

2018 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



Acknowledgement

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1. Foreword

At present, the concept of sustainable development is widely recognized and promotes the sustainable development of tourism into a global trend. The monitoring group conducts the monitoring of the ancient villages in Hongcun, Anhui. After being listed as a World Cultural Heritage in 2000, Hongcun became famous as a new cultural tourism hotspot with its long history, quaint culture and architectural style, being praised as "the village in Chinese painting". The monitoring process includes questionnaire investigations and interviews with residents of Hongcun to understand the changes in the residential areas during this period, record the changes in cultural heritage, and explore the sustainable development model of the heritage sites according to the changes to maintain the heritage with minimal negative impact; in addition, investigate on perceptions and satisfactions, behavioral intentions of tourists, and monitor the impact of activities of residents and tourists in tourism on the building and the environment of village, seeking measures of protection with the least negative impact; collect business information, and the information on the shops and shopkeepers of the main tourist routes is recorded in the file; the conditions of garbage, sewage, noise treatment and toilet setting in Hongcun are also thoroughly investigated; in addition, continue the file building of Hongcun on the basis of previous years.

The monitoring was divided into three phases. The monitoring team was set up in June, and then field monitoring was conducted from July 20 to 30. The report was completed from August to September. The monitoring also collected a large amount of information on heritage protection and tourism development, including the protection of residential information obtained by household investigation, community and tourist questionnaires, research data of commercialization and environmental protection, etc.. The field visit includes the following contents: The contents of the file building are the basic information of residential houses and distribution of housing functions, including written materials, floor plans and photographs. A total of 35 households were filed; residents in various areas of Hongcun were visited, who were distributed the questionnaires of sustainable livelihood and sustainable development. 97 questionnaires were finally distributed, 97 copies collected, and 95 questionnaires were valid. The rate of validity was about 97.93%; For the investigation on tourist in Hongcun, questionnaires on the satisfaction, perception and attitude towards Hongcun were distributed on the spot. Eventually, 204 questionnaires were distributed and 204

questionnaires collected. After eliminating the invalid questionnaires, there remained 199, and the rate of validity was 97.5%. The investigation on commercialization mainly used the method of field investigation to record the tourism commercialization of Hongcun. The scope covers the entire Hongcun scenic spot; in terms of sewage disposal, toilets, energy consumption of homestays and catering in Hongcun scenic area, this monitoring and research uses methods of observation and interview to collect data and analyze their current situation.

2. Current Situation of Heritage Protection in Hongcun

Through field observations and interviews with local people, this monitoring has further understanding of the current situation of Hongcun heritage protection. The results of investigation can be summarized into the following three characteristics:

(1) Good appearance and messy inside. After the visit, the Hongcun scenic spot has revealed the phenomenon that “the exterior of the ancient dwelling is intact and the interior is divided into multiple spaces for various commercial purposes”. The preservation of appearance of the ancient residential architecture in Hui style results from compulsory measures of the government for the repair of ancient dwellings. On the other hand, villagers generally agree that the Huizhou style is one of the important attractions of Hongcun scenic spot; the internal mess is mainly caused by commercialization. In recent years, the Hongcun scenic spot has developed rapidly, attracting a large number of migrants. The degree of commercialization has increased year by year, and the commercial atmosphere becomes strong. Many dwellings facing the streets have been divided into several shops to achieve greater economic profits.

(2) Transforming business causes a fierce competition. More than 90% of the dwellings have been completed or are undergoing commercial transformations such as B&B/Inn. At the same time, more experienced foreign businessmen enter the village to invest in the B&B. Therefore, the competition between the B&Bs has become fierce year by year, and the elimination rate is high. This has led to the widespread use of residential houses for commercial purposes in recent years. The constantly updated merchants do not know much about the residential conditions, and the original heads of households basically moved outside the scenic spots, which also caused certain work for the members of the archives. difficult.

(3) The level of protection of residential houses is uneven. Due to the increase of tourists and the development of commercialization, the busy and unpopular areas in the scenic area are more severely differentiated. The protection condition of dwellings varies in different areas. Most of the houses close to the main street are well-repaired and unique in styles. Dwellings far from the main street are generally older and some are even abandoned.

(4) As mentioned before, a one-house dwelling for one household was divided into one for multiple families. Some dwellings for multiple families are now merged into one household. Therefore, this filing report will be household-based. In addition, the regional division will be based on the latest zoning and residential number, which is slightly different from the residential addresses and the original zoning; at the same time, the case of dividing one dwelling into multiple households will be separated by a secondary number to distinguish. The situation will be in the form of addition of a sequence number when it comes to originally multi-family dwellings that has been transformed into dwellings for one household. Besides, due to the fast speed of transfer and update, objects with more than one year of work/residence were selected to get more accurate and reliable information. A total of 35 households are archived in this monitoring. Dongbianjie area (D): 4 dwellings are archived. Houjie area (H): 4 are archived. Qianjie area (Q): 2 are archived. Shangshuizhen District (S): 11 are archived. Dongbianjing area (J): 5 are archived. Chahanglong area (C): 2 are archived. Area along the river (Y): 6 are archived.

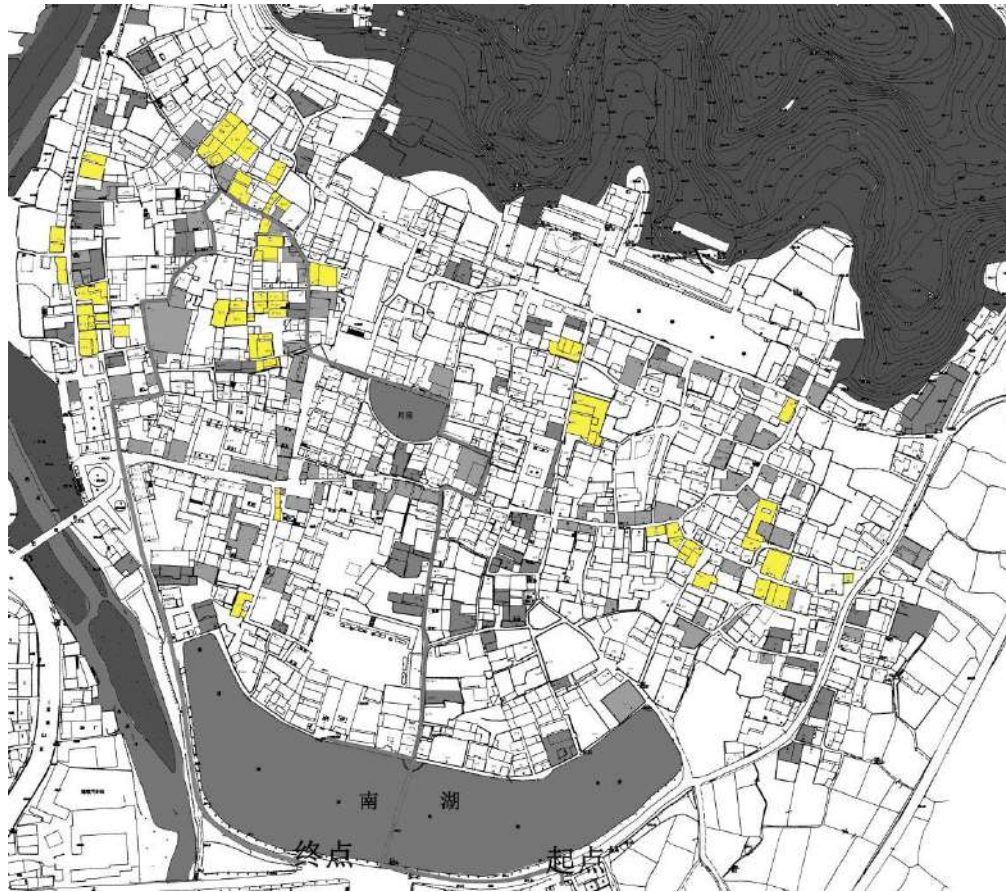


Figure 2-1 Condition of archive in Hongcun

3. Tourism and Community

The investigation was conducted mainly in local residents of Hongcun. The residents in a broad sense include the native residents of the Hongcun family, non-natives such as migrant workers. The investigation adopts a sampling survey method to visit residents in various areas of Hongcun scenic spot with questionnaires on sustainable livelihoods and sustainable development of residents. The investigation group distributed questionnaires in Hongcun scenic spot of Huangshan City in Anhui Province from July 22 to 18, 2018, where researchers strived to collect every questionnaire that had been distributed to improve the collection rate of the questionnaires. 97 questionnaires were finally distributed, 97 copies collected, and 95 were valid, the rate of which was about 97.93%.

A statistical analysis of the basic information of the residents participating in the investigation reveals that the sample male to female ratio is basically the same. In terms of age, 78.9% of the residents who participated in the questionnaire are in the range of 25-60 years old. It is the age of the

principal at home whose views can represent the mainstream view of Hongcun residents. In terms of the length of residence, 66.3% of the residents have lived in Hongcun for more than 10 years, which proves that the sample fits the whole well.

Table 3-1 Community monitoring indicators

Content	Questions	Monitoring indicator
capital evaluation of resident livelihood in Hongcun	Natural capital	The amount of local natural resources (water, forests, etc.) is abundant in amount; the kind local natural resources (water, forests, etc.) is abundant; the local natural resources (water, forests, etc.) are of good quality; the local natural resources (water, forests, etc.) are well protected; the local tourism resources have high tourism value; the quantity of local tourism resources is huge; the local tourism resources combine well; Hongcun scenic area is well-known.
	Material capital	The local tourism infrastructure is complete; the local transportation is very convenient; the local public service facilities are perfect (such as hospitals, schools, etc.); the local public space is increasing; my family's fixed assets are higher than average of local (such as houses); my family's durable goods are more than average of local (such as cars, TVs, computers, refrigerators, etc.); my home is close to the local famous scenic areas; the distribution of local tourism income is more even; everyone enjoys

		equal public space; everyone enjoys the equal right to public facilities and services; everyone has a chance to succeed.
	Human capital	The overall education level of locals has improved; the health of locals has improved; the level of local tourism services has improved; my academic level is higher than average of local; my skills in tourism are better than average of local; The number of laborers in my family (18-55 years old) is higher than average of local; the overall labor capacity of my family is better than average of local (referring to the number of labor, education, health status)
	Economic capital	The development of local tourism has improved; the local economic environment has improved; the types of enterprises have been increasing; the number of enterprises has increased; opportunities for jobs have increased; my income has increased; my consumption level has increased; the type of work I can choose is increasing; the source of income is more than before.
	Social capital	The community provides many trainings; the community residents are friendly; the community residents will support and help each other; the residents of the community are trustworthy; I get

		along well with my family; I have more influence here than average; I feel the sense of belonging in the community; I can get help when I'm in need; I'm getting more friends.
Residents' evaluation of lifestyle	Ability	The rapid changes in tourism have an impact on me; I have experienced the social changes brought about by tourism development; tourism development has had an impact on the local; I am always concerned about the development and changes of tourism; the impact of social change is always there; I am good at reflecting on the shocks and changes I have encountered before; I will think about the shocks I may encounter.
	Ability to understand, learn and plan	I will plan for economic security; I can adapt to change and profited from it; I am able to adapt to change; my friends are happy to share their ideas.
	Ability to deal with risks and strain capacity	I have enough ability to deal with various situations; I have the ability to solve various problems; I can get through many difficulties.
	My level of interest in change	I often learn new skills and knowledge; I am constantly trying to improve myself; I like to try new things; I will plan my life early; I will summarize my life regularly.

	Benefits of tourism	I like to work in tourism; I like working style related to travel; I am looking for opportunities to participate in tourism; working in tourism makes my life better.
Residents' overall satisfaction with life	In many aspects, my life is almost ideal; my living conditions are very good; in general, I am satisfied with my life; I have had the most important things I want in life; if life could be lived over again, I wouldn't change anything.	
Residents' perception of the impact of tourism development	Economic impact	Tourism has greatly promoted local economic development; tourism development has improved local living standards; tourism has brought more employment opportunities to residents; tourism has attracted more investment and consumption for the local area.
	Social influence	Tourism development has led to a deterioration in local security; tourism has overcrowded local traffic and population; the arrival of tourists has disrupted local living order and bothered residents; due to tourism development, local social morality is not as good as before; It is easy to cause tourists conflict with local residents because of tourism.
	Cultural influence	Tourism development makes local residents aware of the value of Hongcun's cultural heritage; tourism development helps to enhance local residents' cultural pride in Hongcun; tourism promotes

		cultural exchanges between local and foreign countries; tourism development has destroyed Hongcun's traditional culture, skills and national customs, etc.; tourism is conducive to the inheritance of local traditional culture and skills, national customs, etc.
	Environm ental impact	Tourism development has reduced the air quality; tourism development has increased the noise pollution; tourism development has increased the water pollution; tourism development has made local solid waste management more difficult; construction of hotels and other tourist facilities has destroyed our natural environment.
	Residents' attitude and action	I am willing to take the initiative to communicate with tourists; I am satisfied with the government's execution of tourism development; I am willing to take the initiative to provide advice on local tourism development; I am satisfied with the current situation of local tourism development; I support Hongcun to continue to develop tourism.
Residents' perceptions and suggestions on tourism development		Distance from tourist routes; attitudes towards visits to residents' dwellings; ways to participate in tourism development; most unsatisfactory issues in tourism development; specific suggestions for tourism development

Residents' perception and suggestions of heritage protection	Satisfaction with the current situation of heritage protection; the nature of house; maintenance attitudes to ancient dwellings; most troublesome issues in heritage protection; protection and development techniques; suggestions and opinions
Resident basic personal information	Gender; age; education level; length of residence; occupation and related to tourism; monthly income; occupation and its relevance to tourism; family status and number of people involved in tourism

3.1 Community Sustainable Livelihoods

In terms of natural capital, residents in Hongcun have a very high recognition of Hongcun natural capital. Most of the residents agree with the popularity of Hongcun scenic area, which means that local residents have cultural confidence in Hongcun's reputation to some extent. All the items can be divided into two categories: local natural resources and tourism resources. Residents' recognition of the latter is slightly higher than that of the former, indicating that the development of tourism has improved residents' self-identification. However, the scores of combination of tourism resources and the protection level of natural resources are not high, where managers should pay attention.

In terms of material capital, the evaluation of local residents on their own material capital is general or neutral. Most residents think that their material capital is not as good as other people. This reflects the residents' subjective evaluation on material capital. The lack of confidence in income and capital is the main thought of Hongcun residents about their own capital. Another outstanding problem is that most of the residents believe that the distribution of local tourism income is not even enough. The reason is that the tourist routes and mobility of tourists have seriously divided the busy and unpopular areas inside Hongcun.

In terms of human capital, local residents' evaluation of their own human capital tends to be general or neutral. Importantly, most residents think that their academic qualifications are not high

enough and their education level is not as good as the average level. But in 2018, with the prosperity of Hongcun tourism development, many residents send their children away to study, which may make improvement. The level of tourism service gets a comparatively high score, indicating that residents generally support tourism of Hongcun and are willing to increase their service level.

In terms of economic capital, local residents' evaluation of their own economic capital is intensively at the general or middle and upper level. The answer given by the residents means that most people agree with the pulling effect of tourism on local economic development and the improvement on their own economic income level. However, the evaluation did not reach the level of strong agreement, indicating that residents still have reservations about the evaluation of economic capital. In addition, residents' evaluation of local economic development, job opportunities and the number of enterprises is very consistent. As far as they are concerned, these are "a number of indicators" that can represent economic development.

In terms of social capital, many residents have a high evaluation of their relationship with their family members. This is due to the kinship effect under the influence of strong social relations, so that opportunities for interaction are much more and intimacy is stronger than those of other social roles. However, residents' integration into the community is not deep and the relationship with the community residents is not good enough. Relatively speaking, most residents do not agree with their relationship with other residents. Detached social interaction between communities and the "busyness" caused by tourism do not allow them sufficient time to interact with community members other than family members. The fixed time and space limits their social relationship with others.

3.2 Residents' Evaluation of Lifestyle

Residents' evaluation of lifestyles includes 5 aspects: the ability to perceive risk, the ability to understand, learn and plan, the ability to deal with risks and strain capacity, one's level of interest in change and the benefits of tourism. In general, Hongcun residents have a positive attitude towards the lifestyle changes brought about by tourism. For these five aspects, the residents' responses are at the upper-middle level. This shows that in the minds of most Hongcun residents, they have a good sense of risk and ability to cope with risks, and they are curious and open-minded about new things and willing to accept the new changes brought about by tourism. Residents also think that their

ability to learn and plan is good, which enable them to continuously learn from new things. The sustainable development of the community presents a good status. Residents have the wish and motivation to pursue a better life. Meanwhile, they believe that they are capable to help residents play an active role in production and living practice to adapt to changes in the market and create a dynamic community. The residents really can feel life changes brought about by the tourism industry, so they are willing to participate in tourism and engage in tourism-related work. However, the ability to deal with risks, residents' evaluation is relatively low, and 30%-40% of residents are not certain about it. This shows that, although the tourism economy has brought about an increase in income, the operational risks have also become diverse, and some residents in the face of operational risks are still passive. To improve this aspect, the government or the neighborhood committee should promote multilateral discussions and provide a good business environment. At the same time, it should provide trainings for residents in need to deal with economic risks and improve their management and operation capabilities.

3.3 Residents' Overall Satisfaction with Life

Overall, residents are relatively satisfied with their lives. Residents agree that their lives are near-ideal, and living conditions are good, and they are generally satisfied with life. But for the item that one has received the most important thing in life, it shows a polarization. Some residents do not agree at all for two reasons: One is that they have no idea of what the most important thing they want in their lives. The other reason is that things they value, such as the house, has not yet been obtained. Most of the people who disapprove are younger groups. Most residents do not agree if their life could be lived over again, they wouldn't change their lives. It proves that most residents do not think that their past life is perfect. Although the current living conditions are satisfactory, they have the idea that they could have been lived a better life.

3.4 Residents' Perception of the Impact of Tourism Development

Residents' perception of the economic impact of tourism is very comprehensive. They feel that tourism can greatly promote local economic development. For example, their living standards are constantly improved due to tourism development, and there are more employment opportunities,

local investment and consumption. At the same time, they also have a deep understanding of the negative impact of tourism, and believe that prices and rising living costs are rising. However, according to the interview results, the positive impact of tourism is greater than the negative impact for residents, because the profits from tourism can offset the negative impact of rising cost of living. It is worth noting that compared with 2017, this year residents are more convinced that tourism narrows the gap of wealth. The possible reasons are manifold: the overall attitude of the local residents has more eased towards the gap between the rich and the poor in the village; the further development of tourism has a positive effect on more local residents to obtain more income and narrow the gap with the local average level.

In terms of the perception of social impact of tourism, the perception of tourism to improve local infrastructure has declined, which may result from the increasing pressure that tourism development puts on local infrastructure. For the objective description, the proportion of residents who agree that tourism development has changed the local population structure has increased to 46.3% of the residents. Compared with 2017, it has an obvious growth, which reflects that the development of tourism has increased the mobility of local population, and the villagers' perception of the internal demographic changes has become increasingly clear. As for the negative impact of tourism on society, the degree of perception of residents is low. Most residents give answers of “disagree” and “neutral”, but compared to 2017, the perception of negative impact on tourism to society is stronger and there is an increasing trend.

In terms of the cultural influence of tourism, the local residents have a very positive perception of the cultural influence of tourism. They believe that tourism development can make residents realize the value of Hongcun cultural heritage. Tourism development will help local residents to take pride in Hongcun's culture, and promote cultural exchanges with other places and the inheritance of local traditional culture, skills and national customs and so on.

In terms of the environmental impact of tourism, most residents' responses are “neutral” and “agree”. Residents' perception of water pollution and solid waste is the most obvious. The perception of the declining air quality, aggravated noise pollution and destruction of natural environment caused

by tourism construction is also obvious. Compared to 2017, the perception of negative environmental impacts in 2018 is stronger.

In terms of residents' attitudes, most residents are willing to continue to develop tourism in the local area and actively communicate with tourists. They are satisfied with current situation of local development and are willing to provide suggestions for tourism development. However, there are certain contradictions between residents and the government. Most residents have reservations about the execution of the government, indicating that with the economic development, while the expectations of residents for the government are constantly being raised, the reform of the government's working methods cannot keep up with the needs of the residents. Generally speaking, compared to the past, satisfaction has increased.

3.5 Residents' Perceptions and Suggestions of Tourism Development

Most of the residents who participated in the investigation live in or near the area of tourist routes, and they have positive attitude towards tourists' visit to their house. Ways for residents to participate in tourism vary, most of which is to run stores or inns which is also their dwelling. In addition, residents could participate in tourism development by tour guiding, collecting rents, etc...

In terms of tourism development, the most important concern of the residents is problems of government management and policy. For example, it is difficult to ask officials to help to cope with affairs and it takes a long time to get the approval of houses. Secondly, it is an environmental health problem that is closely related to the life of the residents. Water pollution and solid waste pollution are the most serious. Next, it is the issue of community interests, such as the commercialization of villages and the visits of tourists that affect residents' lives. In addition, there are issues of management and fairness of the scenic area. In terms of scenic spot management, the villagers feel troublesome when relatives and friends who visit them should buy tickets, and villagers in the village also pay for parking in the public parking lot. In fact, the issue of fairness is the most influential to the mood of the residents. The residents express deep resentment at "taking the relationship" and hope that the staff of the government departments will fairly implement the policy.

Residents' suggestions for tourism development are mostly raised in response to the problems reflected. In terms of environmental protection, residents recommend centralized collection and treatment of sewage to improve water quality and an increase of the number of trash cans and public toilets in the scenic area. Residents also advise that while tour guides are providing interpreting service, tourists could wear headphones to reduce noise pollution. In terms of tourism development, the villagers realize the drawbacks of excessive commercialization and suggest protecting the original things. It is recommended to issue scenic maps and improve the scenic area mark system. In terms of government departments, residents recommend that staff improve their work attitudes. In terms of community interests, residents suggest further facilitating transportation and strengthening the quality education of local people.

3.6 Residents' Perception and Suggestions of heritage protection

Most residents, who are satisfied with the current situation of heritage protection, have a strong sense of protection and maintenance of dwellings, and most of them are willing to take the initiative to repair. However, in the process of heritage protection, residents have also encountered various problems. For instance, the most common problem is that the maintenance of the house is subject to approval and the maintenance intervals are of long time. Secondly, it is difficult for motor vehicles to access, so it is hard to transport maintenance materials. The height of the house, the procedures for paying a deposit and the road width, all the factors more or less affect the convenience of the residents to repair the house. Some residents believe that the government has less compensation for heritage protection and the design drawings are unreasonable. Besides, the required timber is either difficult to buy or too expensive, and installing sanitary equipment and other restrictions is faced with many difficulties and limits..

In terms of protection and development methods, most residents agree that the original lifestyle of the residents should be preserved in the heritage area, while tourism facilities such as tourist accommodation and shopping should be built in the neighborhood. Some residents believe that it is more suitable to build the accommodation and shopping of tourists in the heritage area. Other residents believe that the commercial area should be expanded to the surrounding area after it is saturated.

Another 10.3% of the residents think that other development methods are better.

In terms of heritage protection, residents put forward some insights on five aspects of water pollution, building protection, government management, commercialization and health issues. Residents hope that Hongcun will not be more commercialized to retain its historical and cultural influence on people. In terms of water pollution, residents believe that it is necessary to strengthen water pollution control and control sewage discharge (especially the oily sewage of restaurants). Re-excavate the sewage pipe and wiring pipe, plan in a unified manner, and carry out sewage concentrated disposal. In terms of the protection of ancient buildings, residents think that buildings should be legally constructed to maintain the original ecology of Hongcun and the protection of ancient buildings should be strengthened to retain the traditional Hui style. In addition, the issue of wall tilt should be given enough attention. In terms of government management, it is hoped that tourism development will proceed as planned. Residents suggest that the government increase support for tourism development and speed up the process of examination and approval. For health issues, residents hope to strengthen health protection and pay attention to the quality education of tourists and residents.

4. Tourist Satisfaction

4.1 Tourist Basic Information

In this questionnaire investigation, 204 copies of questionnaires on the satisfaction, perception and attitude towards Hongcun were distributed to tourists in Hongcun scenic area from July 21 to 29, 2018. 204 questionnaires were collected. After omitting the invalid questionnaires, there remained 199, and the rate of validity was 97.5%.

A brief analysis of the demographic characteristics of the investigated visitors is enacted to understand the tourist constitute. According to statistics, the gender ratio is basically the same, and there is no significant gender difference in the attraction of Hongcun to tourists. In terms of age, tourists are mainly made up of young and middle-aged groups. The tourists aged 15-44 account for nearly 90% of the total visitors. High school students and undergraduates account for 65.3% of the

tourist which constitutes the largest proportion, including tourists for sketching and art training school students. Regarding the tourist generating region, tourists mainly come from Jiangxi province, and other places in sequence are Guangdong, Jiangsu, Zhejiang, Shandong and so on. Geographical distance and regional economic development affect the travel options of tourists.

With regard to the tourist behavior characteristics, it is found through analysis that the main channels for obtaining information are relatives, friends and travel agencies. For tourists in Hongcun, team tour is an important type with a proportion of 42.7%. There are two types of self-service tourists: Follow the tour guides or not follow the guides. The former accounts for 55.3%, and the latter 44.7%. In addition, the proportion of tourists who revisits Hongcun is small, which is only 16.6%. The appearance of most tourists who choose the form of travel for a day trip in Hongcun results from the packaging service of the travel agency. The tourist activities are mainly sightseeing tours, and the participation is generally not high.

4.2 Tourist Perception and Satisfaction

Content	Questions	Indicators
Characteristics of tourists	Demographics	Age, gender, origin, education, occupation
	Tourism 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	Commercialization atmosphere, the degree of crowdedness, noise pollution, water quality, air quality, overall sanitary environment and environmental management.
	Infrastructure	The scenic spots' convenience, comfort and price of public transportation, completeness and sanitary condition of public toilets, the completeness of public rest facilities, the

		completeness of garbage collection facilities and the mark system
	Service on scenic spots	The scenic spots' ticket price, tour guide, richness of tourism information carrier, access to tourism information, clarity of signal system
	Safety and health	The scenic spots' security facilities, medical equipment and public security situation.
	Experience the variety of the activities related to scenic spots	The value and charming of Hui-style dwellings; rich historic culture; local residents' traditional living conditions; simple folk customs; local souvenirs and handicrafts; characteristic dining and snacks; variety of excursions
Perc eption 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

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

In terms of satisfaction, after a one-sample t-test, the scores of all items can be considered to be significantly higher than the average level, which Cronbach Alpha can also provide evidence of relatively good reliability. Evaluations on satisfaction for the diversity of destination landscapes, sightseeing, experiences and scenic spots, experiences are highest, which on destination environment, safety and health maintain at medium-to-high levels; infrastructure and scenic services are the least satisfied, with a significant proportion of visitors having "general" attitude.

In terms of heritage perception, according to the average value, tourists have a clear understanding of Hongcun as a world heritage. Everyone knows that Hongcun is a World Heritage Site

that should be protected. Visitors are aware of the value of the world heritage and the need for protection. The statistical results of the standard deviation also reflect that the low standard deviation indicates that the tourists' perceptions are more uniform.

4.3 Visitors' Impressions and Suggestions

In addition, the open-ended questions investigate the deepest impressions and suggestions of tourists. What impresses visitors most are the Huizhou architectural features and the water system of Hongcun. However, tourists also put forward some suggestions for the development of Hongcun tourism mainly on the protection of ancient dwellings, reducing the commercial atmosphere and improving infrastructure, etc.

5. Commercialization

5.1 Shop Distribution Map and Distribution Characteristics

In 2018, there are 395 tourism commercial facilities in the core scenic area of Hongcun. In addition, the number of handicraft shops is 69 this year. For the research focuses on the core scenic spots, only the 2017 statistics are preserved for the craft market with the number of shops being updated. This monitoring is also mainly targeted at shops in the core scenic spots (non-craft market).

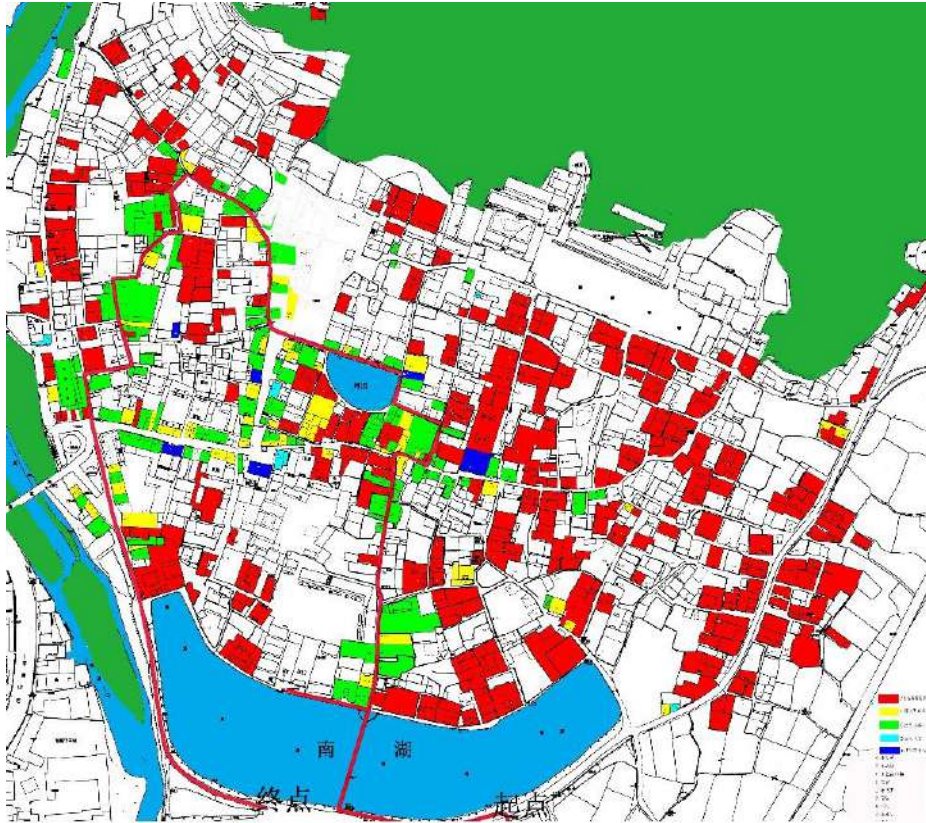


Figure 5-1 The Distribution of Commercial Areas in Hongcun

Among the 395 shops of the core scenic spots, there are 205 tourism reception facilities (Type A), accounting for 51.77%; 67 restaurants (B Type), accounting for 16.92%; 112 souvenir stores, accounting for 28.28%; 6 community stores (Category D) and 5 of other commercial facilities (category E), accounting for 1.51% and 1.26% 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%.

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 56.20% 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.

Comparing the characteristics of Hongcun's commercial business in 2017 and 2018, the total number of shops in Hongcun has increased by 50 this year, while the number of shops increased by

only nine last year. The rapid development of commercialization begins with the long-term accumulation of capital in tourism development and the gradual improvement of business awareness. At the same time, tourism in Hongcun has attracted more foreign investors. In addition, most of investment is concentrated in tourism reception facilities (Class A), which has increased in the past two years. In 2018, the number has increased by 27 compared with last year. The number of restaurants (category B) has also increased year by year, with an increase of 14 in 2018. Souvenir retail stores (category C) has increased by 9 compared with last year. Compared with 2017, the business scope is not much different, and the number of shops that sell tea and specialty products has increased.

This monitoring counts the buildings and shops of Hongcun respectively and provide a reference for the assessment of commercialization degree in Hongcun through the ratio of “number of stores / total number of buildings in the area”. Currently there are 451 buildings in Hongcun, of which 354 are conducting at least one kind of commercialization, and the commercial penetration rate of the whole village has reached 78.48%, which is a rapid growth trend compared with 62.31% in 2017. The commercial penetration rate is generally above 60%. The commercialization degree relatively low in Dobianjing area and the area along the river, while other areas are generally highly commercialized.

5.2 Features of Stores' Names

Through the analysis of the type and location of the Hongcun store's signboards: 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. Because the shops that use the plaques in general match traditional and classical styles which is in conformity with the style of Hongcun. In addition to the basic signboards, the merchants will also use various forms of signage, such as vertical wall-type signboard, hanging signboard. Signboards are more varied in style.

Through the analysis of the font selection of the Hongcun store's signboard: through simple statistics, the regular script is the most used font on stores' signboards in Hongcun, followed by the

handwriting font. The glyphs of the regular script are both classical and practical, square in shape, clear in structure and very easy to read and understand. However, the hand-written font as a fixed sign language can create a thorough "Made in China" from a three-dimensional perspective (name, font, logo), which can better highlight the characteristics of shops.

In terms of syllables on the shop signboards in Hongcun, 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 to achieve the best advertising effect, but also follow the economical and simple principles that shops should be named to impress customers. The most used word in the signboard is the generic name "Ju", and the number is 32 followed by "Tang"(32), "Fang"(17), "Lou"(15), and "Xuan"(11). Many other generic names are used on signboards, such as "Yuan", "Fu", "Zhai" and so on, which have strong classical flavor, in line with Hongcun's architectural features and a long history of culture.

6. Environmental Protection

6.1 Garbage Pollution

The garbage in Hongcun scenic area can be classified into tourism garbage and kitchen waste. Tourist waste mainly comes from tourists' own materials, travel service providers in the scenic area and biological metabolism, etc. The kitchen waste mainly comes from restaurants, inns and the daily life of native residents. The kitchen waste can at least account for half of domestic garbage in the scenic area. Regarding the disposal of tourism waste and kitchen waste, the unpopular tourist zone (outside the tourist routes) and the busy tourist zone (within the tourist routes) are subordinate to different institutions. While Zhongkun Company takes charge of the health situation of the popular tourist zone, the health situation of the unpopular tourist zone is in the charge of the village committee. In terms of hygienic quality, the quality of the busy tourist zone is much higher than that of the unpopular tourist zone. In terms of garbage pollution, a large amount of tourism waste piles up, which will have a serious impact on the air quality of the scenic spot and the water body, even damage the

tourism image and decrease the experience of tourists.

At present, there are two main problems of tourism waste. Firstly, in the process of garbage disposal, most of the staff in the scenic area do not have the awareness of environmental protection. When cleaning up the garbage, the recyclable garbage and the non-recyclable garbage are mixed. The non-classification of garbage will reduce the efficiency of the garbage transfer station, aggravate the garbage pollution and will also violate the regulations stipulated by the National Tourism Administration. Secondly, since 2000, Hongcun Scenic Area has been included in the World Cultural Heritage. The number of visitors has been increasing, which gradually surpasses the carrying capacity of tourist attractions. The amount of garbage generated per day can reach 1,250kg. With large amount of garbage being generated, it not only increases the burden of the ecosystem but also wasted a lot of human and material resources in the scenic spot.

6.2 Water Pollution

Water pollution results from the mixture of various water bodies in nature and some natural or artificial pollutants in the circulation of water, where after a certain limit, human health can be directly or indirectly affected. According to the classification of different pollutants, there are water pollution of natural pollutants and water pollution caused by man-made pollution. Man-made pollution mainly includes pollution of domestic sewage, industrial sewage or pesticides. The water body is seriously polluted and will bring inconvenience to people's lives. Enjoying the name of “village in the painting”, one of the most beautiful villages in China, Hongcun is surrounded by mountains and rivers. Its ingenious water system design and typical Hui-style architecture are main attractions of Hongcun. With the development of tourism, the water quality of Hongcun has declined. The eutrophication was caused in many places by the operating oily sewage and the pigment sewage of students of painting. In addition, residents use detergents containing phosphorus to do laundry in the ditches, which caused eutrophication of water bodies, etc.

In 1986, Hongcun developed tourism activities. With the continuous development of tourism and the promotion of residents' living needs, tap water could be obtained. The water in the village was used

for secondary water for daily life and landscape water for sightseeing. Nowadays, tourists can see a lot of water in the ditches in the scenic area along the tourist route that is not clear as before. There are some areas without water. In the water of the South Lake and the Moon Marsh, a lot of oil and some dead plants could be seen. The main causes of water pollution in Hongcun are oily sewage in life, pigment sewage from students who comes to sketch. phosphorus containing washing powder that the residents use to clean clothes and some garbage from tourists. Nearly few solid wastes appeared on the water in the past few days of the monitoring. If it exists, the cleaning staff will clean it soon. However, no one copes with the oil and the eutrophication of the water which is more serious.

6.2.1 Operating Oil Sewage

Under the tourism development of Hongcun, many ancient dwellings have been transformed into catering and B&B stores. There are more than one hundred restaurants and catering stores in the village. The daily operation of catering stores generates a large amount of oily sewage, as well as the B&B shops and the residents' daily life. During the interview, many local residents believe that the water quality in the village is not as good as before. Hongcun's land is gravelly and it is easy for the water to percolate into the ground. Before the development of tourism or in the early stage of tourism development, people directly discharged with the oil water, so the sewage went underground, ran deep into the ground to the ditches, downstream. When it flows to Yue Nature Pond and the Southern Lake, there is not much oil. However, due to the improvement of people's living standards after the development of tourism, now the oil in the diet is much more than before, but the way of dealing with oil is almost the same as the original one, which increases the pollution of the water body. At present, there are several treatments of operating oily sewage in Hongcun scenic area:

The Treatment of Operating Oil Sewage	Remarks
Personal collection	Each of the restaurants and homestays has a special sewage collection bin. The village committee in charge of the removal of the sewage bins. The

	special cleaning staff will collect the sewage of the previous day.
Oil-proof land	Some of the oil is poured into the oil-proof land, and the sewage treatment facilities of the restaurants that are incomplete will not be given a business license.
Directly discharged into the water	Several residents who don't own tourism business and inns directly discharge with sewage into the ditches and wash kitchen utensils there.
Special cleaning staff cleans the oil in Yue Nature Pond and the Southern Lake	In order to clean up the oil pollution of Yue Nature Pond, the village committee has cooperated with the Ailes Ecological Restoration Company of Beijing to plant grass for purifying water in the pond, and has hired special cleaners to clean the oil.

Table 6-1 Treatments of operating oily sewage

During the field trip, along the water flow pattern of Hongcun, in the upstream area near the water source, in the middle reaches near Yue Nature Pond and the downstream area near the Southern Lake, more than 20 shops involving restaurants and B&B were visited. It is known that restaurants are required to set oil-proof land. The Industry and Commerce Bureau and the government will inspect the safety of the catering and their oil sewage treatment from time to time every quarter. If the oil sewage treatment is incomplete, the business license will not be given. In addition, bowls and chopsticks of some popular restaurants are cleaned and sterilized in Huangshan City, but the rest restaurants clean their tableware by themselves. During the field observation, it was found that several residents who didn't own tourism business in the upstream washed oily kitchen utensils and prepared fish in the ditches, as well as clothes and mops.

6.2.2 Sewage of Phosphorus Containing Detergents

Clothes of many homestays and residents in Hongcun are cleaned by themselves. They wash clothes by a washing machine or hand washing. Some even wash clothes in the ditches. In the hospitality industry, a lot of bed equipment every day needs cleaning. The sheets, quilt covers, pillowcases and towels of many B&B are in the charge of the company outside the scenic spot for cleaning. Some inns near Yue Nature Pond and the Southern Lake and popular B&B in the upstream are outsourced. They are all outsourcing others. Only the clean of sheets, quilt covers and pillowcases is 5 yuan, while towels are included together for 8 yuan. However, many of the homestays that have their own place for drying clothes and whose operating conditions are relatively stable do the laundry with their own washing machine. The laundry sewage is directly discharged into the ground, without any treatment. Residents' awareness of water pollution caused by cleaning their clothes is very weak. They think that water in the ditches are flowing, so cleaning these clothes and oil will not cause pollution, and there is not much improvement in their ideas.

6.2.3 Sketching Pigment Sewage

(1) Overview of Students of Painting

Hongcun is known as the “village in the painting” that attracts a large number of students to come to sketch. The Qian County has typical Hui-style architectures and beautiful sceneries. Every year, 70% of the county’s tourism income comes from sketching tourists. Only the consumption of students of painting in Hongcun account for 70% of the sales of tourism goods, and the daily expenses of art students are much higher than those of other students of the same age. According to interviews and observations, students of painting are not only art students but also students of architecture colleges. Students of painting can be categorized into sketching students and coloring students. Sketching students do not need to use pigments, and most of them are students of architecture college and art child students which makes up a small proportion of students in the village. Coloring students need to use chemical pigment such as gouache, watercolor, and acryl. The group is mostly students of the academy of fine arts. They are the majority of sketching students in the village. Each of them has a folding paint bucket of about 2 liters and uses 1 bucket of water respectively in the morning and

afternoon. The students of painting mainly gather near the Southern Lake and the commercial street. There are hundreds of people painting in the Southern Lake every day, especially the number of students in the holiday continues to increase. The office of scenic area does not permit students to paint near Yue Nature Pond, the South Lake School and Chengzhi Tang where are crowded with tourists. Students of painting mainly live in the Ji Village outside the scenic spot.

(2) Management of Students

The students of painting not only bring economic benefits to Hongcun, but also hidden dangers of environmental pollution. The students of painting and teachers stay longer than the average tourists for more than 10 days. The pigment is chemical. If the pigment is poured without restraints, it will cause great damage to the water quality of Hongcun. The pollution occurred after some students poured sewage in the ditches. Therefore, the local government has successively issued the “Standards for the Safety and Civilization of Students in the County of Qian County” and the “Interim Measures for the Management of Students in the Scenic Spots of Qian County” to manage the students’ sketching activities. Each student holds a student's card for sketching as their tickets, 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. It is forbidden to paint on the main tourist roads, Yue Nature Pond and the Southern Lake, Chengzhi Tang and Lexu Tang.

(3) Dumping of Pigment Water

The Southern Lake and the post office in the commercial street, surrounding areas of the village committee and the water source of the village are the main gathering places for students of painting and the popular spots for sketching. The number of sketching group this year is larger than last year. This year, students sketch landscapes around the Southern Lake. 7 students are interviewed around the village's water source and 5 in the streets of the eastern unpopular area. Twelve students said that before entering the Hongcun, the teacher told them that the pigment water could not be poured into the water of the village. The pen could not be cleaned in the water either. The sewage had to be poured into

the special bucket for pigment placed in the scenic spot. Besides, villagers should keep an eye on the pigment dumping and stop students once the dumping occurs, and inform students of the buckets for pigment sewage.

(4) Distribution of sewage tanks

There are two kinds of sewage buckets in the scenic spot: one is a domestic sewage bucket, and the other is a special bucket for pigments. The two buckets are similar in appearance and are blue plastic buckets of the same size. The difference is that the bucket for pigment has a “pigment bucket” red sign. The domestic sewage buckets are mainly provided in the restaurants, B&B and dwellings. The buckets for pigment are designed for students to dump the pigment sewage. The South Lake is the place where the students gather most and the number of paint buckets is also the largest. Some students in the interview around the Southern Lake said that they only use the special bucket for pigment after seeing it. However, because the bucket for pigment is separated from the sketching students by a pavement, many students do not discharge with pigment sewage until they return to hotels. The students of painting near the Southern Lake in Hongcun have also become a landscape, and many tourists appreciate it. But many students are not willing to be surrounded by other when painting, so they will go to the unpopular areas in the village. However, the water source near the unpopular areas, buckets for pigment are fewer, while there are many sketching student, which a hidden danger to cause water pollution.

6.2.4 Residents' Perception of Water Pollution

The tourism development brings economic benefits and ALSO has an impact on the environment, society and culture. The impact on the economy is generally beneficial. The social impact is not very popular, and the environmental impact is double-edged. It is easy to reach a consensus on both positive and negative attitudes of environment and economy. Residents of Hongcun have different attitudes towardw the perception of Hongcun water pollution. Some people think that the water quality of Hongcun is not as good as before. Before, the bottom of the water was crystal clear. There were small animals in the water, and now almost disappear; some think that water is not as polluted as some other tourist attractions, and they can accept the changes; some think that tourism causes a lot of water

pollution to other crops and the environment, and attaches importance to the protection of the water body.

After visiting local restaurants and B&B, it is found that there are different views in the degree of water pollution among people who live upstream and downstream. The upstream residents of the water flow (the area where Yue Nature Pond goes up to the water source) feel that the water of the ditches is running water, so washing clothes in the upstream does not affect the downstream water. The upstream residents does not have much tourism income and their awareness of water protection is lacking. (We have been washing clothes here. Because this water is running water, washing clothes in the upstream will not affect other people. – a 60-year-old grandmother). The residents in the middle of the water (near Yue Nature Pond) are very sensitive to the pollution of the water body. They are very concerned about the cleanliness of the water. Although there are not many people cleaning the clothes in Yue Nature Pond, many residents have remodeled their own restaurants and B&B for Yue Nature Pond is the village center that many tourists will visit. The nearby restaurants are very prosperous, and the landscape of Yue Nature Pond could attract many tourists, so they are very concerned about the cleanup of Yue Nature Pond. (We will clean up the ditches every year. The water here was very clean. Now I don't know that what plants that the village committee has planted in influence the waterscape, so it is very inconvenient for us to do the laundry in the water. – Ms. Wang of Wangjia Tavern) The downstream residents (near the Southern Lake) feel that the current water body is polluted, which it is not very serious. The connection between water and them is not great. (You can smell it, and the water doesn't have that smell. It's very clean compared to some other scenic spots, and we don't use the water here. – the owner of Hongan Inn)

Different people have different perceptions of the degree of water pollution. It is common of them to think that the water is more polluted than before, and they think that the water pollution is only caused by the pigments of the students. They have no idea that phosphorus-containing washing powder could cause water pollution. People in the village are not sensitive to the pollution of water bodies, and people's awareness of environmental protection is relatively weak.

6.3 Noise pollution

According to the causes of the noise pollution in Hongcun scenic area, the noise sources can be mainly divided into five categories - motor vehicle noise, tourist activity noise, residential activity noise, commercial activity noise and construction and decoration noise. Motor vehicles Noise and tourism activity noise constitutes the highest proportion in the Hongcun scenic area, of which the noise is the loudest. When the motor vehicle passes and approaches the tour guide, the decibel value can reach 90-100, far exceeding the noise standard (60dB).

In this monitoring, seven locations are selected for noise measurement, namely unpopular zone A (Dongdajing), unpopular zone B (source of water system), the tree of village entrance, the Commercial Street, the Southern Lake, Yue Natural Pond and Taoyuan Ju, where Taoyuan Ju is the representative of indoor noise monitoring spots. In the monitoring period of mornings and afternoons in two days, in 7 monitoring points, while the noise of the commercial street and the tree in village entrance is the highest, and the noise of unpopular zone A and B is the lowest. The reason for this phenomenon is the number of tourists. In the busy tourist areas such as the commercial street and the tree of village entrance, there are a large number of tourists, which is noisy. In addition, the motor vehicles have to whistle to pass, which makes the noise louder. In the unpopular tourist zone, due to the small number of tourists, the level of noise is low.

The noise problem always exists in Hongcun scenic spot. In the 2017 monitoring report, it can be found that the noise problem of Hongcun has become the third largest pollution of the scenic spot after the garbage pollution and water pollution. However, the village committee is also actively solving this issue. Since January 2018, the car ban has been prohibited in some parts of the Hongcun scenic area. At present, it works well. Most tourists said that they would like to see the scenic spot close to all vehicles, which not only ensures the safety of tourists but also reduces the noise. However, as one of the long-term means of transportation that residents have long relied on, it is impossible to prohibit vehicles in a day. Therefore, the scenic area will spend a lot of time reforming.

Concerning the noise pollution, it is unexpected that residents and tourists are more tolerant of noise in scenic spots. However, the focus of the two on noise issues is different. Visitors reflect the inappropriateness of motor vehicle whistle in the scenic area. They believe that whistling or motor vehicles should be prohibited in the scenic area. Residents reflect the voices of tourists, noises, horns

of guides and some tourist activities such as noise generated by gliders flying low are the main source of noise in the scenic area.

6.4 Air pollution

In terms of the air quality of Hongcun scenic spot, compared with most tourist scenic spots in the country, the air quality of Hongcun scenic area is good, and there is no large-scale air pollution. But due to the increasing number of tourists i year by year, the temperature of Hongcun is constantly rising. Compared with the average temperature in Xi County, the temperature of Hongcun is about 4 °C higher. Hongcun is slowly forming a heat island effect, which will greatly threat the air quality of Hongcun.

The air pollution in Hongcun is mainly derived from the motor vehicle exhaust, the gases of residential lives, the random piling of domestic garbage and the destruction of water bodies. Although the water system throughout the village maintains the quality of the atmosphere and regulates the temperature, in recent years, it has been continuously destroyed, and some water areas in the South Lake have been in a stagnant state, and breeding mosquitoes, etc. If this condition goes worse, it will destroy the ecosystem of Hongcun and cause prevailing high temperature, abnormal climate and serious air pollution. Therefore, in order to the prevent the air pollution in the scenic area, the Hongcun Scenic Area Management Office should start with the protection of water bodies and the cultivation of green areas, which not only protects the tourism resources of Hongcun, but also maintains the foundation of the ecosystem and tourism development of Hongcun.

6.5 Public Environmental Facilities and Pollution

Regarding the rest service facilities, there are five areas in the Hongcun Scenic Area where visitors can rest: the square near the craft market, the tourist service center, Yue Natural Pond, the tree of village entrance and the Southern Lake. In addition to these five large rest areas, one or two stone benches are placed in front of alleys or in front of several ancient dwellings for visitors to rest, which is a rare condition. At the same time, some merchants will provide visitors with a charging seat. The environment, space and number of seats in each public rest area are very different, the most of which are outdoor spaces, and only the tourist service center is an indoor rest space. Although there are not

many public rest areas in the Hongcun tourist scenic spot, the problem of garbage pollution is not serious. Judging from the interview results, most tourists reported that the area available for rest in the scenic area was relatively small and difficult to find. In addition, some tourists said that the rest service facilities in the scenic area were poor, especially when the weather was hot, there was no shade in the rest area.

The tourism industry of Hongcun has been constantly developing, and the hardware service facilities in the scenic spots are gradually being improved. However, according to the data of 2017-2018, the problem of tourist toilets is still the shortcoming of the public service facilities in the scenic spots. The Hongcun tourist scenic area covers an area of 187km², but there are only 4 public tourist toilets in the scenic area which is in the village committee, the craft market, the parking lot and Chengzhi Tang. The quality of travel toilets is uneven, and some even less satisfactory. In terms of the layout of toilets in the scenic spot, only the toilet in Chnegzhi Tang locates on the tourist routes of Hongcun Scenic Area, where its location is very secret. There are no road signs at the entrance, and the facilities are relatively simple. In terms of the space, environment and function of toilets, the sanitary condition of the toilet in the craft market is the worst. The facilities are relatively old, and the doors and windows of the toilets are basically damaged which is replaced of by the curtains, so the smell in the toilets is unpleasant. The parking lot toilet are the largest, most completed and cleanest among the four tourist toilets. The slogan on the wall is used to show visitors the culture of Hongcun scenic spot. The toilet fully takes into the needs of children, the elderly, wheelchairs and others into account, achieving a humanized setting. But it is located outside the scenic spot, so visitors can only use the toilet before entering the park and after leaving the park. In summary, there are three major problems of tourist toilets in Hongcun – fewer toilets, difficulties in finding toilets and unclean toilets.

Similar to the situation of public toilets in tourist attractions, there are problems of public garbage bins in the scenic spot. Most of the tourists report that there are few garbage bins in the scenic spot, which is difficult to find and lacks design creativity and cultural atmosphere. According to incomplete statistics, there are about 58 garbage bins in Hongcun Tourism Scenic Area, including 32 domestic garbage bins, 15 classified garbage bins and 11 simple ones. From Figure 6-16, the distribution map of public garbage bins in Hongcun scenic area, it can be seen that simple garbage bins and classified garbage bins are mainly located on tourist routes and main nodes, such as commercial streets, the Southern Lake, and the tree of village entrance, where the number of buckets near the Southern Lake is

the largest, which is closely related to the sketching crowd around the Southern Lake. Some old dwellings are also equipped with trash cans. For example, there are more than 3 classified garbage bins in the ancestral hall of Yue Natural Pond. The domestic garbage bins are mainly located in the unpopular areas to collect the domestic garbage of the residents or the kitchen waste of the restaurants. The classified garbage bins and simple garbage bins located in the busy zone are usually cleaned by cleaning personnel, so the appearance is relatively clean. In the unpopular zone, few cleaning personnel would clean the domestic garbage bins, so surface hygiene is poor. The reason why the condition of garbage bins in two areas are different may be the tourism heat and managers of the two regions.

In summary, tourism development of Hongcun brings economic benefits to the village, but also hidden dangers to the sanitation of the village. In order to meeting the needs of tourists, the number of restaurants and homestays is constantly increasing and generates sewage and kitchen wastes affecting the environment, which have brought greater challenges to the sustainable tourism development. The revitalization of the countryside must take the harmony of human and nature into account, cultivate and promote the environmental awareness of residents and tourists, and attach great importance to environmental protection.

7. Summary

In the monitoring process, the investigators find that there are problems like insufficient quality education for residents, improper handling of domestic and operating water, incomplete infrastructure in the scenic spots and insufficient protection of ancient buildings. According to this, four aspects of management opinions are proposed: resident management, scenic area and staff management, tourist management and environmental management. For the management of residents, first of all, residents should collect and deal with domestic water and industrial water as required to reduce the water pollution of Hongcun. Secondly, inform residents of the disadvantages of excessive commercialization, and require residents to carry out the protection of traditional buildings. Finally, it is recommended that the scenic area managers inform the infrastructure construction costs, etc., so as to reduce the discordant voice from the residents and promote the harmony of the Hongcun community. For the scenic spot and its staff management, it is recommended to first provide tourists with earphones, trying

to equip one place with one guide, and then take restrictions and prohibit the whistle, unreasonable whistle or excessive whistle to improve the service level and quality education of the staff in the scenic spot. The scenic spot should increase the number of garbage bins, public toilets, signs and rest areas for tourists, and further enhance the accessibility of the scenic spots; for the management of tourists, strengthen the quality education for tourists, timely stop the acts of environmental damage such as littering, and issue a note book or play the video of environmental protection and precautions in the service center of tourists. For the students of painting who enter the non-permitted sketching area, they must be strictly controlled. Before entering the scenic spot, they must pass the quality examination and inform them of the prohibited items. In terms of the environmental management, all parties need to work together, and the government and the administration of scenic spots should strengthen the supervision of unreasonable construction, and at the same time recommend legal construction maintaining the original ecology of Hongcun; strengthen the protection of old buildings, preserve the flavor of traditional Hui style and pay more attention to the problem of wall tilting, and speed up the construction of sewage treatment facilities to make improvement in the quality of water body in Hongcun as soon as possible.