustainable development of tourism in Zhangjiajie, some residents not only consider economic interests, but also have a growing awareness of environmental protection. They also attach more importance to environmental protection in the process of tourism development.

In the eyes of community residents, the current tourism development in Zhangjiajie is in a stage of steady development, but there are still many hidden dangers, manifesting in environmental health, social security, infrastructure, government policies, social culture, urban development, etc. Some residents also made some suggestions on these issues.

3 Tourist Behavior and Satisfaction

3.1 Visitor Demographics

In this sample of tourists surveyed, the age range of domestic tourists is mainly from 15 to 25 years old, accounting for 48.9% of the total, followed by 26-45-year-old tourists, accounting for 33.2%. The proportion of tourists of other age groups is less. The age of foreign tourists mainly ranges from 26 to 45, accounting for 56.7%, followed by 15-25-year-old groups, accounting for 29.9%. Visitors from other age groups account for less.

The education level of domestic tourists is mainly undergraduate, accounting for 46.8%, followed by high school or technical secondary school, accounting for 17.9%. Primary school and below the tourists, accounting for 1.5%. The level of education of foreign tourists is also

mainly undergraduate, accounting for 41.2%, followed by more than undergraduate level, accounting for 32.0%. Junior high school and primary school and below tourists accounted for only 2.1%, 1.0% respectively.

The monthly income of domestic tourists is mainly under 2,000 yuan, accounting for 38.9%, followed by tourists with 6001-10000 yuan, accounting for 15.6%; and above 10,000 yuan is the least, accounting for 8.2%. The largest number of tourists is students, accounting for 43.9%; followed by engineers/teachers/medical personnel, accounting for 15.1%; the least is farmers, accounting for 0.4%.

In terms of tourist sources, domestic tourists are mainly concentrated in the local and surrounding provinces and coastal provinces of Hunan Province, of which Hunan, Guangdong, Hubei, Jiangsu and Sichuan all account for more than 5.0% of tourists, and Liaoning, Hebei, Inner Mongolia, Ningxia and other remote markets only account for less than 1.0%. Foreign tourists are mainly from the United States, South Korea, and the United Kingdom, followed by India, Italy, Germany, and other places. There are fewer tourists from other countries or regions.

3.2 Tourist Behavior Preference

The area is mainly visited by the new visitors. 86.3% of domestic tourists and 95.9% of foreign tourists visit Zhangjiajie for the first time. Only 13.7% of domestic tourists and 4.1% of foreign tourists are revisits.

Mobile phone networks, computer networks and friends and relatives have become the main channels for tourists to obtain information. The channels for domestic tourists to obtain tourism information in Zhangjiajie are mainly mobile internet media (42.3%), relatives and friends (39.1%), and computer networks (38.7%). The proportions of tourist information obtained through travel agency brochures, television broadcasts, and newspapers and magazines are 19.3%, 13.7%, and 6.5% respectively. At the same time, the main channels for foreign tourists to obtain information are computer networks (61.9%), relatives and friends (46.4%), and foreign tourists who obtain information from travel agency brochures, mobile internet media, and newspapers and magazines account for 23.7%, 17.5% and 7.2% of the whole sample respectively.

The tourists are mainly self-guided tours. Foreign tourists are still based on personal self-help travel, accounting for 75.3%. The proportion of self-guided travel for domestic tourists has increased significantly compared with previous years, exceeded 50% for the first time and reached 53.5%, including personal self-driving public transport (34.0%) and self-driving relatives (19.5%).

The main mode of transportation for tourists is trains. 43.7% of domestic tourists traveled to Zhangjiajie by train. 24.7% of domestic tourists traveled to Zhangjiajie by car and 18.5%, 11.1%, and 2.0% of the aircraft, coaches, and high-speed trains were used. The proportion of domestic tourists who chose to drive by car this year (24.7%) was significantly higher than last year (8.6%), and the proportion of domestic tourists who chose to fly by plane this year (18.5%) was ranked second from last year (30.6%). Dropped to the third, it can be seen that the travel mode of self-driving tour is more and more popular with tourists. In addition, 44.3% of foreign tourists arrived in Zhangjiajie by plane and 43.4% of foreign tourists arrived in Zhangjiajie by train.

Tourists (estimated) stay for 3 days or more. Most of the domestic tourists (91.4%) had a (estimated) stay of 3 days or more in Zhangjiajie, and (estimated) the proportion of tourists who stayed for 1 day and 2 days was 0.7% and 8.0% respectively. In addition, the majority of foreign tourists (86.6%) have (estimated) stays in Zhangjiajie for three days or more.

The total cost of the visitors (expected) is more than 1,200 yuan. 75.9% of domestic tourists (estimated) spend a total of more than 1,200 yuan, while (estimated) total domestic tourists spend more than 2,000 yuan accounted for 36.9% of the total. Foreign tourists (estimated) also spend a total of more than 1,200 yuan, accounting for 53.6% of the total, while (estimated) total foreign tourists spend more than 2,000 yuan accounted for 27.8% of the total.

The Zhangjiajie National Forest Park is the most popular scenic spot, and the Zhangjiajie Grand Canyon (glass bridge) has seen a significant increase in heat. Among the domestic tourists, the top four visitors in terms of the number of visitors were Zhangjiajie National Forest Park, Tianmenshan National Forest Park, Tianzishan, and Zhangjiajie Grand Canyon (Glass Bridge). The proportions were 90.2%, 70.5%, 65.4%, and 61.1% respectively. Among the foreign tourists, the top three most visited scenic spots were Zhangjiajie National Forest Park, Tianmenshan National Forest Park, and Zhangjiajie Grand Canyon (Glass

Bridge), with the proportions of 89.7%, 76.3%, and 69.1%, respectively. The rankings of Chinese and foreign tourists in Zhangjiajie Grand Canyon (Glass Bridge) rose from seventh and eighth (2016 rankings) to fourth and third (2017 ranking) respectively.

3.3 Tourist Satisfaction Level

Tourists are more satisfied with tourism resources. More than 85% of domestic tourists express satisfaction with the scenic natural scenery characteristics and the natural ecological value embodied by the scenic spot. Satisfaction with the overall scenic beauty (84.4%), scenic air quality (84.0%) and scenic river quality (83.6%) is also high. Obviously higher. Foreign tourists' satisfaction with the overall beauty of the scenic spot, natural landscape features, and natural ecological values is relatively high, which is 92.8%, 88.7%, and 79.4%, respectively. The satisfaction with the cultural value of the Zhangjiajie scenic spot is 59.8%, which is low.

Tourists are basically satisfied with the quality of tourism services. Regarding the service of scenic spots, the scores of domestic tourists are all higher than the general level (3.00). Domestic tourists had the highest satisfaction with scenic infrastructure and consulting services, which are 63.2% and 59.4% respectively. The level of satisfaction with the population density of scenic spots and the reasonableness of ticket prices is the lowest, only 45.3% and 46.0%. The scores of foreign tourists on the service of the scenic spots are all higher than the general level (3.00), but the satisfaction ratio of the scenic infrastructure and the attitude of the consulting services only exceed 50.0%, and the satisfaction ratio of the remaining indicators is less than 50.0%. The lowest density and toilet hygiene satisfaction is only 37.1% and 42.3%. In terms of support services, the Chinese tourists' scores are all higher than the general level (3.00), and the evaluation of transportation services and accommodation services is the highest. The satisfaction ratio of each indicator is higher than 50.0%. The evaluation of catering services is the lowest, and the proportion of satisfaction of each indicator is less than 50.0%. Most of the foreign tourists' ratings for support services are above 3.50, the highest rating for accommodation, followed by traffic assessment and catering evaluation. In terms of shopping and entertainment items, domestic tourists score more than 3.30, and the indicator's satisfaction ratio fluctuates between 40.0% and 65.0%. The evaluation of entertainment projects is slightly higher than shopping items. Foreign tourists' ratings for shopping and entertainment items are all above 3.40, indicating that the percentage of satisfaction is between 45.0% and 70.0%.

Tourists are basically satisfied with environmental protection. The indicators of higher domestic tourists' satisfaction are scenic security, residents' friendship level and public security conditions, which are 72.2%, 68.6% and 67.1%, respectively. The satisfaction with the scenic spot medical facilities is relatively low (60.8%). The indicators of higher satisfaction of foreign tourists are the safety of the scenic spots and the friendship of the residents, which are 84.5% and 79.4% respectively.

3.4 Travel Education

Domestic tourists mainly obtain relevant information through scenic area identification plates and maps (64.6%), and tour guides were secondary sources of information (59.6%). Foreign tourists obtain relevant information mainly through signboards and maps (66.0%) and introduce interpreting cards (49.5%) as secondary sources of information.

Domestic tourists have improved their understanding of the natural landscapes such as Shifeng and canyons, accounting for 83.4% of the total. Geological knowledge such as quartz sandstone and dissolved geomorphology is followed by 47.1%. Foreign tourists increase their understanding of the natural landscapes of the Shifeng and the canyons, accounting for 85.6% of the total. Knowledge of animal and plant resources and quartz sandstone and other geological knowledge is followed by 43.3%. Chinese and foreign tourists are less aware of socio-cultural aspects. For the protection of Wulingyuan, over 80% of Chinese and foreign tourists agree that Wulingyuan should be protected as a natural heritage of the world.

3.5 Tourists' General Comments on Zhangjiajie.

Tourists are generally satisfied. 76.0% of domestic tourists express their satisfaction with Zhangjiajie tourism in general, and 81.4% of foreign tourists express their satisfaction with Zhangjiajie tourism in general. Visitors propose a series of suggestions for the development of the scenic spot, especially the scenic spot health (scenery environment, toilet hygiene), scenic spot sign system (refreshing old signs, setting up English signage), market order (travel agencies and guides) and so on.

4 Tourism Economic Impact

4.1 Tourism Development

4.1.1 Tourism Income

In 2016, tourist attractions in Zhangjiajie received 61.43 million passenger trips, an increase of 21% year-on-year, of which 3.342 million were foreign tourists, with a year-on-year increase of 28.5%. The total tourism revenue reached 44.31 billion yuan, with an increase of 30%. Overnight visitors were 28.57 million, with an increase of 28%. Among them, 447 million people were overseas visitors, with an increase of 33.9%. Among them, ticket sales revenue was 3.3 billion yuan, with an increase of 20.4%. Foreign exchange revenue was 77,580,000 US dollars, with an increase of 35.6%.

4.1.2 Tourism's Impact on GDP

In 2016, Zhangjiajie's gross domestic product (GDP) was 49.76 billion yuan, with an increase of 8.1% over the previous year. Calculated according to the permanent population, the per capita GDP of the city was 32,598 yuan (current price), with an increase of 7.7% over the same period of last year. The effect of tourism income on the economic growth of Zhangjiajie has further increased. Compared with 2008, the proportion of tourism revenue to GDP has doubled.

4.2 Seasonal law

Zhangjiajie's travel season is very obvious. The tourist season mainly focuses on four months of 7, 8, 9, and 10, while the off-season of tourism mainly focuses on four months of 12, 1, 2 and 3 each year. At the same time, the number of tourist receptions in the high season and the number of tourist receptions in the off-season are continuously increasing. The disparity number between the high season and the off-season in 2016 is increased by 1 million compared with 2015. The problem of unbalanced reception in different seasons among tourists has become more prominent, which can reach up to 8 million people. In terms of overseas markets, April, July, September and October are the high season for overseas tourists. Among them, the number of inbound tourists received in September and October is relatively high. January, February and December is the off-season for overseas tourists.

4.3 Tourism and Employment

In 2016, the tourism GDP of Zhangjiajie reached 25.991 billion yuan, the contribution rate to the city's GDP was 52.17%. And 21505 people got rid of poverty, and 214.2 million people were employed due to tourism development. Tourism's contribution rate on getting rid of poverty is 39.45%, and tourism's contribution rate on employment is 26.83%. In the course of advancing the development of global tourism, Zhangjiajie always persists in the road of rural tourism and employment to help the poor, and promotes employment through the development of tourism.

4.4 Tourism Industry

4.4.1 Accommodation Industry

According to statistics from the Zhangjiajie City Bureau of Statistics, in the first half of 2017 (January to June), the major districts and counties in Zhangjiajie achieved a total income of 564.53 million yuan in the accommodation industry. Among them, the Yongding District achieved income of 229.44 million yuan, with an increase of 10.4% over the same period last year. Wulingyuan District realized accommodation income of 71.95 million yuan, with an increase of 12% over the previous year. Cili County realized accommodation income of 93.4 million yuan, with an increase of 11.4%. Sangzhi County realized accommodation income of 168.84 million yuan, with a year-on-year increase of 11.0%. In order to further promote the development of Zhangjiajie's lodging industry, relevant government departments in Zhangjiajie issued the "Implementation Measures for the Construction Management of Rural Characteristic B&B (Inns) in Zhangjiajie Wulingyuan District" to regulate the housing industry market order and guide the healthy and rapid development of the lodging industry market.

4.4.2 Travel Agency Industry

According to statistics, as of the first half of 2017, there were 124 travel agencies in Zhangjiajie, with an increase of 55% compared with the statistics of 80 at the end of 2015. There were about 7,000 tour guides in service, with an increase of 1820 guides and an increase of 35% compared with 2015,.

4.4.3 Transportation Industry

As for air transportation, as of June 2017, Zhangjiajie Hehua Airport had a total of 7955 flights, of which 432 were for transit flights. Compared with the same period of last year, the total number of aircraft movements increased by 3.1%, while the number of departures and arrivals at ports decreased by 58.0%. Passenger throughput reached 79.99 million, with an increase of 9.4% over the same period last year.

As for railway transportation, there were 67 trains passing through Zhangjiajie Railway Station in 2017, with a significant increase compared with 46 in 2016 and 39 in 2015. As of June 2017, Zhangjiajie Railway Station sent a total of 101.13 million passengers, which was basically the same as the same period of last year. In addition, the Zhangjiajie High-speed Rail Station has officially started construction on September 8, 2016. After completion, passengers' traffic volume will be 5.5 million passengers per year in the near future and 10.6 million passengers per year in the long-term. And it will become the largest passenger terminal in the Zhangyechang Railway.

As for road transport, as of the end of 2010, the total mileage of highways in Zhangjiajie reached 8502.536 kilometers, accounting for 3.729% of the total mileage of the province's highways. The road network density reached 89.34km/hundred square kilometers, which is 84.44% of the average level in Hunan Province. There are currently three major passenger terminals in Zhangjiajie City, namely Zhangjiajie Central Bus Station, Wulingyuan Bus Station and Cili West Railway Station. Each of the three passenger terminals has a shuttle bus to the major scenic spots. Zhangjiajie Central Bus Station and Wulingyuan Bus Station also send daily shuttles to major cities in Changsha and other cities outside of the province.

4.4.4 Travel Goods

The variety of tourism products in Zhangjiajie City has increased, but it is still mainly traditional tourism products such as native products and national costumes, and there is no innovation in product categories. Its tourism shopping mainly have the following problems: (1) The tourism products mainly consist of native products, national costumes and handicrafts. The added value of the products is low, and the commemorative significance is not high, and it is difficult to attract tourists to purchase in large quantities. (2) Tourism products are not brandable, and there is a lack of high-quality and high-quality features commemorative

products.

4.5 Summary

In 2016, the tourism development in Zhangjiajie was in a good state. The number of visitors and tourism income rose steadily by 21% and 30% respectively. The proportion of tourism revenue to GDP reached 89.05%. Tourism has become a pillar industry in Zhangjiajie's economic development. The vigorous development of the tourism industry in Zhangjiajie has led to the development of a series of related industries such as tourism-related hotel accommodation, travel agencies, and tourism and shopping. It has effectively promoted the local economic development, raised people's living standards, and created more job opportunities for residents.

5 Tourism Marketing

5.1 Product Marketing

In 2016, Zhangjiajie organized many innovative activities to conduct marketing through various events. Representative event exhibitions include the 18th International Senbao Festival, the first Zhangjiajie (International) Food Festival, and the 2016 Zhangjiajie Tourism Carnival.

In 2016, Zhangjiajie focused on marketing activities including folk culture month and "Winter Tour Zhangjiajie". From July 9th to September 4th, the first China • Zhangjiajie Folklore and Culture Month activities focused on displaying hundreds of intangible cultural heritages in major tourist attractions in Zhangjiajie. It is the largest, longest, and richest content tourist cultural event in Zhangjiajie City over the years. The first month of Zhangjiajie folk culture has attracted nearly 10 million visitors to participate in the experience. This has laid a solid foundation for the city's tourists to exceed 60 million for the first time in 2016. From December 2016 to February 2017, Zhangjiajie gathered the city's strength to create the "Winter Tour Zhangjiajie" brand, which was a comprehensive event for the comprehensive display of Zhangjiajie's magical natural scenery, ethnic customs, and unique folk customs. The activities included the top ten winter tourism products, the top ten winter marketing activities and seven preferential policies.

5.2 Price Marketing

Off-season discount fare policy. From December 1, 2016 to February 28, 2017 (excluding the Golden Week of the Spring Festival, that is, January 28 to February 3, 2017), Zhangjiajie's core scenic spots will adopt a fare discount policy. Such as the city's all scenic spots (excluding hot springs) and scenic cableways, elevators, sightseeing trains, environmental protection passenger vehicles, performing arts programs and other common tickets implemented the winter price concessions (ticket package of Wulingyuan core scenic spots discount rate is about 44.5%, and others discount rate is 20 %)and so on.

Special group discounts. In July 2016, the Development and Reform Bureau of Wulingyuan District stated that in the future, preferential policies will be uniform for all special groups of tourists entering the Zhangjiajie Forest Park for sightseeing, sightseeing or transportation. For example, children who are 1.3 meters or less in height, active soldiers with valid certificates, disabled people, and those over 70 years of age are exempted from voting.

5.3 Place Marketing

5.3.1 Media Marketing

In 2016, Zhangjiajie continued to increase the intensity and breadth of media marketing, including traditional television media, online media, and smart marketing.

Traditional television media. Zhang Jiajie paid more attention to the promotion of its cultural heritage in television media propaganda, and presented the customs of Zhangjiajie during the recording of the program to achieve the purpose of cultural propaganda.

Internet media. In 2016, Zhangjiajie made full use of various online media to promote Zhangjiajie through Weibo, websites, apps, and online movies. It focused its efforts on publicizing the titles it acquired, and organized joint activities with many business and political circles. .

Smart marketing. In 2016, Hunan has created a smart service system for travel destinations. Visitors to Phoenix and Zhangjiajie can purchase through the Internet one-stop shopping without having to change their ticket to enter the park, ride, or check-in. The

Zhangjiajie area takes "Internet + Tourism in Zhangjiajie" as the guideline, makes every effort to promote big data strategy, accelerates the construction of 4G networking, "broadband villages", etc., implements the "Internet +" action plan, and builds a "tourism cloud" to lay a solid foundation for the Internet + Tourism in Zhangjiajie.

5.3.2 Communication and Cooperation

In 2016, the tourism development in Zhangjiajie still attached great importance to the communication and cooperation with domestic and foreign countries. Through cooperation with other tourism destinations and media, Zhangjiajie has increased its exposure both at home and abroad, further widening the tourism market.

5.3.3 Partition Marketing

In 2016, Yongding District, Wulingyuan District, Sangzhi County, and Cili County of Zhangjiajie City all actively market their products through joint media, promotional activities, communication and cooperation. Among them, the strategy of Sang Xing Gong Yue and Yue Zhao Sang Xing centered on Wulingyuan District has indicated the direction for the development of global tourism.

5.4 Promotion

Advertising. In 2016, Zhangjiajie was broadcasted on the CCTV Spring Festival Gala opening propaganda film and became the most powerful advertisement for the Zhangjiajie tourism. More than ten people in the crew of CCTV Spring Festival Gala documentary film, "New Year's Eve", went to Dingjiajiacun to shoot.

After a year, it finally released in the 2016 Spring Festival Gala and showed a visual feast for millions of viewers. "Unique Zhangjiajie, stunning the world" is Zhangjiajie's slogan, which can be seen everywhere on the Zhangjiajie's tourism official website.

The marketing in the origin of tourists. In 2016, the Tourism Bureau of Zhangjiajie City formed a sales promotion team based on the area. It targeted and focused on strengthening tourism promotion for the domestic and overseas origin of tourists. The main form was tourism promotion meeting.

5.5 Marketing effectiveness

In terms of products, tourism products were enriched by the festival activities. Series of activities, the “Winter Tour Zhangjiajie”, stimulated more than 5 billion tourism and cultural consumption, and attracted 5 million domestic and foreign tourists. The first Zhangjiajie folk culture has attracted nearly 10 million visitors to participate in the festival. In terms of prices, tourists are attracted by the preferential price policies for different tourist groups. During the off-season, there are more marketing activities. And then the number of off-season tourists is increased. In terms of marketing channels, through vigorous media marketing, we have strengthened our cooperation with major domestic and international networks and television media, and gradually followed the pace of the times to gradually improve and implement smart marketing. And at the same time we implement the marketing and integration of the areas focusing on Yongding District and Wuling District to enhance the overall image of Zhangjiajie tourism. In terms of promotion, the promotion of advertising and source marketing will further enhance the image of Zhangjiajie in the minds of potential market customers. Various types of marketing methods promote each other and generate strong synergies, laying a solid foundation for the total number of tourists, 64.43 million, and total tourism revenue, 44.3 billion yuan, in Zhangjiajie in 2016.

5.6 Summary

In 2016, Zhangjiajie constantly updated its marketing methods from products, prices, channels, promotions, etc. to increase its reputation and attractiveness. Zhangjiajie’s tourism has achieved gratifying results under the efforts of various types of marketing. In 2016, the popularity of Zhangjiajie was further improved at home and abroad. The total revenue of tourism was increased by 30% compared with the same period of the last year. The number of annual tourist visits was 61.43 million, with a year-on-year increase of 21%.

6 Tourism and Environmental Protection

6.1 Environmental protection

6.1.1 Protection work

As of June 2017, Wulingyuan District has achieved remarkable results in the monitoring and protection of forest resources, wildlife protection and forest fire prevention. In terms of

monitoring and protection of forest resources, the Wulingyuan District has completed a total of 91,200 mu of afforestation missions, and the forest coverage rate of the core scenic spots has increased to 98%. In terms of the protection of wild animals and plants, Wulingyuan District has launched special protection actions to crack down on illegal crimes, but Interviews with related organizations revealed that Wulingyuan District lacked statistics on the types and quantities of animals and plants in the region due to lack of funds and technology. And in the field of forest fire prevention, Wulingyuan District established a sound fire protection network in the scenic area and achieved a total of 7 years without major Fire incidents, but this monitoring result shows that there are still loopholes in the area of tourist management, such as smoking and fire bans.

6.1.2 Energy Use

(1) Energy in Use

The energy sources used in Wulingyuan District mainly include electricity, liquefied gas and coal. Statistics show that the energy consumption in Zhangjiajie has increased year by year and the discharge of major pollutants has dropped. Interviews with hotels and restaurants showed that the energy used in restaurants includes liquefied gas, natural gas, environmentally friendly oil and electricity. The hotel's hot water supply is usually heated by air and other uses are mainly electric energy. However, none of the interviewees used renewable energy. The main reason is that the cost is relatively high. Renewable energy such as solar energy does not have universal economic applicability in the local area and the unitary economic entity cannot afford it. In contrast, the type of energy use of residents is more concentrated, mainly liquefied gas, natural gas and electricity, and some residents are supplemented with coal and firewood. However, residents who assist in the use of coal do not process coal slag wisely.

(2) Energy-saving measures

The survey results show that restaurants and hotel employees in Wulingyuan District generally agree with the importance of energy conservation and environmental protection. However, due to the consideration of economic interests, energy conservation measures are mainly behavioral energy conservation. The overall characteristics can be summarized as: The hotel's awareness of energy conservation is stronger than that of restaurants. Medium and

large restaurants are stronger than small and medium sized restaurants. Individual groups are stronger than chain groups, and the boss is stronger than employees. Some restaurant owners or hotel managers stated that they are interested in energy-saving measures or energy-saving products, but due to lack of relevant information and high cost of equipment introduction, they hesitate at it.

6.1.3 Climate Conditions

Zhangjiajie is the archetypal monsoon humid climate of central Asian tropical mountains. Most of the scenic spots are suitable for long periods of time. However, the complex topography of the city's territory is highly variable. Occasional extreme weather will reduce tourists' willingness to travel or make travel difficult. Correspondingly, Zhangjiajie City is experienced in responding to weather changes and has ample plans. In extreme weather, it can basically maintain the order of scenic spots. Interviews with residents and scenic staff in this survey also show that there are fewer extreme weather conditions in Zhangjiajie, and the challenges to scenic spot operation and economic losses caused by extreme weather are within a controllable range.

6.2 Environmental Monitoring and Assessment

6.2.1 Atmosphere and water environment quality

In 2016, the air quality in Wulingyuan was in good condition, and the air quality rate was 87.1%, which was 8.5 percentage points lower than last year. The main reason is the large number of engineering reconstructions in Wulingyuan District. In addition, the main sources of pollution are motor vehicle exhaust fumes, construction site dust, and Wulingyuan District traffic reconstruction and expansion project.

In terms of water environment quality in Wulingyuan District, the quality of drinking water sources was generally good. In 2016, the quality of the two drinking water source monitoring sites and the four surface water monitoring sites met the Class II standards in "Surface Water Environmental Quality Standard (GB3838-2002)".

6.2.2 Acoustic environment and solid waste management

In 2016, the acoustic environment quality in Wulingyuan District was relatively high.

Regional noise has decreased compared to last year, and the quality of acoustic environment has not been improved. This is related to noise in the social life, construction noise, and noise from traffic vehicles.

As regards solid waste, the Wulingyuan main residential area has complete facilities for the recovery of solid waste. The streets are clean and hygienic. And garbage trucks are regularly transported at fixed points. Garbage bins are set up to sort rubbish, but the classification effect is not significant. In particular, most hotels and restaurants do not classify rubbish. The sanitation of the area is good, but rubbish can be seen everywhere in densely populated areas, and health needs to be improved.

6.3 Environmental Protection Policies and Measures

At present, Zhangjiajie City has formed an environmental management system based on the Environmental Protection Bureau of Zhangjiajie City, and has achieved certain results through a series of environmental protection measures in accordance with relevant state regulations and local actual conditions. As the main environmental protection management agency in Zhangjiajie City, the Municipal Environmental Protection Bureau has conscientiously implemented the basic national policy of environmental protection, focused on the environment, strengthened the prevention and control of noise, air, and water environmental pollution, and made breakthroughs in improving sustainable development capabilities. We will improve the basic system of environmental protection in the city, coordinate, supervise and manage major environmental issues. In addition, the residents and enterprises' understanding of environmental protection still remains at a shallow level, so relevant departments are required to further publicize and guide them. At the same time, although some residents and companies have a stronger sense of environmental protection, they lack adequate policy guidance and help to put awareness into action.

7 conclusion and suggestion

(1) Residents have a stronger sense of tourism, but they also have negative perceptions. Community participation needs to be enhanced.

As a whole, the residents of Zhangjiajie have a stronger sense of tourism, mainly from economic development and socio-cultural aspects. At the same time, residents also perceived

the negative impact of tourism development. Residents reflected the increase in prices caused by tourism to increase the pressure for survival, and realized that tourism development led to a series of problems such as traffic congestion, noise pollution, and urban construction pollution.

Residents' awareness of community involvement increased, but they lacked sufficient policy guidance and assistance. Therefore, governments or tourism companies should be more active in establishing community participation mechanisms, increase opportunities for community participation in tourism activities, and establish effective, fair, and reasonable community distribution mechanisms so that residents can participate in the project and get benefit from it. And ultimately sustainable development of the entire tourism system can be realized.

(2) There is a relative lack of humanistic value of the scenic spot, and there are still many problems in the development of the scenic spot.

As a whole, most tourists have an positive attitude towards Zhangjiajie tourism. It is generally believed that the scenery in Zhangjiajie has high natural landscape value, but the lack of humanistic values is reflected in the serious problem of excessive commercialization of scenic spots. The main problems in the development process of the scenic spot are as follows: 1) environmental and hygienic issues in the scenic spot; 2) overcrowding problem in the scenic spot; 3) poor catering and unremarkable catering characteristics; 4) foreign language barriers for tourists; 5) chaos in the market order. Therefore, in the future development process, it is necessary to rectify the shopping environment and prices, and establish a credit mechanism. For the scenic area supporting facilities, we should focus on the scenic area identification system, enhance the self-service provision, improve the tourism commentary system, English logo system, etc. And it is necessary to improve the calculation and management of the carrying capacity of tourists in various scenic spots and optimize the carrying capacity between scenic spots.

(3) The tourism-related industrial market is gradually standardized, but the supervision system needs to be improved and the product features are not prominent enough.

In 2016, the tourism development in Zhangjiajie was in a good overall situation. The

number of visitors and tourism revenues rose steadily. At present, the tourism industry has occupied a pillar industry status in Zhangjiajie's economic development, and at the same time it has promoted the development of hotel accommodation, travel agencies, tourism shopping and other related industries. In the future development, we need to further improve the current market management system and supervision system, properly solve the problem of food and lodging accommodation safety, create a safe and standardized tourism shopping environment, and enhance the economic benefits of tourism development in Zhangjiajie. Secondly, the government and relevant law enforcement agencies need to regulate the order of the tourism market, increase the crackdown on informal practitioners, and raise the awareness of standardizing management. In the end, we should make full use of the characteristics of Zhangjiajie, based on local development and innovation of tourism products, and increase the promotion of tourism shopping.

(4) Marketing methods have been updated and marketing results have been remarkable

In 2016, Zhangjiajie continued to update its marketing methods in tourism marketing with remarkable results. The highlighted marketing activities include "Zhangjiajie Folk Culture Month" and "Winter Tour Zhangjiajie", all of which have exerted great influence. Under the combination influence of price-preferential policies, media marketing and smart marketing, the level of tourism development in Zhangjiajie continues to increase, and marketing results are significant.

(5) Zhangjiajie environmental protection has formed a relatively complete institutional system, but there is still space for improvement

At present, the environmental monitoring and assessment work in Zhangjiajie has achieved certain results. The ecological environment in the Wulingyuan District has been continuously improved, and the forest coverage rate in the scenic areas has remained the highest in the province for many years. At the same time, dust, noise, and construction waste caused by construction projects such as the transformation of old cities and housing upgrades are still severe and urgently needed to be resolved. Many related organizations such as government, community residents, and tourists need to work together to do a good job in environmental protection. First of all, it is necessary to strengthen the supervision and control of tourist behavior, and focus on the prevention of destructive behaviors such as littering,

destruction of vegetation, and pollution of water source. Second, strengthen the promotion and promotion of low-carbon tourism behavior, and implement the call through the release of low-carbon tourism behavior manuals. Finally, it is necessary to increase the popularization and education of low-carbon environmental protection concepts and improve visitors' environmental awareness.

2017 Monitoring Report on the Sustainable Tourism Development of Kanas

Monitoring Centre for UNWTO Sustainable Tourism Observatories
People's Government of Yi County, Huangshan City



Acknowledgement

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Acknowledgement

Kanas Scenic Area Management Committee, Kanas Scenic Area Office of Party and Administration, Kanas Development and Reform Commission, Kanas Bureau of Finance, Kanas Forestry Administration, Kanas Social Affairs Administration, Kanas Scenic Area Public Security Bureau, Kanas Scenic Area General Management Office, Kanas Scenic Area Comprehensive Law Enforcement Bureau, Kanas Bureau of Agriculture Husbandry and Water Resource, Kanas Scenic Area Bureau of Environmental Protection, Construction, and Transportation, Kanas Scenic Area Tourism Administration, Kanas Government Office Administration, Kanas Land and Resources Bureau, Kanas Scenic Area Tourist Service Center, Hemu Village People's Government, Tielieketi Village Government, Kanas Village Committee, Baibaha Village Committee

And all those who helped with the monitoring work.

1. Introduction

The 2017 monitoring program could be divided into three stages, specifically: monitoring preparation stage, field monitoring stage and report stage. ◦

Monitoring preparation stage: Since MCSTO received the monitoring task in early August of 2017, the center started to set up monitoring group and actively prepared for the monitoring program. The 2015 monitoring group consisted of 11 doctoral and postgraduate students from the Center for Tourism Planning and Research of Sun Yat-sen University (SYSU). During the preparation stage, the monitoring group conducted detailed discussion and analysis on monitoring tasks. Based on Instruction Manual of Sustainable Tourism Development Indicators for Tourism Destinations and the characteristics of Kanas scenic area, the monitoring group initially drafted the monitoring indicator system on Kanas scenic area, and designed the questionnaires to be distributed among tourists, residents, tourism business operators and staff, along with community interview proposals. In addition, the monitoring group also learnt about information about Xinjiang tourism and Kanas scenic area, in order to lay a solid foundation for the latter monitoring work.

Field monitoring stage: On September 17th, the monitoring group arrived at Kanas and started their investigation. During the 10-day investigation, with the strong support and collaboration of Kanas Scenic Area Management Committee, the monitoring group successfully conducted the monitoring on sustainable tourism development indicators of Kanas scenic area. The monitoring group conducted random researches among tourists in Kanas Tourist Center (Transit Center), Kanas Old Village, Kanas New Village, Kanas Lake, Jia Dengyu, Hemu Village and Baihaba Village. They conducted questionnaire surveys and interviews with tourists and community residents. They also visited the Kanas Scenic Area Management Committee and collected relevant second-hand information on the Kanas area.

During the monitoring program, the group collects a great number of first-hand materials about tourists, residents, tourism enterprises and local government. In terms of tourists, 800 tourist questionnaires were distributed. While distributing questionnaires, the group also interviewed some tourists and tour guides about key issues so as to supplement analysis. In terms of residents, by random sampling, the group mainly conducted door-to-door interviews and supplemented by intercept interviews. The investigation

combined semi-structural interviews and questionnaires. The group mainly adopted door-to-door in-depth interviews and semi-structural questionnaires to conduct community investigation, mainly in 3 communities, specifically: Hemu Village, Kanas New Village and Old Village, as well as Baihaba Village. 176 questionnaires were distributed. In terms of tourism enterprises, the group conducted sampling investigation on the major business format in these three communities, including hospitality industry, catering industry, souvenir shops and retail stalls. Among them, there are 100 valid questionnaires for the owners and 100 valid questionnaires for the employees.

Report stage: From October 1, the monitoring group started to study the materials collected during the monitoring and carried out a final report.

2. Tourism and Community

2.1 Tourism and community monitoring indicators

The 2017 monitoring was mainly conducted in Kanas New Village, Kanas Old Village, Baihaba Village, Hemu Village and Jia Dengyu. By random sampling, the monitoring mainly conducted door-to-door researches and supplemented with intercept interviews. Combining semi-structural interviews and questionnaires, the monitoring group in total distributed 200 questionnaires in four communities, with 197 ones returned, achieving a rate of return of 98.5%. Among which, 194 of them were valid questionnaires, achieving a validity rate of 98.5%.

2.2 Community profile

From the perspective of gender ratio, there were more male respondents than female respondents. Young and middle-aged residents accounted for the most proportion. Tourism development appealed a great many young people to work locally, which effectively prevented the phenomenon of “hollowing-out”. From the perspective of education, resident qualifications are mainly concentrated in high school or secondary school education, and the proportion of higher education levels needs to be improved. Residents’ professions mainly related to tourism industry. Over half of the residents are engaged in tourism-related industries. Most residents live in the local area for more than five years, and 68% of the residents live for more than 20 years. The foreign population is dominated by the population

in the Xinjiang Autonomous Region, and a small amount comes from other provinces. The family structure is based on a core family of less than five people. Nearly 70% of the families have no one to go out to work, and over 60% of the households have 1-2 people to participate in tourism. More than half of the residents have more than five houses. The number of residential houses exceeds 10, and the number of residents owns houses have decreased compared to last year. The demolition of half-timbered houses in the local area is the main reason for the decline. The building's material is dominated by logs, and more than 90% of the houses are used for tourism operations. The overall increase in the rent for residential houses in Kanas in 2017 compared to 2016 may be related to the decrease in the number of houses caused by the demolition of many half-timbered houses. The annual rent for about 60% of houses is increased to more than 5-10 million yuan. Of course, the housing rent is obviously different due to the geographical location.

2.3 Residents' perception of the impact of tourism

(1) Economic influence

Residents generally believe that tourism promotes local economic development. Most residents believe that tourism has increased employment opportunities, promoted consumption and investment, and improved living standards. Regarding the negative impact brought by tourism, the most intense reflection of residents is the increase in prices. Some residents also believe that tourism has widened the gap between the rich and the poor. However, only a very small number of residents believe that tourism only leads to a small number of people in terms of the number of benefiting groups.

(2) Social influence

Among the positive influences, the highest degree of recognition is that tourism has improved infrastructure such as roads, hydropower, etc. And more than 90% of residents recognized it. At the same time, compared with 2016, residents' recognition of tourism's positive impact on healthcare and education has increased. Among them, the recognition of tourism improving local medical conditions has increased significantly, from 36% in 2016 to 51% in 2017. It can be seen that the medical conditions in the local community have gradually improved in the past two years. Among the negative impacts, a higher degree of recognition was attributed to the increase in the demolition of old houses, the increase in new

houses, and the increase in traffic caused by tourism, which accounted for 47% and 49% of the total. And the majority of residents considered that other negative effects such as increased crime rates and life disturbance and tourism have limited the residents' use of scenic spots and the tension between residents and tourists.

(3) Cultural influence

The highest degree of recognition is that tourism promotes the exchanges between local and foreign, reaching 90%. Secondly, tourism promotes the development of handicrafts, increases festival activities, and enriches people's lives. Half of the residents did not agree that tourism caused the destruction and oblivion of folk customs and traditional culture. In 2017, residents' perception of tourism impact on culture was basically the same as that of 2016 survey.

(4) Environmental influence

Among the positive influences, the highest degree of recognition is that tourism has improved environmental hygiene conditions, and it is recognized by 84% of residents. In addition, “enhancing environmental education and protection of animals and plants” was also recognized by 76% of residents. Among the negative impacts, the highest percentage of residents' approval was that tourism increased garbage, accounting for 54%, followed by noise pollution (39%) and water quality pollution (39%), consumption of local residents (33%) and air pollution (28%). Compared with the survey results in 2016, residents' positive perception of environmental impact on tourism generally increased, and perception of negative impacts generally declined. This indicates that the environmental quality of Kanas scenic spots has been significantly improved.

2.4 Residents' attitude and satisfaction

2.4.1 Looking forward to an increase in the scale of tourism: the vast majority of residents recognize it

7% of residents expressed disagreement, 5% of residents said they had no influence, and 88% of residents agreed with this view. As a whole, the vast majority of residents hope that the tourism industry will continue to develop. It shows that most residents are positive about the increase in the scale of tourism and hope to participate more in the tourism industry to

gain more benefits

2.4.2 Residents' willingness to be engaged in tourism-related work: 80% of residents agree

Seven percent of residents disagreed, eight percent said it was neutral, and eighty-five percent of residents expressed their willingness to participate in the tourism industry. This shows that the employment advantages brought by tourism have been recognized by residents and residents have higher expectation of tourism.

2.4.3 Residents' willingness to make suggestions for the development of scenic spots: 80% of residents agree

6% of residents expressed disagreement, 16% of residents said they had no influence, and the proportion of residents who agreed with this view was 66%, and the proportion of residents who strongly agreed with this view was 12%. Overall, 78% of the residents agree with this view, and only 6% disapprove. This shows that local tourism is closely related to the interests of local residents. Through the development of tourism, the local residents' sense of ownership is enhanced.

2.4.4 Tourism has made great contributions to local development: nearly 80% of the residents agree

3% of residents expressed that they disagreed. 3% of residents expressed disagreement. 5% of residents said they had no influence. The proportion of residents who agreed with this view was 72%, and the percentage of residents who strongly agreed with this view was 17%. On the whole, 89% of the residents who agree with this view and 9% of those disagree with it. It indicates that residents' recognition of tourism's economic contribution is getting higher and higher.

2.4.5 The leaders of the scenic area will listen to the opinions of the residents: 20% of the residents disagree, and nearly 60% of the residents agree

6% of residents said that they strongly disagreed. 15% of residents expressed disagreement. 23% of residents expressed neutrality. The proportion of residents who agreed with this view was 43%. The proportion of residents who strongly agreed with this view was

13%. As a whole, 21% of the residents do not agree with this view, and 56% of the residents agree with this view. Compared with the 2016 data, the percentage of residents who agree with this point of view has increased, indicating that the decision of the scenic spot takes into account the residents' suggestions.

2.4.6 Residents' willingness to actively participate in promotion and publicity: most residents agree

A 1% of residents said that they strongly disagreed. 1% of residents expressed disagreement. 10% of residents expressed neutrality. The percentage of residents who agreed with this view was 40%, and the percentage of residents who strongly agreed with this view was 49%. Overall, 89% of the residents are willing to actively participate in promotion and publicity, and 2% are unwilling to promote. Most residents have certain feelings for the development of scenic spots and are willing to make their own contribution to the promotion of scenic spots.

2.4.7 Satisfaction with the Development of Kanas Tourism: over 80% of residents are satisfied

1% of the residents said they were very dissatisfied, 4% said they were not satisfied, 13% were neutral, 64% were satisfied, and 18% were very satisfied. As a whole, 82% of the residents are satisfied with the development of tourism. There was an increase compared to 2016. And 5% were dissatisfied. There was a decrease compared to 2016. It shows that the development of tourism meets the needs of most residents.

3. Visitors' perception and satisfaction

3.1 Tourist perception and satisfaction monitoring indicators

The surveyed tourist questionnaire was evaluated from three aspects: the basic characteristics of tourists, tourism experience evaluation, and the subsequent impact of tourism. Tourists' basic information includes personal information and travel information. The tourism experience evaluation includes tourists' evaluation of tourism resources, environment, service evaluation and overall evaluation. The evaluation of tourism resources includes the following eight dimensions: forest, lake water, ethnic customs, grassland scenery,

border atmosphere, tourism activities, climate, and human settlements.

The evaluation of social security, local residents and tourism services mainly involves revisiting and recommending willingness.

The monitoring team conducted random surveys of tourists at major tourist attractions and villages in Kanas from September 15 to September 26, 2017, including the Visitor Center, Kanas Lake, cruise ship terminal, Tochigi-mura, and White Haba., old village, new village and so on. A total of 800 visitor questionnaires were distributed, of which 773 were valid questionnaires and the effective rate was 96.6%.

3.2 Social demographic characteristics of the sample

Among the surveyed subjects, tourists from Xinjiang accounted for 6.99%. Among the tourists from other provinces, the most sources were those with more developed economies. Among them, tourists from Guangdong accounted for 12.29%. Tourists from Beijing and Shanghai accounted for 7.89% respectively. Visitors from Zhejiang accounted for 5.56%, and visitors from Sichuan accounted for 5.43%. Through the overall analysis, it can be found that the Kanas' source market is mainly concentrated in Xinjiang and the developed areas, such as the Pearl River Delta, the Yangtze River Delta, and Beijing. It is worth noting that the number of overseas tourists in Kanas increased compared with previous years. Visitors from Taiwan accounted for 2.07%. Hong Kong tourists accounted for 0.78%. And some visitors are from Russia, the United States and other overseas tourists. In general, Kanas's promotion of the source market should be based within the territory, occupy large cities, enter small cities, and appropriately conduct overseas marketing and publicity.

The proportion of male and female tourists is more balanced and the age is mostly concentrated in young adults. Among them, tourists aged from 25 to 44 accounted for 40.44% and tourists aged from 45 to 64 accounted for 41.95%. In terms of education, Kanas tourists have higher levels of education, mainly bachelor's degree, accounting for 47.47%. Tourists with college education accounted for 24.44%. Those with master's degree or above accounted for 8.95%. But tourists with high school or below only represented 15.9%. In terms of income level, the overall income of the tourists as a whole has a medium-level overall income, mainly between 5,000 and 10,000, which accounted for 41%. Visitors with 3,000 to 5,000 income accounted for 32.23%.

3.3 Analysis of tourists' behavior characteristics

Travel form: mainly DIY travel, group travel coming next. Of the 773 valid questionnaires collected, 51.42% of the surveyed tourists were DIY tourists; 19.82% were in personal delegations or group tours with friends and family members, accounting for 23.83%; and the number of unit-organized tours increased significantly compared to 2016, from 6.47% in 2016 to 27.78% in 2017.

Access to information: recommendations of friends and family and internet are equally important. Tourists have multiple channels for accessing to Kanas tourism information. The most important channel is web browsing, followed by recommendations from friends and family. There are 45.67% of tourists obtaining tourist information through the Internet, 33.76% of tourists are recommended by relatives and friends, and some of the tourists are through travel agencies (18.24%), tourist books introduction (16.04%), TV promotion (14.88%), etc. Tourists who obtained relevant tourist information and obtained Kanas information through newspapers and periodicals accounted for 6.99%, indicating that the traditional paper media's publicity effect was weaker than the new media. Therefore, Kanas's future propaganda should mainly focus on new media, and at the same time implement the propaganda of Kanas' good image, and consolidate the two major channels of communication, while expanding new ways of propaganda.

Motivation of travel: mainly for sightseeing, followed by the leisure travel and photography travel. The purpose of most visitors to Kanas is for sightseeing (78.27%), while leisure (45.67%) and photography (25.61%) are also important motivations of tourists. However, tourism motives such as business activities, official meetings and inspections, incentive travel of company and unit, wild adventures, and festival events are not obvious. It can be seen that the existing tourist attraction of Kanas is mainly sightseeing, leisure vacation and photography activities based on the superior natural scenery. Other types of activities are not yet abundant and attractive.

Residence time: residence time is short while family hotels are favored. The statistics on the number of days that visitors plan to stay in Kanas have found that the proportion of tourists who plan to stay for 2 or 3 days is the highest, and most of the visitors

stay in Kanas for 3 days and below (76.47%), of which the visitors who chose to stay for 2 days accounted for 35.56%, and visitors staying for 3 days accounted for 27.41%, visitors staying for 4 and 5 days were 6.68% and 4.95% respectively. In addition, tourists choose to stay in family hotels (55.10%) and star hotels (33.88%). Compared with previous years, the overall number of tourists choosing a family hotel has shown an upward trend (as shown in Figure 3-13), and the number of tourists choosing a star-rated hotel has slightly increased this year after a decline.

Travel expenses: tourists have strong purchasing power but spend little money on souvenirs. For tourists' expense, more than 30% (34.75%) of tourists spend less than 1,000 yuan in Kanas; 20% (20.05%) tourists spend 1001-2000 yuan, nearly 20% (18.13%) of tourists in Kanas spend 2001-3000 yuan. Overall speaking, most tourists spend little in Kanas, which is related to the short residence time of tourists in Kanas. In terms of shopping, the proportion of tourists buying souvenirs is not high, 27.17% of tourists choose not to buy souvenirs or choose "other", and those who choose to buy modern crafts and fur products are about 16.04% respectively. And people also choose to buy other ethnic embroidery products (11.25%), Gobi jades (9.18%) and wood products (7.24%).

3.4 Tourists' perception of tourism

Unique natural scenery and strong ethnic customs. 94.44% of tourists think that the attraction for them to visit Kanas is its beautiful natural scenery; 35.32% of tourists are attracted by the national culture of Kanas; they believe that Kanas's unique climatic conditions, unique border atmosphere and hospitality of local people are attractive, which accounted for 12.94%, 11.64%, and 9.57%, respectively. Therefore, we can see that beautiful natural scenery and unique national culture are the two main attraction factors of Kanas, and they are also important carriers for Kanas to have unsurpassed advantages in the same kind of scenic spots.

There is a large demand for tourism information, and accommodation and transportation are the greatest demands of tourists. Visitors have more demand for Kanas tourism information, and the demand for transportation, accommodation, food and beverage, scenic spots, weather and expenses exceeds 30%. The information of accommodation, transportation, scenic spots, food and beverage information, weather, and expenses of Kanas

are the most expected information. The proportions of these demands are 55.50%, 53.82%, 47.99%, 39.72%, 37.39%, and 31.82%, respectively.

3.5 Tourist satisfaction evaluation

The evaluation of resources is high, and it is considered that natural scenery is good. Visitors' satisfaction with the natural and cultural tourism resources in Kanas is relatively high. The average value is above 3.9; satisfaction with tourism activities is the lowest, but the average value is also 3.66, relatively satisfactory.

Social security is good, but the tourism environment is poor. The tourists' evaluation of the public security situation in Kanas was as high as 4.48. The local residents were very friendly and also received higher evaluations from tourists. The average score was 4.17, showing that the atmosphere of the Kanas tourism market's humanistic environment was highly satisfied by tourists, indicating that tourists considered Kanas is a safe and unique tourist destination. However, the scores for catering quality, catering prices and accommodation prices were all lower, which were 2.98, 2.92, and 2.84 respectively.

The evaluation on service is low and the overall satisfaction is low too. Statistics on the overall satisfaction of tourists found that the overall satisfaction of tourists on Kanas tourism averaged 3.8, which was an improvement from the average score of 3.4 in 2016. However, according to the general reflection of tourists, the management of the Kanas scenic spot is disorderly and unreasonable. The problem of accommodation, catering, transportation and other ancillary service facilities that cannot keep up with the demand has greatly reduced the satisfaction of tourists.

3.6 Tourists' intention of revisiting Kanas

Most visitors believe that Kanas's image is more in line with expectations, and over a quarter of tourists' travel experience is worse than expected. Nearly half (50.1%) of tourists said that their travel experience is better or more consistent than expected, which accounts for the largest proportion. However, more than a quarter (28.8%) of the tourists still think that the travel experience is worse than expected. Among them, 22.5% think that it is worse than expected, and 6.3% think that it is much worse than expected. Through interviews with tourists, it was found that similar to last year's survey datas, visitors expressed their

appreciation for Kanas's beauty, but expressed dissatisfaction with the management and service of scenic spots.

Tourists have a strong desire to visit Kanas again, and visitors are more concentrated in summer and autumn. Through statistics on tourists' willingness to revisit Kanas, more than half of the tourists (52.4%) said that they would consider revisiting Kanas in the future; meanwhile, 20.6% of tourists clearly indicated that they would not come back to Kanas. In terms of reasons, travel distance being too long, transportation taking a long time, the management service of the scenic spot being not good enough, the cost-effectiveness of accommodation and catering being not high, are the main reasons why visitors do not want to revisit Kanas. In the revisiting month, tourists mainly choose to revisit Kanas from June to October, among which 44.2% of tourists chose it in September, accounting for the largest proportion; followed by October and June, with 15.6% and 10.7 respectively. This indicates that the seasonal changes in the tourism of the Kanas scenic spot are more obvious. Tourists are more likely to come to Kanas tourism in the summer or autumn, which is consistent with the recommendations on relevant tourism strategies.

Tourists' willingness to recommend Kanas to friends and families is higher than that in previous years. The vast majority of tourists (84.0%) expressed their willingness to recommend Kanas to their friends and relatives, and their willingness to recommend is higher than the 69.5% in 2016. 10.4% of visitors expressed uncertainty about whether they would recommend it. Only 5.6% of visitors said they would not recommend it to friends and relatives.

The overall impression of Kanas is good and the natural humanities are impressive. Tourists who are willing to recommend Kanas often say that the recommendation is due to the beautiful natural scenery. From the feedback of 443 respondents, a large number of words about natural scenery are used to describe their impression of Kanas as "natural scenery". , "beautiful scenery", "landscape", "beautiful", "worldly wonderland", "Kanas lake", etc. Therefore, the most attractive resource of Kanas is still its unique natural landscape. In addition, visitors also paid attention to the humanistic environment of Kanas. The village sites of "Hemu Village" and "White Haba" were mentioned by tourists. In addition to boasting of good scenery, many tourists mentioned "friendly residents" and "favorable folk customs" too.

The infrastructure is to be improved, and the management of scenic spots needs to be strengthened. Judging from the opinions and suggestions of 437 tourists on the scenic spots, there are still areas where improvement is needed. First, the infrastructure needs to be improved, including narrow roads in scenic spots, poor toilet cleanliness, trash cans, street lamps and signage to be repaired and replenished. And tourists have insufficient facilities to rest in scenic spots. Second, accommodation and catering services need to be improved. With particular attention to cost-effectiveness, many tourists think that dining options are limited and accommodation conditions are not good enough, but there are many costs. Third, the management of scenic spots in the tourist season should be strengthened. Many tourists report that there are too many tourists during the same period, resulting in difficulty in riding, queueing and traffic congestion. To solve the problems, scenic spots can be diverted from the aspects of increasing the number of shuttle buses, adjusting the bus stop, adding new tourist routes, and strengthening the order management of the ride area.

4. Travel products and services

Based on the compilation and analysis of tourist questionnaires, interview records, observation records, and materials provided by the Kanas Scenic Area Management Committee, we monitored and analyzed Kanas tourism products and services from four aspects: tourism motivation and purpose, tourism products and routes, tourism service and quality, tourism image and publicity, which included:

The purpose and motives of tourists visiting the Kanas scenic spot are diverse. Sightseeing tourism, leisure tourism and photography are still the main purpose and motivation of tourists visiting Kanas.

The core tourism products and routes of the Kanas scenic spot are similar to those of previous years, mainly including classic tourist routes, outdoor trekking, scientific expeditions, expedition routes, and winter tourism routes. Each route links the core tourist attractions in the scenic area, and the themes are different. They have distinctive characteristics, which can meet the diverse needs of tourists travel experience.

Tourism service facilities in the scenic spot mainly focus on the core tourist attractions (Kanashu, Zhangmutou, Jiadengtang, Baihaba). Compared with last year, the government implemented more stringent supervision on tourism service quality, accommodation and

catering prices. Supervision has led to a certain increase in the standardization of tourism services.

The Kanas scenic spot relies on high-quality natural landscapes and cultural landscapes to shape the overall tourism image of the “Pure Land on Earth”. At the same time, the Kanas scenic spot actively carried out marketing and publicity on the tourism image of scenic spots through festival propaganda, tourism trade fairs, media propaganda and film and television distribution. And those achieved good social response and marketing results.

◦

5. Tourism and Resource Environment Protection

The Kanas tourist area is most attractive to tourists because of its beautiful natural resources and natural landscapes. Therefore, the protection of resources and the environment is particularly important. Under the background of tourism development, the resources and environment of the Kanas scenic spot are easily affected by various aspects, and it is necessary to regularly monitor the scenic spot resources and environmental impact. The protection and management of natural resources in the Kanas scenic area mainly involves two aspects: “forest resources and ecology” and “landscape resources and tourism”. The former is the basis for the latter’s development and development, while the latter is the former’s concretization and representation.

At present, the quality of the resources and environment in the Kanas scenic area is good. The atmosphere, soil, and water quality have not been contaminated by the development of tourism. They are in line with the national first-class standards. Various types of animal and plant resources have also been well protected. Therefore, the ecological environment is good. All types of illegal buildings have been gradually demolished. The landscape of the building was in line with the surrounding environment, and the viewing angle was excellent. At the same time, illegal and improper operations were further controlled and regulated.

According to the questionnaire survey of tourists and community residents, it was found that residents and tourists’ evaluation on the air, noise, water quality, and overall environmental cleanliness (solid waste) of residents and tourists is at the middle and upper

levels. Residents have a higher level of recognition of sanitation improvement and environmental protection.

However, as the status of Kanas as a tourist destination continues to rise, the number of tourists that need to be received is also growing. There is no doubt that tourism development will influence the environment. Residents also have certain perceptions of negative environmental impacts such as resource consumption, air, noise, water bodies, solid waste, etc. Tourists also say that tourism has caused certain negative effects on the natural environment of Kanas. Although the Kanas scenic spot has improved the related sanitation supporting facilities to meet the increasing demand of tourists, it is still necessary to control all kinds of environmental damage behavior to ensure the sustainable development of the ecological environment.

Kanas is still a natural scenic destination. Visitors' perception of Kanas mainly rests in the nature scenery and weather conditions of Kanas Lake, Baihaba Village, Yuki Village, Naren Prairie and Jia Dengyu. According to the tourist survey, the perception and awareness of tourists on Kanas mainly stays on the surface of the natural environment and natural scenery. However, the ethnic culture and lifestyle of the people in Kanas are known by few people. The main tourism product of Kanas is also related to natural scenery. There is insufficient excavation on cultural resources such as architectural landscapes, ethnic cultures, festivals and festivals within the scenic spot, and the corresponding tourism products are also lacking. In the future, Kanas tourism development, in addition to maintaining its natural beauty as a beautiful destination, its unique Tuva culture and other national culture should also be understood by tourists. We must strengthen the Tuwa culture excavation, and further cultural products developing.

6. Summary

From the Kanas tourism monitoring results, the following main conclusions can be obtained:

6.1 Increased participation of community residents and overall satisfaction of tourists

With the development of tourism and the ever-increasing scale at the local level, it has brought many social, economic and cultural influences to the local area. When making decisions, the scenic spot further considered the residents' suggestions. Residents' recognition of scenic spots and tourism is getting higher and higher. Most of the residents are willing to participate in the development of tourism as well as promotion and publicity. Community residents have a higher level of economic impact and environmental impact recognition. Most residents said that tourism had promoted the development of the local economy. Tourism has significantly improved health conditions. In terms of social impact, tourism has improved infrastructure such as roads and hydropower. Although tourism has gradually improved medical conditions and education level, the effect is not obvious. In addition, tourism development plays a positive role in the local community policing. When it comes to the negative influence, most people agree that tourism has led to the demolition of old houses, and the number of new houses has increased significantly. In terms of the cultural influence, most people believed that tourism promotes the exchange of local and foreign.

The structure of the Kanas tourist group is dominated by young and middle-aged people, and the level of culture and income is relatively high. Traveling is still dominated by self-guided tours, supplemented by group tours. And organization travel has improved compared to last year. There are many kinds of Kanas tourism souvenirs, but tourists purchase less, which is related to the homogenization of souvenirs and prices. Although the overall level of satisfaction of tourists is not high enough, it has been improved compared to previous years. And the willingness to revisit and the willingness to recommend are all relatively high. Scenic spots should focus on improving infrastructure, management capabilities and supervision of execution.

6.2 The diverse activities of the scenic spots and the development of natural resources and human resources

In 2016, Kanas Becomes China's First "Hiking Tourist Destination" Certified by International Sports Federation and held the Kanas International Walking Tourism Festival and the inauguration ceremony of the Kanas Walking Association. It is one of the first "National Green Tourism Demonstration Bases" officially approved by the Tourism Bureau.

The same year, the Kanas Branch of the Administrative Bureau of Industry and Commerce of the Altay Region was formally established. In June, the training seminar (a community management seminar) on sustainable development of China's observing sites in the United Nations World Tourism Organization was held in the scenic spot. The management personnel pay more attention to the overall development of the scenic spot, as well as more regular, systematic and scientific management of the scenic spot. In addition, at the opening ceremony of the Kanas Cup, the Fourth Western Literature Awards Ceremony and the opening ceremony of the second Kanas Silk Road Music Festival, the World Adventure Cross-country Championship was opened in Kanas. This series of diversified activities, on the one hand, has improved the awareness and image of the Kanas area and has passed a different business card to the world. On the other hand, it has also left visitors with different experiences and perception.

6.3 The implement of “Internet + Tourism” in Kanas Scenic Area, the Promotion of Optimization and Upgrade of Tourism Products

From the experience of tourists, to the marketing methods of tourism companies, to the management of government departments, the power of the Internet has penetrated into all aspects of tourism. In August 2015, the General Office of the State Council issued the "Several Opinions on Further Promoting Tourism Investment and Consumption" and called for the active development of "Internet + Tourism" and actively promoted the development and expansion of online travel platform enterprises. On September 16, the National Tourism Administration issued the “Circular on Implementing the ‘Tourism + Internet’ Action Plan” and proposed the action requirements for implementing the “Tourism + Internet” action plan. The Kanas scenic spot caught up with the “Internet + Tourism” craze. In 2016, it signed a strategic cooperation ceremony with Ali Travel. The Kanas scenic spot access Ali travel’s full range of products, including “future scenic spot” credit travel, scan code payment, electronic tour by code, and map guide, etc. Scenic spot ticket can be purchased on the Ali Travel Platform. In May, the Kansas WeChat ticketing platform was formally opened for online operation. The implementation of these online platforms, on the one hand, can provide a convenient experience for tourists, data for tourism enterprises. Tourism enterprises can provide a basis for decision-making by tourism managers through data analysis, thus it can be a tool for tourism management. On the other hand, it can enhance the Tourists' control and service capabilities, can effectively relieve the pressure of resource protection and tour

security at scenic spots during the peak period, and achieve a win-win situation for resource protection and public visits.

2017 Monitoring Report on the Sustainable Tourism Development of Luoyang, Henan

Monitoring Centre for UNWTO Sustainable Tourism Observatories

Henan Tourism Administration

Luoyang Tourism Development Commission



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Acknowledgement:

People's Government of Henan Province, Henan Provincial Tourism Bureau, People's Government of Luoyang City, Luoyang Tourism Development Committee, Management Committee of Longmen Grottoes World Heritage Park, Management Committee of White Horse Temple Scenic, Tourism Work Committee of Luanchuan County, Luanchuan Chongdugou Scenic Co., Ltd, Weipo Ancient Village Cultural Tourism Area Management Committee, Luoyang Weizi Tourism Development Co., Ltd

And all those who helped with the monitoring work.

1. Monitoring Profile

This year, Luoyang Tourism Sustainable Development Monitoring conducted a field survey from July 7 to July 13, 2017. With the cooperation of Henan Province People's Government, Henan Tourism Bureau, Luoyang Municipal People's Government, Luoyang Tourism Development Commission, Longmen Grottoes Management Committee and other departments, following the index system and operation methods provided by Sustainable Development Department of World Tourism Organization, the monitoring team fully integrated local tourism development and actual needs, and successfully completed the monitoring work.

The Luoyang sustainable tourism development monitoring program mainly monitored on six scenic areas, namely: Longmen Grottoes, Baima Temple, Chongdugou, Weijiapo, Mingtang and scenic paradise and Longyang Museum, along with Luoyang Old Town areas. The monitoring content mainly consisted of two parts: (1) regular monitoring, including tourist satisfaction, resident perception, environmental impacts, and economic impacts, etc.; (2) special monitoring, mainly including three special topics, specifically: *Heritage Resources Protection and Tourism Development*; *Smart Tourism Construction*; and *Tracking Chongdugou Tourism Development*.

In terms of regular monitoring, a total of 830 valid tourist questionnaires were collected and 119 structured interviews with community residents were completed. In terms of special monitoring, a total of 120 valid tourist questionnaires, 87 and 85 structured interviews with residents were completed respectively in Chongdugou and Weijiapo. In the meantime, with the active organization and coordination of the Luoyang Tourism Development Commission, the monitoring team collected a great many information and mastered new changes of Luoyang tourism development in 2017 from Luoyang Bureau of Statistics, Luoyang Land Resources Bureau, Luoyang Transportation Bureau, Luoyang Environmental Protection Bureau, Luoyang Water Affairs Bureau, Luoyang Press and Publication Bureau of Culture, Luoyang Agriculture Bureau, Luoyang Forest Bureau, Luoyang Bureau of Commerce, Luoyang Gardens Bureau and other government departments.

2. Major Findings in Regular Monitoring

2.1 Residents are generally supportive of tourism development, with positive perception dominant

Similar to last year, most residents believe that tourism development had positive influences on Luoyang. Over 85% of the residents are satisfied with local tourism development. Among which, approximately 11% of them are highly satisfied. Most residents believe that tourism had positive impacts on local development. 93.5% of them believe that “tourism is good for local development”.

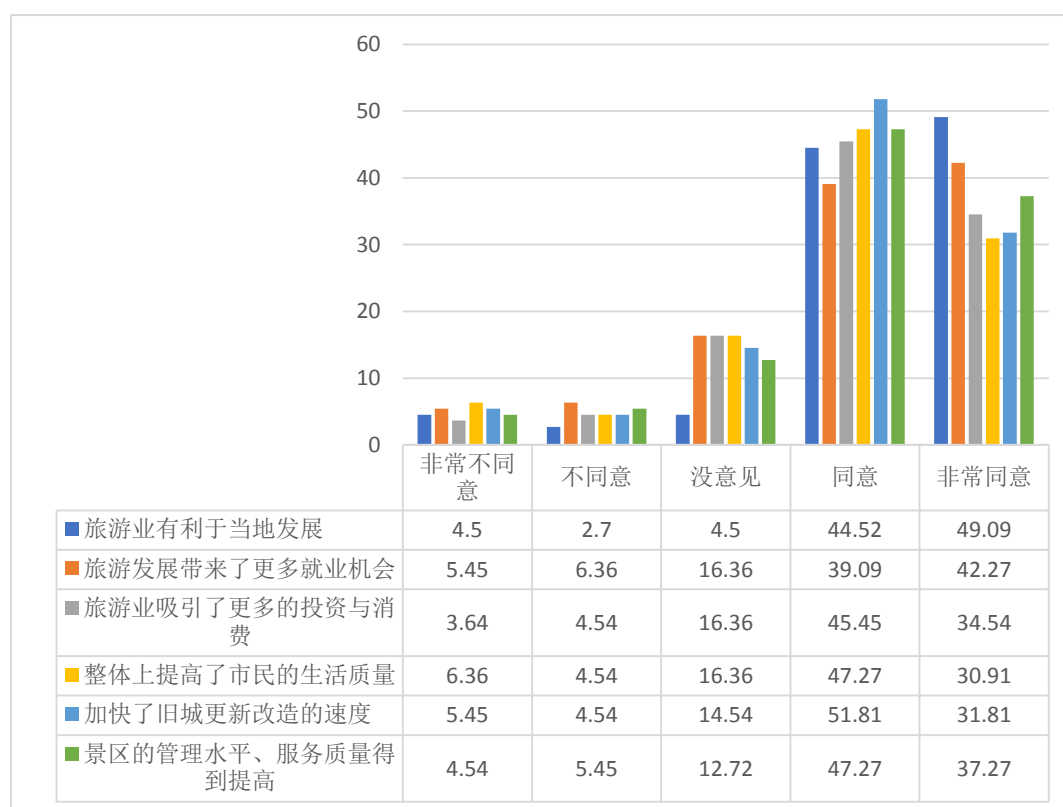


Figure 1. Residents' overall perception of Luoyang's tourism impacts

(tourism is good for local development; tourism development creates more job opportunities; tourism attracts more investment and consumptions; tourism generally improve residents' living quality; tourism accelerates the renovation of old town; tourism improves the administration and service quality of scenic areas; Strongly disagree; disagree; neutral; agree; strongly agree)

In terms of tourism's economic impacts, 88.17% of the residents believe that tourism "promotes the development of local specialty restaurants, souvenir shops and the like". 81.81% believe that tourism "creates more job opportunities for local young people" and 79.08% believe that tourism "promotes the development of local handicrafts". 68.17% of them think that "I can get economic benefits from the tourism industry". In addition, about half of the residents have certain perception of the negative economic impacts of tourism development. 53.63% of the respondents think that "the housing prices of the community is rising at a higher speed" and 47.27% agree that "the price level of the community is rising at a higher speed".

Residents' perception tourism's social impacts can be divided into two aspects: social life and social culture. In terms of social life, most residents believe that tourism development has promoted the development of infrastructure and local medical standards. Among them, 79.99% of the residents reckon that "municipal infrastructure has improved" 69.09% believe that "local medical conditions and services have improved". However, at the same time, 61.81% of the residents think that the development of tourism cause traffic congestion. Nearly 40% of residents think that "the daily life of local people is disturbed". At this stage of development, community residents generally agree that tourism development has improved their living conditions, while negative impacts cannot be ignored. Among these negative impacts, traffic congestion and disturbance to daily life are most prominent issues. In terms of socio-cultural aspects, most of the respondents believe that the development of tourism has brought about positive impacts on community culture. It can be inferred that the development of tourism does not have a significant negative impact on Luoyang's social culture. Residents are more appreciative of the positive socio-cultural impact of tourism development.

In terms of environmental impact, 77.2% of residents believe that "tourism makes landscapes under better protection". At the same time, 79.58% of residents believe that "tourism has decreased the size of farming land". 59.29% of residents think that "tourism increases garbage", and half of the residents believe that tourism has increased various pollutions (water pollution, air pollution, and noise pollution) in the scenic spots. 45.01% of the residents disagree that "tourism facilities (such as houses, roads, and parking lots) has damaged the landscape", which is slighter higher than 36.20% who hope the opposite opinion. From this we can see that in terms of environmental impact, residents' opinions vary. Residents have most strong perception of the decreasing size of farming land, followed by the

increasing waste and various pollutions.

2.2 Tourist's overall satisfaction over Luoyang tourism

Overall, tourists' satisfaction of Luoyang tourism in 2017 remains high. 89% of the tourists were satisfied or very satisfied with Luoyang tourism. Only 1% of the tourists expressed dissatisfaction, and 0% were very dissatisfied. 83% of tourists think Luoyang tourism is in line with expectations or higher than expected. 59.51% of tourists said they would revisit Luoyang, and 79.89% of tourists would recommend friends and family to travel to Luoyang.

Compared with 2016, tourists have greater satisfaction of Luoyang tourism's resource specialty, city image, infrastructure, and scenic spot service. Among which, tourists have the highest satisfaction with Luoyang tourism resource characteristics (4.24). In addition, satisfaction with public toilets (3.8), ticket prices (3.82), and crowding issue (3.74) is slightly lower, indicating that Luoyang's public toilets conditions and traffic conditions need to be further improved, and due consideration must be given to increasing tourist's satisfaction with ticket prices.

In terms of tourism facilities, the satisfaction of six aspects, including: catering services, transportation services, shopping, entertainment projects, consultation and complaints, and safety and health, are all between "general" and "satisfactory" levels. In addition, the survey found that a considerable number of tourists did not make use of the supporting services, such as shopping and entertainment, etc.

2.3 Tourism brings increasing contribution to economic growth

(1) The amount of tourists continues to increase, and tourism revenue continues to increase. According to the "2016 Luoyang Statistic Bulletin on National Economic and Social Development", in 2016, Luoyang received 114.2 million visitors a year, an increase of 9.5% year-on-year. Among them, there were 1.15 million inbound visitors, an increase of 14.5% year-on-year, and 113.1 million were domestic visitors, an increase of 9.49% year-on-year; total tourism revenue continued to grow, reaching 90.5 billion yuan, an increase of 16% year-on-year. The contribution of total tourism revenue to GDP reached 23.92%, a year-on-year increase of 1.69%. The contribution of tourism income to economic growth has

increased, and the status of tourism in economic development has increased.

(2) The output value of the tourism industry continues to grow and promote the upgrading of the industrial structure. In 2016, the ratio of primary industry, secondary industry, and tertiary industry in Luoyang was 6.2:47.7:46.1. This shows that Luoyang is still dominated by industry, followed by service industries. In 2016, the added value of Luoyang's tertiary industry was 174.43 billion Yuan, with a year-on-year increase of 10.4%. This shows that the proportion of the service industry is showing an upward trend. Among them, the proportion of tourism in GDP increased from 22.23% last year to 23.92% this year, and the proportion of tourism in the tertiary industry increased from 50.87% last year to 51.89% this year. It can be seen from this that tourism has a prominent role in adjusting the Luoyang industrial structure.

3) Tourism promotes the employment of residents, and residents' awareness of participating in tourism increases. In 2016, there were 301 companies engaged in the production (sales) of tourist products in the city of Luoyang. There are 100,000 people directly engaged in tourism in the city, and 500,000 people indirectly in the tourism industry. The survey shows that 82.05% of the residents recognize the fact that tourism has brought more employment opportunities to residents. 76.92% of residents believe that “the development of tourism creates more job opportunities for local young people”. In addition, 86.44% of residents support the continued development of tourism, and believe that the development of tourism can bring many benefits to the economy, culture, and the environment. At the same time, the survey also found that residents and shopkeepers still face many difficulties in participating in tourism development, mainly due to difficulties such as “lack of funds” and “poor operation”, and fierce competition and insufficient tourists are also the two key obstacles to the residents' management of tourism.

2.4 Tourism has not destroyed resources and the environment

Luoyang City is rich in biological resources, and some forests and vegetation have been developed into national forest parks or recreational tourist areas, which not only provide funds for the protection of biological resources, but also enable tourists to obtain the original ecological tourism experience. According to current monitoring data, although air quality has been declining, tourism has not generally caused damage to biological resources and their ecological environment.

In terms of water quality, the overall quality of surface water monitoring of state and provincial controlled section in 2016 was good. The annual average water quality of seven surface water monitoring of state and provincial controlled sections reached the planning target, and the total compliance rate was 100%.

In terms of air quality, the overall air quality in Luoyang has gradually declined from 2012 to 2016. There was 88.77% compliance rate in the whole year of 2012. In 2016, there was only 45.48% compliance rate. The increase in air pollution will reduce the satisfaction and experience of tourists and may have an impact on the development of tourism.

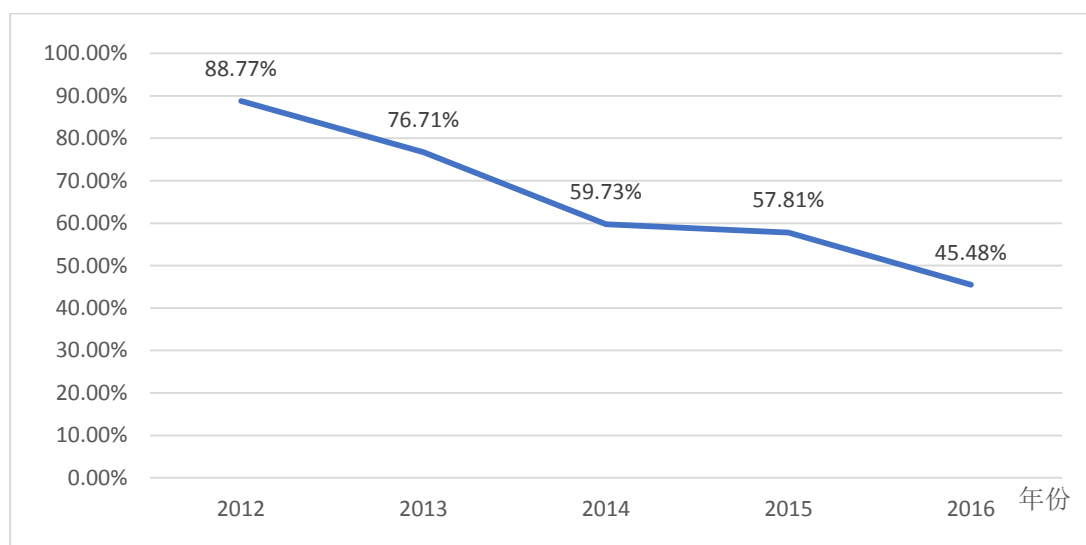


Figure 2. Proportion of Good Air from 2012 to 2016

In terms of cultural heritage, cultural heritage can be effectively protected or inherited. Luoyang has 3 World Cultural Heritage sites, 6 key cultural relics protection units, 122 provincial cultural relics protection units, nearly 500 municipal and county-level cultural relic protection units, more than 9000 removable cultural relics, more than 40 collections of cultural relics, and 8 national intangible cultural heritage. In Luoyang, there are many folk characteristics, such as Henan opera, Quju opera, lion dance and stilt, and traditional folk festivals, which make the traditional culture continue for a long time. In 2016, Luoyang has made great progress in the construction of the exhibition project, the construction of museums, the protection of cultural relics and the security of cultural relics and so on. It has effectively protected and inherited the rich cultural heritage of Luoyang.

3. Core Content of Thematic Monitoring

3.1 Cultural Resources Protection and Tourism Development

3.1.1 Annual progress

(1) **The protection works of the great sites are steadily advancing.** In 2016, Luoyang adopted the concept of organic combination of cultural relics protection, display and use to continue to promote the protection of cultural relics, and achieved fruitful results: the protection and display project of Jiuzhouchi and Yingtianmen in Sui and Tang dynasty smoothly progressed; the overall plan of the Ding Dingmen Area (Mingjiafang, Ningrenfang and the southern section of Tianjie) was officially approved by the State Administration of Cultural Heritage; the planning and preparation work of the South Wall Relics Park of Luoyang in the Sui and Tang dynasties progressed smoothly; the protection and display project of the West City Wall Relics (South Section) in the Hanwei dynasty progressed smoothly; new progress was made in archaeological surveys and protection planning for the Dongzhou King City, Yiyang Han City, and Mangshan mausoleums; the Protection Exhibition Phase III of Yanshi Mall was successfully implemented, and the construction of the ruins park progressed steadily. Among them, the Ding Dingmen Site Project won the title of “National Outstanding Cultural Relics Protection Display and Utilization Project in 2016”.

(2) **The construction of museums (Memorial) continues.** The preliminary work of the Erlitou Site Museum has been smoothly advanced; the construction of the main body of the contract Museum has been completed, and it is planned to be completed and opened in 2017; the outline of the Silk Road Museum has been preliminarily drawn up, and the cultural museum building has been actively followed up; the Ancient Mural Protection Research Center project of the ancient art museum of Luoyang push forwards steadily. In terms of the construction of non-state-owned museums, at the beginning of 2016, seven private museums such as the Museum of Luoyang Stone Character of Nine Dynasties and the Luoyang Shovel Museum were approved by the Henan Provincial Cultural Heritage Bureau and opened to the public one after another. Museums and memorial halls use the advantages of cultural relic resources to carry out various forms of cultural activities to meet the cultural needs of tourists and local residents. In 2016, a total of more than 20 temporary exhibitions were introduced and held in various museums (memorial halls) of the city and a total of more than 5 million visitors were received, which promoted the development of cultural tourism in Luoyang.

(3) Actively promote the protection of ancient buildings and traditional villages. In 2016, Luoyang completed the declaration of the central subsidy funds for the protection of five traditional villages such as Shibe Wu, and completed the declaration work of the historical and cultural village of 5 villages like Ganquan village, Hedizhen Village and other villages in Henan Province. At the same time, in conjunction with the Luoyang Municipal Government to complete the protection and rectification of the related work of the old city historical and cultural street and improvement of the maintenance and protection plan of Jianxi style building group.

(4) Development of tourism projects and tourism products. With the promotion of the "World Heritage" city being the breakthrough, Luoyang has formed a comprehensive tourism product system of "taking historical and cultural tourism products as the guide, focusing on landscape holiday and tourism products, taking rural leisure tourism products as the support and other special tourism products as supplement". It has established 10 key tourism projects such as Longmen Grottoes World Heritage Cultural Park, Baima Temple Buddhist Culture Park, Guan Sheng Cultural Park, and Old City Historical and Cultural Street. At the same time, the four ace cultural tourism products "The Source of China", "Romantic City of Luoyang", "Peony Flower City" and "Chinese Buddha Capital" as well as special cultural leisure products of "Silk Road Shuicheng" are planned, mainly focusing on fine cultural tourism routes like the Silk-Road Tour, Peony Flower Trip, Sinology Experience Trip, Heluo Source-tracing Trip and Yellow River Culture Trip.

(5) Hold cultural performances. Luoyang organizes film and television shows and scene performances to stimulate cultural tourism consumption and night-time tourism economy based on existing "Mudan Theater", "Sui Tang Performing City", "Kung Fu&Poem•Nine Volumes" and etc.. At the same time, guide local old artists to plan and organize performing activities, make full use of traditional Luoyang cultural performing such as Luoyang Ling, Dong Gong Poetry, puppets, etc., encourage the creation of realistic dramas and tour performances that are suitable for scenic spots, and encourage the guidance of social groups and folk artists. Encourage and guide social groups and folk artists to organize literary sketches and organize square dance competitions to attract tourists and enrich visitors' experiences.

(6) Promote the development of cultural tourism crafts. Luoyang has increased its efforts in the development of cultural tourism products such as atri-coloured glazed pottery of the Tang Dynasty, series products of Peony and antique bronze ware. At the same time, in conjunction with the “Peony Flower City” city card, Luoyang vigorously developed the peony industry and has now formed a complete industrial chain. It has also launched more than 400 kinds of deep-processed products such as peony porcelain, peony painting, peony embroidery, peony cake, peony stone artwork, peony stamp, peony flower tea, peony cosmetics, peony essential oil, peony eternal flower, peony massage pillow, peony edible oil, peony food, etc., which allow visitors to experience Luoyang peony culture from the commemorative commodities of Peony series.

(7) Actively organize festivals. Luoyang has now formed a four-season pattern of “Peony Cultural Festival in Spring, Waterfall Festival in Xiaolangdi of Yellow River in Summer, Heluo Culture and Tourism Festival in Autumn, and Funiushan Ski and Tourism Festival in Winter”. Since 2016, the 35th China Luoyang Peony Culture Festival, the 11th and the 12th Xiaolangdi Waterfall Festival, the Heluo Culture and Tourism Festival, and the China Luoyang (International) Cultural and Technological Creative Exhibition, China (Luoyang) cultural arts and trade fairs of appreciating stones, cultural festival of Chengni inkstone, China Zhougong cultural festival, New Year temple fairs of Heluo culture and other festival activities have been successfully held, and these activities pay attention to the combination of culture and tourism, which further attracts a large number of tourists.

3.1.2 Main experience

(1) Pay attention to promoting the cultural image of the city and drive the development of urban cultural tourism.

Luoyang actively expands its marketing methods and marketing platforms, and takes various measures to promote Luoyang's cultural tourism image, routes, and products to increase the popularity and competitiveness of Luoyang cultural tourism. It has long-term cooperation with traditional mainstream media such as CCTV and China Travel News. It has put on tourism images and product promotion videos, vigorously promoted festival events such as the Peony Cultural Festival, and continuously enhanced the influence of cultural tourism in Luoyang. Luoyang also uses new media such as Weibo, WeChat, animation, and micro-films to promote marketing, cooperates with online travel platforms such as Ctrip and

Tuniu, Tiancat, and Microtravel to timely publish Luoyang cultural tourism information and comprehensively promote the image of Luoyang and its cultural tourism. At the same time, it has organically integrated publicity and promotion with economic and trade exhibitions, cultural exchanges, investment promotion and other forms to form a three-dimensional propaganda network, which has enhanced the appeal of Luoyang cultural tourism.

In addition, Luoyang has been actively promoting international cultural tourism with the goal of building an "international cultural city." In 2016, Luoyang took Peony Cultural Festival as the core content and went to Thailand to carry out the special promotion of 34th Peony Cultural Festival. In early March, Luoyang Tourism Bureau went to Sweden, Finland, Germany and other European countries to actively promote and preheat the Peony Culture Festival. During this period, Luoyang also used the TNN24 channel of Thai News Network, the largest media group in Thailand, and China International Radio International Online and other media to continuously promote Luoyang tourism both at home and abroad, attracting many overseas tourists to visit peony flowers in Luoyang. In addition, Luoyang has also been promoted by having accounts on overseas social media such as FACEBOOK and Youtube to create a "city of international cultural tourism".

(2) Rational use of cultural relics on the basis of protection

As an ancient capital of 1000 years, Luoyang has rich historical and cultural sites. Over the years, Luoyang has made reasonable use of historic cultural relics based on effective protection, vigorously promoted the protection and display of large relics sites, strengthened the construction and display of museums, protected traditional villages and ancient buildings, and played a very important role in supporting the sustainable development of cultural tourism in Luoyang. At the same time, new technologies such as 3D printing and holographic projection have been introduced to combine the latest achievements in archaeological heritage such as modern theme park technologies to develop high-grade, deep-experienced tourism products.

(3) Creating a distinct cultural tourism image

Luoyang pays attention to the shaping of the city's cultural tourism image. With the goal of being "a famous city of international cultural tourism", it combines the local culture of Silk Road Culture, Heluo Culture, Root Culture, Ancient Capital Culture and Peony Culture

to successfully create four major urban cultural city cards, namely, “The Holy City of the World,” “Silk Road's Origin”, “the Millennium Royal Park”, “Peony Flower City” . Luoyang has created five cultural brands, including Silk Road Culture, Royal Park Culture, Peony Culture, Landscape Culture, and Industrial Culture, which fully demonstrate Luoyang's city characteristic and city image, and increase the popularity of cultural tourism and the sense of identity of tourists. At the same time, Luoyang actively explores new ideas for city cultural image, through the project of “Introducing Yellow River to Luoyang”, “Longmen National Wetland Park”, “East Lake of Luo River”, “East Lake of Yi River” and other projects, Luoyang enhances the city's image, and builds a “Northern Water City”, which helps create a new city card of “Water charm in Luoyang”.

(4) Paying attention to the protection and development of intangible cultural heritage

Luoyang paid attention to the protection and development of intangible cultural heritage, and carried out a series of related work, including: the editing of the “Regulations on the Protection of Intangible Cultural Heritage of Luoyang” and the completion of the legislation on intangible cultural heritage protection; and also, actively built non-material cultural heritage protection bases like a discourse hall and exhibition hall, social heritage bases, production protection demonstration bases and etc., actively carried out research work on intangible cultural heritage and compiled and published the results as “Memory of Luoyang - Luoyang's Intangible Cultural Heritage Resources Compilation (2005-2012)”. What is more, Luoyang also actively organized various non-heritage projects to participate in intangible exhibitions at all levels, popularized the Luoyang intangible cultural heritage to local residents and tourists, expanded the popularity, and helped promote the development of Luoyang cultural tourism.

(5) Actively promote smart tourism

Since 2012 was listed as the first batch of 18 smart tourism pilot cities in the China, Luoyang has compiled a “Construction Plan of Luoyang being Constructed as a Smart Travel City ” with high standards, and actively guided scenic spots, hotels, travel agencies to build smart tourism. Taking the Longmen Grottoes as an example, in 2016, Longmen Grottoes smart scenic spot was formally launched with the form of “Internet + Longmen” . The WeChat ticketing system and the intelligent Audio Guide System were introduced into

the scenic spot, and the nation's first experience of "offerring incense to Buddha online" was launched on Wechat. The project protected cultural relics while satisfying tourists' needs. Longmen Grottoes has used form of "Internet+" to open up new avenues in the propagation of history and culture. It is a model as the successful combination of "smart tourism" and "cultural tourism".

3.2 Smart Tourism Construction

3.2.1 Annual progress

The main event of the development of Luoyang Smart Tourism this year was the launch of the Longmen Grottoes Smart Cloud Platform on July 15th, 2017. The start of the platform marks the Longmen Grottoes as the nation's first "Internet+" smart resort, entering the era of intelligent cloud and opening a new chapter in the development of smart tourism. Previously, the smart parking lot in Longmen Grottoes and the Longmen Grottoes online channel have also been officially launched. At this point, Longmen Grottoes have fully opened up and integrated the resources of the industry chain online and offline, and realized the integration of the entire ecosystem. The "Longmen Grottoes" intelligent cloud platform with "three features, four characteristics, and five highlights" presents a new era of characteristics.

The "three major characteristics" of smart tourism in Luoyang is, namely, "the national leader", "Longmen characteristics", and "serve tourists well". The first is the national leader. The Longmen intelligent cloud platform is the first online travel industry in China that was jointly built by the Longmen Grottoes and Tencent and put into practical application. The technology brings together Tencent's multiple ecological open systems and advanced scientific and technological achievements. The second is Longmen characteristics. The Longmen intelligent cloud platform integrates all the elements of Longmen tourism, from the icon design, the setting up of sections, the display of drawings to the application of functions, etc., all of which form a distinctive style with distinct Longmen characteristics and rich gantry elements. The third is to serve tourists. The powerful integrated functions of the intelligent cloud platform can understand the needs of tourists, perceive the emotions of tourists, and provide better services for tourists. A series of functions and projects such as "WeChat pays scenic spot", "free mobile phone voice explanation in Chinese and English", "Lucky Bottle", "Match Buddhism", "Longmen Album", "Pray to Buddhism", "Longmen Grottoes Encyclopedia Knowledge Contest", "Song Lin Puzzles", "360° Panoramic View of

Wanfodong", and "Make Wishes" will allow the cultural heritage to enter the lives of the people and incorporate the elements of the times. In addition, the Longmen WeChat public account will also periodically push information on the historical knowledge, developments, and tourism activities of the Longmen Grottoes on a daily basis, so that tourists can also learn about information and spread culture after they leave the Longmen.

"Four characteristics" of smart tourism in Longmen is, data fusion, scientific cognition, smart application, and growth. The first one is data integration. Through the data interface of intelligent devices on and off the area, online data access and connection are realized, and massive data access is realized to form a more intuitive, visualized, and three-dimensional global data platform. The second is scientific cognition. By linking all the smart functions and smart travel experience items of Longmen Tourism, we can understand the tourist's knowledge of the scenic spots, enhance the experience of tourists, and form a psychological and emotional interaction between the scenic spots and tourists. The third is smart applications. The Longmen intelligent cloud platform can not only understand the origin of tourists, portraits of tourists, peaks and valleys of passengers in scenic spots, real-time passenger flow density in scenic spots, tourist trends in scenic spots, etc., but also the number of real-time visitors in the park and tourist routes. The fourth is to open up and grow. Longmen intelligent cloud platform can continuously extend and upgrade various follow-up functions according to the development needs of Longmen. According to demand, it can continuously enrich its functions, optimize its structure, increase its efficiency, enhance its energy efficiency.

"The five highlights" are visualization, precision, freshness, diversification, and intelligence, respectively. The first is visualization. The original data platform only stored data in the backstage. The current Longmen intelligent cloud platform displays the backstage figures in the form of images through the process of intelligent "data collection" → "data cleansing" → "data analysis" → "data calculation" → "data visualization", which is concise and clear. The second is precision. Through the precise positioning of the Longmen intelligent cloud platform, you can understand where visitors have performed that interactive experience in the scenic spot, where they stay longer in those areas, which attractions are the most attractive, and which products are more loved by tourists. The third is fresh activation. Each interaction between the tourists and the Longmen will leave valuable trace data on the Longmen intelligent cloud platform, which truly realize that big data comes from tourists and

serves tourists. The fourth is diversity. The Longmen intelligent cloud platform not only integrated the Longmen tourism ecosystem, but also has access to Tencent's multiple application technologies under Tencent's strong technical support. It has connected Tencent's multiple public applications and integrated the Longmen Grottoes intelligence management platform. The fifth is intelligence. The Longmen intelligent cloud platform uses Tencent's most advanced artificial intelligence (AI) technology. Tencent Wenzhi system extracts a large amount of text data sources from the Internet through a series of intelligent processes such as natural semantic processing, keyword analysis, and emotional judgment. The keywords that visitors are interested in gentry are truly perceivable and recognizable.

3.2.2 Suggestions for Development

(1) Further enrich marketing channels, content and means

At present, Longmen scenic spot has basically achieved accurate tourism marketing, but marketing channels and marketing methods are still too single. Moreover, compared with previous consumers, tourists in the new era will deal with information overload problems in a fast-viewing manner based on the degree of relevance of information to individuals, and can ignore those advertisements that are irrelevant or uninteresting to them. Therefore, Longmen scenic spot should first focus on understanding tourists, especially tourists between the ages of 18 and 25 (this year's monitoring results show that the number of tourists in this group accounts for 40.56% of the total number of tourists in Luoyang), how to determine the information space and channels , and then purposefully innovate marketing content (for example, invite celebrities to livestream, shoot new promotional videos), upgrade marketing methods, effectively transfer scenic spot information, quickly capture the attention of tourists, and make them participate in future travel plans and travel experiences. In addition, the current research and development of "virtual reality" (VR) technology has entered a mature stage, and it can be considered to be applied to generate a 3D virtual world through computer simulations, providing tourists with sensations of sight, hearing, touch and other senses. Tourists can experience the scenes of local festivals (such as the Peony Cultural Festival) immersively in front of the excursion, the scenes of the filming scenes and the beautiful scenery of the scenic spots throughout the year. In addition, the VR experience area can be added inside Longmen scenic area to allow visitors to experience the scenic area through the VR eye/helmet to enhance the tour experience.

(2) Implementing the collaborative construction of tourist participation and tourism experience

In general, the collaborative construction of the value of tourism products includes four levels, namely, "between tourists and management (services)" (C2B), "between tourists and relatives and friends" (C2F), and "between tourists and tourists (C2C)" and "between tourists and local residents" (C2L), in which the cooperation on the first two levels (i.e, C2B and C2F) is usually the highest in the occurrence of travel activities.

Through analysis of the types and functions of all the products/services provided by Longmen Scenic Area, you can discover the "Longmen Grottoes Smart Cloud Platform" and relevant smart services (mainly including the aforementioned WeChat ticketing, Wechat paying parking fees, voice explanations and all kinds of small games on Wechat) have indeed greatly promoted the cooperation between tourists and scenic spot's managers (server) (C2B) and improved the satisfaction of tourists. However, the possibility of cooperation on the other three levels is relatively low, and there is still room for improvement.

In addition, recent studies have found that the use of smart phones may change the travel experience by solving the problems in the three stages of before travel, during travel, and after travel. In other words, the tasks previously completed by tourists before and after the trip are now being tackled in the journey due to the widespread use of network in smart phone. Therefore, it is also necessary to increase the participation and interaction of tourists during the journey, which is particularly important. In addition, since family travel is still one of the most important travel methods for tourists from other provinces in China to Luoyang (according to the monitoring findings, tourists visiting Luoyang mainly travel by themselves with friends or family members, which account for 47.30% of the total.) Longmen scenic spots should actively use more information technology and equipment to develop more tourism projects with "parent-child travel" as the theme and promote interaction among family members.

(3) Dealing with the "ubiquitous" phenomenon of "smart cloud platform" for tourism in China

As smart tourism and "Internet + tourism" have become popular in China in recent years, many tourism cities centered on the Bohai Gulf, the Yangtze River Delta, and the Pearl River

Delta have now built a smart platform similar to Luoyang's "Smart Cloud Platform" to promote the management and service level of scenic spots, travel agencies, hotels and other entertainment venues. In the next ten years, more tourism cities will join this trend. The "ubiquitization" of tourism "smart cloud platform" will inevitably increase the competition among domestic tourism cities in the field of smart tourism, which means that Luoyang should vigorously develop high-tech projects, cultivate the technical backbone, and dig deep into tourism resources. Luoyang should also encourage small and medium micro-tourism companies to use high technology to improve services, to achieve the diversification of tourism products and the sustainable development of smart tourism.

3.3 Investigation on the development of tourism in Chongdugou

The investigation of this year into the development of tourism in Chongdugou mainly focuses on surveys of small tourism enterprises (mainly about family hotels). The survey mainly used the interview method and conducted in-depth interviews with 70 local family hotel operators and 17 foreign family hotel operators.

According to the survey, Chongdugou has the following advantages in family hotel operations:

(1) Place the farmers in the scenic spot and guide them correctly.

In Chongdugou scenic area, the companies operate scenic tourist enterprises, farmer households manage accommodation and catering, and other service enterprises and they own property rights. These two constitute complementary products and form a corporate community of the scenic spot. The interests of various stakeholders are distributed rationally. Most rural households are deeply involved in tourism development. Farmers become business households, which maximizes their income. Business operators such as family hotels are deeply involved in local economic and social economic relations and have enhanced the sustainable development capability of Chongdugou scenic area. In addition to measure that the local farmers are placed on the scenic spots, the correct guidance to the farmers is the basis for the development of the scenic spots. The development of Chongdugou scenic spot can be said to be shaping a peasant team to a certain extent. Before the development, the scenic spot and the government carried out the concept guidance and technical training for the farmers, through the Sunshine Training Project and other projects,

aiming at different groups, manager has repeatedly carried out training in different forms, different contents, and different levels, and has repeatedly invited experts and scholars from the tourism industry to Chongdugou scenic spot to educate the villagers on the concept of education so the farmers all have undergone fundamental changes. At the same time, they also organized village representatives to go out and visit other places and learn to change the concept of the villagers. These training and concept change projects laid the foundation for the development of the family hotel in Chongdugou. One business operator even said: "After operating a family hotel, people's quality has improved, because people learn about more things after meeting more people. In a word, it is also possible to improve people's quality by travelling."

(2) The relationship between operating organizations and management structures among various stakeholders guarantees the maximization of the overall interests of scenic area enterprises.

The organization and management structure of Chongdugou scenic spot conforms to the general laws of the organization of economics, which ensures the maximization of the overall interests of the scenic spot enterprise. It is understood that the choice of this mode was not planned beforehand, but was formed after constant exploration and change in the development and practice procedures. Among them, the government has played a very important role in the early stage of development in establishing a family hotel as an independent property company that participates in the management of the scenic area. The government also stipulated that the operating right must be maintained after the transfer to a holding tourism company. In the general market economy, investment holding companies usually aim at pursuing the maximization of interests. If there is no effective restriction like the government, the investment company can easily adopt the organization to manage the scenic area to maximize its own benefits after obtaining the operating right. For example, if the community residents only participate in the tourism development and management of the scenic spot with labor force, the participation of the community residents is low, and they cannot participate in the tourism industry system in depth, for example, residents can only become hotel attendants and cleaners in a scenic spot. This form of organization will result in a limited income for the residents. The community has developed tourism resources, but it is investors and middle and senior management personnel that become rich at last. What can be learned from Chongdugou is: at the beginning of the enterprise's entry, an agreement should

be reached on the organizational mode of community participation, relevant incentive policies, and institutional constraints on the scenic spot development company. So in this plan, the local government actually played an important role.

(3) The complementary-community mode of "companies + farmers" enables all stakeholders to promote mutually and be interdependent

The mode of "companies + farmers" in Chongdugou scenic spot means that the property rights of family hotels belong to the farmers themselves, and the scenic area does not enjoy property rights to family hotels. However, in order to achieve sustainable development of scenic spots, and for the long-term interests of tourism operators in scenic areas, the management of the accommodation and catering businesses will be managed by these enterprises. Without the development and management of the scenic area, there would be no tourists, and family hotels would not have any business. Without a family hotel in the scenic area, it would be difficult to solve the problem of food, accommodation and purchase for tourists, and there would be no rural culture atmosphere formed by family hotels. Because the family hotel itself is also a kind of landscape, it also constitutes the tourist attractions of the Chongdugou. The mode of combining the development of Chongdugou scenic spot with family hotels has realized functional complementarities. The development mode of "companies+farmers" is facilitated by common economic interest. It achieves integration in management without involving property rights.

(4) The key role that the pioneers play in the development of small tourism businesses.

In rural areas such as Chongdugou, village cadres and village management systems play important roles in the development of the village. Many villages are embarking on the way to becoming rich under the leadership of elite pioneers. The cultural level of the farmers is relatively low, and the awareness of development and collaboration is indifferent. A forward-looking village cadre is needed to lead the villagers in the development of the village's economy, society and culture. Ma Haiming, the Deputy Mayor of Tantou Town, Luanchuan County, was a pioneer in the development of the Chongdugou scenic area. At the beginning of the development of Chongdugou scenic area, Ma Haiming played a key role in

the development of the scenic spot. When he served as deputy mayor in 1996, Ma Haiming volunteered to take the lead in the development of Chongdugou. At the beginning of development, Tantou Town faced three major problems: lack of funds, lack of understanding by the masses, and lack of marketing. He took great pains and difficulties and encouraged the villagers to be active. He began to develop small tourism enterprises and take the lead in the village to personally go for road repairs, bridges, and routes design. As a result, the development of the scenic spot has been improved and the income of the farmers have also increased, making Chongdugou become a national 4A-level scenic spot from a poor village and it become a well-known fairly well-off Village.

Of course, there are still many other advantages and reasons for the current success of Chongdugou scenic area, such as its own advantages in tourism resources, the development period conforming to the new trend of ecological farm tourism, and the reputation of integrity-building brand management being well established and so on. And all these are the reasons for the good development of Chongdugou.

2017 Monitoring Report on the Sustainable Tourism Development of Jiaozuo, Henan

Monitoring Centre for UNWTO Sustainable Tourism Observatories

Henan Tourism Administration

Jiaozuo Municipal Tourism Bureau



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Acknowledgement:

People's Government of Henan Province, Henan Provincial Tourism Bureau, People's Government of Jiaozuo City, Jiaozuo Municipal Tourism Bureau, People's Government of Xiuwu County, People's Government of Boai County, Yuntai Mountain Scenic Spot Administration, Qingtian River Scenic Area Administration, Jiaozuo Municipal Development and Revolution Commission, Jiaozuo Municipal Culture and News Publication Bureau, Jiaozuo Municipal Landscaping Bureau, Jiaozuo Municipal Water Conservancy Bureau, Jiaozuo Municipal Environmental Protection Agency, Jiaozuo Municipal Public Security Bureau, Jiaozuo Municipal Statistical Bureau, Jiaozuo Municipal Administrative Bureau for Industry and Commerce.

And all those who helped with the monitoring work.

1. Monitoring Profile

2017 is the first year of Jiaozuo City to carry out program of "the global tourism model city". The counties and districts, in accordance with the arrangements of the municipal government, give the city and Jiaozuo tourism to achieve the second venture. The creation of the "Global Tourism Demonstration City" has brought about gratifying changes to the development of Jiaozuo. Jiaozuo has focused on improving the development of tourism products, project construction, improvement of tourism elements, tourism development in the central city, integration of tourism development, tourism marketing, tourism Industry supervision and civilization education and cultivation. These eight projects brought a new look to the city. Under the global tourism development model, Jiaozuo develops a multi-industry integration around tourism, focusing on the "tourism+" thinking, allowing a number of highlights of the tourism industry, such as tourism commodities, folk culture, and leisure shopping, to catch up with the global tourism development express train. At the same time, the government has given policy and financial guidance, to support the integration of multi-industry and tourism development. It can be seen that tourism has played an increasingly important role in the overall development of Jiaozuo.

At the same time, tourism development has greatly promoted the economic development of villages in Jiaozuo and improved its internal economic structure. Before the development of tourism, the villagers in the surveyed villages mainly depended on farming, stone mining, handicraft weaving, etc. to earn a living, and their income was low. After the development of tourism, the construction and improvement of scenic spots has attracted a large number of tourists and led to the economic development of the surrounding villages. Relying on the development of the scenic spot, the villagers have larger employment possibilities and can participate in tourism management in person. In terms of operating business, family hotel is the most important business type, followed by sales of local products and catering services.

In 2017, while carrying out routine monitoring projects, two research projects have also been carried out on the development of tourism SMEs and tourism poverty alleviation effect evaluation and policy recommendations, focusing on monitoring the sustainable development of tourism in scenic spots, understanding the status of enterprise development, and paying attention to the transformation and upgrading of community participation, carrying out in-depth tourism special investigations in key villages for poverty alleviation.

This monitoring work was at the third year of monitoring, and a nine-day field survey was conducted in Jiaozuo from June 27th to July 5th, 2016. The research sites included Shennong Mountain, Chenjiagou, Qingtian River, Yuntai Mountain and other tourism spots, districts and surrounding communities. The surveyed objects involved government department heads, tourists, community residents, tourism company employees. This year's monitoring team consisted of Associate Professor Liang Zengxian, Research Associate of Cui Qingming, Dr. Meng Kai, 1 master graduate student and 10 undergraduate students at the Tourism Development and Planning Research Center of Sun Yat-sen University. Under the guidance of the

index system and operating methods designated by the Sustainable Development Department of the World Tourism Organization, the monitoring team fully integrated local tourism development conditions and actual needs. In October 2016, the team completed the monitoring, analysis and report writing of 2015 Jiaozuo project.

In this survey, a total of 1,000 tourist questionnaires were distributed and 934 questionnaires were collected. After omitting invalid questionnaires, 894 valid questionnaires remained and the effective rate was 95.7%. 600 community questionnaires were distributed to community residents and employees of the tourism industry, and 584 questionnaires were returned. Excluding the invalid questionnaires, 482 valid questionnaires remained and the effective rate was 82.5%.

The evaluation index system and analysis framework for this period of monitoring are mainly based on the results of the World Tourism Organization *Indicators of Sustainable Development for Tourism Destinations: A Guidebook* and related academic research. The report is divided into two parts: the general report and the specialized reports. The specialized report is divided into Tourism Small and Medium Business Development and Tourism Poverty Alleviation Effect Evaluation and Policy Suggestion.

2. Main findings

2.1 Stable visitor behavior, and tourism attractions need to be diversified

Respondents to the survey were mainly in young and middle-aged groups. The surveyed people's income level was not high, but their educational level was relatively high. The respondents were mainly from three provinces: Henan, Hebei and Shandong. Compared with the past three years, the proportion of tourists in Hebei Province dropped significantly in 2017, and the proportion of tourists from Jiangsu increased slightly. At the same time, the number of provinces of tourists increased significantly, and Jiaozuo's attraction radius gradually expanded.

In the way of accessing to information, tourists obtain information mainly by word-of-mouth publicity. Therefore, improving the tourist experience of tourists is important to attract more tourists. The influence of online promotion began to exceed the travel agency brochures, but the advantages were not obvious. Compared with the current trend of large-scale scenic spots adopting various new media for promotion, Jiaozuo's tourism promotion should increase investment in new media.

Compared with the past three years, tourist spending on tourists has begun to be concentrated in the range of 500-1,000 yuan, which is still at a relatively low level. This is closely related to the low level of income and short stay of tourists who come to Jiaozuo. In the future, Jiaozuo's tourism market should focus on high-end holiday groups, enriching tourism and leisure services and experiences, and thereby attract more high-end holiday groups.

In the way of participating in tourism, self-guided travel and family and friends group tours are the main tourism methods for Jiaozuo tourists, and the ratio is basically the same. Self-guided tours and conference visitors have a high percentage of mid-to-high consumption, but in fact, family and friend groups also have great potential for consumption. In the future, Jiaozuo should provide more family and friend groups with tour services and facilities, and strive to increase the consumption of this group under the advantage of its large number of tourists.

For tourist purposes, it is relatively single, and most tourists regard relaxation as the main purpose of Jiaozuo tourism. This is inseparable from the outstanding mountain resources in Jiaozuo. In the future, Jiaozuo can try to increase tourism attractions, such as culture and business, to make tourism attractive in more ways.

During the stay and accommodation of tourists, most of the tourists are stay shortly, preferring to choose low-end accommodation facilities. Compared with previous years, the proportion of tourists staying in star hotels has increased. The short stay of tourists, and the current low-level family hotels in Jiaozuo make the tourist's tourism consumption lower. In the future, Jiaozuo can learn from the mature tourism places where family hotel is prosperous, build high-end family hotels, provide a variety of tourism and leisure experiences, and extend visitors' stay.

In the difference between the behavior of first-timers and revisits, the rate of return visits has decreased compared with that of previous years. Revisits are mainly from within the province; there is no significant difference in stay between first-timers and re-visits in Jiaozuo, but the cost of revisiting tourists was slightly more than beginners.

As for the assessment of tourist satisfaction on tourism development, there is little difference between different evaluation indicators, but the satisfaction rate of each indicator has increased significantly compared with the past three years. In the future, Jiaozuo needs to pay more attention to scenic spots services, catering services, accommodation services, shopping and entertainment projects, tourism consulting and complaints, etc., in order to reduce the negative impact of the drawbacks.

In terms of the follow-up impact of tourists' satisfaction, most tourists have an attitude of being recognized as the focus of tourism, and both their revisit intention and their willingness to recommend have increased. However, from the previous analysis, it can be known that the actual revisit rate in Jiaozuo in 2017 has decreased. In the future, Jiaozuo should strive to convert the revisit intention into a real revisit, for example, using new media to publish relevant propaganda information to past tourists.

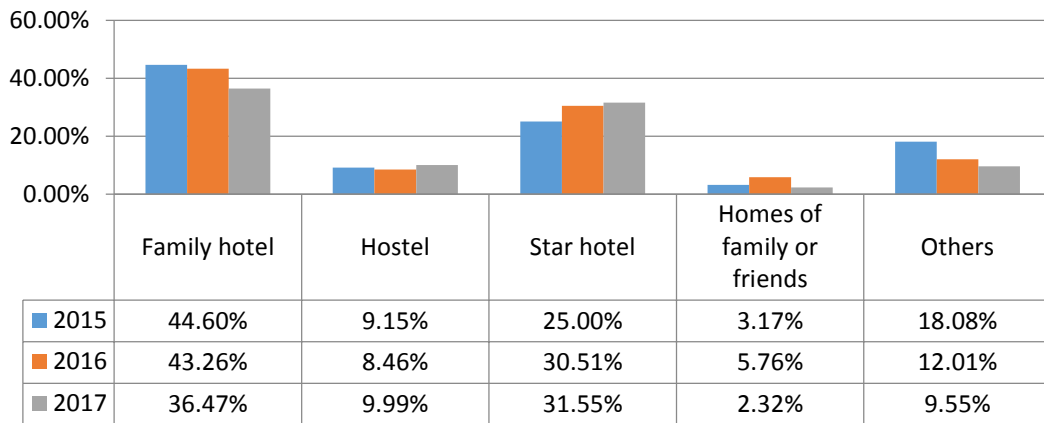


Figure 1 Comparison of tourist accommodation options in 2015 to 2017

Main choose family hotels and star hotels as accommodation. As shown in Figure 1, the accommodation options for tourists are mainly low-end accommodation facilities (mostly less than RMB 200/night), especially family hotels. This is because there are a large number of family hotels in Jiaozuo's tourist attractions. In addition, the consumption level of tourists is low, and most tour groups will choose family hotels as accommodation facilities. Star hotels have started to develop in recent years. With the increase in high-level tourists, they are not satisfied with the original family hotels and began to seek higher-level star hotels. Therefore, the number of star-rated hotels has started to increase. Among the selected visitors, quite a few of them are traveling with the group and arrive on the first day, and they do not know their place of accommodation for the time being. In addition, there are also a large proportion of tourists who do not stay. These are mostly day-trip tourists and are available on a daily basis. Relative to star-rated hotels, family hotels attract less consumption, but there are a large number of family hotels in Jiaozuo's scenic spots (especially in Yuntai Mountain Scenic Area). The consumption level of these family hotels is not high, so tourists choose more family hotels. As an accommodation facility. At the same time, it can greatly increase the income of operators (i.e, local residents) and will be conducive to the development of the local economy.

2.2 Satisfaction of environmental perception improved, and the landscape has horizontal and vertical differentiation

Visitors' perception of the urban environment is measured by eight indicators including noise pollution, urban cleanliness, air quality, river quality, urban afforestation, overall urban hygiene environment, tourism environment, and scenic spot congestion. The overall findings are as follows:

The perception of urban environmental quality is relatively consistent, and the overall perception changes from general to comparatively satisfactory. In 2016, there was a slight decrease in air quality and the overall hygiene status had slight fluctuations in 2015. The average values of other indicators in 2017 exceeded that of 2014 in all cases. The degree of satisfaction was greater than 3.6, indicating that the

overall perception of tourists gradually became more satisfactory. In the transition, the current perception bias is relatively satisfactory. The standard deviation of all indicators of the data is between 1-2, indicating that the tourists' feelings of focusing on the urban environment are relatively consistent, with little difference between individuals.

The tourism environment of the scenic spot has a high degree of satisfaction. The perception of the crowdedness of the scenic spot is poor, but it has improved. Visitors' focus on the scenic environment as the perceived indicators of tourism environment and scenic crowding degree, the two indicators in the past four years, the overall upward trend is obvious, the tourism environment has a high degree of satisfaction and continued to improve, the perception of scenic spot congestion has been poor, but improved. In 2017, the average satisfaction level of visitors to the tourism environment reached a record high, reaching 4.30, indicating that the tourists' satisfaction with the scenic environment was very high. The continuous improvement reflected the perfection of the environmental quality; the degree of satisfaction with the scenic spot was only 3.69. Compared to 3.23 in 2014, it has greatly improved. Although 54.20% of the tourists were very satisfied with the scenic environment, 29.30% of the tourists were very satisfied with the crowdedness of the scenic spot, but the standard deviation of the tourism environment satisfaction was 0.929, and the standard deviation of the scenic spot congestion was 1.860. With a large tourism environment, it can be seen that most of the tourists' perceptions of satisfaction with the overall tourism environment are concentrated between being relatively satisfied and very satisfied. However, the perception of the crowdedness of the scenic spots by tourists is scattered, which precisely reflects the different scenic spots and the different scenic spots in the same scenic spot. The difference in congestion.

Regional surveys of environmental perceptions were conducted. Through the number of questionnaires issued, it was found that Qingtian River and Yuntaishan were the main distribution areas for questionnaires, and Yuntaishan took Hongshixia and Xiaozhaigou as examples. First of all, a horizontal comparison of the perceptions of tourist satisfaction with the three major attractions in 2017 is shown in Figure 2.

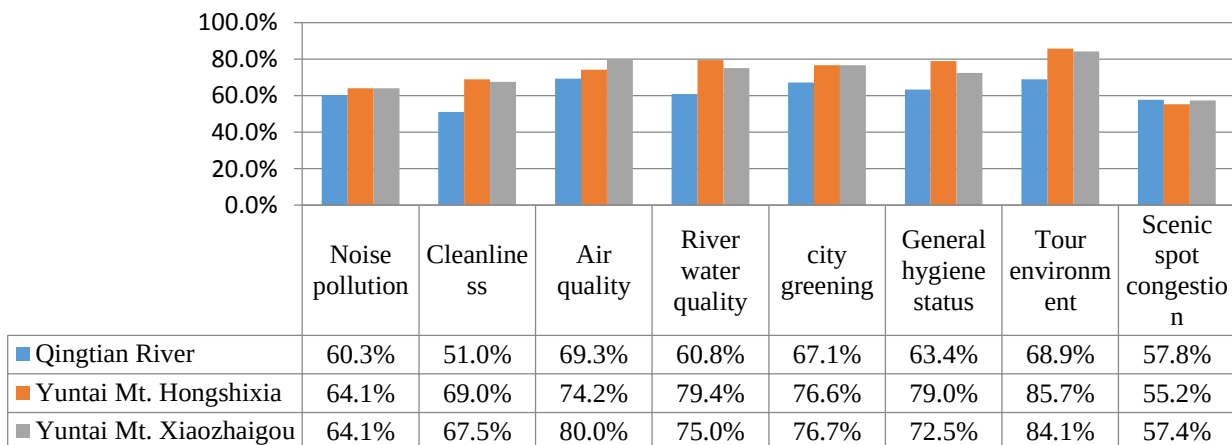


Figure2 Comparison of Visitors' Environmental Perception Satisfaction Degree of Main Attractions in 2017

The analysis found that Yuntai Mountain's tourists' satisfaction in various indicators was basically higher than that of the Qingtian River, and the satisfaction rate of the six indicators such as the visiting environment, general hygiene status, urban greening, river water quality, air quality, and urban cleanliness was particularly high.

The tourists of various scenic spots in Yuntai Mountain showed high satisfaction in various indicators, and there was a strong consistency among different scenic spots. Visitors' perception and feelings to various scenic spots in Yuntai Mountain are superior to other scenic spots in terms of noise pollution, cleanliness, general hygiene status, environment, river water quality, urban greening, and air quality perception. However, tourists' perception of the crowdedness of scenic spots is relatively weak, especially compared with the Qingtian River scenic spot, and it is still an important issue to maintain and control the congestion of scenic spots, especially in densely populated distribution centers (such as the Hongshixia scenic spot). The proper handling of tourist diversions and the control of the number of scenic spots are very necessary.

Visitors' perception of the environment in the Qingtian River scenic spot decreased as a whole compared to last year. The level of satisfaction with noise pollution and cleanliness decreased most significantly, falling from 71.6% in 2016 and 61.6% in 2016 to 60.3% and 51.0%, respectively. The remaining indicators such as air quality, urban afforestation, and overall perception of living conditions were relatively satisfactory. Tourists who were satisfied or very satisfied reached 69.3%, 67.1%, and 63.4%, respectively, slightly higher than in previous years.

As for the tourist environment perception of Yuntai Mountain scenic area, the overall perception of tourists is generally better. In the past four years, the satisfaction of four urban environmental indicators, such as noise pollution, cleanliness, air quality, and overall hygiene, has remained at a level of 50-75%, and there has been a breakthrough within stability; the river water quality, urban greening, and tourism environment satisfaction have gradually improved. Increased by more than 75%. In recent years, Yuntai Mt. has had a remarkable effect on the internal management of scenic spots, and the tourism environment has been greatly improved. It has been favored by the vast majority of tourists (85.4%). Although the number of tourists is increasing, the problem of scenic spot congestion has been effectively solved, and satisfaction has increased year by year, which needs to be given continuous attention.

Therefore, a horizontal and vertical comparison of the perceptions of tourist satisfaction of two scenic spots was conducted, and the findings are: Yuntai Mountain maintained a high level of satisfaction as a tourist attraction in the dominant scenic spot, and achieved a breakthrough within stability; Qingtian River's tourist satisfaction overall declined compared to last year, which needs to keep up. It requires to consider all aspects of the visitor experience.

2.3 Increased participation of community residents, future income shows a trend of polarization

The cultural and tourism industry in Jiaozuo was upgraded rapidly. Qingtian River Leisure and Holiday Center and Jiaying Grand View Park were accelerated to develop. Yuntai Mt. won the China Quality Award nomination. Residents of the community have maintained their enthusiasm for participating in tourism management in previous years. They have chosen to invest in tourism operations and start their own businesses in order to obtain higher income and quality of life.

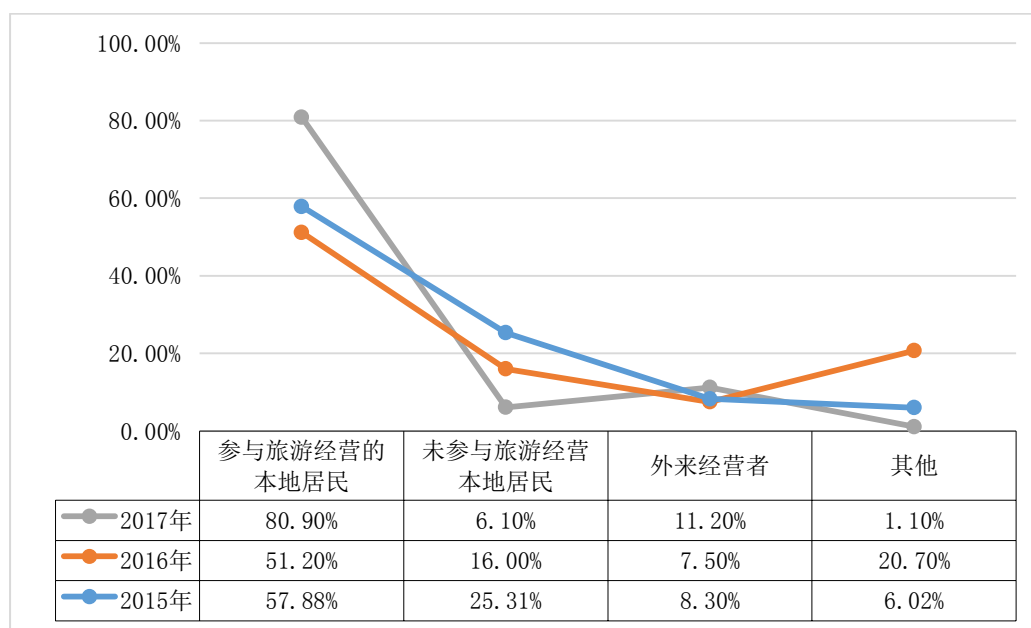


Figure 3 Comparison of the proportion of community residents participating in tourism management in 2015-2017

(Local residents participating in tourism business, local residents who do not participate in tourism business, foreigners businessman, others)

Figure 3 shows that the proportion of community residents who have participated in tourism operations in the past three years has continued to show an increasing trend. Of these, more than 80% of residents participated in tourism operations in 2017, an increase of nearly 30% over the previous year. In 2017, foreign operators accounted for 11.2%, an increase of 3.7% over the previous year. This shows that in addition to the increasing number of local residents involved in tourism operations, as well as foreign operators, and on the one hand shows that the local people saw the profits brought about by the development of tourism in recent years, but also reflected that the government and scenic areas in many aspects to promote local tourism development. The efforts made, on the other hand, also show that with the increasingly rapid development of tourism, the competition between tourism operations is increasing.

The level of community involvement is high, and the number of family hotel staff has increased significantly. In terms of operating conditions, the ratio of residents in the nearby tourist attractions (Yongtai Mt., Qingtian River, Shennong Mt., etc.) in Jiaozuo City in 2017 accounted for 87.3% of the total number of people engaged in tourism-related work (waiters, chefs, family hotels, catering, etc.). The proportion of residents in the nearby community who work in tourism-related work is very high. In 2015-2017, the proportion of people engaged in catering, especially in the sale of goods, has decreased, while the work in family hotels has continued to rise, especially during 2016-2017. It is worth noting that a large number of non-standard family hotels will increase competition in the market, which may lead to a decrease in occupancy rates and a drop in housing prices. Therefore, the government should pay attention to the planning of family hotels and the construction of family hotels. With regard to special issues, we attach importance to the training of hotel operators' management capabilities, do a good job in regulating the price of family hotels, and prevent the oversupply of family hotels.

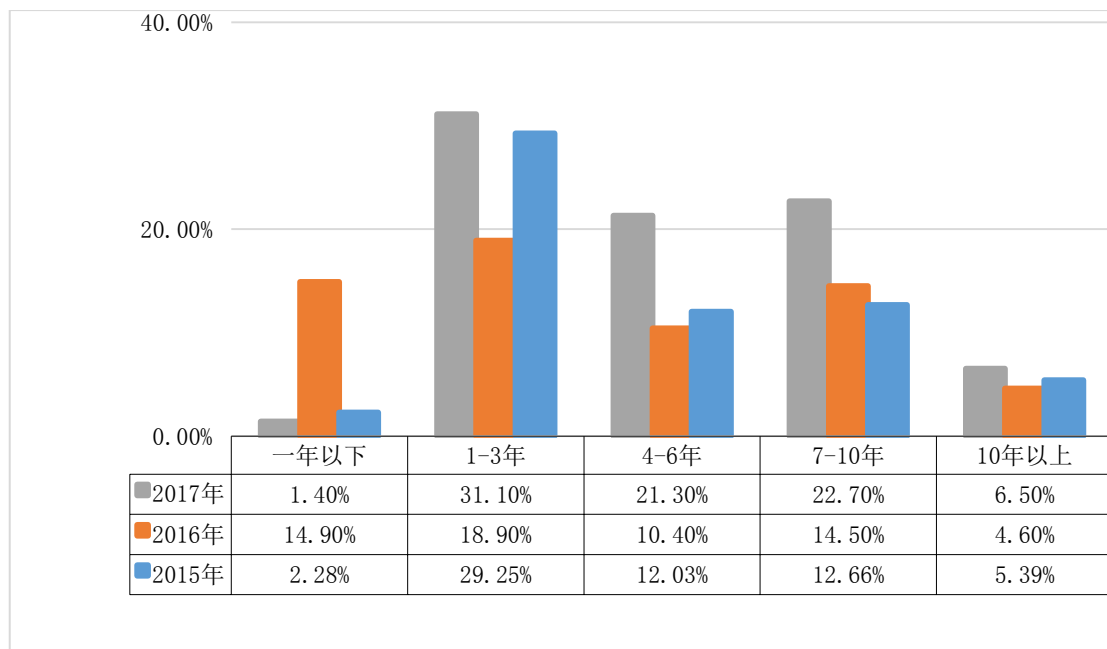


Figure 4 Comparison of Duration of Community Residents Participating in Tourism Management in 2015-2017

(Less than one year, from one to three years, from four to six years, from seven to ten years, more than ten years)

The average monthly income of community residents in 2015-2017 was concentrated in 2000-10000 yuan, accounting for 73.9%, 71.4%, and 66.8%, respectively. The proportion of lower income (less than 2,000 yuan) in the three years was 14.9% and 22.2%, respectively. 20.9%. It can be seen that the proportion of low-income residents is relatively high in 2016, presumably because some residents have relatively little time to participate in tourism operations and have little experience. The more prominent

data for 2017 reflect the proportion of the population with income of 10,000 yuan or more, which is an increase of 2.8% compared to 2016, indicating that some residents have realized profits through tourism or other means. This reflects that the general income of the operating participants in Jiaozuo is still relatively stable, but there is a phenomenon of polarization.

Local residents have been operating the market for longer and longer, and the tourism market is attractive and operational, concentrated between 1 and 10 years, accounting for 75.10% and 53.94%, respectively, and over 50%; 2016 accounted for 14.9% of the operating time less than 1 year, indicating that the local tourism market is attractive and manageable. With the development of tourism, there will be more people joining the business. They will gradually accumulate experience and the market will be gradually cultivated in this environment. Then they will be able to attract more experienced people.

The income of tourism practitioners is relatively stable, but there is a polarization phenomenon. The more prominent data in 2017 shows that the proportion of the population with income of 10,000 yuan or more has increased by 2.8% compared with 2016, indicating that some residents have realized profits through tourism or other means. This reflects that the general income of the operating participants in Jiaozuo is still relatively stable, but there is a phenomenon of polarization.

2.4 Satisfaction of the quality of life declined, and the resident groups became more rationalized

In 2017, local residents' satisfaction with their current overall quality of life has generally reached a level above average. The proportion of people who chose "very dissatisfied" and "unsatisfied" has dropped slightly. Specific analysis of the people who feel satisfied (choose "satisfaction" and "very satisfied") has the following findings: (1) Satisfaction in 2014-2017 was 51.99%, 69.87%, 45.90%, and 55.40%, respectively, fluctuating. Compared with the previous year, it has dropped by nearly 20%, and is more concentrated on the general satisfaction option (44.40%). It can be seen that with the in-depth development of tourism, the overall satisfaction of residents' living experience satisfaction shows a downward trend, although the proportion of unsatisfied is decreasing (3.61%), but it also shows a trend of tepid; (2) As for satisfaction in four years, the mean value also fluctuates. It can be seen that the overall perception of the residents' satisfaction is declining, and the decrease in the average of satisfaction is mainly due to the sharp drop in the proportion of people who feel "very satisfied" and believes that the current total quality of life is "very satisfied" from 28.45% in 2014. It decreased to 10.47% in 2017, a drop of 63.20%.

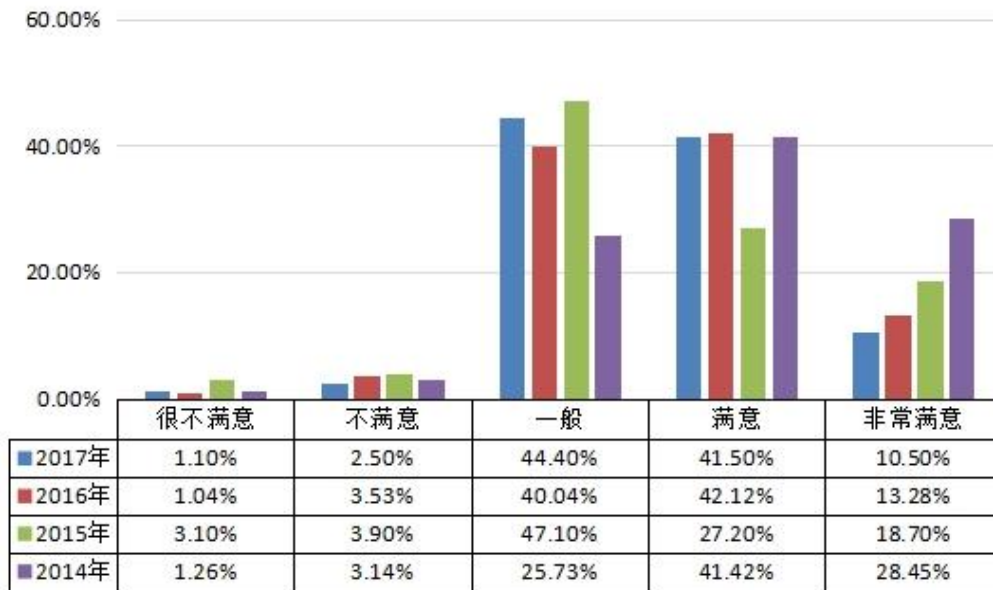


Figure 5 Comparison of the current overall satisfaction of residents on the quality of life from 2014 to 2017

(very dissatisfied, satisfied, not bad, satisfied, very satisfied)

Although residents still maintain a positive perception of the quality of life, the level of positive perception has declined significantly. Interviewed residents said that despite the increase in the number of DIY tourists in recent years, the business is getting worse, mainly because of the following reasons: (1) More people are involved in the tourism industry, which leads the pressure of competition to increase; (2) the per capita consumption of DIY tourists is generally not high and their stays are not long. This directly leads to a reduction in the overall income level of the residents. As a result, the residents' perception of the pressure of life increases and their satisfaction with life decreases. In addition, there are also farmhouse operators who have indicated that the tourists who stay overnight in the scenic spot are allocated by the scenic area management personnel, so there is no fierce competition and the communities are more cooperative. At the same time, due to the advantages and disadvantages of the geographical location, there are contradictions between the operators in the scenic spot and the operators around the scenic spot.

Tourism development brings both benefits and disadvantages to the residents of Jiaozuo community at the same time: 1) the enthusiasm of residents to participate in tourism management has increased, and their operating experience has also increased. But at

the same time, the increase of foreign operators has made the competition of tourism management more and more challenging. 2) Some residents obtained considerable income through tourism management, but due to the low per capita consumption of tourists and their short residence time, the overall income level of the residents is not high, and the income gap between operators has also widened; 3) Natural resources and the ecological environment is still the optimal condition for the development of Jiaozuo tourism, which is approved by residents. But the resources lack effective integration and adequate facilities to support, including urban infrastructure and scenic facilities; 4) On the other hand, the development of tourism has also brought a noisy social environment, the competition for limited customers also affects the social relations and daily life among residents. 5) The opinions of residents of Jiaozuo community on the development of tourism activities are influenced by their knowledge of local tourism resources and academic qualifications. And they also hope that the local folk customs can be integrated into the development of tourism; 6) The rapid development of tourism meets the basic livelihood of the major people, but there is still a big gap between their ideal lives and real lives; 7) In terms of life satisfaction, tourism development does not bring about significant improvement in satisfaction of residents. Residents' evaluation of the indicators is becoming objective, and extreme evaluation is greatly reduced. Residents' lives are generally flat, and they do not have any high expectation the quality of life in the future.

The enthusiasm of residents to participate in tourism management is high. They identify their own labor achievements and are proud of the tourism resources in their region. **However, their business is constrained by the amount of tourists and the level of tourists' consumption. Also, with more and more operator, homogenization of business methods, and lack of adequate management knowledge, ideas, and lack of support and guidance, residents' enthusiasm of operating business and satisfaction with life were significantly reduced.** Although compared with the previous three years, residents of the surveyed community in 2017 have significantly reduced their satisfaction with the current quality of life, and their expectations of the future are even more uncertain. However, it must be noted that in this fluctuation, this group of residents will become more rational and objective, and they try to better coordinate the beneficial policies. They still have great enthusiasm for life and business management. It can be revealed that how to guide and assist community residents in this period is particularly critical.

The residents of Jiaozuo community have continued to increase their recognition of tourism development. The average score of the “community residents’ recognition of the importance of tourism development” in 2017 was 4.34 and the standard deviation was 0.60, which was higher than that in 2016. The percentage of residents with a positive attitude (choose “agree” and “strongly agree”) accounted for 93.11% of the total, which was an increase from 88.80% in 2016 and was the highest in the past four years.

The residents of Jiaozuo have increased their support for the expansion of tourism. The average score of the “community residents’ support for continuing to expand the tourism industry” in 2017 was 4.43, and the standard deviation was 0.55. The average score of the indicators increased slightly from 2016. The percentage of residents who supported (choose “support” and “strongly support”) accounted for 97.45% of the total, which rose slightly after a slight decline in 2016; the proportion of residents who did not support (choose “strongly oppose” and “oppose”) was increased. For the first time in four years, the score was 0, which shows that the advantages of development of tourism outweigh the disadvantages, and the development of tourism also has received extensive support from residents.

The community residents in Jiaozuo have reached 100% in the degree of approval for expanding tourists. The average score of “community residents’ support for more tourists visiting here” is 4.64, with a standard deviation of 0.48, indicating that the percentage of residents who supported (choose “support” and “strongly support”) reached 100% for the first time in four years. When asking residents about the problems and suggestions related to Jiaozuo tourism, how to attract more tourists has become a major problem that community residents think is urgently needed to solve. Residents propose to attract more tourists by increasing propaganda and developing entertainment projects.

The residents of Jiaozuo have increased their recognition of “Jiaozuo is suitable for tourism development” year by year. In recent years, Jiaozuo has vigorously developed tourism, building glass walkways and cableways in the scenic spots to add highlights to the original monotonous landscape tourism. The rise in the degree of recognition and the rise in high recognition indicate that under the leadership of the government, the improved infrastructure of tourism has been recognized by residents because residents benefit a lot from it.

In the development of tourism in Jiaozuo, **the government, the community, and the**

scenic spot are intertwined and inseparable. In particular, the government can and should play a guiding role: 1) The government should increase its investment in urban infrastructure to make urban development keep up with the speed of tourism development. At the same time, it should guarantee community residents' health care and education and other benefits, so that scenic spots and urban construction can retain talents, thereby improving residents' well-being; 2) The government should act as a third party to coordinate the conflicts between communities and scenic spots, rectify the market order, and operate policy guidance on business operation and employment to achieve a win-win situation; 3) The government must be concerned about the people. Many residents said that the collection of their opinions on tourism development policies has not been realized. Many residents have their own views on development but there is no way to reflect them. The absence of these channels will make the government lose its basic judgment on the development of tourism. For community residents, the participation of foreign investors will bring both competition and opportunities. New capital investment, the introduction of new technologies, and the impact of business ideas can all be utilized through learning and transformation, which in turn stimulate market vitality. As the vanguard of regional tourism development, the priority job of the scenic spot is to attract more tourists and create more income. The whole scenic area generally suffers from the lack of tourist consumption, that is, tourists have money but get nowhere to spend it, and their residence time in Jiaozuo is short. In this regard, scenic spots should learn experience from abroad, collect opinions from within, provide special tourist products that can be paid for by tourists, and excavate consumption points.

2.5 The pace of global tourism strategy has been accelerated, and the tourism industry has significant achievements in helping the poor

In January 2017, in order to implement the strategy of making tourism in Jiaozuo the second entrepreneurship to build a strong tourist city, **Jiaozuo organized and the National Mobilization Conference of Making Jiaozuo the Demonstration City and established the leading group of this project.** In accordance with the “Three-Year Action Plan for the Creation of a Global Tourism Demonstration City”, by 2018, Xiuwu County and Boai County in Jiaozuo will strive to become the first national tourism demonstration areas, and other counties (cities) will basically reach the standard of national tourism demonstration area. Jiaozuo strives to become the second batch of national tourism demonstration cities. The number of visitors from home and abroad is expected to reach 52 million, and the

comprehensive tourism revenue will be 42 billion yuan. The average annual increase in the amount of tourists received and comprehensive tourism revenue will reach 11.5% and 13.5%, respectively, and the comprehensive tourism revenue will account for more than 16% of Jiaozuo's GDP.

In order to achieve the above objectives, Jiaozuo, in the process of establishing a national demonstration city of tourism, has focused on improving the development of tourism products, project construction, improvement of tourism elements, development of central urban tourism, integration of tourism development, tourism marketing, supervision of the tourism industry, civilized quality education and focuses on implementing 28 tourism projects with a total investment of 16.8 billion yuan. Jiaozuo is making efforts to promote the construction of Sweet Honey Village in Yuntai Mountain, the meditation town of Yueshan Temple, the Tai Chi Town, the cultural tourism town of Miaole Temple, and the Sangpo style town, aiming to cultivate the tourism products of leisure tourism, health care tourism and fitness tourism. Jiaozuo also speeds up the upgrade of star hotels, family hotels, country houses, and farmhouses to form a comprehensive tourism hotel reception system. Yuntai Mountain has been built as an international destination of health resort, ecological experience and geological wonders. Chenjiagou has become an international special tourist destination of Tai Chi. Qingtian River, Shennong Mountain, Qinglong Valley, and Fenglin Valley have become international tourism destinations. Jiaozuo develops and expands the tourism shopping service industry and increases tourism revenue. Beside, Jiaozuo accelerates the construction of a smart tourism system and realizes intelligent management, marketing and services. to further improve the tourism service standard system and create a number of tourism service standardization demonstration enterprise, spreading the brand of "Jiaozuo service" . Jiaozuo will actively promote the reform of the “1+3” tourism management system, establish and improve comprehensive tourism supervision mechanisms for comprehensive tourism coordination, joint investigation and handling of tourism case, strengthen the establishment of a credit system, and create a favorable tourism market environment.

In the past five years, Jiaozuo has embarked on the strategy of building a well-to-do society in an all-round way, **actively innovated the work mechanism for poverty alleviation and its development, and vigorously promoted poverty alleviation projects.** Through unremitting efforts, a large number of rural poor people have escaped poverty. Jiaozuo has invested a total of 560 million yuan in all kinds of poverty alleviation funds,

arranging 726 projects, accumulating 91,400 people out of poverty. Jiaozuo implemented a village advancement project in 97 impoverished villages, so that 11,800 poor laborers received employment skills training, so that they realized the transfer of employment. The project of increasing industrial income through rolling development has driven 80,500 people to increase income.

Among them, in the “four-in-one” poverty alleviation mode in Jiaozuo, the effect of industrial poverty alleviation is significant. In the implementation of the policy “one village one product”, 83 poverty villages in Jiaozuo have developed their own income-increasing industries such as agriculture cultivation, aquaculture, agricultural product processing, and tourism, and cultivated pillar industries in areas where poverty-stricken villages are relatively concentrated. In the area of tourism poverty alleviation, Jiaozuo actively guided and assisted the impoverished villages around the scenic areas to vigorously develop the tourism service industry. The number of family hostels, restaurants, and supermarkets reached 430, resulting in direct economic benefits of 38.6 million yuan. The poverty-stricken people in Shangxiang ancient cave kiln and Yidoushui in the shore town of Xiuwu County, Peijiazhuang, Houhe, and Shuangmiao in Xicun town, Jiudu, Yangzhuanghe in Changping towns, and Xuhe, and Zhaozhuang in Zhongzhan district, have been out of poverty. There are 35 family hotels in Fangshan Village and Qingtian River Village in Boai County. There are more than 300 employees and the average annual income is about 50,000 yuan.

The village of Yidoushui Village, Anshang Town, Xiuwu County, is located on the side of the peak of Yuntai Mountain and is a typical stone village. Li Weifu, a villager in the village, is a successful example of realizing individual development through tourism. In the past, people in the village lived barely by harvesting seasonal forsythia and planting vegetables. Young people went out to work and earned a living, and the village had been poor villages for many years. In 2013, Yidoushui Village was selected as a directory of traditional Chinese villages, which gave villagers the hope to develop. Regarding tourism as a start point, Li Weifu seized the opportunity of tourism and organized a family hotel called “Lijia Courtyard” that attracted many tourists. The development of folklore tourism in the village succeeded with the benchmarking effect of Li Weifu. Today, Yidoushui Village has developed 20 family hotels and more than 300 guest rooms. It can receive nearly 80,000 tourists each year. The village also has a “Cuncunle” website, the promotion of tourism transforms from off-line to on-line. According to research, there were originally 13 impoverished households

in Yidoushui Village, and 9 households have now been out of poverty because of the development of tourism.

The development of rural tourism and the promotion of poverty alleviation through tourism have increased the living standards of villagers and improved the overall quality of their life. However, **with the increase of the overall quality of residents' life, the gap between the rich and the poor among the residents in the same community has become apparent.** The survey found that the main negative impact of tourism development on the community is the widening gap between the rich and the poor. The main reasons is the difference of location. In a village, although the operating level of the villagers is almost the same, the location difference leads to a significant gap between the rich and the poor. Compared with poorly-located business households, well-located business households can receive more tourists and have more income. Therefore, more funds can be used for the upgrading of family hotels and other facilities to make them competitive in the market. In addition, the length of time involved in tourism operations is also the cause of the gap between the rich and the poor. Since the income of residents participating in tourism operations is generally higher than that of residents who are not involved in tourism operations, residents who participated in tourism operations in the early stages of tourism development are relatively more prosperous. This part of the population is at the forefront of rural tourism development. Most of them can become elites in the community and drive the development of tourism management in the entire community.

3. Special report I: Development of Tourism SMEs

In the process of transformation and upgrading, how should tourism small enterprises adapt to the new demands of the market, how to improve service quality, how to identify their positioning, create their own characteristics and brands, and attract more tourists with unique characteristics, are not only in relation to the business operation of residents in the community but also closely related to the transformation and development of tourism in Jiaozuo, which deserves attention and exploration. This special study will focus on the sustainable development of the urban transformation and tourism SMEs (farmhouses) in Jiaozuo. The study will be based on a review of Jiaozuo's economic development history and transformation status, tourism development status, and tourism and economic growth. The questionnaire data summarizes the views of tourism SMEs on tourism development, analyzes

their operating conditions, operating performance and influencing factors, sums up the industrial transformation and sustainable development experience of SMEs in tourism, in order to provide scientific data support for sustainable tourism development in Jiaozuo.

3.1 The surge of family hotels leads to oversupply problems

In terms of operating business, more than half (70.40%) of the community operators operate family hotels, which represent a significant increase compared with 48.02% in 2015 and 46.77% in 2016. This shows that the family hotel is the main business type of tourism in Jiaozuo. Compared with other types of business, family hotel has great potential in the market. The proportion of business operators engaged in catering operations from 2015 to 2017 was roughly the same, all around 13%. Compared with 2015 and 2016, the number of operators engaged in the sale of goods and guide services in 2017 decreased significantly, accounting for 13.70% and 12.3% respectively. The proportion of working as guide services was zero, and the ratio of the last three types of business has decreased significantly. This indicates that there has been a big change in the small-scale tourism enterprises in Jiaozuo, the markets for restaurants, shops, and guide services have decreased, while the number of family hotels has increased dramatically.

The surge in the operation of family hotels has created a problem of oversupply in the market competition among Jiaozuo SMEs' tourism operations. In the four operator characteristics of "the operation of business works as expected", "the operation of business is better than peers", "the operation is well-managed" and "strong marketing capabilities", the choice of neutral attitude towards the operation of business is more than the choice of "agree". About half of the respondents chose "neutral" for the indicator of "the operation of business is better than peers" in the statement, which means that there is not much difference between shops, which easily leads to poor price competition and low profits. When analyzing the operation of SMEs in the community, it can be seen that small enterprises do not pay special attention to the development of new products, which leads to homogenous competition.

3.2 The operating conditions have improved compared to last year and face the issue of upgrading

The number of visitors in Jiaozuo have increased year by year, and the city's tourism revenue has also increased year by year. Comparing the operating performance of 2016, it

can be found that the number of people who expressed neutrality and approval in the indicators of “I think I am profitable since the business starts” and “I think that the operation of business is good” are quit a lot, and the proportion has risen slightly, indicating that the operating conditions of a small number of small businesses have improved slightly this year.

The operation of tourism business has improved, but it faces the issue of transformation and upgrading in the future. Compared with 2016, it can be found that the scores of related indicators such as “improve service quality” and “innovate marketing measures” have declined, indicating that there may be some setbacks in business owners' effort of developing new products, improving product quality, innovating marketing methods, controlling cost and inspiring employees during the year. At the same time, through the structural model, it can be found that corporate innovation has no significant impact on the operating performance of SMEs. Many business households hope to improve the market homogenization through innovation and upgrading. However, innovation at this stage is still low-end innovation lacking of highlights and characteristics, so the current corporate innovation has not played a significant role in the improvement of the operation of tourism SMEs. The current development of Jiaozuo tourism is in a stage of transition, and it should be gradually shifted from the attraction of tourism resources to the attraction of the overall tourism destination, such as the transformation and upgrading of small tourism enterprises: the environmental quality of tourism reception facilities (farmhouses) and the service quality of operators and the increase of high-end consumer goods in the market. The experience of this transformation and the urban transformation in Jiaozuo are similar to each other, that is, to timely seize the opportunity for transformation, early implementation of the transformation of the existing large number of reception facilities, nurturing tourism related extended product, lengthening the tourism industry chain. And all of these open up more room for development of tourism in Jiaozuo.

3.3 The government's impact on business performance has weakened and it should give more support

Compared with 2016, the correlation of market's influences remained at a relatively high level, and the relevance of government's influences decreased. This indicates that Yuntai Mountain's tourism industry was originally guided by the government and then led by market. Since 2016, the government's influence on companies has been decreasing. On the one hand, this reflects the trend of business operations being marketized. However, on the other hand,

the structural equation model shows that the government has no significant positive effect on the operating conditions of SMEs. In the indicator “make decision on the basis of government's guidance”, the number of people with neutral attitude is relatively high, which shows that the government's guidance and support are not implemented. In addition to the confusion in the management of the community as reflected by respondents, more than half or even a large number of respondents disagreed with the indicators of “I have received policies and financial support from government” and “I have participated in the technical training from government organizations.”, which shows the lack of government policies or funding and technical training.

Although it is in a market-oriented trend, from the perspective of the standardized regression coefficients of the structural equation model, the main social relations of these enterprises (including the ability to raise technical assistance, external funding, and the ability to raise funds) have the greatest impact on the performance of tourism SMEs, followed by the market and the ability of business owners, so the government's support still need to be increased, especially in technology and funding. In the case of Jiaozuo, the government should hire experts to make scientific development plans in the transformation and upgrading of small tourism enterprises, make a basic regional orientation for the transformation of small tourism enterprises, improve the institutional mechanisms for enterprise transformation, and creating a good investment environment is the key to the successful transformation and upgrading of small tourism enterprises, especially in the development and growth of the tourism industry.

4. Special report II: The effectiveness assessment of poverty alleviation and the suggestions on policy

The relationship between tourism and poverty is a worldwide research topic. China, as the largest developing country in the world and one of the fastest-growing countries in the world, how to promote the combination of tourism development and poverty alleviation and realize the sustainable development of tourism is also an important research topic for Chinese scholars and international scholars. Therefore, monitoring center has conducted a special research on the evaluation and policy suggestions of the poverty alleviation in Jiaozuo, aiming at monitoring the current situation of tourism poverty alleviation in Jiaozuo, understanding and evaluating its progress and effectiveness, and making analysis and relevant

policy suggestions accordingly. This monitoring of the tourism poverty alleviation village is mainly conducted in the Anshang village, Yidoushui village, Peijiazhuang village, Yuzhuang village, Xiaodi village, Qingtian River Village and Wujiatai villages, to find out how these villages achieve got rid of poverty and realized economic development through tourism.

4.1 Poverty alleviation in tourism is good, and the poor households in the villages are significantly reduced

Jiaozuo's work on poverty alleviation in the past has been remarkable, until 2016, more than 560 million yuan funds are put in various types of poverty alleviation in 5 years, and there are 726 projects, with 91,400 people out of poverty in Jiaozuo. This remarkable achievement originates from Jiaozuo's "Four As One" poverty-alleviation development pattern, and the industry poverty alleviation includes the tourism poverty alleviation. There are 83 impoverished villages in Jiaozuo, which have developed different planting, breeding, agro-processing, tourism and other increasing industries. In the area of tourism poverty alleviation, Jiaozuo actively guided the impoverished village around the scenic area to develop tourism service industry, the number of family hostels, restaurants and supermarkets have reached 430, with direct economic benefits of 38.6 million yuan. Poor people in ancient cave Kiln Village in Xiuwu County Anshang town, Yidoushui village, Peijiazhuang village in Xi County, Houhe village, Shuangmiao village, Jiudu village in Changping town Qinyang City, Yangzhuang village, Xuhe village, Zhaozhuang village and other villages got rid of poverty through tourism development.

From the monitoring in Anshang town, Yidoushui village, Peijiazhuang village, Yuzhuang village, Xiaodi village, Qinghe River village and the Wujiatai village, the poor households in the village are obviously reduced and the economic income increases. At present, there are only 2 poor households in Anshang town, its current income is about 40000 yuan per capita, at present Wujiatai villages have 66 households with no poor households in the village. Qingtian River village can generate income of 900,000 yuan a year, and per capita annual income increase of about 2000 yuan; Yuzhuang village has become whole-area tourism model village in Boai County because its economy develops rapidly. Poor people who have ability to work in Xiaodi village have been out of poverty. 3 households in Peijiazhuang village have been out of poverty since the development of the tourism in Peijiazhuang villiage; and the tourism poverty alleviation has brought 9 households out of 13 households in Yidoushui villiage out of poverty. These specific figures show that with the

development of tourism, the villagers has the labor force have basically been out of poverty, which proved that Jiaozuo tourism poverty alleviation work is good.

4.2 According to their own development conditions, poverty alleviation modes are diverse

Based on their actual development conditions, Anshang town, Yidoushui village, Peijiazhuang village, Yuzhuang village, Xiaodi village, Qingtian River Village and Wujiatai village developed a suitable development model of poverty alleviation.

(1) With the advantage of the geographical conditions in the scenic spot, Anshang village and Wujiatai village run their own farmhouses; (2) Qingtian River village and the Qingtian River scenic spot develop together and have rural tourism characteristic products (3) Yuzhuang village has practiced the enterprise cooperation pattern, and the community elite takes the lead with residents following up on tourism development. This mode of rural tourism development is undoubtedly worthy of the reference of other rural tourism; (4) According to geographical location conditions, Xiaodi village develops agricultural tourism with the help of the government, and takes the cherry planting as the core industry; (5) With the co-operation of scenic spot, government and poverty alleviation department, Peijiazhuang village develops the ‘romantic tourism in ancient village’; (6) Yidoushui village has its own ancient village characteristics: the development of leisure vacation tourism.

4.3 Adapt to the changes in the tourism market, the future development needs upgrading

The change of tourism market directly affects the future development direction of tourism. The original relatively poor villages began to develop gradually. These poor tourism villages, although has made great achievements by virtue of tourism development, their current level of tourism management and development orientation are relatively low. With the improvement of the cultural level of tourism consumption group and their enrichment of tourism experience, they need higher tourism levels to meet the conditions, so the relatively backward tourism development of these poor villages also encountered many problems.

On the one hand, the reform of the basic conditions is imminent, especially the traffic conditions, environmental sanitation, water resources, educational resources and medical

facilities. These basic conditions not only affect the daily life of the villagers, but also have a negative impact on tourism development. In the monitoring of these villages, for example, in Yuzhuang village, environmental problems, especially sewage and the improvement of public facilities, have become the major challenges in tourism development. On the other hand, the development of farmhouses or accommodations are facing the problem of transformation and upgrading, they need to upgrade to be high-end business; Anshang village, for example, their number of farmhouses is almost saturated and the farmhouses have low occupancy rate. Their homogeneous competition is obvious, resulting in lower overall income. After the early growing period, there is an urgent need for the village to upgrade and improve the quality of farmhouses. At the same time, in the future development of the transformation and upgrading process, the government must first have a relatively complete regional planning, which can provide effective guidance and help for the later transformation and development.

Table 1 Jiaozuo Poverty Village Tourism development model list

Tourism poverty alleviation Village	Main points of modes	Basic conditions	Poverty alleviation effect	Development trend in the future
Anshang Village、 Wujiatai village	Driven by scenic spots tourists & villagers themselves to operate agritainment	Surrounding location of scenic spots; Farmhouses Industry Foundation; Ensured Passenger flow	Before the development of tourism, almost the entire village is poor, and to 2017, the whole Anshang village only had 2 poor households, the income is about 40000 yuan per capita; At present, there are 66 families in Wujiatai village, with no poor households in the village.	The transformation and upgrade of farmhouses, the improvement of service quality and the development of self characteristics; Overall planning of villages, environmental remediation
Qingtian River village	Scenic spots and village develop together+ the characteristics of rural tourism	Surrounding location of scenic spots; The village itself has the foundation of tourism development	The village can generate income of 900,000 yuan in a year, per capita annual income is about 2000 yuan	Scenic Area and village have cooperation and develop together

Tourism poverty alleviation Village	Main points of modes	Basic conditions	Poverty alleviation effect	Development trend in the future
Yuzhuang village	Government and enterprise have cooperation to promote tourism development + Led by community's elites, and community residents follow up the progress	Rich tourism resources; Adequate capital for reform; The Government promotes the comprehensive transformation	At present, Yuzhuang village has become the whole-area tour demonstration village in Boai County, and its economy develops rapidly	Create boutique homestays, enrich leisure activities
Xiaodi village	Agricultural tourism with the development of traditional planting	The advantage of good geographical location; The characteristics of agricultural tourism are distinct; The Government is actively promoting the development of the industry;	With the income from the cherry, poor households in the village has already become rich and there are still 11 poor households.	Form farmhouses and accommodation, such as rural catering, accommodation and entertainment as one of the agricultural tourism development modes
Peijiazhuang village	The cooperation of scenic area, the government, the Poverty Alleviation Unit (Tobacco Bureau)	The advantage of good geographical location; Government's support; The setting of Village's image	3 households become rich since tourism development, and there are still 12 poor households	Development of tourism products, the specialization of tourism shopping; Make full use of poverty alleviation funds to develop appropriate projects and form "hematopoietic mechanism"
Yidoushui village	Characteristics of ancient village leisure tourism	Ancient village landscape; The state of original ecology; The transformation of	Tourism poverty alleviation makes 9 out of 13 poor households out of poverty	Increase manpower investment and the marketing propaganda to attract the visitors; develop the integrated characteristic traveling pattern

Tourism				
poverty alleviation	Main points of modes	Basic conditions	Poverty alleviation effect	Development trend in the future
Village		ancient dwellings		

5. Suggestions after Monitoring

5.1 Speed up the development of the whole-area tourism

Jiaozuo should expand the space of the development of whole-area tourism, promote the integration of tourism industry. It should promote the development of the pattern of "tourism + Internet", accelerate the construction of smart scenic spots, invest more in wireless networks, service marketing platforms, application terminals and new media services, and realize the collection, analysis, calculation, processing and sharing of tourism data. To promote the development of the pattern of "tourism + culture", the main body of the development of tourism resources in Jiaozuo is mainly based on landscape tourism, and the historical and cultural tourism resources are lighter. In the follow-up development process, Jiaozuo can spare more effort on the development of cultural tourism resources to let the culture and tourism fully integrated, focus on the excavation and promotion of cultural connotations with the landscape resources and cultural resources. Jiaozuo should also spare more efforts to enhance the overall image, so that tourists can not only return to nature in the landscape, but also use the culture to edify sentiment, enhance the visitor's recognition to Jiaozuo. Jiaozuo should also promote the development of "tourism + sports", integrate local characteristics, and actively develop sports and recreational health tourism projects, such as Tai Chi, outdoor camping, mountain sports adventure, and cultivate a group of distinctive sports tourism products.

In addition, Jiaozuo should promote the construction of urban tourism and create a whole-area tourism destination. The development of Jiaozuo tourism should not only depend on Yuntai Mountain, but also should be based on the improvement of the lag of tourism development in the central area and the promotion of the construction and development of

urban tourism. City is the base of tourism development, and tourism is the source of urban vitality, thus urban and tourism need to be integrated. On the basis of the gradual change of the industrial structure, Jiaozuo, as an important tourist destination, should pay more attention to the development of its urban tourism before the service mode and the market of tourist source structure changed. Jiaozuo should has a clear position, continuously improve the urban tourism public service function, increase the introduction of the project to promote the development of urban tourism. At the same time, it should speed up the construction of tourists village, tourist resort and village Boutique Park, diversify the development of tourism products, improve the quality of leisure projects and vacation, enlarge the capacity of tourist reception, and radiate the tourism industry around the regions.

5.2 Develop rural tourism and promote poverty alleviation in tourism

In the past 6 years, through the poverty alleviation pattern of "Four As One", Jiaozuo vigorously promotes the masses out of poverty, and promotes the city's economic and social development. In the new stage, in order to achieve the goal of poverty alleviation, it is also necessary for Jiaozuo to innovate and develop to promote the process of poverty alleviation by rural tourism development.

The development of poverty alleviation in tourism should focus on accuracy. Poverty alleviation should be conducted according to the local characteristics and the actual level of development of the plan, to further develop the rich tourism resources in poor areas, set up tourism economic entities, and explore in line with the actual local industry model. The development of tourism is to form regional industries, with which residents in the poor areas and local governments can both be out of poverty. Development of agricultural industry in the village and township units can help villagers to develop their own cultivation, aquaculture, agricultural products processing and other income-increasing products, such as cherries, bamboo crafts, and so on. And then with the formation of scale effect and the establishment of development base, the poor will be led to fund into the land and other ways to participate in the operation. At the same time, villagers can design experiential activities to attract tourists and expand marketing publicity. On the basis of tourism development, these measures will actively guide the villagers to participate in tourism services, through the development of family hotels, restaurants, specialty supermarkets and other forms, they can provide good services for tourists while increase their income.

For the tourism products and tourism industry development, the forms of innovation can be diversified, for example, government can turn the traditional garden into a harvesting garden, so that visitors can experience the fun of farmland, which can meet the needs of tourists to have outdoor experience, and establish a leisure camping site in the village farmland. Also, it can work with the local arts association institutions to establish art galleries, photographic exhibitions and other arts pavilions to attract people to come to have folk painting, increase the number of tourists, which can further motivate villagers to build more family hotels, restaurants and other small businesses.

On the measures to support poverty alleviation, the government needs to improve the financial support and technical support, and also to establish a pair of supporting files for poor villages, impoverished households. Government should also motivate more tourism enterprises, hotels, scenic spots, tourism planning agencies, tourism institutions and other units and individuals to participate in poverty alleviation, promote the all-round development of rural tourism. At the same time, government should concentrate on solving the tourism infrastructure problems of the key villages of rural tourism, including road infrastructure construction, tourism environment management, tourism public service facilities and so on, and implementing the service system such as village car parking lots, tourist toilets, garbage collection stations, medical emergency stations, local specialties and so on to improve the tourist reception conditions.

5.3 Promoting the transformation and upgrading of agritainment

Under the requirement of constructing important tourist destinations in Jiaozuo, with the change of people's living habits and consumption patterns, the development of Jiaozuo farmhouses needs to be transformed and upgraded, that is to say, to change "sightseeing" into "leisure experience type". In the era when leisure tourism was booming, urban people began to find a second living space in the countryside. The natural landscape, the remaining village appearance and the real life in villages are attracting people to pursue memory, reposing homesickness, experience the elements of the countryside. While going back to villages is not simply back to the past, but selectively combining modern lifestyle, emotional preferences and aesthetic taste to form tourism and leisure form with rural quality life, and the most important thing is to maintain rural areas' unique differences with the city.

Therefore, we need to integrate resources, eliminate barriers, and jointly guide the

healthy development of farmhouses. The government should grasp the agricultural industry tightly, deeply dig farming culture and inject spiritual connotation, creative development Jiaozuo rural characteristics tourism products, highlight the local characteristics, make the rural simple customs into a standardized tourism management services and also the natural reality of rural life. The use of new media marketing should be used to promote accurate services to tourists. Next, to improve infrastructure construction is also an important way to create high quality tourism experience to meet the growing diversity of the material and spiritual needs of tourists. In the era of mass tourism, tourist group is the main types of tourism, so that the traditional standard in family hotel is a relatively suitable room type, but with the rise of family touring and DIY touring, family hotel can consider to have some family suites, more room type with peasant characteristics, to better meet the needs of tourists. At the same time, the government should strengthen the guidance of educational resources, trade associations and agricultural cooperation organizations, and gradually develop skills training for SME owners, so that community residents can provide more responsive services to tourists. The training can include the use of computers, Internet operations, online booking marketing, mobile payment and other modern means.

5.4 Pay attention to the work of tourism safety and create a good tourism environment

Tourism safety is the prerequisite for tourists to obtain a good experience, it's also an important factor affecting the image of tourism destination, so we need to pay enough attention to tourism security work and create a good tourism environment. First, establish a tourism security incident contingency plan, to respond to public events and provide relief and help tourists and to protect the safety of tourists. Also, set up a field headquarters who are responsible for organizing the command and disposal of the situation. Second, implement the law system of tourism security and reduce the disputes of tourism security incidents. Then, integrate the law or terms relating to tourism safety, so as to better for the relevant departments to play the role of legal norms. Third, emphasize on flow control, information early warning and disposal scheme construction. And in major holidays and tourist season, relevant department should start the tourism security early warning system and all kinds of tourism reception units should carry out comprehensive tourism safety inspection to eliminate hidden dangers. Government also needs to strengthen joint law enforcement, market order, and the management of tourists cheating. Fourth, the safety of the consultation and

information should be released to the public in a timely manner. Tourist traffic, tourist attractions, tourist accommodation and other places of congestion information should be provided and published as far as possible, in order to guide the tourist behavior scientifically. For the unexpected risk, information should be released timely through the appropriate media platform for effective coverage, to ensure that the travel safety information effectively transmitted to tourists on the road. Fifth, as to strengthen publicity education of tourists, government can hold public education activities in the scenic spots, travel agencies, hotels, stations and other public occasions. Through map, scenic manuals and other forms government can also expand publicity and improve the safety awareness of tourists.

5.5 Implement tourism infrastructure

With the continuous development of Jiaozuo tourism, the city's social and economic production continues to develop, while it also put forward higher requirements on the tourism toilets, tourism services, tourism emergency rescue and other infrastructures and public services facilities. The first is to construct a perfect whole-area tourism transportation system. The construction of connecting roads between city, scenic area, village, railway station and bus station should be increased to achieve smooth traffic and seamless connection, and to eliminate the tourism traffic in the region. The second is to establish and improve the tourism distribution and advisory service system. To speed up the construction and classification, which should cover tourism distribution centers, tourism advisory points, the central city, 3-A level scenic area, the key folk villages and railway stations, bus stations and other tourist gathering areas. And next to the tourist traffic loop, newly built or upgraded rest sites should be built. The third is to improve the construction of tourist toilets, parking lots and marking systems. Government should also optimize the allocation of tourism toilets, improve the distribution of toilets along the tourist routes, reasonable allocation of public toilets, scenic spots, toilets, tourist villages and towns toilets, and build or rebuild a number of unique characteristics of tourism toilets and ecological tourism toilets. At the same time, to speed up the construction progress of the signs that directs tourists to scenic spots. And government should improve the parking lot, observation deck and other ancillary facilities construction too.

5.6 Strengthen tourism marketing, improve the off-season benefit

In order to improve the development of tourism projects and facilities and marketing

efforts to extend long-term effects, Jiaozuo has held a number of "Tai Chi culture" and "landscape brand" as the theme of large-scale festival activities, which had achieved very good results. The proposal extends its influence and is positioned as a landmark event tourism activity in the region. At the same time, the subject and theme design can be more novel, with the significance of rich theme content, diverse planning types, theme-specific event tourism activities, such as the use of Jiaozuo unique Huai Medicine resources to conduct the development of "Huai Pharmaceutical Culture Festival" and other distinct themes, with local characteristics of the tourism products. In the peak season, the tourism boom gradually faded, the festive events can attract visitors, change off-season into the peak season, and further improve economic efficiency. And in the entertainment and tourism, on the one hand, government should strengthen the existing tourism and entertainment project publicity, such as the Zifang Lake dynamic airship, Zhuyu Peak glass walkway, high-altitude ropeway, etc.. Government can consider working with travel agents, OTA and other cooperation to launch concessions, scenic tickets and other forms related to promotion, to improve visibility and established Jiaozuo Entertainment tourism brand. On the other hand, new projects with unique and interesting features, with local characteristics and customs, are needed to provide recreational activities that are suitable for the participation of adolescents, children and families, such as bosom Bang, Suona and cultivation of drama, Tai Chi culture related participation, waterfall climbing experience activities, to expand its influence.

At the same time, government can also carry out cooperation with the club, with the association or with the domestic university and other forms of organizations, and then they jointly hpld social research, outdoor practice, quality development training activities, with the help of new and old media to attract tourists, expand new customers, effectively improve the off-season passenger traffic.

2017 Monitoring Report on the Sustainable Tourism Development of Xishuangbanna

Monitoring Centre for UNWTO Sustainable Tourism Observatories

People's Government of Xishuangbanna Dai Autonomous Prefecture



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Acknowledgement:

People's Government of Xishuangbanna Dai Prefecture, Tourism Development Committee of Xishuangbanna Dai Prefecture, Yunnan Jinghong Municipal Tourism Administration, Tourism Bureau of Menghai County (Culture, Sports, Broadcast, TV and Tourism Bureau), Mengla County Tourism Bureau, Mohan Economic Development District Tourism Bureau, Mandan Village committee, Shanggang Village Committee, Mengjinglai Village Committee, Bapiao Village Committee, New Baya Village Committee, Old Banpo Village Committee, Xishuangbanna Dai Nationality Park Co., Ltd., Xishuangbanna Wild Elephant Valley Scenic Area Co., Ltd, Jinghong city Manting Park Limited Liability Company, Xishuangbanna Haicheng Tourism Development Co. Ltd, Zuozhe Tea Estates

And all those who helped with the monitoring work.

1. Foreword

In April 2015, after the United Nations World Tourism Organization established Xishuangbanna as the first “Sustainable Tourism Development Observatory” in Yunnan, the Monitoring Center formally conducted the third field monitoring on sustainable tourism development in Xishuangbanna from July 15 to 24, 2017. This report is based on data collected in 2017 and related secondary data, and focuses on the analysis of the resources, environmental, social, and economic impacts of tourism development in Xishuangbanna.

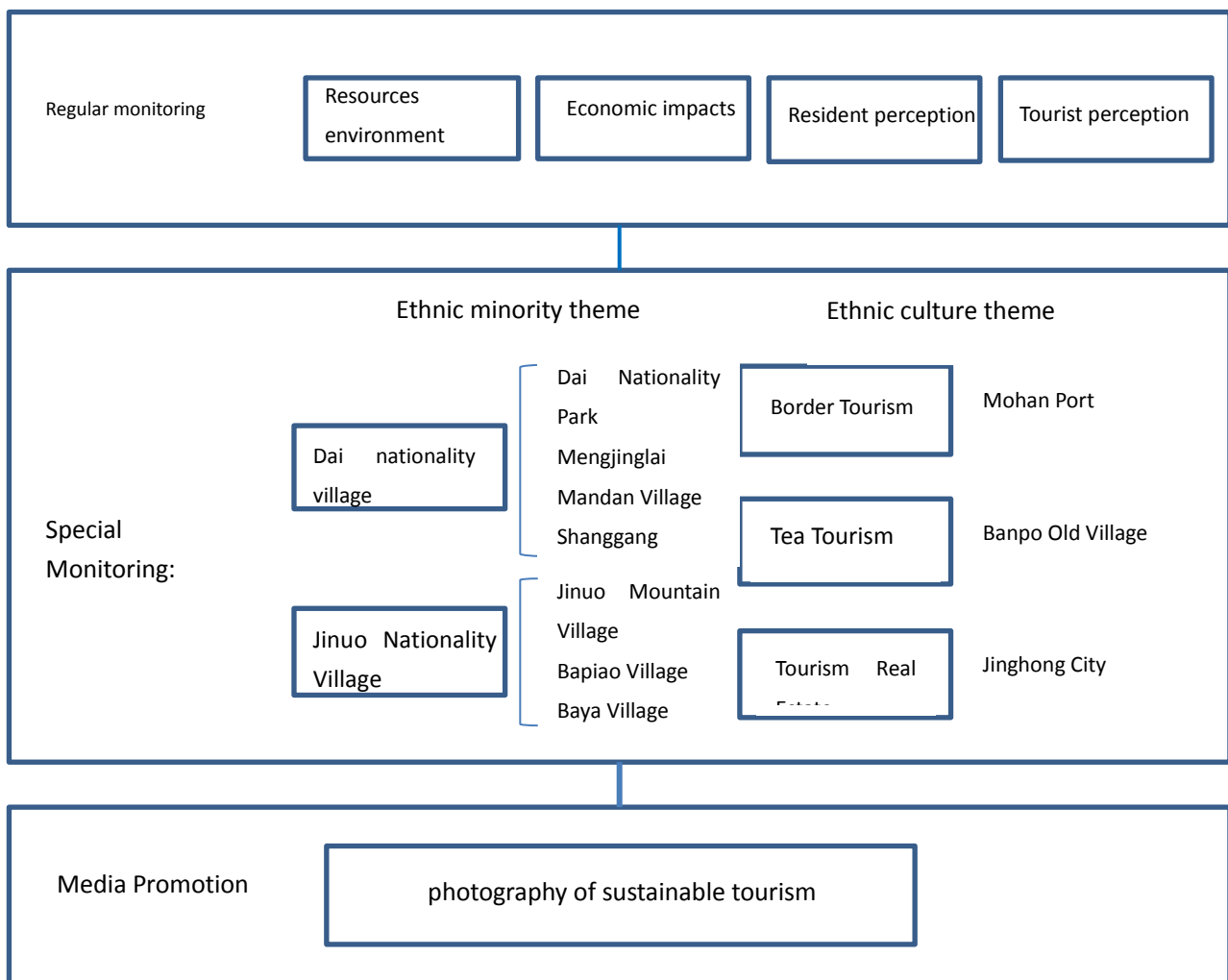


Figure 1-1 2017 Xishuangbanna Monitoring Framework

The monitoring is divided into two phases. The first stage is the monitoring of key projects, including minority tourism, tea tourism, border tourism, and tourism real estate, which are shown in Figure 1-1. The second stage is monitoring summary and promotion. The 2017 monitoring conducted a questionnaire survey. A total of 470 tourist questionnaires were distributed, 426 valid ones were collected; 300 resident questionnaires were distributed, and 297 valid ones were collected. In addition, the photography team was set up to carry out the shooting of tourism promotion video clip.



Figure 1-2 2017 Monitoring spots of Xishuangbanna

This monitoring combined the indicator methodology provided by UNWTO with the actual situation of Xishuangbanna's tourism development, and then formulated the basic indicator system for the sustainable development of tourism in Xishuangbanna (see Table 1-1).

Table 1-1 Basic Indicator System for the Xishuangbanna Sustainable Tourism Development

Theme	Major Issue	Basic Indicators
Tourism with	Ecosystem Protection	Forest coverage

Resources and Environment Protection		Protection of important species
		Conservation Area
		Tourism development's impacts on Conservation area
	Land Utilization	Land utilization rate
Tourism and community	Residents' perception and attitudes towards tourism	Residents' general attitude towards tourism development
		Residents' evaluation on economic impacts of tourism
		Residents' evaluation on socio-cultural impacts of tourism
		Residents' evaluation on environmental impacts of tourism
	Residents' utilization of tourism resources	Residents' visit to scenic areas or spots
	Residents' level and awareness of tourism participation	Level of community participation
		Awareness of community participation
Tourist perception and satisfaction	Destination image	Destination image; overall image; fundamental facilities; security and health;
	Evaluation on services	Tourists' evaluation on services of scenic area, catering, transportation, accommodation, shopping and entertainment
	Tourism complaint and consultation	Tourists' evaluation of tourism complaints and consultation services
Tourism and economy	Status quo of tourism development	Tourism statistics (tourism revenue and its components; tourist volume; domestic tourist volume; international tourist

		volume)
	Tourism and economic growth	Proportion of tourism revenues in GDP
		The overall development trend of the tertiary industry driven by tourism
	Tourism and investment	Overall trend of tourism investment
		Tourism investment direction

2. Tourism and Resource and Environment Protection

2.1 Tourism and Resources Protection

Xishuangbanna Dai Autonomous Prefecture is located in the south of Yunnan Province and is in the tropical humid area. It is a biodiversity agglomeration area of China, a national-level ecological demonstration area, a national-level scenic spot and a member of the UN biodiversity conservation circle, and one of the 25 global biodiversity conservation areas.

The transportation system of Xishuangbanna is perfect. As shown in Figure 2-2, the one-hour traffic circle centered on Jinghong City covers the most popular attractions; and the three-hour traffic circle basically covers all of the attractions. As more and more high-speed rail and highways open to public, the time tourists spend commuting between attractions will be greatly reduced.

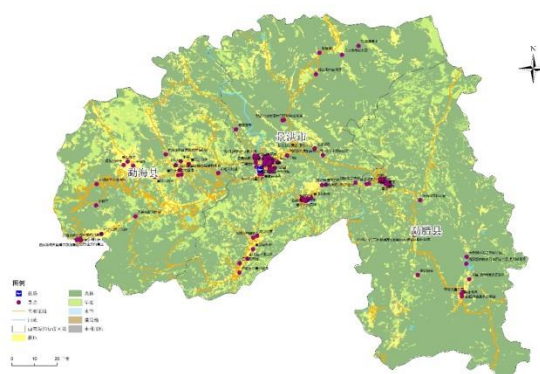


Figure 2-1 Xishuangbanna Transportation System

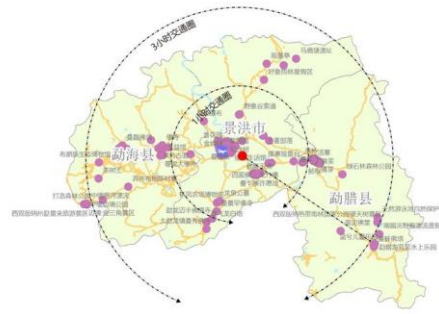


Figure 2-2 Xishuangbanna Tourism Transportation Circle Analysis

2.2 Tourism and Land Utilization

2.1.1 Status quo of land utilization

According to the 2013 Xishuangbanna land utilization structure, forests occupy the most areas, aggregately $15,770 \text{ km}^2$, accounting for 74.2% of the total land area of the entire state. Farm land occupies an area of $2,388 \text{ km}^2$, slightly less than $2,846 \text{ km}^2$ of grassland. Water area, construction land and unused land altogether occupy an area of 246 km^2 .

2.2.2 Changes of land utilization

Inferred from the land utilization from 1980 to 2013, the proportion of forest land, farm land, and grassland did not change significantly. Forest land accounted for up to 74.4% of the total land area and showed an upward trend. Grassland and farm land accounted for similar proportion, at 13.4% and 11.2% respectively, and showed a slight downward trend. Construction land showed an upward trend due to urbanization, but the increase was small, only 0.6 percentage in 33 years from 1980 to 2013.

According to spatial superposition analysis of GIS, forest land mainly concentrated in the northern part of Jinghong City, southeast of Mengla County, and southwest of Menghai County. The spatial variation first decreases and then increases, presenting the characteristic of “retreat in south and proceed in north”. The grassland mainly concentrated in the northwest of Mengla County and Bohai County, and its spatial variation is frequent. The variation was mainly increase at first and then

was decrease, showing the characteristics of “retreat in west and proceed in east, retreat in south and proceed in north”. The farm land is determined by paddy fields, and the paddy fields in Xishuangbanna are mainly distributed in flat-damped dam areas, and their locations are relatively fixed. The total area of water land, construction land, and unused land is relatively small, among which, the change mainly happens in central Jinghong City, where construction land continues to increase.

3. Economic Impacts of Tourism

According to Table 3-1, the proportion of total tourism revenue to GDP in Xishuangbanna is on the rise. The overall proportion of total tourism revenue to GDP is relatively high, which indicates that the healthy development of the tourism industry is of great significance to Xishuangbanna’s economic growth.

Table 3-1 the contribution of tourism revenue to GDP in Xishuangbanna from 2010 to 2016

year	Total tourism revenue (0.1 billion)	GDP (0.1 billion)	Proportion of tourism revenue to GDP (%)
2010	80	161	49.7
2011	100	197.7	50.6
2012	140	232.6	60.2
2013	171.7	272.3	63.1
2014	228	306	74.5
2015	286.7	335.9	85.4
2016			

3.1 Tourism consumption

According to Table 3-5, in 2016, the consumption level of domestic tourists and border one-day trip has greatly increased. Among which, overnight tourists spent 957.15 yuan a day on average, an increase of 12.73% from 2015. Day-trip tourists spent 406.47 yuan per person per day, an increase of

15.32% from 2015. However, in 2016, the spending of international tourists, including Hong Kong, Macau and Taiwan tourists, has decreased compared to 2015, indicating that domestic tourists are more enthusiastic about Xishuangbanna tourism than overseas tourists, and that the overseas promotion of Xishuangbanna tourism did not have significant effect.

Table 3-5 the contribution of tourism revenue to GDP in Xishuangbanna from 2011 to 2016

		2011 (yuan/per day)	2012 (yuan/per day)	2013 (yuan/per day)	2014 (yuan/per day)	2015 (yuan/per day)	2016 (yuan/per day)
Domestic tourists	Overnight tourists	678.97	724.63	768.68	815.11	849.04	957.15
	Day-trip tourists	209.07	240.32	260	284.85	352.48	406.47
Border one-day trip		56.27	59.44	64.25	67.87	70.77	72.42
International tourists	Foreign tourists	189.31	187.08	195.67	203.12	228.1	210.21
	Hong Kong, Macau and Taiwan tourists	523.31	599.08	602.74	620.76	641.27	575.28

3.2 Tourism and investment construction projects

Table 3-6 Tourism projects introduced into Xishuangbanna (during “the Thirteenth Five-Year Plan”)

No.	category	Number of projects	Planned investment (0.1 billion yuan)	“The Thirteenth Five-Year Plan” investment (0.1 billion yuan)
1	Tourism public service facilities construction	5	6.26	2.8
2	Scenic area promotion and upgrading	13	25.11	18.76
3	Tourism county construction	6	245.75	72.35
4	Rehabilitation leisure vacation base	11	599.05	154.57

No.	category	Number of projects	Planned investment (0.1 billion yuan)	“The Thirteenth Five-Year Plan” investment (0.1 billion yuan)
5	Tourism special village	49	0.245	0.245
6	Tourism route transportation	3	16.43	15.43
7	Star hotel	7	10.05	10.05
8	Other tourism projects	25	735.384	216.194
	total	119	1638.279	490.399

During the “Twelfth Five-Year Plan” period, Xishuangbanna is committed to promoting the comprehensive tourism development. It intends to build Quanzhou as a large scenic spot, accelerating the construction of tourism services, tourism transportation and tourism product systems, promoting the layout of tourism industry changing from the elemental economic layout to comprehensive layout, and thus speeding up the transformation and upgrading of tourism industry. In 2016, the first year of the “Thirteenth Five-Year Plan”, new changes have taken place in tourism development projects. As shown in Table 3-6, during the “Thirteenth Five-Year Plan” period, there were 119 major tourism projects in Xishuangbanna Prefecture (newly-established and under-construction tourism projects), with a total planned investment of 163.839 billion yuan and a planned completion investment of 49.039 billion yuan.

4. Resident Perception and Attitudes

4.1 Sample Information of Respondent Residents

The resident questionnaires were mainly distributed in Xishuangbanna Dai Park, Jinuo Mountain Village, Mengjinglai and surrounding areas. Besides that, the questionnaires were also distributed among Nannuo Mountain and Banpo Village where tourism development remained at a relatively low level. A total of 300 questionnaires were distributed and 297 valid ones were collected,

reaching a valid rate of 99%. The sampling methods are random sampling and convenience sampling.

4.2 Residents' understanding of sustainable tourism development

Regarding the understanding of "sustainable tourism development", the questionnaires mainly consist of short answer questions, which is conducive for residents to express their personal views. In the actual survey, a total of 53 respondents provided answers, and the remaining 244 mostly expressed no opinion or "unclear" or "unknown."

4.3 Status quo of residents participating tourism

Respondent residents have relatively high degree of tourism participation, but the participation degree presents significant differentiation. Residents living nearby the scenic areas (spots) are more likely to participate in tourism, such as providing explanation services, performing folk songs and dances as actors, selling local specialty products, and operating agritainment.

4.4 Residents' willingness of participation

According to the statistics, most residents support the development of local tourism and welcome more tourists. They are willing to communicate with tourists and to recommend relatives and friends to visit Xishuangbanna. Residents have high willingness to provide advice for the development of local tourism, but their initiative should be further encouraged.

4.5 Residents' perception of impacts of tourism development

Residents' overall perception of the impacts of tourism development are mainly reflected through their agreements with the following seven statements, specifically: "Xishuangbanna is a domestic popular tourism destination"; "Xishuangbanna has good tourism resources"; "Xishuangbanna has convenient transportation"; "Xishuangbanna has adequate infrastructure for further tourism development"; "Tourism is beneficial to the overall development of Xishuangbanna"; "The arrival of tourists has injected vitality for the development of Xishuangbanna"; and "The

introduction of tourism-related manpower, capital and the like contributes to the overall development of the region”.

5. Tourist Behavior and Satisfaction

5.1 Sample information of respondent tourists

The questionnaires are mainly designed to examine tourists' perception and satisfaction. The investigation team conducted a convenient sampling of tourists in major scenic spots in Xishuangbanna, including the Dai Park, the Jinuo Mountain Village, Mohan Port, Gaozhuangxishuangjing, Manting Park, Mengjinglai, Hani Culture Park, and Banpo Old Village, etc. A total of 470 questionnaires were distributed, 426 valid ones were collected, reaching a valid rate of 90.6%. Judging from the composition of the tourist sources of the respondents, tourists from Yunnan Province account for largest proportion; followed by tourists from Sichuan Province and Chongqing City; and tourists from Hubei Province, Jiangsu and Zhejiang Provinces are also plentiful.

5.2 Tourist behavior analysis

In terms of tourists' access to information, online channels and introduction through relatives and friends are the most important ways for tourists to obtain information, followed by information obtained through travel agency brochures, television broadcasting, and newspapers and magazines.

In terms of tourists' travel type, self-help travel is the main form of tourism for Xishuangbanna tourists, followed by group tour with friends or family members, personal travel in groups, and travel organized by units or companies. The smallest proportion is the conference tourism.

In terms of tourism motivation, “leisure and relaxation” is one of the main purposes of Xishuangbanna tourism; followed by “understanding food and enjoying culture”, “enjoying a good climate”, “education or learning knowledge”. The proportions of “visiting friends and relatives”, “adventure” and “business”, are relatively low, all below 10%.

In terms of tourism transportation, airplane is the major transportation choice, followed by long-distance buses, self-driving cars and trains.

In terms of types of accommodation, nearly half of the Xishuangbanna tourists will stay for 2-4 days or medium-to-long term, and less than 2% of the tourists were on one-day trips. The star hotel is the major accommodation type, followed by family hotels and youth hostels.

5.3 Tourists' recognition of Xishuangbanna

5.3.1 Tourists' recognition of tourism resources

①Tourists are highly satisfied with the characteristics of tourism resources in Xishuangbanna, but are less satisfied with the climate and environment; ②Tourists have a higher degree of satisfaction with the overall image of Xishuangbanna, of which the satisfaction with the local air quality is highest, followed by the tourism value of Xishuangbanna. Satisfaction with local river water quality and noise pollution is relatively low; ③Tourists have a relatively neutral attitude towards the overall score of infrastructure in Xishuangbanna. Tourists are most satisfied with urban greening effect, while least satisfied with the overall hygiene condition, public transport, public toilets and rest facilities, among which, public transport and public toilet issues stand out; ④ Respondent tourists are neutral about the safety and health conditions of Xishuangbanna, but the evaluation was relatively low. In addition, only about half of the tourists are satisfied with the local medical equipment.

5.3.2 Tourists' recognition of tourism services

On the whole, tourists' level of understanding of tourism services is at a medium level. Tourist are only relatively satisfied with catering services, information and compliant services.

①In terms of services in scenic spots, tourists are most satisfied with the explanation of scenic area guides, and least satisfied with the tickets; ②in terms of catering services, tourists are most satisfied with "taste, variety and characteristics of the catering"; ③in terms of transportation services, tourists are least satisfied with the comfort and convenience level of transportation; ④In terms of

accommodation services, tourists had the highest satisfaction with staff's service attitudes, followed by the convenience to check in and comfort of hotels or inns. In addition, most tourists think that the accommodation price is appropriate, and the accommodation facilities are safe and hygienic. ⑤In terms of shopping experience, tourists are most satisfied with the characteristics of the product. Contrarily, tourists are bothered by the inappropriate pricing of products, the shopping environment and market order; ⑥In terms of entertainment services, tourists are most satisfied with the safety of the entertainment facilities or projects, while least satisfied with reasonableness of the pricing of these entertainment projects; ⑦in terms of consultation and complaint services, tourists are most satisfied with “the attitude of providing consulting services” and “the convenience of accessing tourist information”.

5.4 Tourists' overall evaluation of Xishuangbanna tourism

Overall, the overwhelming majority of tourists are satisfied with their visits to Xishuangbanna, which reflects the high degree of tourists' recognition for Xishuangbanna. Most tourists think that it meets their expectations, and few tourists think that it does not live up to their expectation.

5.5 Tourists' willingness to revisit or recommend

In general, tourists have a high willingness to revisit and recommend, and the willingness has increased compared to last year. On the one hand, this phenomenon may be due to the errors caused by sampling. On the other hand, it reflects the potential crisis of tourism development and needs attention in the future work.

5.6 Tourists' suggestions for Xishuangbanna tourism development

This questionnaire sets subjective questions for tourists to fill out areas where they think Xishuangbanna tourism development needs improvement, mainly including the following aspects:

(1) Infrastructure: Mainly refers to traffic and travel toilets. Nearly half of the tourists provided suggestions on the development of transportation, such as the convenience degree, transportation

type and traffic volume. Several tourists also pointed out that the number of toilets is not enough and the environment is poor.

(2) Ethnic characteristics: Ethnic characteristics are not clear enough. Attractions and performances should pay more attention to characteristics and diversity.

(3) Price and Transparency: Ticket prices are high, and the price of services is not transparent enough. Tourists' opinions mainly focus on tickets and guides. Some tourists also point out that the price of transportation is not transparent.

(4) Urban hygiene environmental: Urban hygiene environmental mainly refers to the overall appearance of the city, among which, opinions mainly concentrate on catering and travel toilets.

(5) Service attitude and service quality: such opinions mainly concentrate on the tour guides. Many tourists reflect that the quality of tour guides and their services is poor.

(6) Publicity: The popularity of the scenic spot is relatively low, and people have limited online access to the information of the scenic areas.

Compared with 2016, tourists' opinions still mainly concentrate on transportation and environmental sanitation. What is noteworthy is that compared with 2016, tourists put forward more opinions on ethnic characteristics as well as the characteristics and diversification of the performances held in scenic areas.

6. Conclusions and Suggestions

(1) The effect of tourism market rectification is significant, and the market becomes more standardized

The healthy development of the tourism industry is of great significance to economy growth of Xishuangbanna Prefecture. After years of development, Xishuangbanna relies on its own resources which have become its distinctive tourism characteristics and attracts a large number of tourists. However, with the development of tourism, the tourism market issues started to surface. On March

27, 2017, the Yunnan Provincial Government issued the "Measures for the Improvement of the Tourism Market Order in Yunnan Province" to rectify outstanding problems in the tourism market and further standardize the tourism market order. However, inferred from the feedback of tourists, "price transparency" and "guide issues" are still the significant issue, and the chaos in the tourism market needs further improvement.

(2) Tourism products are in replacement period and tourists have higher requirements for the market

At present, the youth market and self-help travel market gradually take the dominant position in domestic tourism, which calls for replacement and transformation of the current tourism structure and tourism products. Besides that, the border tourism market is also growing rapidly. As the Xishuangbanna tourism is under rapid development, tourists put forward higher requirements. Local accommodation, catering, scenic area services, transportation, and medical services are facing new challenges. Tourism products and their quality require further enhancement. The key focus is the upgrading and enhancement of supporting facilities and services.

(3) Promote the sustainable tourism development and focus on the protection of ecological resources

The continuous influx of tourists puts forward higher requirements for the coordinated development of local tourism and resource protection. In terms of tourism, Xishuangbanna explores and develops forest-based leisure tourism products, such as forest ecological tours, forest adventure tours, forest science investigation tours, and river exploration tourism, and strengthens the low-carbonization transformation of scenic spots, in an attempt to realize the development mode of "energy saving, environmental protection, cycle, sustainable development". For the development model. With the active promotion of forest ecotourism, great importance is attached by government to the sustainable development of land utilization.

(4) Tourism infrastructure needs to be improved, with the emphasis on improving the comfort and convenience of internal transportation

In terms of external traffic, most of the tourists choose to fly to Xishuangbanna, which provides a large market for the development of aviation in Xishuangbanna. However, the infrastructure survey results show that tourists have the lowest satisfaction with public transport and public toilets. The planning and effective management of traffic is a major problem that needs special attention. Internal traffic remains to be improved. Traffic construction is still the focus of tourism development of Xishuangbanna. Xishuangbanna should not only increase investment in transportation construction, but also should strengthen the connection and interaction between different scenic spots.

(5) The willingness of residents to participate in tourism is high, but the awareness of participation and sustainable development still needs to be improved

Compared with 2016, local residents have increased their support for the development of tourism, but overall, residents' participation capability and participation levels are still at a relatively low level. In terms of tourism impacts, the negative impact perceived by residents is declining. While further developing the tourism industry, it is also necessary to take into account the protection of the environment and resources as well as the coordinated development of the economy, resources, and the environment. In terms of awareness of sustainable development, some residents have a deeper understanding of the concept of sustainable development, but the level of understanding remains at a low level. In the long run, residents' ability to participate in tourism needs to be improved and promoting the education of residents needs to be taken into consideration for long-term development.

(6) Further enhance the overall image of tourism, strengthen online marketing, and promote popularity

Xishuangbanna is becoming a mature and popular tourist destination in China. Its popularity should be further promoted nationwide. Nowadays, the Internet has become the most important and most convenient way to obtain information. Network marketing is particularly important, and it is of great significance to the dissemination of Xishuangbanna's destination image.

(7) The rise in house prices tends to be stable and the land use is reasonably regulated

The proportion of forest land, farm land and grassland fluctuates little, with the proportion of forest land showing an upward trend. With the development of urbanization, the construction land around Jinghong City has shown an upward trend, but the increase is small. The total area of water body, construction land and unused land is small. With the rapid development of tourism and investment construction projects along with tourism real estate, the total area and investment have increased significantly.

7. Special Topic 1: Dai Nationality Villages and Tourism

Development

7.1. Research process

This report mainly investigates the following 4 villages, specifically: Dai Park, Mengjinglai Village, Mandan Village, and Shanggang Village. The investigation was conducted from July 17 to July 23, 2017. The research method is a combination of questionnaires and interviews. The research content includes the general situation of the community, the impact of tourism on the community economy and culture, community participation in tourism, and the impact of tourism on the community environment.

7.2. Tourism and economic development

Table of tourism development conditions of each village

village	stage	Development mode	Development level	Outstanding issues
Dai Park	Mature operation	firm + farmer	Relatively great development, replacing most traditional agriculture	Profit distribution; challenge of commercialization
Mengjin glai	Mature operation	Village + enterprise +	Relatively great development, replacing	Profit distribution; traditional protection

		farmer	most traditional agriculture	
Mandan Village	Early development	Farmer	Slight development, replacing some traditional agriculture	Ecological issue; promotion channels
Shangga ng Village	Cultivation of operation awareness	Government + farmer	Slight development, exploring under the instructions of government	Development strategy

The development degree of tourism in each village from high to low is: Dai Park, Mengjinglai, Mandan Village and Shanggang Village. Tourism development has brought direct economic income to the villagers, including land rent, wages, and ticket bonuses. In 2016, the average income per person of the Dai Park was 14,300 yuan/year, and that of Mengjinglai was 15,790 yuan/year. Tourism provides a large number of employment opportunities for local residents. 90% of grassroots employees in the Dai Park are local residents, and 76% in Mengjinglai. Tourism attracts migrants to the two villages. In 2017, Mengjinglai has taken strict measures to prohibit migrants from entering the business. There is no substantial tourism development in the Mandan Village and Shanggang Village. The economic development of the two villages is basically not affected by tourism.

7.3. Tourism and cultural changes

The four villages show the following characteristics in the cultural changes:

- (1) Scientific planning and development, and government enhances the planning and protection of the village;
- (2) Protect culture and inherit traditions, and the scenic spots make full use of ethnic resources and culture;

(3) National characteristics are affected by modernization; modernization of building forms and material; modernization of daily necessities; modernization of dressing; and street commercialization;

(4) Economic develops but education lags behind, and lack of high-quality talents in cultural heritage.

7.4. Tourism community participation

(1) forms of tourism participation: Dai Park is "company + farmer", Mengjinglai is "village + enterprise + farmer";

(2) Conflicts between stakeholders: there are basically no obvious conflicts between residents, government, and tourists. There is a contradiction in the profit distribution between residents and companies.

(3) The tourism development in Shanggang Village and Mandan Village are both at the transition period from the exploration phase to the participation phase. At present, the exploration and participation in tourism remain insufficient. Both villages hope to participate and develop tourism under the instructions of the government or non-local big companies.

7.5. Tourism and environment

(1) Overcrowding of tourists: There are peaks in both scenic spots of the Dai Park and Mengjinglai during the holidays, but both within the capacity range and thus there is no overcrowding of tourists.

(2) The environmental protection measures in the Dai area mainly include three aspects: greening protection, waste disposal, and sewage treatment.

(3) There are no obvious ecological problems in Dai Park and Mengjinglai, due to the effective instruction and management of the companies. However, the main income sources of Mandan Village and Shanggang Village are rubber cutting. Planting of rubber will to a certain extent damage

the original ecosystem, and fertilizers and pesticides will also pollute the water and soil to some extent.

8. Special Topic 2: Jinuo Nationality Village and Tourism

Development

In this study, the Jinuo ethnic group was selected as the research object, and four typical villages were examined. Four villages were investigated from four aspects: the impacts of tourism development on economy, society, cultural changes, and resources environment of the ethnic minority areas. The basic situations are illustrated in the following table:

Overview of basic conditions of four jinuo nationality villages

Village	Village committee	Population	Village image	Tourism development conditions
Bapo Village	Baya Village Committee	328	Good hygienic conditions; roads have been hardened; construction style tends to unification; ethnic characteristic prominent	Semi-developed
Bapiao Village	Xinsitu Village Committee	Around 290	Good hygienic conditions; roads have been hardened; construction style tends to unification; ethnic characteristic prominent	To be developed
Baya New Village	Baya Village Committee	544	Poor hygienic conditions; roads have not been hardened; construction style are not unified; ethnic characteristic not prominent	undeveloped
Baduo Village	Xinsitu Village Committee	381	Good hygienic conditions; roads have not been hardened; construction style are not unified; ethnic characteristic not prominent	To be developed

The survey found that tourism development promotes multiple employment and multi-model entrepreneurship, but the scope of radiation is still limited and the future has great potential. Tourism is a flexible employment industry, and has significant contribution in promoting employment. The

development of the Jinuo Mountain Village has enriched the employment types and entrepreneur model of local residents, diversifying the income sources of local residents and ensuring the quality of life. However, as far as the current level of tourism development in Jinuo Township is concerned, the scope of its radiation is still limited, but the potential for tourism to promote the economy in the future is enormous and remains to be explored.

In terms of society, tourism development has led to tight supply of resources, an increase in the gap between the rich and the poor, and the growing contradiction between business and the community. With the continuous influx of tourists, the indispensable public resources such as water resources and road traffic have become increasingly tense and even affects daily life. Two major issues are the enlarging gap between the rich and the poor caused by the limited radiation of tourism, and the conflicts between the residents and the company due to the unfair treatment.

In terms of cultural changes, it is hard to balance between ethnic traditional cultures and tourism development. Tourism development in ethnic minority areas is more about excavation of culture. However, when the culture associate with tourism, on the one hand, the culture was consolidated and publicized; on the other hand, due to excessive pursuit of performance effects and commercial effects, the traditional culture was distorted. Therefore, in the process of tourism development of ethnic traditional culture, the owner of the culture should conduct good supervision and set an example.

In terms of resources and environment, tourism development cannot be realized at the expense of the environment. Tourism development will improve the hardware facilities of tourism destinations, making the tourism environment neater and standardized to attract more tourists. However, with the development of tourism, tourists will inevitably produce more daily garbage, domestic sewage, noise and construction waste and other pollution. The painful lessons of economic development at the expense of environmental pollution must not be repeated.

In short, tourism development is a double-edged sword in terms of economic, social, cultural, and environmental aspects for a region. Therefore, it is imperative to explore appropriately, conduct real-time monitoring, conduct timely remedy, which can thus lead to the comprehensive

development of the region. This is the significance of monitoring of sustainable tourism development.

9. Special Topic 3: Tea Industry Tourism of Nannuo Mountain

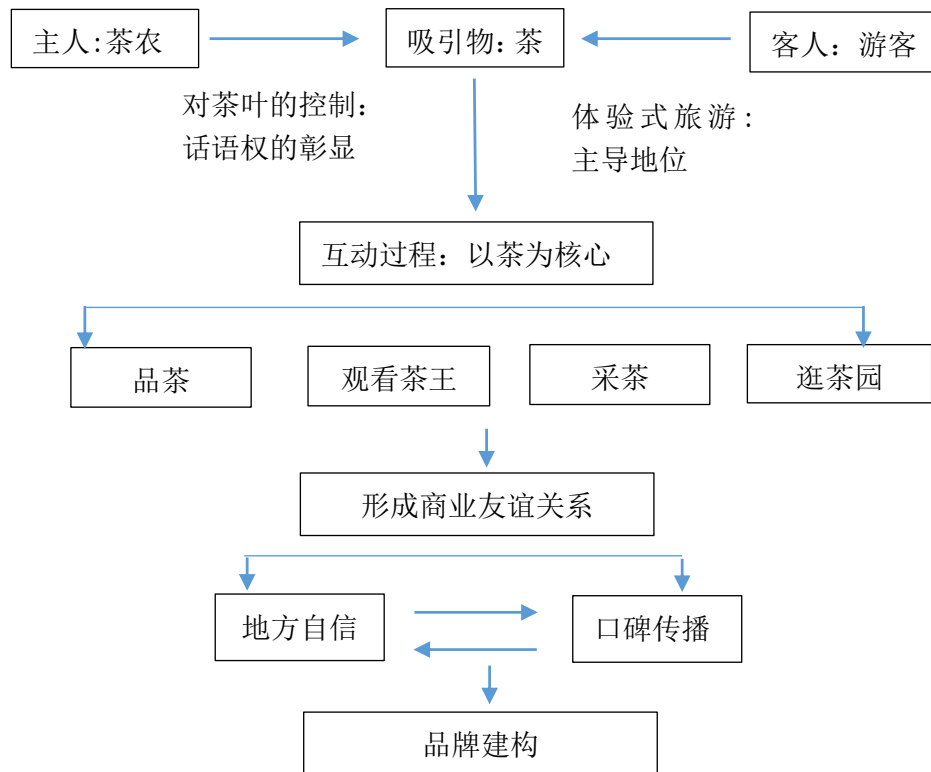
9.1. Monitoring issues

to Nannuo Mountain, the “tea culture” associated with “tea” has long penetrated and integrated into all aspects of the local people’s lives, and has intangibly promoted a strong sense of pride in its unique tea. Under the development of tea industry and tourism, how does tea farmers and tourists interact? What relationship has formed in years of interaction? Does the interaction between tea farmers and tourists lead to “admiring culture” for tourists, and thus form or enhance the brand image of the tea of Nannuo Mountain?

9.2. Research Method

This research is mainly conducted in the form of field research, and the data collection is mainly conducted in the form of semi-structured interviews. The research was mainly conducted in Banpo Old Village, Nannuo Mountain, Jinghong City of Yunnan Province. The research was conducted from July 17 to 24, 2017. The survey objects are mainly Banpo Old Village residents and tourists.

9.3. Research findings



(Owners: tea farmers → attraction: tea ← guests: tourists)

Control over tea: discourse power; experience tourism: dominant position

Interaction process: center about tea

Taste tea; admire tea; pluck tea; visit tea garden

Establish friendly commercial relationship

Local confidence; word-of-mouth promotion

Brand building)

9.4. conclusions and suggestions

On the whole, the tea industry and tea culture tourism of Nannuo Mountain are currently in a stage of steady development. The government's policy support, environmental protection facilities, and infrastructure construction have played an active role in the development of Nannuo Mountain. The number of tourists visiting Nannuo Mountain have steadily increased. As the interactions between tea farmers and tourists increase, their interaction is centered on tea. Tea farmers have the discourse power, but the tourists occupy a dominant position. Tea farmers and tourists establish friendship. Tea farmers and tourists of different educational levels have different interactions. Local residents with local self-confidence will have a profound impact on foreign tourists, help shaping the image of the tea brand of Nannuo Mountain. In addition, these residents will have positive word-of-mouth effects, promoting the brand building of Nannuo Mountain.

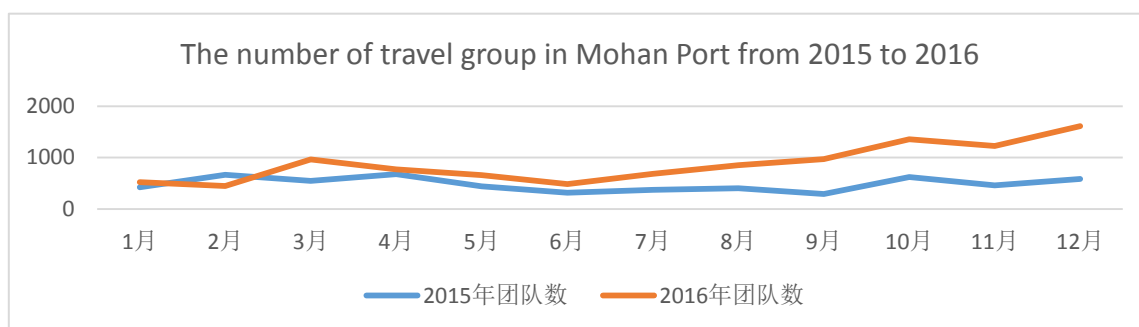
Adhere to the tourism development mode where tea farmers acting as the major participant; let tea farmers play their role and protect the environment of tea mountain; enhance industrial competitiveness, strengthen training of tea farmers; enhance tourist experience, enrich tourism experience products; highlight brand characteristics, strengthen management strategies.

10. Special Topic 4: Research on Border Tourism of Mohan Port

10.1. Development trend of border tourism groups

On the whole, the number of tourists traveling in groups to Mohan Port border tourism continued to increase. In 2016, tourism revenue reached 4,047,511,000 yuan, an increase of 13.91% over the same period of last year. In terms of tourism revenue, it has continued to grow steadily, but the growth rate has slowed down, showing little fluctuation. In 2016, the number of group tourists accounted for 6.5% of the total number of cross-border departures and arrivals. In the first half of 2017, it accounted for 10.186%, a year-on-year increase of 286%. Although the border group tourism was affected by the Yunnan provincial government's tourism market correction in April 2017, the related tourism policies were tightened, and the number of people for border tourism quickly

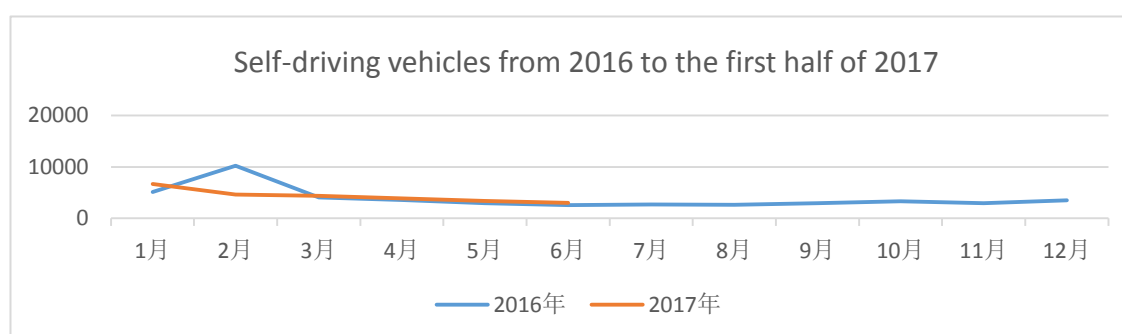
declined. The growth rate in the first half of the year actually showed a significant downward trend, but the number of tourists still remains to grow significantly.



(Statistic data: Sports, Broadcasting and Television Tourism Bureau of Mohan Economic Development Zone)

10.2. Development trend of self-driving border tourism

In 2016, the number of cross-bounder self-driving vehicles at the Mohan Port was 46,485, which was 12.4% of the total number of vehicles that had crossed the border for the year. The number of self-driving tourists was 428,200, which accounted for 16.06% of the number of people crossing the border. In the first half of 2017 (January to June), the number of Type B vehicles crossing the border was 25,817, accounting for 13.45% of the total number of vehicles, and the number of self-driving tourists accounted for 12.91%. Since the self-driving policy of Thailand was restricted, self-driving tourists began to decline in the second half of last year. The data showed that the tourist volume during the National Day was less than 5,000. The period 1 to 2 months before and after the Spring Festival holiday was a remarkable tourism peak, and there was a significant decline in March. It was still difficult to bounce back until the Spring Festival of 2017.



(Data source: Vehicle Management Office of Mohan Economic Development Zone)

In 2017, although the growth rate of the development of border tourism in Mohan was slowing down, the overall size and number of the group tourists and self-driving tourists both increased. Among them, the proportion of self-driving travel was still larger than the proportion of group travel in border tourism industry. Cross-border self-driving tourism is greatly affected by cross-regional policies and cross-border environment, and there is a vast space for cross-border tourism cooperation. Cross-bounder self-driving tourism is bound to become an important tourism type that would promote transnational cooperation and exchange.

Therefore, it is urgent that Mohan should establish a clear image of tourist destinations, to become a border tourism destination, and to focus on creating a domestic product system. In the light of that, Mohan intends to help tourists gradually develop an idea that “we should travel to and consume in Mohan”, and therefore cross-border comprehensive services should also be paid great attention to. On the one hand, Mohan intends to become a border tourism town as well as a tourist destination with a domestic port. On the other hand, it also wishes to become a comprehensive service hub for cross-border tourism, which can not only help retaining tourists but also can appropriately divert tourists.

11.Special Topic 5: Research on Tourism Real Estate Development

11.1. Research background

Xishuangbanna has become a hot spot for tourism real estate investment. There are more and more non-local people coming to Xishuangbanna for career or vacation, and thus a second home is become a common phenomenon. The development of the second home is worth paying attention to.

The property market in Xishuangbanna has taken off in the past half year and the case of Yajieju Xishuanglinyu is a typical example. The property market is under steady development. Compared with last year, the average selling price has a great increase rate, and sales are very hot.

11.2. Characteristics of second home vacation people

For second-home owners, climate is the main reason why they choose to buy a house in Xishuangbanna. Compared with their major residence, Xishuangbanna has good weather and climate, which is not only beneficial to physical health, but also good for various leisure and holiday activities.

11.3. Climate resources of Xishuangbanna

Xishuangbanna's overall climate in winter is very pleasant and comfortable (see Figure 1), enabling people to escape from freezing cold. Such climate shows monopoly characteristics (see Figure 2). It is expected to become the second largest winter resort following Sanya of Hainan Province.

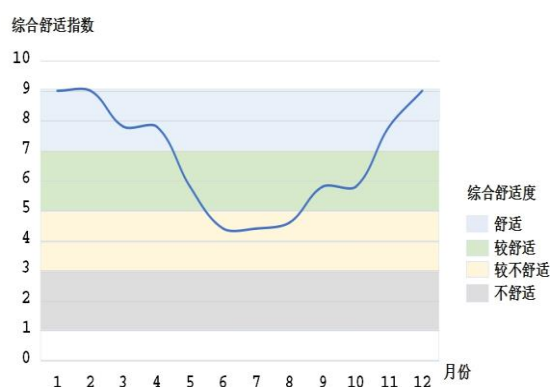


Figure 1. Comfort index of each month in Xishuangbanna

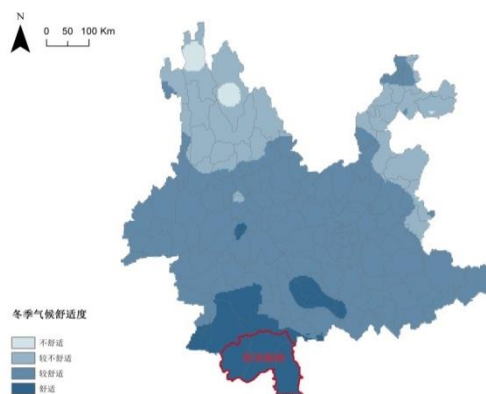


Figure 2. Spatial distribution of comfort degree of winter climate in Xishuangbanna

The second-home owners mainly come from cities or regions where winter is cold and foggy. The majority of the purchasing group are middle-aged and old people with certain economic strength, and most of them tend to purchase a house for rehabilitation. In general, second-home owners show the characteristics of infrequent visit, long length of stay and seasonality.

11.4. Conclusion and suggestions

Xishuangbanna has unique climate resource, attracting many vacationers with the needs to avoid cold, and the phenomenon of second home resort gradually becomes more and more popular. The potential for tourism real estate development is huge. Especially under the influence of the “One Belt One Road” Policy, the construction of the Trans-Asian Railway has brought even larger markets, and the external traffic of Xishuangbanna will be improved. In the light of that, the future of the real estate market is prosperous. The local tourism real estate development attaches great importance to the combination of “tourism + recreation”, not only planning products based on local tourism characteristics, but also emphasizing creating a “slow-paced” living atmosphere.

According to the survey, the majority of the second-home owners are middle-aged and elderly people, and they have strong willingness to retire in a different place. With the advent of an aging society, retirement property development is the future trend. However, the infrastructure of Xishuangbanna is yet to be improved, including medical care and public transportation. Only when the infrastructure be improved can the demands of the second-home owners be satisfied.

2017 Monitoring Report on the Sustainable Tourism Development of Changshu

Monitoring Centre for UNWTO Sustainable Tourism Observatories

People's Government of Changshu



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Acknowledgement:

People's Government of Changshu, Changshu Municipal Tourism Bureau, Shajiabang Tourism Resort Area Management Committee, Yushan and Shanghu Tourist Resort Management Committee, Changshu Garment City Management Committee, Urban Historic Sites Management Office, JiangXiang Village Committee.

And all those who helped with the monitoring work.

1. Foreword

From 8th July to 14th July, 2017, according to the index system and operation method recommended by the Ministry of Sustainable Development of the World Tourism Organization, and fully combined with the tourism development situation and actual needs of Changshu Observatory, the Monitoring Centre for UNWTO Sustainable Tourism Observatories (hereinafter referred to as the “MCSTO”) completed the monitoring work of 2017. In October 2017, the monitoring team completed the monitoring analysis and report writing of Changshu observatory.

The monitoring covers the whole Changshu city area. During the period from July 8th to July 14th, 2017, with the strong support and cooperation of the Changshu Tourism Bureau, the monitoring team successfully completed the third field research on the sustainable development of Changshu observatory. The research team consists of a full-time teacher, a doctoral student, four master's degree students and 14 undergraduate observers of the Tourism Development and Planning Research Center of Sun Yat-sen University (School of Tourism Management, Sun Yat-sen University).

A total of 250 questionnaires on local residents' perception of tourism development and their leisure life quality in Changshu City were distributed, and 243 were recovered, with a recovery rate of 97.2%. Among them, 241 were valid questionnaires and the valid rate was 99.2%. A total of 380 questionnaires were sent out for Changshu's foreign tourists on their evaluation of tourism awareness and satisfaction of Changshu City. 373 were returned and the recovery rate was 98.2%; among them, 366 were valid questionnaires and the valid rate is 98.1%. A total of 168 questionnaire surveys were conducted on tourism industry employees' (tourists and employees) perception on the impact of tourism development. 163 were returned, the recovery rate was 97%, and 160 valid questionnaires were available, with a valid rate of 98.2%.

The evaluation index system and analysis framework of this monitoring mainly refer to the World Tourism Organization's “Indicators of Sustainable Development for Tourism Destinations: A Guidebook” and related academic research results.

2. Tourism and Resources, Environmental Protection

(1) **Ambient air quality and atmospheric environmental quality.** In 2016, the content of sulfur dioxide, nitrogen dioxide, carbon monoxide, and ozone in the air of Changshu reached the standard, but the content of two particular matters exceeded the standard, among which the daily compliance rate of PM_{2.5} was 83.89%; the daily compliance rate of PM₁₀ was 95.63%. Therefore, the primary air pollutant in Changshu is fine particulate matter. In the past three years, the content of sulphur dioxide in the air of Changshu has reached the standard, and its primary air pollutant is fine particulate matter, but the content of nitrogen dioxide and ozone have undergone certain changes. Compared with 2014 and 2015, the number of air pollutants in Changshu in 2016 was higher than the standard amount, and the emissions of nitrogen dioxide and ozone were reduced, and the amount of air pollutants was reduced too. Thus, the air quality was improved.

(2) **Water Environment.** In 2016, the water quality in Changshu did not meet the water quality standard of Class III in general, and it is mild pollution. From 2014 to 2016, the permanganate index in the river water of Changshu showed an upward trend. At the same time, the content of ammonia nitrogen and total phosphorus in the water did not change significantly. The surface water quality of Changshu needs to be further improved. The change of permanganate index should be controlled and the content of ammonia nitrogen and total phosphorus in the water should be continuously reduced. From 2012 to 2016, the drinking water quality of Changshu reached the standard of Grade III or above. Despite a slight decrease in water quality in 2013 and 2014, water quality returned to Grade II in 2015 and 2016.

(3) **Acoustic environment.** Main sources of noise in Changshu are: shops, restaurants, cultural and recreational facilities, residents' lives, and vehicles. The average equivalent sound level value of traffic noise in daytime in Changshu was 67.4 dB, which was the first-class standard of road traffic noise, reflecting that the supervision of traffic noise in Changshu was relatively effective. However, compared with the noise intensity from 2011 to 2015, the noise intensity in 2016 is relatively high, and the acoustic environment quality needs to be improved.

(4) **Promotion of environmental protection projects.** From 2011 to 2016, Changshu actively promoted such projects as water environmental renovation, atmospheric pollution control, urban and rural environmental renovation, and the

expansion of green area, achieving remarkable results.

3. Tourism and Community

3.1 Residents' Attitude to Tourism

(1) Residents' perception and evaluation of the impact of tourism economy. The monitoring set up the following seven indicators to measure the residents' assessment and perception of the tourism economic impact, including: 4 positive indicators and 3 negative indicators. Each indicator corresponds to one of the five options like “strongly disagree”, “disagree” and “no effect”. , “Agree” and “strongly agree”. In order to more clearly reflect the residents' attitudes toward various impact indicators, the numbers 1, 2, 3, 4, and 5 are used to indicate “strongly disagree”, “disagree”, “have no opinion”, “agree” and “strongly agree” in turn. It is better to help show the statistics and comparison of the average of residents' attitudes and perceptions. The greater the value is, the higher the recognition (approval) of residents is.

From Figure 3-1, it can be seen that most of the residents affirmed that the tourism industry can have a positive impact on the economy. In particular, among the three indicators of “promoting economic development”, “increasing employment opportunities” and “attracting investment and consumption”, more than 57% of residents scored more than 4 points (meaning “agree” with this indicator), indicating that residents agree with the content of these three indicators. In the indicator of “tourism development can improve living standards”, the degree of recognition of residents is relatively low compared with the other three indicators, with only 46.50% of residents showing recognition. Some residents believe that tourism development may not directly bring economic benefits to them, and that Changshu's main industry is light industry. The development of tourism has nothing to do with their lives. The cognition of these residents is related to Changshu's own industrial structure, residents' employment methods, and the degree of urban economic development. According to Figure 3-2, compared with the positive effects of the previous two years, in 2017, except for the “incentivization of investment and consumption”, the evaluation of other indicators is increasing, especially the indicator of “increase in employment opportunities”. The

recognition of residents to this indicator made the unemployment rate of the residents drop and stabilized the social order.

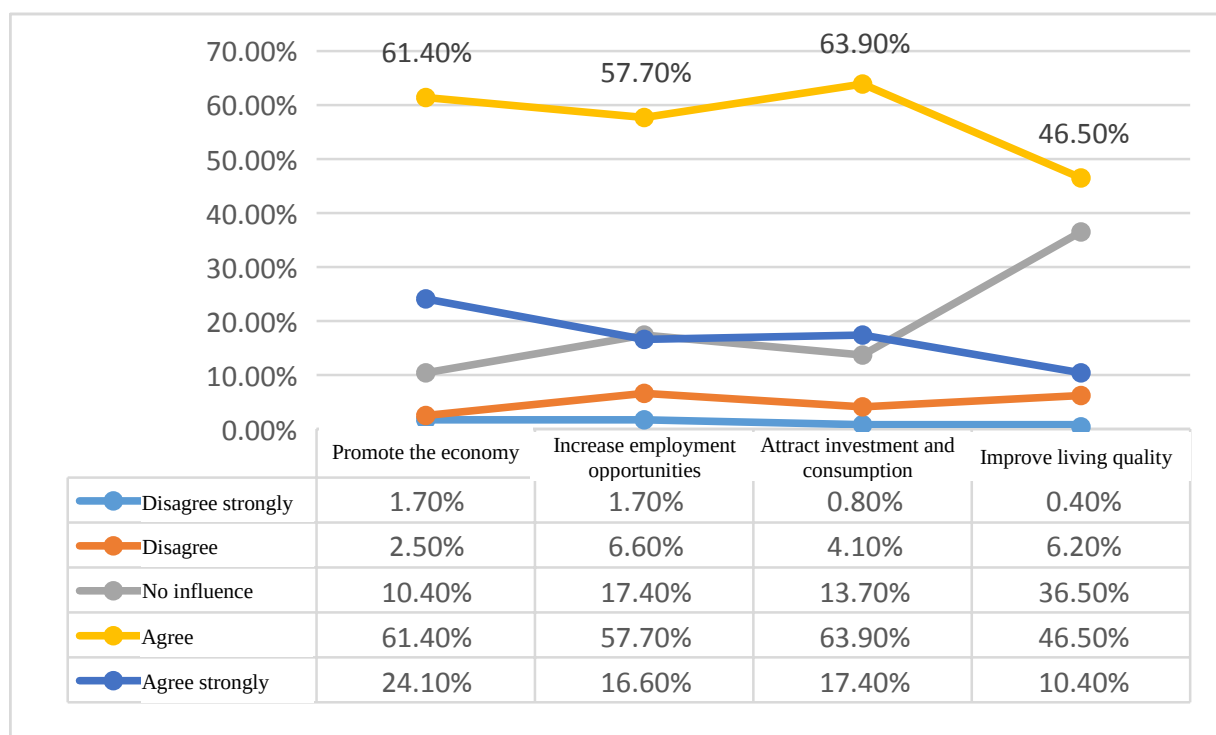
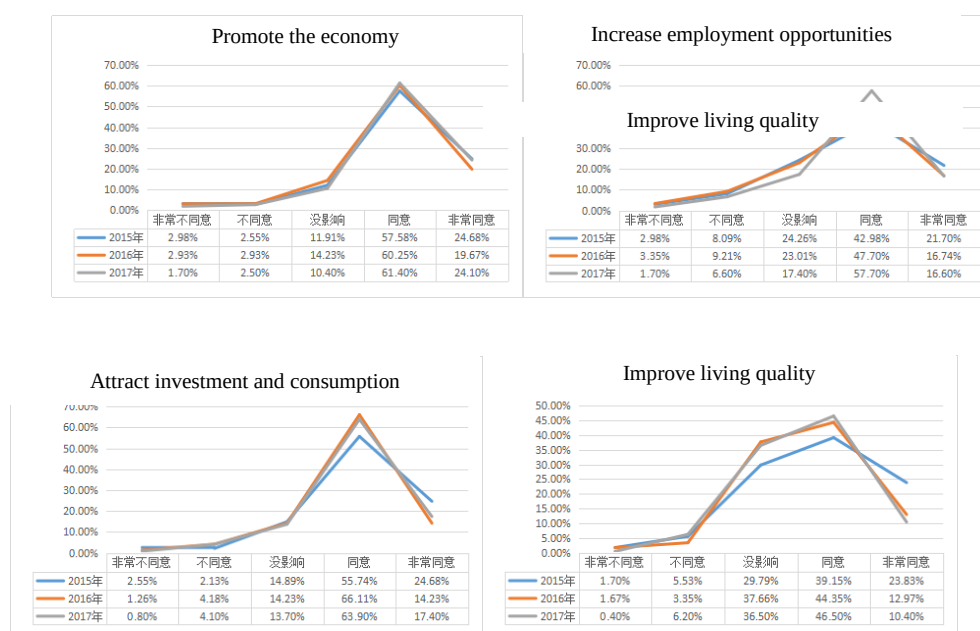


Figure 3-1 Evaluation of Positive Indicators of Tourism Economic Impact



From left to right: Disagree strongly, disagree, no influence, agree, agree strongly

Figure 3-2 Trend Change of Positive Indicators on Tourism Economic Impact from

2015 to 2017

From Figure 3-3, we can see that the negative impact of tourism development on the community can not be ignored. In the evaluation of the indicator that “tourism development benefits only a minority of people”, 40.20% of residents “agreed” and 9.10% of residents “are very much in agreement” with this statement, arguing that only a few people benefit from tourism development and that It has nothing to do with most people; compared with the previous two years, the proportion of residents who expressed “strong agreement” was basically the same. In the indicator that "Tourism Development Increases Local Prices," 37.30% of residents think that there is "no effect" and think that Changshu's prices are inherently high and have nothing to do with tourism, but at the same time, 41.90% of residents said "agree" and 12.00. % of the residents said that they “strongly agree” with the claim that tourism development has indeed increased local prices; and compared with previous years, the proportion of residents who agree with this statement (that “agrees”) has increased, and “strongly agree” has declined first and then increased, it can be seen that the residents' perception of Changshu's rising prices is obvious. In response to the argument that "the development of tourism has increased the gap between the rich and the poor", 44.80% of the residents think that "it has no effect", but 28.20% and 9.10% of residents said that they "agree" and "strongly agree." In 2016, the percentage of residents who agree with this statement has declined, but it has risen significantly in 2017.

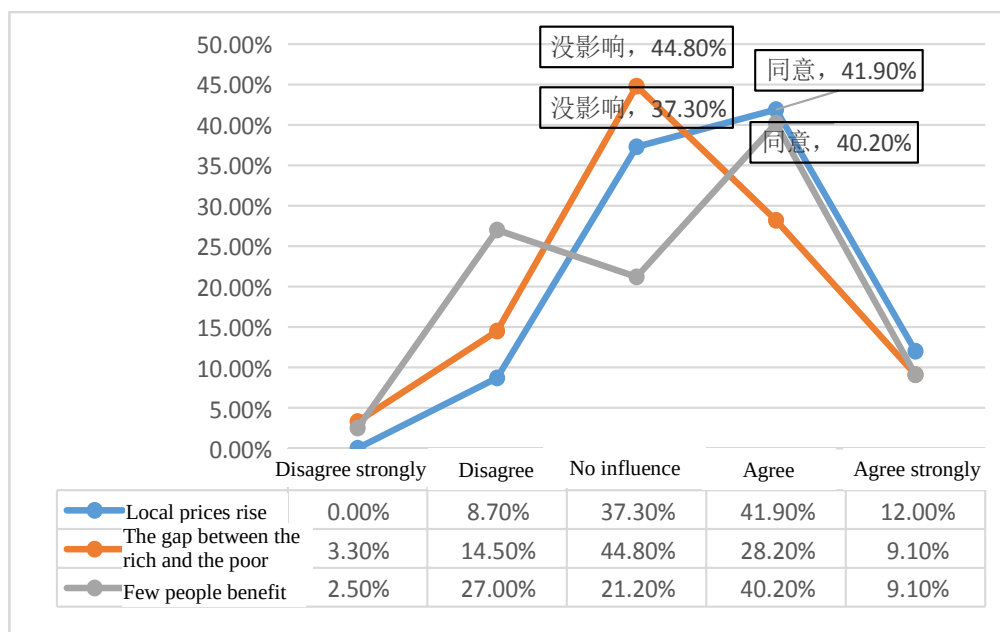


Figure 3-3 Evaluation of negative indicators of tourism economic impact



Disagree strongly, disagree, no influence, agree, agree strongly

Figure 3-4 Trend Changes of Negative Indicators of Tourism Economic Impact from 2015 to 2017

(2) **Residents' perception and evaluation of the social impact of tourism.** This monitoring set the following seven indicators to measure the perception and evaluation of

local residents on the impact of tourism development on the social life environment. Among them, there are four positive indicators, namely, “Improved facilities such as road and hydropower” , “Improved medical conditions” , “Improved education level” , and “Removed old houses, increase in new houses” ; there are 5 negative indicators, namely, "increased traffic congestion", "caused an increase in crime rate," "tourists disturbing the residents' original life," "restricting residents' use of scenic spots resources," and "tensions between residents and tourists."

Residents have a high overall assessment of the positive impact of tourism development on society, which is basically the same as in previous years. Among them, the highest evaluation was “improved facilities such as roads, hydropower, etc.” with an average score of 3.88, followed by “tourism removed old houses and brought in new houses” , with an average score of 3.75, indicating that residents feel agree with the fact that tourism development improves urban facilities and brings in new houses. The average score for “tourism improves local medical conditions” is 3.50, and the average rating for “tourism improve education level” is 3.54, which indicates that residents think that tourism development has no direct impact on these two indicators. From Figure 3-5, it can also be seen that 62.70% of residents believe that tourism development has a positive impact on urban facilities. **Second, 51% of residents agree that “tourism development has promoted the demolition of old houses and the increase of new houses” . According to the statement, although this figure has fallen back compared to 2016, it is on the whole an upward trend. In the past three years, this figure has dropped first and then increased, indicating that tourism development has a positive effect on urban construction.** Among the two indicators of “improve medical conditions” and “improve education level,” more than 41% of residents believe that these two indicators are not directly related to tourism development, and the proportion of these indicators has also improved compared with the previous two years. Residents' assessment of the negative impact of tourism development on the society is basically “no influence” , and the average score of “travel has increased traffic congestion” has reached 3.64, while the remaining five indicators have average scores below 3, indicating that residents in Changshu basically believe that tourism will not have a negative impact on Changshu.

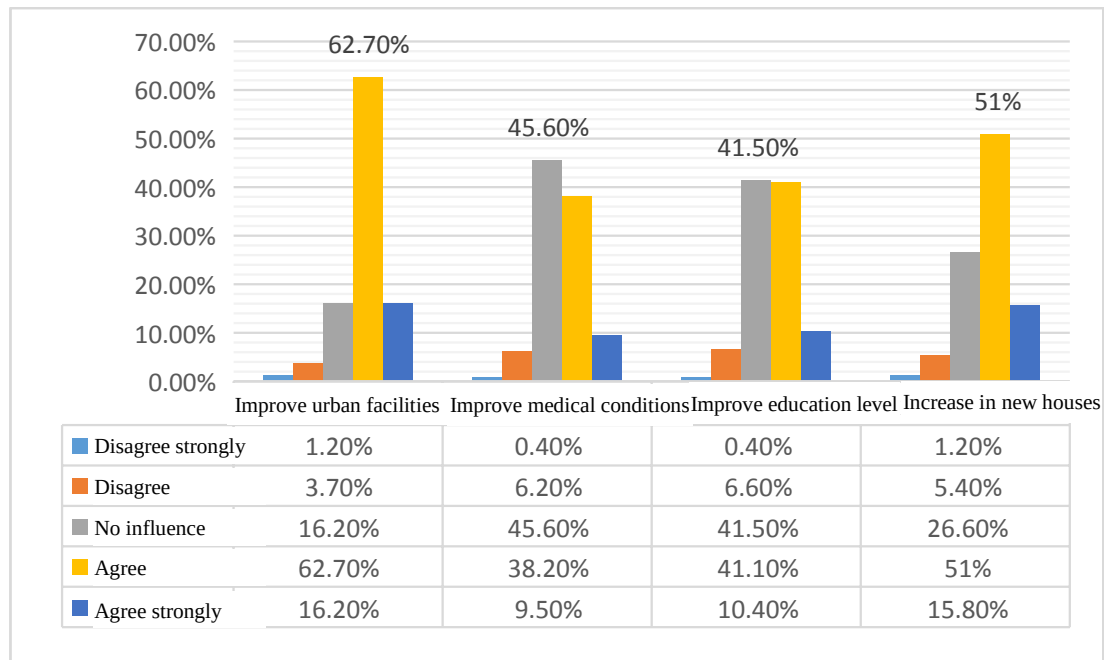
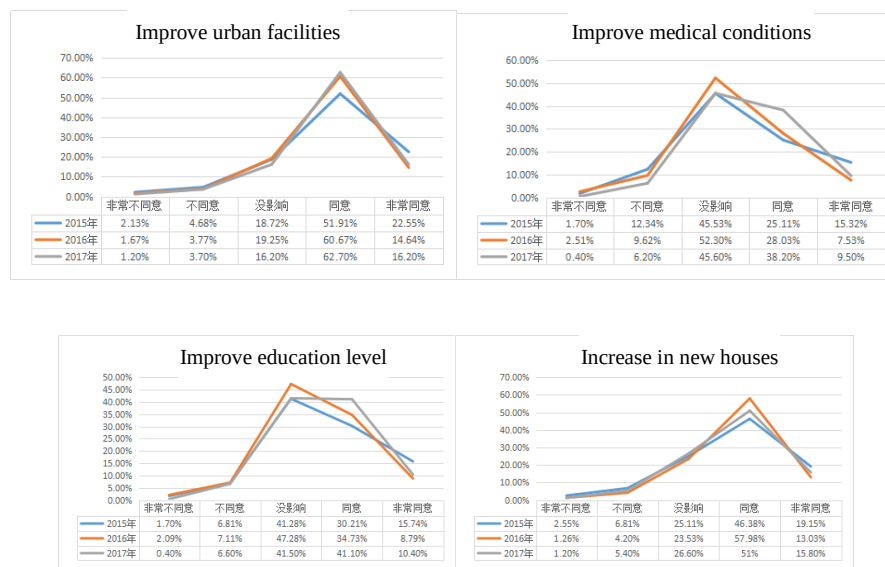


Figure 3-5 Evaluation of Positive Indicators on Social Impact of Tourism



From left to right: Disagree strongly, disagree, no influence, agree, and agree strongly

Figure 3-6 Trend Change of Positive Indicators on Tourism Social Impact from 2015 to 2017

From Figure 3-7, it can be seen that 28.60% of the residents expressed “no effect” on the indicator that “tourism development exacerbates traffic congestion”, while 48.10% of residents also expressed “agreement” on this, this number has increased compared to that of

2015 and 2016. Although Changshu is building a civilized city and traffic is the key to construction, the operation of the public transport system still needs to be strengthened; For the four indicators of “increased crime rates caused by tourism”, “tourism disturbed residents’ previous lives”, “tourism restricted residents’ access to tourist attractions” and “tourism causes tension between residents and tourists”, more than 47% of residents said that tourism had “no influence” on them. Compared with the previous two years, the proportion of people who agreed with this statement (that “had no influence”) was increasing, indicating Changshu has done a good job in following four aspects: public security, residents’ living order, utilization of scenic resources, and host-guest relations.

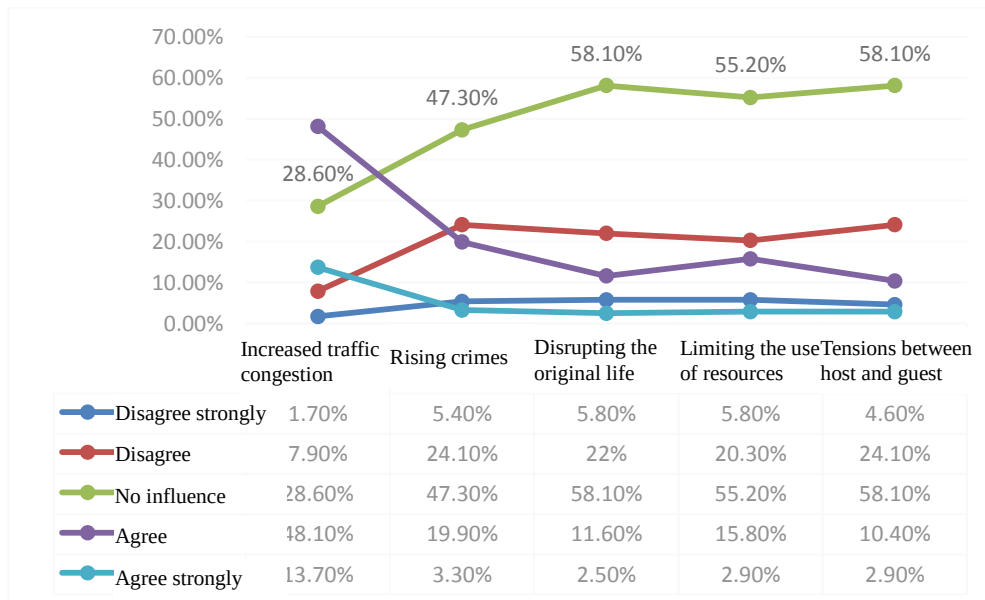
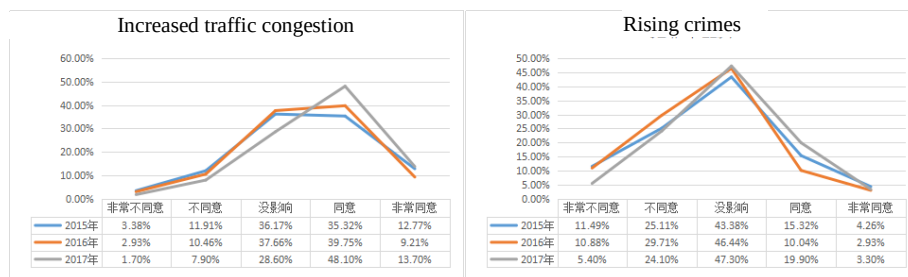
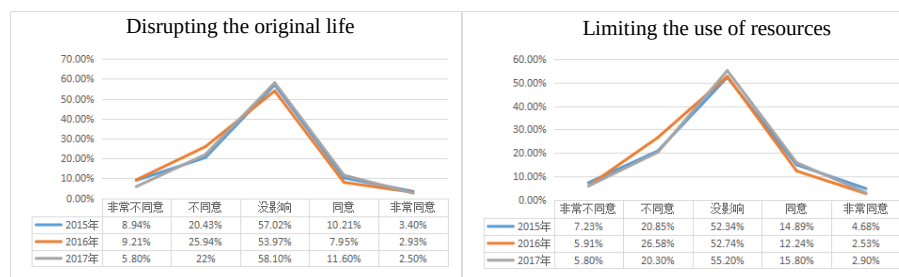


Figure 3-7 Evaluation of negative indicators of tourism’s social influence





From left to right: Disagree strongly, disagree, no influence, agree, agree strongly

Figure 3-8 Trends in Negative Indicators of Tourism Social Impact from 2015 to 2017

(3) **Residents' perception and evaluation of the influence of tourism culture.** The monitoring set the following four indicators to measure the residents' perception and evaluation of the impact of tourism culture. Indicators are divided into positive indicators and negative indicators. There are three positive indicators, namely “tourism promotes local and foreign cultural exchanges”, “bringing festival activities and enriching residents’ lives” and “tourism promotes local handicrafts’ development”; there are one negative indicators, that is , "tourism causes the folk and traditional culture to be forgotten.";

In general, tourism has a positive cultural impact on the community. As shown in Figure 3-9, for the three positive indicators of cultural impact, 70.10%, 61.40% and 61.80% of residents express agreement respectively, indicating that more than 60% of residents expressed “agreement” on that “tourism development has promoted cultural exchanges between local and foreign countries, increased festival activities, enriched residents’ lives, and promoted the development of local handicrafts” . **Compared with previous years, these proportions have been increased to a greater extent, indicating that the role of tourism in community residents' culture is becoming more and more significant.**

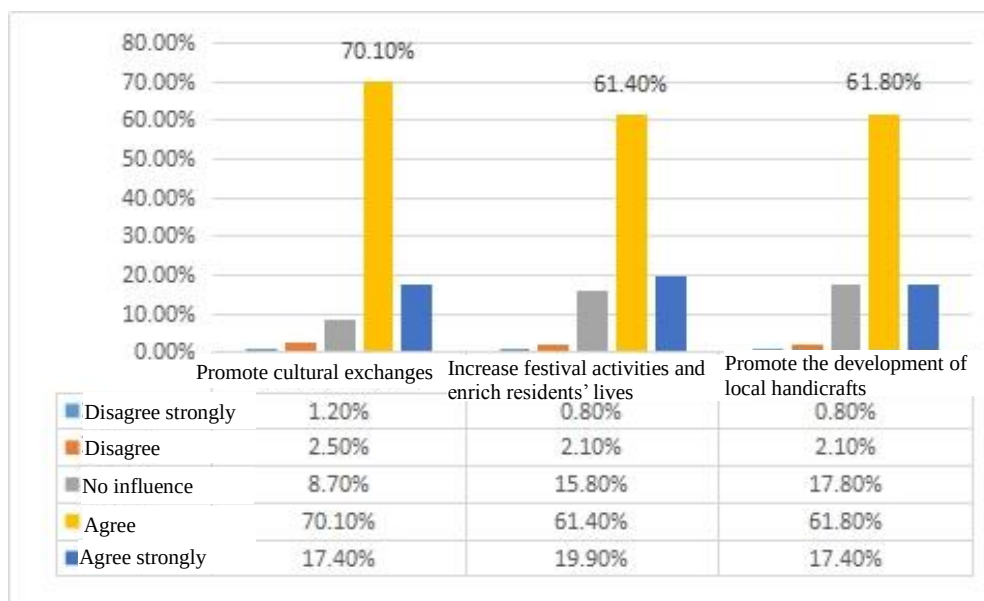
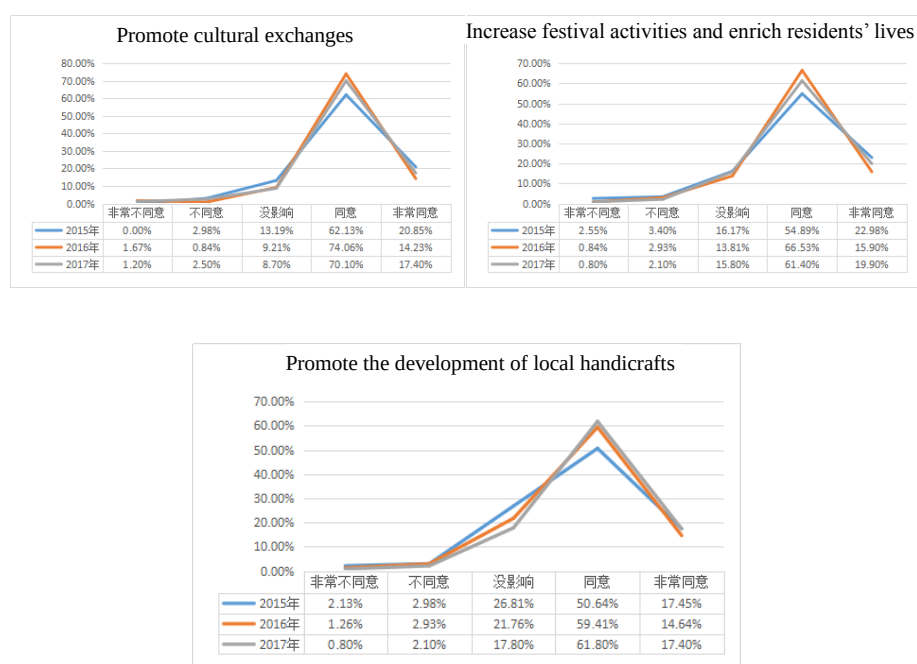


Figure 3-9 Evaluation of Positive Indicators of Tourism Culture Impact



From left to right: Disagree strongly, disagree, no influence, agree, agree strongly

Figure 3-10 Trend Change of Positive Indicators of Tourism Culture Impact from 2015 to 2017

In the evaluation of the negative indicator that “tourism development has caused the destruction of folk and traditional cultures”, 46.90% of residents believe that tourism exerts “no impact” on it and 24.90% of residents expressed “disagreement” on it; compared with previous years, the proportion of “disagree” and “strongly disagree” has been declining. Although the proportion of residents who agree with this statement is still relatively low, compared with 2015 and 2016, the proportion has increased, Changshu should pay attention to strengthening the protection and inheritance of culture.

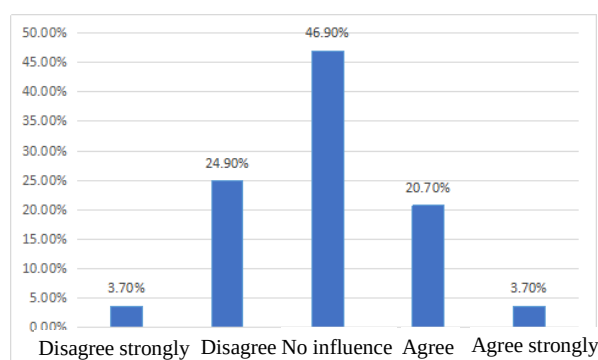


Figure 3-11 Evaluation of negative indicators of tourism’s influence on culture

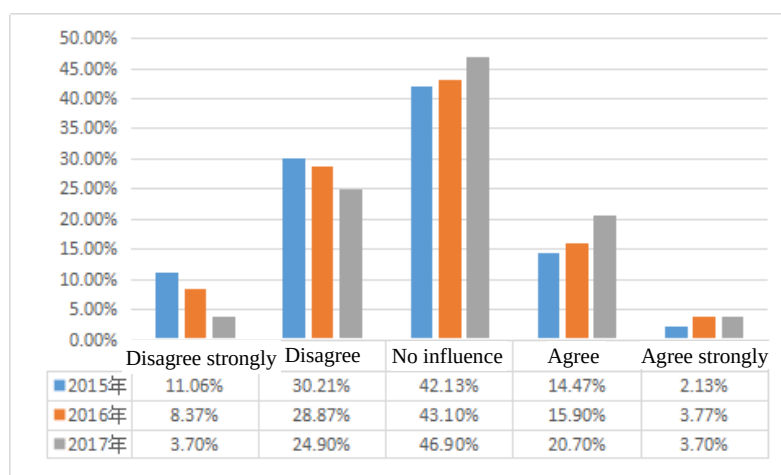
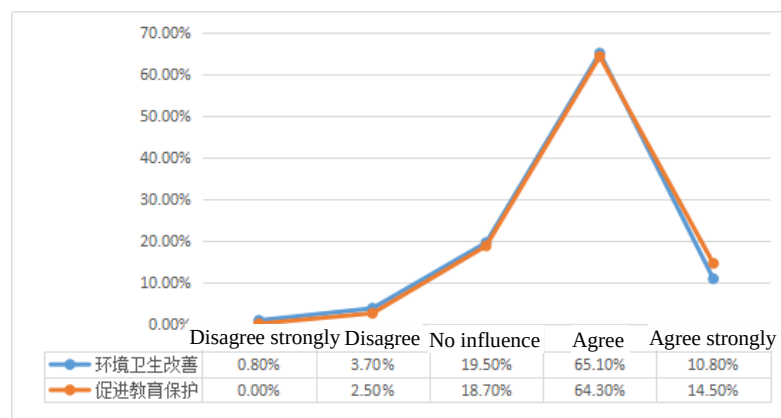


Figure 3-12 Trend of negative indicators of tourism’s influence on culture in the past three years

(4) **Residents' assessment of the impact on the tourism environment.** The monitoring set the following seven indicators to measure the residents' perception and evaluation of tourism’s impact on environment. Indicators are divided into two categories: positive indicators and negative indicators. Among them, there are 2 positive indicators, namely,

“obvious improvement in environmental sanitation conditions” and “enhancement of environmental education and protection of animals and plants” ; five negative indicators are “exhausted local people’s needed resources like fishes and water”, "brought air pollution", "increased noise pollution", "increased water pollution" and "increased waste."

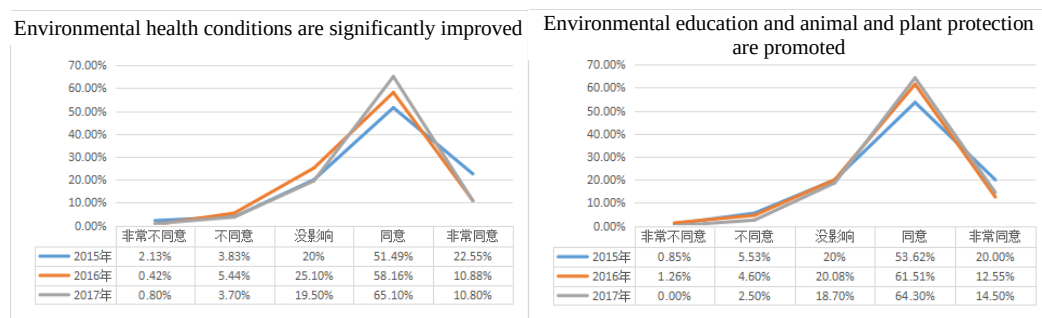
Of the two indicators that "travel has a positive impact on the environment," more than 64% of residents agree. As shown in Figure 3-13, the residents have basically the same evaluation of the two positive indicators of "environmental health conditions are significantly improved" and "environmental education and animal and plant protection are promoted." In general, residents have expressed "agreement" on the “tourism development exerts positive impact on the environment." **This proportion has increased significantly in the past three years. Residents also repeatedly mentioned the zoo in the Changshu scenic area, indicating that Changshu has done a good job in environmental protection, animal and plant protection.**



Environmental health conditions are significantly improved —

Environmental education and animal and plant protection are promoted —

Figure 3-13 Evaluation of positive indicators of tourism's impact on environment



From left to right: Disagree strongly, disagree, no influence, agree, agree strongly

Figure 3-14 Trend Change in Positive Indicators of Tourism's Impact on Environment from 2015 to 2017

Among the five indicators that “tourism has a negative impact on the environment”, the average score for “garbage increases” is 3.68, which is well identified among residents; and for the four indicators of “tourism development consumes residents’ use of resources”, “tourism development increases air pollution”, “tourism increases water pollution” and “the development of tourism have increased the noise pollution”, the average scores are between 3.2 and 3.4. The residents’ recognition of these four indicators is not high, and most of them believe that tourism development did not cause too much negative impact on these four indicators. As shown in Figure 3-15, of the four indicators of "tourism development consumes residents' resources", "“tourism increases water pollution" and "the development of tourism have increased the noise pollution" and "tourism development brings more rubbish." 40% of the residents show agreement and the proportion is the largest and the ratio has increased every year. **In the case of “the development of tourism causes air pollution to increase,” 43.20% of the residents said that they thought that tourism exert no influence on it, but compared to In previous years, more and more people agreed with this statement, that is to say, most residents thought that the air in Changshu had not be improved.**

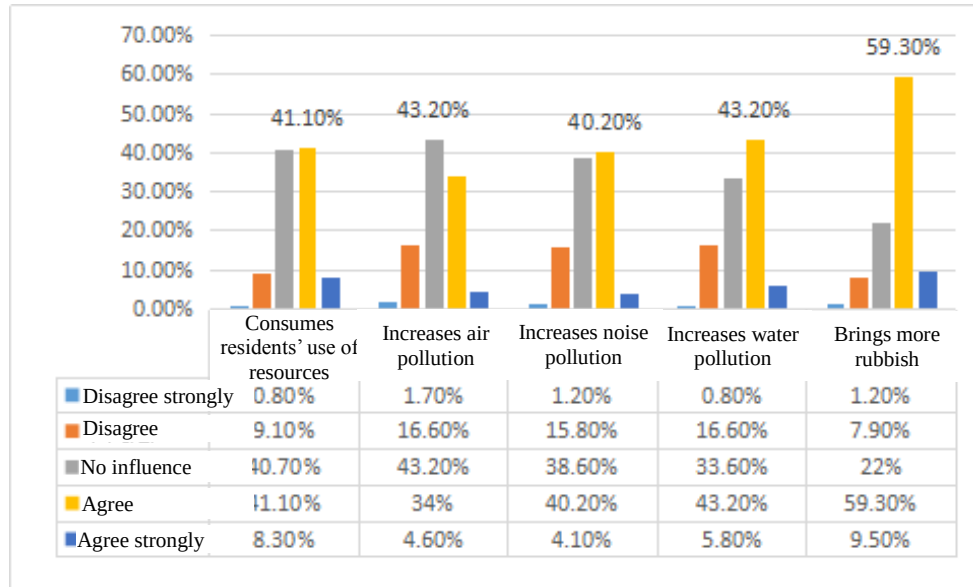
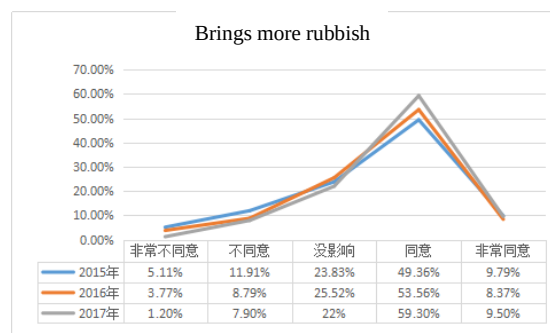


Figure 3-15 Evaluation of negative indicators of tourism's impact on environment





From left to right: Disagree strongly, disagree, no influence, agree, agree strongly

Figure 3-16 Trends in Negative Indicators of Tourism's Impact on Environment from 2015 to 2017

3.2 Community participation and awareness

(1) The perception of community residents about their participation in tourism. The monitoring set up the following seven indicators to monitor the community residents' perception of the degree of their participation in tourism, including: "the administrator will listen to the views of residents when making decisions," "the residents are very satisfied with the environment of the leisure activities", "residents are very satisfied with the transportation facilities in the leisure spots", and "it is very easy for residents to get leisure information".

According to statistics, on the whole, Changshu residents are more satisfied with the various evaluation indicators, and residents have higher awareness of Changshu leisure tourism activities. And for the three indicators of “very satisfied with the environment of the leisure activities”, “very satisfied with the transportation facilities in leisure spots” and “very easy to access to leisure information”, the percentage of residents' being satisfied with them accounted for 60.17%, 61% and 51.87% respectively. More than half of the people agree with these statements, indicating that residents have higher satisfaction with recreational activities. **However, for the indicator “the opinions of the residents will be taken when making decision in the scenic spot”, the residents’ consent rate is the lowest, which is only 47.3%, indicating that nearly half of the residents think that the administrator of the scenic spot will not listen to the opinions of the residents when they make decisions, or the residents indicate that the decision has nothing to do with them. Some residents also stated that although they are willing to take the initiative to propose**

suggestions for the development of the scenic spot, they do not know what the specific approach is.

(2) Community residents' awareness of participation in the development of tourism.

The indicators of community residents' willingness to participate in tourism development include “I hope the scale of tourism continues to increase” , “I am willing to engage in tourism-related work” , “I am willing to actively initiate suggestions for the development of scenic spots” and “I am willing to actively participate in promotion and publicity” content. From the survey results, 58% of residents expressed their agreement that the scale of tourism continues should be increased; 52% of the residents agreed or strongly agreed to engage in tourism-related work; 67% of Changshu residents expressed their willingness to contribute to the development of scenic spots; 12% of residents expressed their willingness to participate actively in tourism promotion and 58% of residents expressed their willingness to participate in tourism development. **The above data shows that residents of Changshu hope that the tourism industry of Changshu will continue to develop and that their initiative to participate in tourism will be highly motivated. It can be seen that the development of tourism in Changshu is highly supported by the people.**

4. Tourists' behavior and satisfaction

4.1 Tourists' Behavior Preferences

(1) Ways for tourists to obtain information. A survey of tourist access to tourist information can help tourism destinations better implement tourism promotion. In 2017, the proportion of tourists obtaining tourist information from the “network” surpassed “recommended by friends and relatives” for the first time, becoming the first place. This shows that with the continuous development of the new media network, tourists are more inclined to accept and actively search for network information and integrate tourism information on the network into the decision before travel. Among all the channels for obtaining tourism information, the “network” accounted for the largest proportion (47%) with the fastest growth rate (21%); secondly, the “recommended by relatives and friends” accounted for 40%; and the “travel agency” and television reached 21% and 19%

respectively; the last are "travel books" and "newspapers," accounting for 12% and 4% respectively. In general. The most significant increase in the proportion are "network" and "recommended by friends and relatives". Due to the specificity of the study time, the proportion of travel agencies experienced the largest change.

(2) Ways to participate in tourism. From the analysis of the survey of the ways in which tourists participate in tourism, we found that in 2017, like the data of 2015 and 2016, “DIY travel” is still the main form of tourism for Changshu tourists, and 61% of Changshu tourists will choose the approach of "DIY travel" followed by “personal group travel”, which accounted for 32%; the third was “organizational travel”, accounting for 28%; and the fourth was “with friends or family members”, accounting for 9%; the smallest proportion is "conference inspections", with only 6%. This shows that the main group of Changshu tourists is still DIY traveller. Therefore, the Changshu Government should continue to pay close attention to the DIY tourist groups, design diversified DIY travel products, and strengthen the construction of hotel accommodation, traffic road systems, and signage recognition systems.

(3) Tourists’ motivation. Among tourists visiting Changshu, the proportion of “traveling for sightseeing” is the highest, reaching 73%, and it has achieved steady growth in the three years from 2015 to 2017; this can explain to some extent that the nature and history of Changshu play important roles in the tourism of Changshu. In addition, about 62% of tourists take "leisure vacation" as their purpose of tourism, which indicates a year-on-year growth of 24% and a steady increase in the three years from 2015 to 2017. The proportion of tourism motives for "business activities" and "visiting relatives and friends" is roughly the same. Compared with the previous two years of data, the proportion of tourism motives such as "company or unit incentive travel", "wild adventure", "scientific investigation", "religious pilgrimage", and "scientific investigation" is still relatively small, indicating Changshu tourism's unicity, which indicates that Changshu still has great potential in the development of these tourism motives.

(4) Transportation choices. According to the survey on the choices of transportation for tourists, compared with 2016, the proportion of tourists taking “self-driving” methods to travel to Changshu in 2017 decreased, accounting for only 46%, a decrease of 20% from the same period of last year, but it is still the highest proportion of all choices of transportation (this part of visitors is mainly from cities in Jiangsu Province or near Changshu). This is followed by "long-distance car tourists", accounting for 35%, with an increase of 18%. Changshu tourists taking planes and trains account for 10% and 6% respectively, and only 3%

for other choices of transportation.

(5) **Accommodation type.** From the analysis of the data on the type of tourists' accommodation, it can be seen that tourists who choose the “other” account for half (50%), which is related to the fact that tourists are mostly short-distance tourists, who generally do not choose to stay overnight in Changshu, and some are visiting relatives. Visitors visiting friends lived in the homes of relatives and friends; There are also some tourists choosing to stay at star hotels, which accounted for 27%. The proportion of staying in family hotels and hostels is 18% and 5% respectively. Over the past three years, the proportion of accommodation types has basically stabilized, so this data has important reference value in the future development of Changshu lodging industry.

4.2 Visitors' perception and satisfaction

(1) Tourists' evaluation of tourism resources. The analysis of the evaluation of tourism resources was conducted from several aspects of "resource characteristics," "city image," "infrastructure", "safety and health" and so on. In the evaluation of resource characteristics, six indicators were set up, namely "historical and cultural connotation", "natural ecological value", "abundance of tourism resources", "visibility of tourist attractions", "tourism environment", and "climate suitability." From Table 4-1, it can be seen that tourists evaluate the characteristics of tourism resources in Changshu with high score with average scores of all indicators being above 4.0, and the percentage of tourists who are satisfied with each indicator is above 84%, indicating that tourists are satisfied with the characteristics of tourism resources in Changshu.

Table 4-1 Evaluation of Tourist Resources in Changshu during the Past Three Years

Indicators	2015	2016	2017
Historical and cultural connotation	4.209	4.172 ↓	4.401 ↑
Natural ecological value	4.211	4.227 ↑	4.423 ↑
Abundance of tourism resources	4.111	4.06 ↓	4.286 ↑
Visibility of tourist attractions	4.049	4.09 ↑	4.253 ↑
Tourism environment	3.681	4.157 ↑	4.316 ↑
Climate suitability	3.794	4.09 ↑	4.239 ↑

Comparing the monitoring results of 2015 and 2016, from the perspective of the average point of the scores, the visitors' evaluation of Changshu's "tourism environment", "visibility of tourist attractions", "natural ecological value" and "climate suitability" has been stable for three years, which reflects tourists' affirmation of natural tourism resources in Changshu. The evaluation of "tourism resource abundance" has also generally improved in the past three years. The evaluation of "historical and cultural heritage" has declined. In the future, Changshu should focus on enhancing the richness of tourism resources and concentrate on creating historical and cultural attractions. From the perspective of "satisfaction", the proportion of tourists who have expressed "satisfactory" or "very satisfied" with each indicator has increased significantly in the past three years, indicating that Changshu has made progress in promoting the tourism resources, and the overall experience of tourists has also been improved too.

(2) **Tourists' evaluation of the city's image.** This monitoring set seven indicators on the evaluation of Changshu's resource characteristics, namely, the evaluation on Changshu's "tourism culture value", "vividness of tourism image", "degree of enthusiasm of local residents", "urban noise pollution", "urban cleanliness", "urban air quality", and "urban river water quality".

Table 4-2 Evaluation of the City Image by Tourists in the Past Three Years

Indicators	2015	2016	2017
Tourism culture value	4.041	4.106 ↑	4.321 ↑
Vividness of tourism image	3.925	4.002 ↑	4.269 ↑
Degree of enthusiasm of local residents	3.777	3.832 ↑	4.047 ↑
Urban noise pollution	3.712	3.867 ↑	4.08 ↑
Urban cleanliness	3.883	4.007 ↑	4.223 ↑
Urban air quality	3.896	4.032 ↑	4.212 ↑
Urban river water quality	3.299	3.763 ↑	4.012 ↑

Compared with the monitoring results of 2015 and 2016, all indicators showed a steady growth trend within three years. Among them, tourists' scores on "urban noise pollution", "air quality" and "river water quality" have increased significantly,

indicating that Changshu has improved the tourism image of the city through environmental governance. At the same time, the average of the seven indicators is greater than 4.0, which also shows that the overall image of Changshu began to improve.

However, among the seven indicators, the score of “local residents’ enthusiasm” is relatively low. In the survey, some tourists suggested that the degree of contact with local residents during the tourism process is not high. Though they have contact with local residents, they have not been treated friendly. This shows that in the process of tourism development, the relationship between residents and tourists has yet to be strengthened. From the perspective of “satisfactor”, the evaluation of the city’ s image by tourists has been greatly improved within three years. At the same time, the greatest change in the upward trend is “the level of enthusiasm of local resident”, which indicates that tourists’ acceptance of the image of Changshu has increased. As a result, Changshu's tourism image construction has achieved good results.

(3) Tourists' evaluation on infrastructure. The monitoring sets up six indicators in terms of infrastructure, namely, “overall urban health environment”, “overall urban public transport conditions”, “public toilet sanitation”, “urban public rest facilities”, and “the clarity road guidance signs” and "urban greening effect" (refer to Table 3-4).

Table 4-3 Tourists' Evaluation of Infrastructure in the Past Three Years

Indicators	2015	2016	2017
overall condition of urban health environment	3.897	3.968 ↑	4.168 ↑
overall condition of urban public transport	3.496	3.922 ↑	4.168 ↑
public toilet sanitation	3.845	3.965 ↑	4.271 ↑
urban public rest facilities	3.876	4.094 ↑	4.198 ↑
the clarity road guidance signs	3.995	4.069 ↑	4.195 ↑
urban greening effect	4.134	4.188 ↑	4.335 ↑

From the above data, it can be found that the tourists' evaluation of Changshu's (4) 游客对安全与健康的评价。问卷在安全与健康方面共设置了 3 个指标，见表 4—4。infrastructure is generally satisfactory, with the average score ranging from 4.1 to 4.4.

Compared with the monitoring results of the previous two years, visitors' satisfaction with infrastructure has shown a steady growth trend. From the data, the biggest change in upward trend is the “overall condition of urban public transport” and “sanitation status of public toilets in cities”.

(4) **Tourists' assessment of safety and health.** The questionnaire sets a total of 3 indicators in terms of visitors' evaluation on safety and health, as shown in Table 4-4.

Table 4-4 Tourists' assessment of safety and health

Indicators	2015	2016	2017
Urban Security Facilities	3.984	3.933 ↓	4.184 ↑
Medical equipment	3.799	3.745 ↓	3.956 ↑
State of law and order	3.927	3.871 ↓	4.093 ↑

Compared with the results of monitoring in 2015 and 2016, all three indicators experienced a slight decrease in 2016, and they generally increased significantly in 2017. The scores of "urban safety facilities", "medical equipment" and "State of law and order" have greatly improved. Due to successive major terrorist attacks, earthquakes, and fire incidents in some tourist cities in recent years, Changshu government has also taken corresponding measures to increase the security in various tourist attractions, traffic arteries, and public transport facilities in Changshu, which gains higher affirmation from tourists. The satisfaction ratio of tourists to the three indicators is more than 70%, but because most tourists do not have much intuitive feelings about safety facilities and medical equipment, the reference value of this data is not great.

4.3 Tourists' Evaluation of Tourism Services

The monitoring will analyze the tourists' overall evaluation of tourism services from aspects of tourist services, catering services, transportation services, accommodation services, shopping and entertainment items, and evaluation of resources and complaints.

(1) **Tourists' evaluation of scenic service.** The questionnaire has set 7 indicators for service evaluation in scenic spots, as shown in Table 4-5.

Table 4-5 of Tourists' Evaluation on the Service of Scenic Spot in the Past Three Years

Indicators	2015	2016	2017
Scenic infrastructure	4.016	4.037 ↑	4.206 ↑
Sanitary condition of toilet	3.99	4.041 ↑	4.258 ↑
Rationality of ticket's price	3.603	3.488 ↓	3.638 ↑
The professionalism and humour of the tour guide	3.676	3.557 ↓	3.989 ↑
The richness of tourism information	3.856	3.864 ↑	4.038 ↑
Clearness of marking system in scenic area	3.942	3.966 ↑	4.135 ↑
The degree of crowding in the scenic area	3.892	3.965 ↑	4.022 ↑

In terms of the overall indicators, there are five indicators experiencing continuous upward change during the three years from 2015 to 2017, and two indicators experienced fluctuations (the "rationality of ticket prices" and "the professionalism and humour of the tour guide"). It is worth emphasizing that tourists' satisfaction with toilet's sanitary condition in scenic spots has increased 12.2% , which shows that the sanitary problems in scenic spots have been better handled during the year. The issue of ticket prices has been raised in the 2015 monitoring report, and in 2016 only less than half (48.3%) of the tourists considered that the ticket price for Changshu scenic spot was reasonable. Although the percentage of satisfaction with this indicator exceeded 60% for the first time in 2017, it is still the lowest indicator among the 7 indicators. In the interview, many tourists also reflected the problem of high ticket prices in the scenic spots, especially the ticket prices in the Shajiabang scenic spot, which made tourists feel dissatisfied. Also in September, the Yushan Lake Scenic Spot in Yushan is in the off-season, and the ticket price is 60 yuan; while the Shajiabang Scenic Spot is in the busy season, and the ticket price is 120 yuan. Such a gap may also be one of the reasons why the satisfaction of tourists is not high.

(2) **Tourists' evaluation of the catering service.** The questionnaire sets four indicators for tourists to make an evaluation of catering services, as shown in Table 4-6.

Table 4-6 Tourists' Evaluation of Catering Services in the Past Three Years

Indicators	2015	2016	2017
Food taste, variety and characteristics	3.72	3.708 ↓	3.893 ↑

Food hygiene and safety	3.793	3.73 ↓	3.885 ↑
Rationality of food's price	3.772	3.498 ↓	3.703 ↑
Initiative of catering service	3.351	3.718 ↑	3.841 ↑

From the above data, we can see that Changshu's food hygiene, taste and characteristics are accepted by most tourists. **The average of the four indicators in 2017 showed an upward trend compared with that in 2016 and 2015. The initiative of catering service achieved steady growth, and the other three indicators showed a slight decline in 2016.** It is worth noting that Changshu's average score on the rationality of catering prices is about 3.7, which is still the lowest of the four indicators, even though it is higher than that in 2016.

(3) Tourists' evaluation of transportation services. The questionnaire sets five indicators for the evaluation of tourists' traffic services in Changshu, as shown in Table 4-7.

Table 4-7 Tourists' Evaluation on Traffic Services in the Past Three Years

Indicators	2015	2016	2017
Convenience	3.919	4.014 ↑	3.989 ↓
Comfort	3.487	3.998 ↑	3.906 ↓
Safety	3.963	4.06 ↑	4.176 ↑
signal System	3.948	4.103 ↑	4.044 ↓
Price rationality	3.897	3.908 ↑	4.121 ↑

Visitors' evaluation of Changshu's transportation service has two rising indicators within three years, namely, "traffic safety" and "price rationality". This shows that Changshu's traffic safety and price control are continuously optimized and improved. In the survey, some visitors reflected that the signal system of the scenic spot could have room for improvement. Changshu still needs improvement in transportation services.

(4) Visitors' evaluation of accommodation services. The questionnaire sets six indicators for visitors to evaluate the accommodation services in Changshu, as shown in Table 4-8.

Table 4-8 Tourists' Evaluation on Accommodation Services in the Past Three Years

Indicators	2015	2016	2017
Convenience of Accommodation	3.843	3.818 ↓	3.978 ↑
Comfort of room facilities	3.817	3.811 ↓	3.912 ↑
Health and safety of hotels	3.826	3.79 ↓	4.027 ↑
Rationality of accommodation price	3.770	3.711 ↓	3.986 ↑
Staff's service	3.811	3.785 ↓	3.989 ↑
Convenience of Hotel's check-in time	3.882	3.774 ↓	4.124 ↑

On the whole, tourists expressed overall satisfaction with the accommodation environment. The average scores of all indicators were between 3.7-3.8, and all of the indicators' satisfaction levels experienced a slight decline in 2016 and a steady increase in 2017. Due to the large number of visitors who do not stay overnight in the surrounding area, not all visitors experience the accommodation service. However, in the process of developing tourism in Changshu, improving the experience of tourist accommodation services is a very important part of improving the satisfaction of tourists.

(5) Tourists' evaluation on shopping and entertainment. The questionnaire sets 10 indicators for visitors to evaluate on shopping and entertainment, as shown in Table 4-9.

Table 4-9 Tourists' Evaluation on Shopping and Entertainment Items in the Past Three Years

Indicators	2015	2016	2017
Product diversity	3.808	3.773 ↓	3.830 ↑
Product features	3.78	3.756 ↓	3.912 ↑
Rationality of goods' price	3.647	3.599 ↓	3.747 ↑
Whether it worths	3.654	3.717 ↑	3.808 ↑
Shopping environment and market order	3.8	3.785 ↓	3.934 ↑
Diversity of entertainment	3.709	3.604 ↓	3.876 ↑

Uniqueness of entertainment	3.656	3.647 ↓	3.879 ↑
Safety of entertainment	3.748	3.795 ↑	3.942 ↑
Fun of entertainment	3.682	3.691 ↑	3.885 ↑
Rationality of the price for entertainment	3.643	3.56 ↓	3.827 ↑

From the above analysis data, we can see that **the diversity of tourism products and entertainment items in Changshu has been affirmed to a certain extent by tourists, but the overall level of satisfaction is not high**, and some indicators have a steady increase (whether it worths, the safety and fun of entertainmen items), but the increase is not significant.

(6) Tourists' evaluation on consultations and complaints. The questionnaire has set three indicators for visitors to evaluate on consultation and complaint items, as shown in Table 4-10.

Table 4-10 Tourists' Evaluation on Consultations and Complaints

Indicators	2015	2016	2017
The convenience of learning about tourism information	3.838	3.875 ↑	4.049 ↑
Complaint handling efficiency	3.62	3.596 ↓	3.885 ↑
Attitude of consulting service	3.756	3.78 ↑	3.937 ↑

Compared with the monitoring results of the previous two years, tourists' evaluation of "the convenience of learning about tourism information" has increased. This shows that the propaganda work conducted by the Changshu Tourism Bureau at the reception centers of various tourist attractions has been recognized by tourists; in addition, the satisfaction ratio of tourists to the “efficiency of handling complaints” has not reached 50%, indicating that the tourist attractions staff's efficiency of handling tourist complaints has yet to be improved.

4.4 Willingness of Revisiting and Recommending

The monitoring data shows that of the tourists surveyed in 2017, the proportion of tourists who have a willingness to visit Changshu again is 64%, with a decrease of 1% compared to 2016, but it is still higher than in 2015, and the data tends to be stable. For the

selection of revisit time, the proportion of tourists' choice on time is stabilized. On recommending friends to visit Changshu, more than 80% of tourists are willing to recommend Changshu as a tourist destination to others, indicating that Changshu can be regarded as a tourist destination worth recommending to others.

Table 4-11 Tourists' Willingness to Revisit Changshu

	2015	2016	2017
Yes	60.0%	65% ↑	64% ↓
No	4.0%	5% ↑	7% ↑
Not sure	36.0%	30% ↓	29% ↓

Table 4-12 The time period for tourists to revisit Changshu

	2015	2016	2017
Within a year	38%	37% ↓	33% ↓
Within two years	24%	29% ↑	31% ↑
In two years	38%	34% ↓	36% ↑

Table 4-13 Tourists' desire of recommending Changshu to others

	2015	2016	2017
Yes	77%	84% ↑	83% ↓
No	5%	3% ↓	2% ↓
Not sure	18%	13% ↓	16% ↑

Combined with the above monitoring data, it can be found that the vast majority of tourists have a positive evaluation of their travel experience in Changshu, but the high fees for tickets, catering accommodation and goods and entertainment items are important factors that affect tourists' willingness to revisit Changshu. In the interview, it was found that some tourists thought that the quality of tourism in Changshu had to be improved, because the water quality of the river was poor; the leisure and entertainment facilities were not perfect; the ticket price of the scenic area was too high. In addition, visitors think that Changshu also needs to have a clear scenic area signal system, a rich nightlife, the development of more distinctive tourist souvenirs and the highlighting of the characteristics of the scenic spot.

5. Tourism's Impact on Economy

5.1 Tourism and Economic Growth

The number of visitors to Changshu has been rising year by year, showing a good development trend overall. In 2016, Changshu received 1985.35 million domestic and foreign tourists, with an increase of 3.2% over the previous year and realized tourism revenue of 30.343 billion yuan, with an increase of 7.4%. The number of domestic tourists received was 1,791,800, with an increase of 3.2%; and the domestic tourism revenue was 29.72 billion yuan, with an increase of 7.3%. The number of overnight foreign visitors received was 39,400 passengers, with a decrease of 24.7%, and foreign exchange revenue from tourism reached US\$93.9 million, with an increase of 8.4%.

During the year from 2012 to 2016, the tourism industry's contribution to the GDP of Changshu has been rising. The contribution rate of tourism to the GDP of Changshu has increased from 11.72% in 2012 to 14.36% in 2016, indicating that the economic contribution of tourism to Changshu in the past five years has been further enhanced. The role of tourism in driving the economic development of Changshu has gradually strengthened and is one of the driving forces for economic development in Changshu.

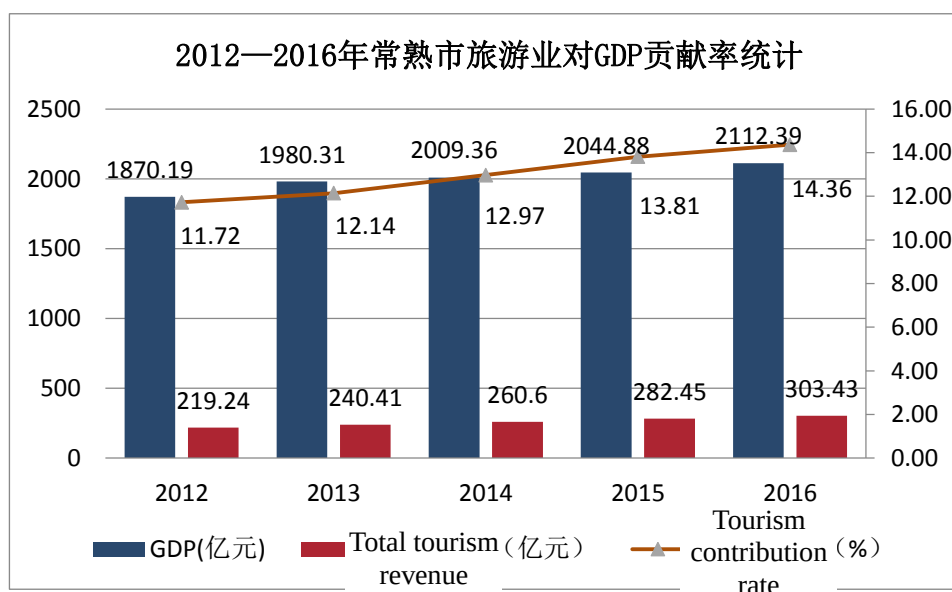


Figure 5-1 Statistics on the Contribution Rate of Tourism to GDP in Changshu

from 2012 to 2016

5.2 Tourism's Impact on Industrial Structure

From Figure 5-2, it can be seen that the revenue that is brought by tourism plays an increasingly important role in the added value of the tertiary industry. Compared to 2014 and 2015, the proportion of tourism's revenue in 2016 has increased significantly. On the whole, this trend will continue.

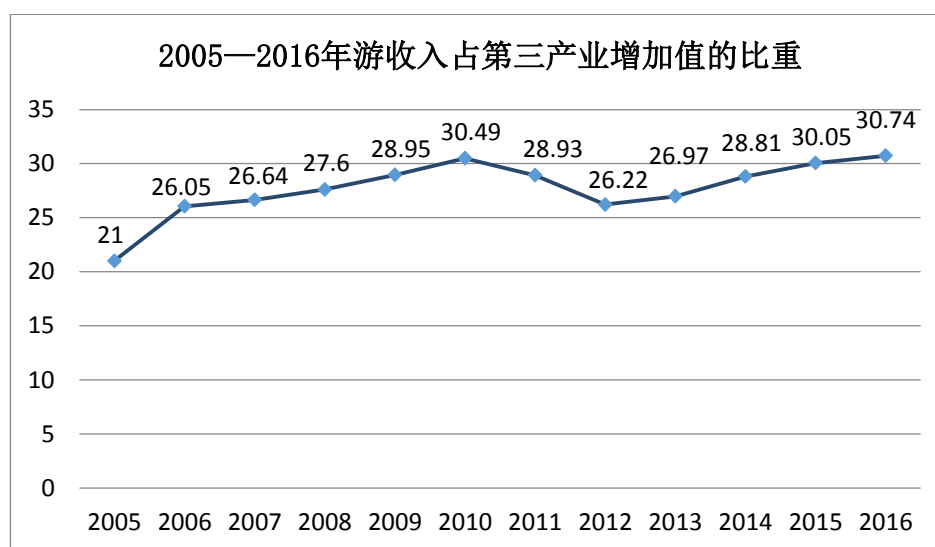


Figure 5-2 The proportion of tourism revenue in the third industry from 2005 to 2016

5.3 Tourism Industry

(1) **Hotels and catering companies.** As of June 2017, there are 221 hotels in Changshu, including 17 star hotels, that is, 6 five-star hotels, 3 four-star hotels, 6 three-star hotels and 2 two-star hotels. In addition, there are more than 20 budget hotels such as Jinjiang Inn, Home Inn, Super 8 and Ibis. Compared to 2016, the number of star hotels in Changshu has decreased by two. The number of five-star hotels has increased by one, four-star hotels have decreased by two, and three-star hotels have reduced by one. With the arrival of the new economy mode, the hotel industry has shown a trend of change and adjustment. Changshu uses its own advantages to meet the catering needs of different tourists, and has created a variety of tourism and catering systems. The system includes star hotels, tourist restaurants, leisure districts, old restaurants, specialty snacks, and farmhouses catering. At the same time,

Changshu uses its own natural resources and cultural history to vigorously develop local specialty food brands and vigorously develop specialty dishes such as farm dishes, special noodles, and ecological catering. In addition, Changshu has rich rural tourism resources and it has developed rapidly. Therefore, Changshu farmhouse has developed more prominently and there are a number of distinctive star-rated farmhouse hotels. After Changshu Tourism Bureau and other organizations organized the “Changshu Characteristic Leisure Farmhouse” and “Top Top Ten Gold Farm Cuisine” and promoted them through various channels, Changshu’s farmhouse catering attracted a great deal of attention.

(2) **Travel agency industry.** According to the data in 2017, there are 40 travel agencies registered in Changshu, including 4 four-star agencies, 8 three-star agencies, 1 two-star agency and 1 one-star agency. Changshu's overall business performance of travel agencies is good, but there are still some problems as follow: the business scale is small; the market is not large; personnel is few; staff's turnover is frequent; the management is weak; its development concepts can not keep up with the requirements of the times. On the whole, the situation of this year has not been much improved. The problems and challenges presented by the data still exist.

(3) **Internal transportation.** Changshu has a relatively well-developed public transportation system, and has activated bus-dedicated lanes on specific road sections. There are multiple bus routes through Shajiabang Scenic Area and Yushan Shanghu Scenic Area. At the same time, there are special tourist lines for the tourists and citizens, such as the Yushan Tourism Line, the Clothing City Shopping Tour Line, and the Shanghu Shajiabang Line. However, on the whole, the use of public transport and tourism lines by tourists is not high. In addition, self-driving tourists who travel to Changshu account for about 70% of the total. Therefore, the convenience of transportation, the comfort, and the clarity of the signal system are crucial to the improvement of tourist satisfaction.

6. Conclusions and Suggestions

(1) **The tourism perception of Changshu residents has been increasing year by year, and their demand for cultural education has increased.** Compared with previous years, residents of Changshu this year have a stronger perception of "Changshu is suitable for sightseeing and leisure", indicating that Changshu residents gradually become clear about the concept of urban tourism in Changshu. In addition, residents believe that the top three

tourism activities that Changshu should develop are “tourism and leisure”, “customs and humanities” and “culture and education”. Residents have the highest demand for tourism, leisure, customs, and humanities, which shows that residents are looking forward to improving the conditions for sightseeing and leisure activities in Changshu, as well as increasing the atmosphere of customs and culture. This is in line with the advantages of the local excellent ecological environment and strong cultural heritage. In addition, the residents' demand for cultural education is also relatively high, which reflects to some extent the emerging trend of increasing demand for cultural education, which embodies residents' emphasis and appeal for cultural education, and it allows cultural heritage to drive urban development.

(2) Residents' perception of tourism's impact is overall satisfactory and stable year after year, but the degree of residents' participation is low. As a whole, residents of Changshu are relatively satisfied with the indicators that are related to residents' perception of tourism's impact, and residents have a higher degree of awareness of leisure tourism activities in Changshu. Among them, the agreement with the three indicators of “very satisfied with the environment and health of leisure activities”, “very satisfied with the transportation facilities of leisure venues” and “very satisfied with the easy access to leisure information” exceeded 50%, indicating that the residents' satisfaction with leisure activity sites is relatively high. However, residents are not quite satisfied with the indicator of “the scenic spots will listen to the opinions of the residents when they make decisions”, indicating that nearly half of the residents believe that the scenic area will not listen to the views of residents, or residents believed that the activity has nothing to do with them. Residents also stated that although they are willing to take the initiative to propose suggestions for the development of scenic spots, it is unclear what approaches are available. For example, community residents cannot understand government's tourism development plans and measures, and the area in the decision-making also failed to effectively seek the views of community residents. What is more, residents are not clear or do not believe Changshu's communication channels related to tourism development. Therefore, residents of Changshu are kept a certain distance from the development of tourism although they have a higher level of awareness of the development of tourism. The operation and management of future scenic spots should be strengthened in these aspects.

(3) Visitors to Changshu prefer to make decision based on the information they collect, self-service participation in transportation, and personalized accommodation. In

2017, the proportion of Changshu tourists obtaining tourist information from the Internet exceeded the proportion of being recommended by friends and relatives for the first time. This shows that with the continuous development of the new media network, tourists are more inclined to accept and actively seek out network information and integrate travel information on the web into the basis for decision-making before travel. The Changshu Tourism Bureau should pay close attention to the opportunities in the new media era and strengthen the construction of tourism media on all major Internet platforms. In the aspect of tourism participation, “self-help travel” in the past three years is still the main form of tourism for Changshu tourists. Self-help travel has continued to rise for three years. As for the type of accommodation, from the analysis of the types of tourist accommodation for the past three years, it was found that the number of tourists who chose “Other” accounted for more than half, followed by star hotels. The proportions of choosing family hotels and hostels were 18% and 5%, respectively, which indicated that the personalization of tourists was evident.

(4) The trend of Changshu tourists' satisfaction: The overall satisfaction rate increased and the rate of revisit was stable. In the past three years, tourists' satisfaction with Changshu's overall tourism development has been steadily increasing, and the rate of revisiting Changshu has stabilized. On the one hand, it shows that Changshu's overall tourism environment has greatly improved. On the other hand, it also shows that tourists have a higher expectation for the overall improvement of Changshu's tourism, and they still have higher expectations for tourism in Changshu. Among them, the degree of satisfaction with the overall hardware construction of the city and the related indicators of the environment of the city and the scenic spot has increased. The satisfaction degree of some indicators with lower average scores has also improved significantly; the satisfaction of tourists with service-related indicators has also been improved accordingly. It shows that the overall tourism service industry in Changshu will continue to improve, keeping pace with the upgrade of hardware facilities and tourism environment. Of particular note is that in the monitoring of price-related indicators, the overall satisfaction of tourists is low, and the price issue is an important factor affecting the overall impression of tourists on the city, which needs attention.

(5) The growth rate of Changshu tourism slowed down, the business conditions of small tourism enterprises were stable, and tourism products with local characteristics increased. In the past three years, the number of visitors to Changshu has increased slightly. The growth rate has slowed down year by year and has stabilized. The total tourism revenue

has continued to grow in the past three years, and the growth rate has also slowed down year by year. The survey found that the establishment of tourism-related small businesses was mainly within 10 years, and more than half of the owners had employees. Most of the owners had no more than 5 employees. The employees' academic qualifications were moderate, and more than half of the owners did not provide training for employees. The products and services involved in these tourism-related small businesses are mainly catering and tourism products, of which restaurants are mainly local restaurants (such as tea houses), and clothing, souvenirs, handicrafts and specialty products are the main products. The overall level of operating conditions is above average, and the operating conditions are affected by many factors.

(6) Owners of small tourism enterprises are longing for the development of tourism in the future, and the satisfaction of employees in small tourism-related enterprises will increase year by year. The data for the past three years shows that owners experience potential positive changes in their perception of tourism's impact on economy. Small tourism-related business owners are more appreciative of the revenue generated by tourism, especially in terms of increasing income, quality of life and happiness index. In terms of future tourism development, compared with 2015 and 2016, Changshu's small tourism-related business owners increasingly recognize the value of tourism and discover the pleasure of communicating with tourists, which is full of flaw. In addition to this, employees of small tourism-related companies have improved prospects for employees' promotion, their smooth communication between colleagues, and have significantly improved employees' satisfaction with the vacation system. At the same time, they found that the work of employees can receive more support from their families, indicating that tourism occupations are increasingly recognized by majority. In addition, employees' satisfaction with financial subsidies such as bonuses and wages has also increased year by year, and overall satisfaction has been increasing year by year.