

**Monitoring Report on the Sustainable Tourism
Development of Xidi
(2019)**

Huangshan Scenic Area Management Committee

Monitoring Centre for UNWTO Sustainable Tourism Observatories

September 2019

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1 Foreword

1.1 Purpose of monitoring

With the gradual deepening of the concept of sustainable development, promoting the sustainable development of tourism has become a global trend. Finding specific technical methods for long-term monitoring of destinations, and taking necessary preventive and corrective measures to ensure the sustainable development of tourism has become the focus of attention of the world today. Since 2006, Sun Yat-sen University and the World Tourism Organization (WTO) have begun to establish a good cooperative relationship, working together to apply the sustainable development indicators of tourist destinations specified by the World Tourism Organization in practical operations, and scientifically carry out tourism destination monitoring and promotion.

Monitoring Centre for UNWTO Sustainable Tourism Observatories(hereafter referred to as the monitoring center) began to set up observatories in Xidi and Hongcun ancient villages in Yi County, Anhui Province in 2012 to carry out continuous tourism monitoring. This monitoring team is responsible for the monitoring of Xidi. The main purpose is to feedback the monitoring results of previous years to the local residents and the government, and to provide practical suggestions for local tourism development.

1.2 Monitoring scope

Xidi Village is an ancient village in Yi County, southern Anhui Province. The village uses a longitudinal street and two roads along the stream as the main structure, forming a village street system that mainly faces east and extends north to south. The village originated from the 11th century AD and flourished in the 14-19th century. Because it is rarely affected by war in history and has not been affected by major economic development, the original form of the village has been well preserved, and it has always maintained the authenticity and integrity of historical development. There are 124 Ming and Qing ancient dwellings and 3 ancestral halls preserved in Xidi, all of which have been listed as key cultural relics protection units in Anhui Province. In November 2000, it was included in the World Cultural Heritage List by UNESCO with Hongcun. On May 5, 2011, Xidi Village Scenic Area was officially awarded the title of "National 5A-level Tourist Scenic Spot" by the National Tourism Administration. At the same time, Xidi is also a national key cultural preservation

unit, a famous historical and cultural village in China, and one of the top ten most charming towns in China.

1.3 Monitoring content

The monitoring work lasts for 7 days and includes: 1) issuing a questionnaire for tourists, and conducting simple interviews with tourists to understand their perception and satisfaction with the development of Xidi tourism, and promoting sustainable tourism related knowledge to tourists; 2) issuing questionnaire for residents and interviewed residents on local business development, residential protection, community resilience and environmental protection, collected residents' attitudes and opinions on local tourism development, distributed publicity brochures to residents, and popularized knowledge about sustainable tourism development; 3) for residential housing, established a file to number, file and investigate households in the blocks divided by the main streets; 4) Establishing a database of Xidi business information, for Dalu Street, Straight Street, Henglu Street, Qianbianxi, Houbianxi and Huanghuang; 5) Paying attention to Xidi environmental protection issues, and further understanding issues such as the generation and treatment of garbage and sewage; 6) Understanding the development of Xidi tourism, upgrading its future tourism products and giving recommendations for brand building; 7) Understanding the impact of tourism on the lives of local residents and the changes in intergenerational heritage. A video was made to record the changes.

2 Resident filing

2.1 File range

The scope of this Xidi residential building filing was mainly concentrated at the intersection of Qianbianxi and Houbianxi, Houbianxi, the middle part of Dalujie and Qianbianxi, the middle part of Dalujie and highways, and highways, and Dalujie. The establishment of 59 houses of 37 households was filed.

Where the front stream(qianbianxi) and the back stream(houbianxi) meet and the back stream are filed. At the junction of Qianbianxi and Houbianxi and the houses of Houbianxi, there are 21 buildings and 14 households. Because this time the front stream and the back stream meet at the junction of the back stream and most of the dwellings in the back stream are located in the alleys, so most of the sub-regional dwellings are for

residents' own use, and a small amount is for lease and part of the lease. The heads of households of 14 households are all in Xidi, and they are currently living in Xidi. The heads of the household are mostly farmers, and most are over 50 years old. The confluence of Qianbianxi and Houbianxi and the residences of Houbianxi are relatively close to the tour route. Therefore, more than half of the dwellings in the archives are involved in tourism business activities, mostly in the form of guesthouses.

As part of the dwellings filed this time are distributed inside the alleys and partly along the streets, the way they participate in tourism and business activities includes both guest houses and restaurants that need to face the street.

The middle section of Dalu Street and the front stream are filed. There are 8 dwellings in the middle of Dalu Street and Qianbianxi, 6 of them are protected dwellings and 2 are ordinary dwellings. All relations of dwellings are for residents' own use. The eight heads of households are all Xidi and are currently living in Xidi. The occupation of the head of the household is mostly farming, concentrated in the 60s and above in terms of age.

The dwellings built in the middle of Dalu Street and Qianbianxi were originally used as residential houses. Of the 8 households in the archives, 11 are currently occupied and have people living in them. As the dwellings in the middle of Dalu Street and Qianbianxi are mainly located at the east of the village and are far from the tourist routes, they rarely participate in tourism business operations.

Between Dalu Street the highway and the highway are filed. There are 9 buildings between Dalu Street and the highway, and along the highway. Among them, there are no key protection residential buildings, 2 buildings are protection residential buildings, and 6 buildings are ordinary residential buildings. There are two main types of uses of residential houses: residents' own use and renting. Because the residents of Dalu Street have many places in the alleys, all the ancient houses in Dalu Street and the middle part of the highway are mainly for residents' own use. The ancestry of 7 heads of households is Xidi, and the ancestral home of only one head of households is northeastern China; 8 heads of households all live in Xidi, and the heads of households are mostly self-employed, followed by farming. Dalu Street is the main arterial road in Xidi Village and the main gathering place for tourist business in the scenic area. Half of the residents are involved in tourism business activities, but there are also livelihoods such as farming and income sources such as retirement wages. The number of residents participating in self-employment and farming is

relatively large, and at the same time, the diversification of household economic sources has occurred.

The residential buildings are divided into 4 types of uses, including 4 households for self-occupation and 2 households for tourist accommodation. The majority of residents live in their own residences, indicating that although Dalu Street is closer to tourist routes, because these houses are located in the middle of Dalu Street and the highway, the geographical location is not very favorable. Therefore, most houses do not use their own houses for business activities. The survey shows that tourism development has a small impact on the area and has not changed the function of most residential buildings, but there are still some residential buildings affected by this, and there has been a shift in residential functions to commercial uses.

Dalu Street is filled. There are 12 buildings in Dalu Street, of which there is no key protection residential houses, 3 are protecting residential houses, and 4 are general residential houses. The houses on Dalu Street are mainly for rent. The ancestral home of 6 heads of households is Xidi, and the ancestral home of one head of households is Taiwan; 5 heads of households live in Xidi, and 1 head of households live in Taiwan; most of the heads of households are farmers. As Dalu Street is in a tourist hot zone, the number of residents participating in self-employment is relatively large and at the same time, the diversification of household economic sources has occurred.

Dalu Street residential buildings have three types of uses, including 6 households for self-occupation, 4 households for tourist accommodation, and 1 household for rent. Since they do not directly face the street, most of the residential buildings are self-occupied by residents. Under the influence of tourism activities, some residents also use their homes to carry out commercial activities such as tourist accommodation.

2.2 Impact of tourism development on residential buildings

Tourism development has a great impact on the buildings close to the confluence of Qianbianxi and Houbianxi. Most of these buildings are involved in tourism activities. For those located in the popular tourists area, they are involved in commodity sales and catering operations, and in the cold tourist areas, residents are involved in homestay management.

The ancient dwellings in the middle of Dalu Street and Qianbianxi(the front stream) are close to the tourist route, which is affected by tourism. Some houses have been converted into places for commercial activities.

Buildings in the middle of Dalu Street and the highway, and residential houses on the highway are not affected by tourism development because they are not areas that tourist routes pass through. Internally, most of the dwellings have been equipped with new basic living facilities. There are few dwellings with only commercial use. It also shows that the impact of tourism is limited.

Dalu Street and the middle part of the road are located deep in the alleys. Fewer tourists come here, and it is less affected by tourism development. The main source of income for residents is farming. On the other hand, Dalu Street is closer to tourist routes, and some residents use them or rent them to non-locals to carry out commercial activities such as tourist accommodation.

2.3 summary

The overall architectural appearance of most of the dwellings is traditional Hui style, and there are changes and modifications in the interior to varying degrees. In terms of internal structure, most of the dwellings have been installed with basic living facilities, and the dwelling living facilities operated as tourist accommodation are the most complete. Most of the dwellings with a history of more than 100 years have been renovated to a small extent, retaining the pattern of traditional buildings, while the new buildings built in the second half of the last century are completely new house structures.

The use of residential houses in the four areas has different characteristics: the intersection of the front stream and the back stream and the rear houses are partly located inside the alley and partly along the street, so they participate in tourism business activities

There are both homestays and restaurants facing the street. The residential houses in the middle of Dalujie and Qianbianxi are mainly located at the east of the village and are far from the tourist routes. Therefore, there are fewer residential houses participating in tourism business operations. In the middle of the street and highway, most of the dwellings do not use their own houses for business activities. Even if they are engaged in commercial activities, they are mainly based on tourist accommodation. Since the dwellings built on Dalu Street do not directly face the street, most of them are occupied by residents

themselves. There are also some residents who use their homes to carry out commercial activities such as tourist accommodation, and there are cases where they are leased to non-local operators.

3 Community perception survey

3.1 Basic situation of the questionnaire

Residents in the Xidi Scenic Spot were surveyed. The survey period was seven days from July 15, 2019 to July 22, 2019. The survey method was mainly based on questionnaires, with short interviews. A total of 100 questionnaires were distributed in this survey, and 83 were effectively recovered, with an effective recovery rate of 83.0%. Among the valid questionnaires collected, the respondents were mainly distributed in the important areas of Xidi, such as Dalu Street, Huishi Street, Henglu Street, Zhijie, Qianbianxi and Houbianxi. Based on the size of each street and the dense distribution of residential buildings, it can be judged that the survey has a wide coverage. The survey sample can represent most of the residents in the Xidi Scenic Area. The community questionnaire consists of the following seven parts and indicators:

Table 3.1 Community survey indicators

Content	Issue	Monitoring indicators
Tourism development impact	Economic impact	Economic development level; living standards; employment opportunities; attracting investment and consumption; cost of living; housing rents; gap of rich and poor
	Social impact	Infrastructure; population proportion; law and order situation; population density; living order; social atmosphere; relationship between tourists and residents
	Cultural impact	Awareness of heritage value; cultural pride; cultural integration and exchange; destruction of traditional culture; inheritance of culture and customs
	Environmental Impact	Air Quality; Noise Pollution; Water Pollution; Solid Waste Management; Man-made Buildings and Natural Environment Balance;
	Residents' attitudes / actions	Communicate with tourists; Government's enforcement efforts; Provide recommendations for tourism development; Tourism development satisfaction; attitude towards Tourism development

Personal situation and environmental awareness	The influence of surroundings	Continuous improvement of the people around them; People around them have enough opportunities to learn; People around them can improve their skills; People around them can develop themselves; People are comparing each other; everyone is worried about mistakes; people feel pressured;
	Personal goal-oriented	Willing to challenge myself; looking for opportunities to improve myself; willing to try new things; proving yourself; worrying about mistakes; striving for perfection;
	Dynamic ability	Focus on change; understand the local; think about possible changes; focus on tourism development; quickly respond; adapt to the environment; try new areas; be good at solving problems
	Dynamic changes in the environment	Customer needs; competitors; industry changes; operating environment; policy environment; climate environment;
Living conditions of residents	Economic level	Fixed assets; Durable goods;
	Income and work situation	Job opportunities; income level; consumption level; job type; source of income;
	Social reach	influence; circle of friends; get help;

Residents' satisfaction of life	Ideal life; living conditions; life satisfaction; whether they are willing to change;
Residents' perceptions and suggestions on tourism development	Distance from tourist routes; residents' attitudes towards tourists visiting residential houses; ways in which residents participate in tourism development; the most dissatisfied; specific opinions or suggestions;
Residents' perceptions and suggestions on heritage protection	Degree of consent to the status of heritage protection; house attributes; maintenance attitude; the most troublesome issues in protection; heritage protection and development methods; suggestions and opinions;
Basic information of residents	Gender; age; education level; frequency of residence; length of stay; occupation and its relevance to tourism; channels and proportion of monthly income sources; monthly income; total family population and number of people engaged in tourism;

3.2 Basic situation of community residents

Table 3.2 Demographic analysis of surveyed residents (N = 100)

characteristics	Sample size	ratio	Characteristics	Sample size	Ratio
gender			occupation		
male	38	39.6%	student	6	6.3%
Female	58	60.4%	farmer	5	5.2%
Age			Service workers	10	10.4%
Under 15	1	1.0%	Company employees	3	3.1%
15-24	13	13.5%	retirees	4	4.2%
25-44	49	51.0%	Self-employed	63	65.6%
45-60	26	27.1%	other	5	5.2%
Over 60	7	7.3%	Related to tourism or not		
Education background			Yes	77	87.5%
Primary school and below	3	3.2%	No	11	12.5%
Junior high school	38	40.0%	Monthly income		
High school or technical secondary school	31	32.6%	<1000	11	12.4%
Bachelor	23	24.2%	1001-2000	22	24.7%
Master and above	0	0.0%	2001-3000	27	30.3%
Residence frequency			3001-5000	11	12.4%
seasonal	21	22.3%	5001-10000	13	14.6%
Long term	73	77.1%	>10000	5	5.6%
Residence time					
Less than 1 year	10	10.6%			
1-3 years	15	16.0%			

4-6 years	8	8.5%	
7-10 years	3	3.2%	
More than 10 years	58	61.7%	

The demographic analysis of the residents surveyed this time is shown in Table 3.2. From the table, it can be seen that among the residents surveyed this time, men accounted for 39.6%, women accounted for 60.4%, and the number of female samples was higher than that of male samples. In the sample age, the majority of the 25-44-year-old population accounted for 51.0%, and the other age groups were more evenly distributed. In terms of education level, most of the respondents are mainly concentrated in high school or technical secondary school and junior high school. There is no master's degree or above in the sample, and the overall level of education is low. In terms of frequency of residence, long-term residents reached 77.1%, seasonal residents accounted for 22.3%, and most of them were long-term residents of Xidi. From the perspective of residence time, 61.7% of the residents surveyed have lived for more than ten years, and most of the residents in the short-term community are private business owners.

In terms of occupation, the residents surveyed are mainly private business owners, up to 65.6%. Most of them are individuals who open restaurants, homestays, tea houses, souvenir shops and other tourism-related activities in the Xidi Scenic Area, accounting for about 80% of the residents surveyed. In terms of the monthly income level, the monthly income of most residents is in the range of 1001-3000, and the overall income level is not high, which is affected by the number of tourists.

3.3 Personal situation and environmental perception

3.3.1 the influence of surroundings

The perception of the influence of surroundings of Xidi residents in 2019 is shown in Table 3.3. On the two indicators with lower mean values, residents agree with the assumption that "everyone is afraid to make mistakes", but do not agree with the assumption that "everyone will avoid making mistakes." This shows that the residents of

Xidi will be keen to choose the grow from mistakes and ask for advice modestly. At the same time, residents are hoping to do better for tourists and for their own lives.

Table 3.3 Perception of environmental goals in Xidi residents in 2019

Indicator	Oppose	neutral	Agree	Mean value
People around can continue to improve	1.2%	24.1%	74.7%	3.92
People around have enough opportunities to learn	8.4%	24.1%	67.5%	3.72
Everyone has the opportunity to improve their knowledge and skills	4.8%	20.5%	74.7%	3.86
Everyone has a chance to achieve self-development	6%	26.5%	67.5%	3.77
Interest and curiosity are the main reasons for everyone to engage in tourism	10.8%	38.6%	50.6%	3.52
Everyone is constantly proving their abilities	1.2%	24.1%	74.4%	3.98
Everyone wants to do better	13.6%	59.3%	27.1%	4.14
Everyone wants to do better than everyone else	0%	14.5%	85.5%	4.16
You will compare performance or development status with each other	3.6%	32.5%	63.9%	3.73
Everyone is afraid of making mistakes	12.2%	32.9%	54.9%	3.52
Everyone would rather risk making mistakes than ask others	48.8%	37.8%	13.4%	2.60
Everyone will try to avoid doing things that they are not good at	18.1%	56.6%	25.3%	3.33
People will feel a lot of pressure when they make mistakes	10.8%	47%	42.2%	3.52

3.3.2 Personal goal orientation

Table 3.4 Personal goal orientation

Indicator	Oppose	neutral	Agree	Mean value
I am willing to do things that can keep learning and challenging	3.8%	22.8%	73.4%	3.95
I often look for opportunities to improve my knowledge and skills	2.4%	17.1%	80.5%	4.01
I like to take on challenges and difficult tasks and learn new skills from them	3.6%	25.3%	71.1%	3.90
For me, I am willing to try to further improve my ability	2.4%	13.4%	84.2%	4.06
I like to prove that I can do better than others	3.7%	31.7%	64.6%	3.77
I will think about how I can prove my ability to others	13.3%	32.5%	54.2%	3.53
I like to let others know that I am doing well	9.8%	42.7%	47.5%	3.51
I like to do things that can prove my ability to others	11%	42.7%	46.3%	3.49
If I might do worse than others, I would not do it	30.1%	43.4%	26.5%	3.02
For things that are not good, I try to avoid doing them instead of learning	44.6%	31.3%	24.1%	2.78
I'm upset about things that may not be done well	23.5%	34.6%	41.9%	3.23
I try to avoid performing poorly	20.7%	24.4%	54.9%	3.45

In terms of personal goals, the residents of Xidi will be willing to choose to work with challenging and learned skills, which may be related to the desire of residents to master more skills to adapt to changes after the development of Xidi Scenic Area. The data results show that Xidi have a learning atmosphere in which residents learn and compete with each other, and have the courage to challenge themselves.

3.3.3 Personal dynamic ability orientation

Among the results of Xidi residents' individual dynamics, residents generally showed the characteristics of being able to observe changes in time, being able to quickly make response plans, and using resources to develop new fields. "Focus on the development and changes of the tourism industry at any time" and "Adapt to change and profit from it" have become the behavior characteristics of everyone.

Table 3.5 Individual dynamic ability orientation

Indicator	Oppose	neutral	Agree	Mean value
I think it's important to keep abreast of changes	1.2%	18.1%	80.7%	4.05
I have a deeper understanding of various local conditions	3.6%	33.7%	62.7%	3.78
I am constantly thinking about the various changes I may encounter	6%	24.1%	69.9%	3.82
I always pay attention to the development and change of tourism	6%	20.5%	73.5%	3.86
I can quickly respond to changes in the external environment	7.2%	45.8%	47%	3.52
I can quickly find new opportunities in a changing environment	4.9%	31.7%	63.4%	3.74
I can adapt well to change and profit from it	10.8%	43.4%	45.8%	3.49
I am looking for ways to make better use of my resources	6%	27.7%	66.3%	3.81
I am actively trying to invest in new areas	8.5%	31.7%	59.5%	3.65
I am actively learning how to develop in new areas	7.2%	31.3%	61.5%	3.70
I am good at using various resources to deal with various situations	7.2%	38.6%	54.2%	3.60

3.3.4 Orientation of dynamic changes in the environment

The results of dynamic environmental changes show that Xidi residents are very sensitive to various changes. It is not difficult to see that Xidi residents can quickly identify changes and adjust in a timely manner in a changing environment, and have strong environmental adaptability.

Table 3.6 Orientation of dynamic changes in the environment

Indicator	Oppose	neutral	Agree	Mean value
Customer demand is changing	0%	10.8%	89.2%	4.14
Changes in competitors (products or services, etc.)	1.2%	10.8%	88%	4.10
Industry is changing	2.4%	12%	85.6%	4.11
Operating environment is changing	1.2%	16.9%	81.9%	4.07
Policy environment is changing	1.2%	16.9%	81.9%	4.05
Climate and environment are changing	6%	25.3%	68.7%	3.78

3.4 Residents' Perceptions of Tourism Impact

Residents' perception of tourism impact is mainly investigated and analyzed from four dimensions: economic, social, cultural and environmental.

3.4.1 Residents' Perception of Tourism's Economic Impact

The residents' perception of the impact of the tourism's economic impact in 2019 can be seen from the data in Table 3.14. Except for the indicator item "Tourism development is conducive to narrowing the gap between the rich and the poor of local residents", the average values of other indicators are above 3.9. The economic impact of Xidi's tourism development is recognized.

Table 3.7 Residents' Perception of Tourism Economic Impact

Indicator	Oppose	neutral	Agree	Mean value
Tourism greatly promoted local economic	1.0%	12.0%	87.0%	4.20

development				
Tourism development improves local living standards	1.0%	13.0%	86.0%	4.18
Tourism creates more employment opportunities for residents	6.0%	19.0%	75.0%	3.99
Tourism attracts more investment and consumption	4.0%	18.0%	78.0%	4.04
Tourism increases local prices and costs of living	4%	11.0%	85.0%	4.22
Tourism development increased local house prices, rents, etc.	3.1%	9.2%	87.8%	4.30
Tourism development is conducive to reducing the wealth gap between local residents	17.3%	30.6%	52.0%	3.42

3.4.2 Residents' Perception of Tourism's Social Impact

Residents' perception of the social impact of tourism is shown in Table 3.15. On the whole, residents generally have a positive attitude towards the social impact of tourism. The positive descriptions of "tourism development has improved local infrastructure" are above 4.0. The negative description of "Tourism development leads to poor local public security situation" has a low average value, below 3.0, and most residents oppose it. Most residents are neutral about "Tourism overcrowds local traffic and population".

Table 3.8 Residents' perception of tourism social impact

Indicator	Oppose	neutral	Agree	Mean value
Tourism development improves local infrastructure	4.1%	16.3%	79.6%	4.03
Tourism development has changed the local population structure (male to female ratio,	20.2%	46.5%	33.3%	3.18

ethnic composition, etc.)

Tourism development leads to poor local public security situation	61.0%	23.0%	16.0%	2.45
Tourism overcrowds local traffic and population	23.0%	41.0%	36.0%	3.17
The arrival of tourists disrupted the local life order and caused distress to residents	51.5%	34.3%	14.1%	2.58
Tourism development makes local social atmosphere worse than before	44.0%	34.0%	22.0%	2.76
Tourism easily triggers conflicts between tourists and local residents	57.1%	24.5%	18.4%	2.55

3.4.3 Residents' Perception of Tourism Cultural Impact

Table 3.16 shows the residents' perception of the impact of tourism on culture. In general, residents have a strong recognition of the cultural promotion effect of tourism in Xidi. "Tourism development has made local residents aware of the value of Xidi cultural heritage." The positive values of positive descriptions such as "Tourism development helps to strengthen local residents' cultural pride in Xidi" and "Tourism promotes cultural exchange between local and foreign countries" have received a score of 4.0 or more, indicating that residents have a positive evaluation of the cultural impact of tourism.

Table 3.9 Residents' Perception of Tourism's Cultural Impact

Indicator	Oppose	neutral	Agree	Mean value
Tourism development makes local residents aware of the value of Xidi cultural heritage	3.0%	11.0%	86.0%	4.10
Tourism development helps strengthen local residents' cultural pride in Xidi	3.0%	14.0%	83.0%	4.13
Tourism promotes local and foreign cultural exchanges	2.0%	12.1%	85.9%	4.09

Tourism development destroys Xidi's traditional culture, skills, ethnic customs, etc.	57.0%	25.0%	18.0%	2.54
Tourism is conducive to the inheritance of local traditional culture and skills, national customs, etc.	5.0%	23.0%	72.0%	3.95

3.4.4 Residents' Perceptions of Tourism Environment Impact

Residents' perception of the impact of the tourism on the environment is shown in Table 3.17. Among the residents' perceptions, tourism development has no or small impact on air quality and noise pollution, and the construction of hotels and other tourism facilities has no impact on the natural environment. Among them, water pollution is the most serious, 47.5% of the residents agree, the average value is 3.35, which is at a relatively high level.

Table 3.10 Residents' perception of the impact of tourism environment

Indicator	Oppose	neutral	Agree	Mean value
Tourism development worsens air quality	50.5%	36.4%	13.1%	2.57
Tourism development aggravates noise pollution	29.3%	43.4%	27.3%	2.97
Tourism development aggravates water pollution	21.2%	31.3%	47.5%	3.35
Tourism development makes local solid waste management more difficult	26.5%	35.7%	37.8%	3.14
The construction of hotels and other tourist facilities destroyed our natural environment	35.7%	39.8%	24.5%	2.86

3.4.5 Residents' attitudes / actions

The results of the study on residents' attitudes / actions are shown in Table 3.18. Residents are open to the outside world and recognize the role of tourism in local development. However, residents believe that the government's work on local development

needs to be strengthened, and they do not fully recognize the current development status. At the same time, residents have their own thoughts on local development, and some residents think that their suggestions cannot play a large role.

Table 3.11 Residents' attitudes / action intentions

Indicator	Oppose	neutral	Agree	Mean value
I am willing to actively communicate with tourists	3.0%	13.1%	83.6%	4.04
I am satisfied with the government's implementation of tourism development	18.4%	34.0%	46.0%	3.32
I am willing to offer suggestions for local tourism development	8.0%	27.6%	64.3%	3.76
I am satisfied with the current status of local Xidi tourism development	25.3%	33.3%	41.4%	3.18
I support Xidi to continue to develop tourism	2.0%	11.1%	86.9%	4.23

3.5 Living conditions of residents

The survey measures the living conditions of residents from three aspects: physical capital, economic capital and social capital.

According to Table 3.12, the residents' perception of the first two indicators of physical capital of the question group, "My family's fixed assets are higher than the local average level" and "My family's durable goods are more than the local average," have low perception levels, and the average values are both 3.

The next five indicators are surveys on the perception of residents' economic capital. Except the indicator "My consumption level has increased," the average value of "My job opportunities have increased," "My income has increased," and "The number of job types is increasing" and "My source of income is more than before" are all lower than 3.5.

From the last three indicators of social capital indicators, it is clear that residents' most obvious perception is the expansion of the circle of friends, which is "I can get help

when I need help" and "I have greater influence in the local area than ordinary people" The two indicators indicated that there were too few residents who agreed with it. Among them, the "I have relatively strong local influence" had the lowest recognition. It can be seen that under the influence of tourism, the circle of residents' friends is expanding, but the help that residents can get and their own local influence are still insufficient.

On the whole, residents' identification with economic capital is higher than that with social and physical capital.

Table 3.12 Residents' perception of living conditions

Indicator	Oppose	neutral	Agree	Mean value
Our family's fixed assets are higher than the local average level	28.6%	54.1%	17.3%	2.91
My home has more durable goods than the local average	32.7%	48.0%	19.4%	2.92
My job opportunity increased	19.4%	29.6%	51.1%	3.37
My income increased	22.4%	29.6%	47.9%	3.30
My consumption level increased	11.3%	25.8%	62.9%	3.64
The types of jobs I can choose are increasing	19.6%	27.8%	52.5%	3.37
I have more sources of income than before	19.6%	34.0%	46.1%	3.31
My local influence is stronger than the average person	33.7%	50.0%	16.4%	2.78
I can get help when I need it	20.6%	39.2%	40.2%	3.20
My circle of friends is expanding	6.2%	24.7%	69.1%	3.78

3.6 Life satisfaction of residents

The table below shows the satisfaction of residents with their lives. From the table, we can see that the average values of the indicators are higher than 3.0 except for the

indicator "If life can be repeated, I don't want to change anything". Among them, "in general, I am satisfied with my life" has been endorsed by 60.8% of the residents, with a high degree of recognition; "in many ways, my life is close to ideal" and "I have been The two most important things "I want" are also highly recognized by residents. It can be seen that the development of tourism has brought a positive impact on the lives of residents.

Table 3.13 Residents' satisfaction with life

In many ways, my life is close to ideal	14.4%	32%	53.6%	3.40
My living conditions are good	17.3%	40.8%	41.9%	3.28
In general, I am satisfied with my life	11.4%	27.8%	60.8%	3.61
I have got the most important things I want in life	21.6%	29.9%	48.4%	3.33
If life can be repeated, I don't want to change anything	54.1%	21.4%	24.4%	2.48

3.7 Residents' Perceptions and Suggestions on Tourism Development

Most of the respondents in this survey live in or near tourist route areas, with the proportion reaching nearly 90%.

As can be seen from Figure 3.2, the vast majority of respondents said they welcome visitors to their homes, accounting for 86.7%. Only a few respondents were indifferent or disgusted.

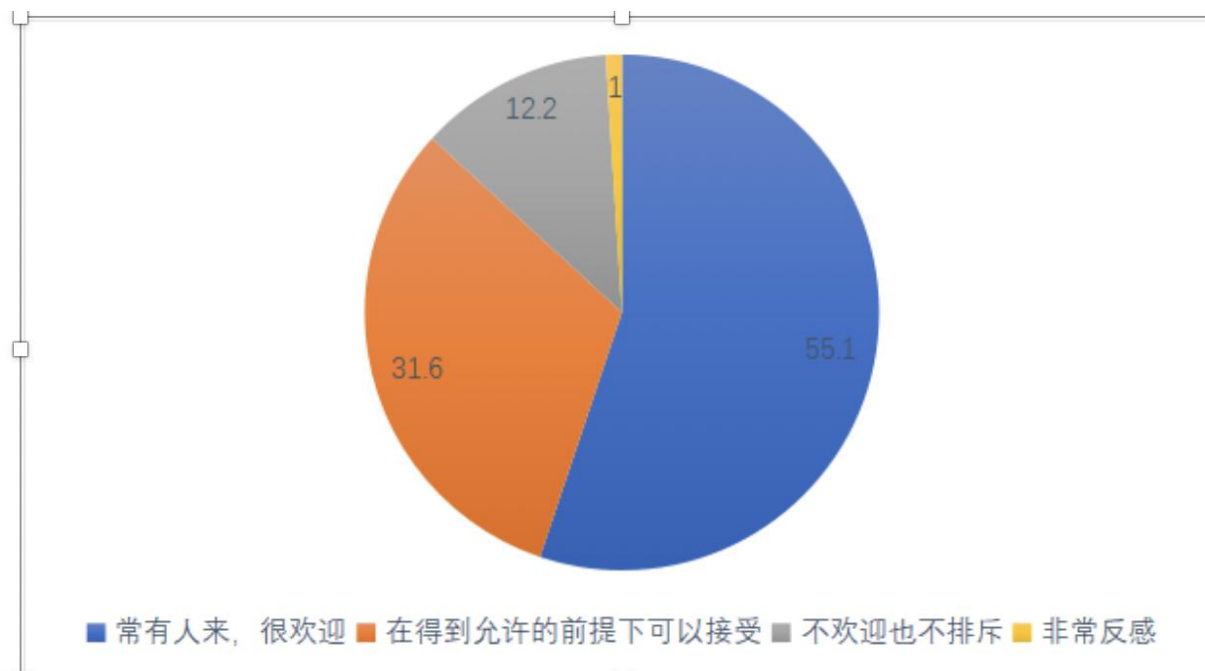


Figure 3.2 Residents' attitude towards tourists visiting home

It can be seen that in this survey, more than half of the residents lived in the same place and opened their own shops or inns; secondly, residents who did not participate in tourism-related work and residents who moved to new towns, and old houses opened their own shops or inns. In addition, 19.6% of the residents participate in tourism development in other ways, which shows that the forms of residents' participation in tourism development are more diverse.

According to Table 3.14, the most dissatisfied places for residents in tourism development are concentrated, mainly at the three levels of government, environment, and tourists. The proportion of each part is 56.09%, 24.39%, and 9.75%.

Among the issues related to the government, they can be divided into three parts: management, development, and distribution. The main problems are: (1) insufficient publicity; (2) the government does not conduct tourism development from the perspective of villagers, and does not listen to residents' opinions; (3) poor service attitude, and low efficiency; (4) lack of overall long-term strategy for tourism development planning, slow development progress, and difficult results; (5) imperfect infrastructure construction; (6) ticket prices for scenic spots are too high. The tourism management model is backward and the attractions are insufficient. Among environmental issues, residents are most concerned about water pollution, followed by ecology, garbage, noise, and congestion. Among the

problems related to tourists, the stay time of tourists was shortened because of the tour guides, followed by the problem of the decline in the number of tourists and the low quality of tourists. In addition, the influx of sketch students and the rise in local prices have also brought greater pressure on the lives of local residents.

Compared with the problems that existed last year, it can be found that residents' complaints about the unfair distribution of resources have decreased, to a certain extent, this problem has been better improved. However, problems such as government management, tourism development planning, and environmental pollution have not been improved.

Table 3.14 The most dissatisfied aspects in tourism development

	nu m be r		content	frequ ency
Gove rnme nt	1	mana geme nt	Inadequate publicity management	2
	2		The government does not develop from the perspective of villagers and does not listen to the opinions of residents	2
	3		Unqueal treatment	2
	4		Government policy cannot keep up with market changes	1
	5		Some related service staff have a bad attitude	1
	6		Insufficient detail management	1
	7		Inefficient government work	1
	1	distri butio n	Unfair distribution	1
	1	devel opm ent	Slow progress	1
	2		Insufficient infrastructure construction planning, long construction time, multiple ground excavations	2
	3		Inadequate infrastructure	3
	4		Ancient folk customs are destroyed	1
	5		The examination and approval procedures for the repair of ancient buildings are cumbersome, the cycle is long, and there	2

		are many restrictions	
	6	Ticket prices in scenic spots have risen, and the tourism management model is still in a low-level mode of collecting tickets in enclosures	2
	7	Scenic spots with few eye-catching spots	1
Environment	1	severe water pollution	4
	2	A lot of garbage	2
	3	Very polluted	1
	4	Noisy	1
	5	crowded	1
	6	Excessive development of the natural environment	1
Tourists	1	Guides urge tourists, resulting in short stays	2
	2	Declining number of visitors	1
	3	Uncivilized tourist	1
Others	1	Rising prices and heavy living burden on residents	2
	2	Strange scarecrow	1
	3	Fewer sketchers	1
Total	27		41

Residents put forward their opinions from government management, tourism development, infrastructure construction, heritage protection, and environmental protection, etc., mainly focusing on the following points: (1) Optimize the internal government mechanism, strengthen policy implementation and information transmission at the upper and lower levels, and improve efficiency; (2) the government should formulate a long-term development strategy to avoid leaders' shifts affecting the implementation of the strategy; (3) the government should communicate more with villagers and give residents some preferential strategies; (4) use local advantages to develop new tourism products and improve tourism development quality; (5) Improving infrastructure construction, including street lights, parking lots, express delivery, tap water, etc .; (6) Strengthening external publicity and marketing, and organizing residents to learn network marketing skills; (7)

Maintaining the original buildings, reducing damage (8) Strengthen environmental protection. There are also some other suggestions, such as canceling the tickets for scenic spots, regulating the tour guides, improving the skills of guides, and regulating prices.

Table 3.15 Residents' suggestions on tourism development

	No.	content	
Man agem ent	1	Under a clear system, companies and governments must have comprehensive long-term development strategies, abandoning one idea from one term of leadership	1
	2	Inadequate management	1
	3	Inadequate management, difficult implementation of relevant policies at the upper levels, timely communication of information from top to bottom, and problems with functional structure	1
	4	Hope that the government will be consistent in words and deeds to improve efficiency	1
	5	Simplify the approval process	1
	6	Disappointed in this management, without any hope	1
	7	More preferential treatment to the residents	1
	8	Communicate more with villagers and give residents some preferential policies	2
Devel opm ent	1	Update tourism products with existing resources	1
	2	Increase project development and increase new formats	1
	3	Opening new projects to increase passenger flow	1
	4	Developing good tourism	1
	5	Develop more tourism	1
Infras truct ure	1	Improve infrastructure (courier, toilet, sewage, noise pollution, etc.)	2
	2	Extend the working hours of street lights	1
	3	There are many students in high season, and tap water is too little at night, and needs improvement	1
	4	Expansion of the parking lot	1

Promotion	1	Increase publicity	2
	2	Organize local residents to learn online marketing tools and skills	1
Legacy	1	Can be more comprehensive, don't always modify buildings	1
	2	It is best to keep the old house intact	1
	3	Protect the original roads and slate	1
Environment	1	Protecting the natural environment should have its own characteristics	1
	2	Protecting the natural environment while focusing on the development of the culture environment	1
	3	Tourism companies should not just look at health and do a good job of environmental governance	1
Others	1	Increase visitors	1
	2	Guide words should add some factors close to life	1
	3	Regulating guide behaviors	1
	4	Regulating prices	1
	5	Increase connections	1
	6	Cancel tickets	1
Total	31		34

3.8 Residents' Perceptions and Suggestions on Heritage Protection

Residents' satisfaction with the status of Xidi heritage protection is shown in the figure below. Residents are generally satisfied with the current status of Xidi heritage protection. 73.5% of the residents are basically satisfied, and 12.2% are very satisfied and dissatisfied And 11.2%.

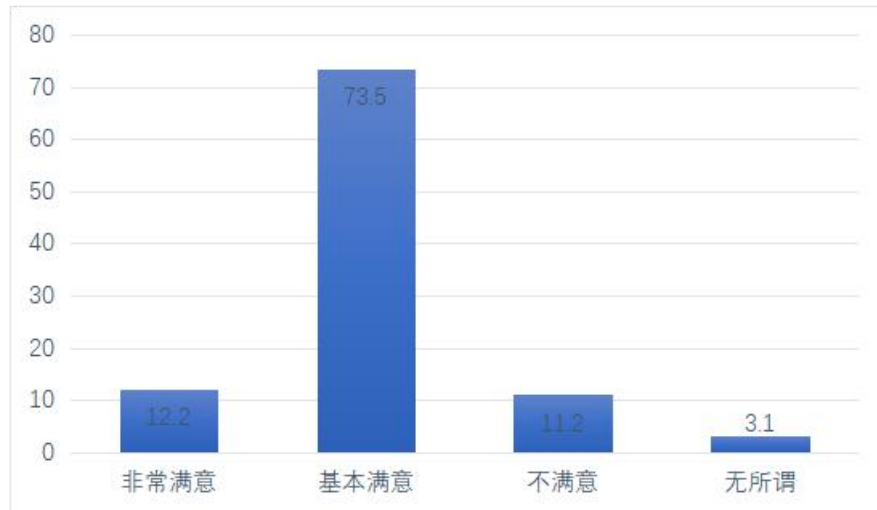


Figure 3.3 Residents' satisfaction with the status of Xidi heritage protection

The properties of the residents' houses are shown in the figure below. According to the chart, 34.4% of the residents' residences are protected residents, including the key protection residents; 22.9% of the residents' residences are old houses outside the protected residents; they live in newly built residences, accounting for 16.7%.

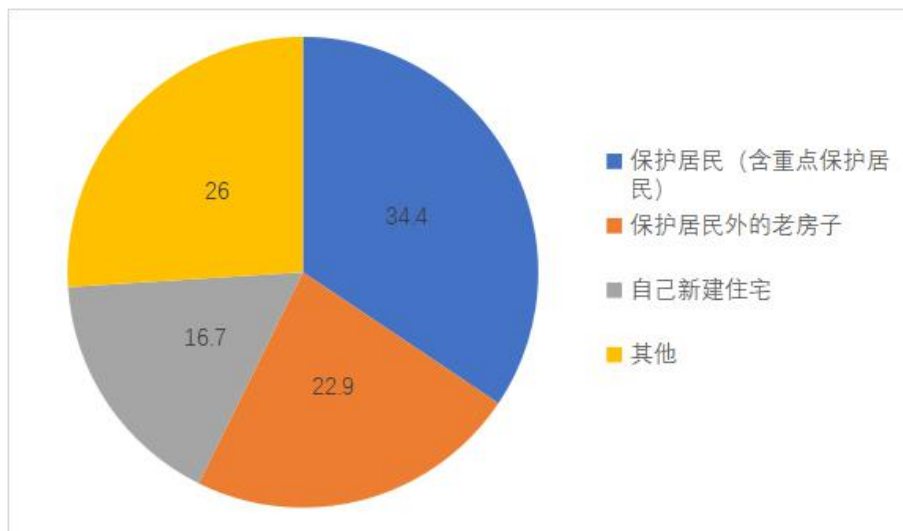


Figure 3.4 Attributes of respondents' houses

As shown in Figure 3.5 below, in terms of residents' attitudes towards ancient residents' maintenance, nearly 60% of the residents are willing to repair ancient residents. Among them, 38.5% of the residents of the respondents stated that they would actively want to repair themselves; 20.8% of the residents said that if the government give compensation they are willing to repair.

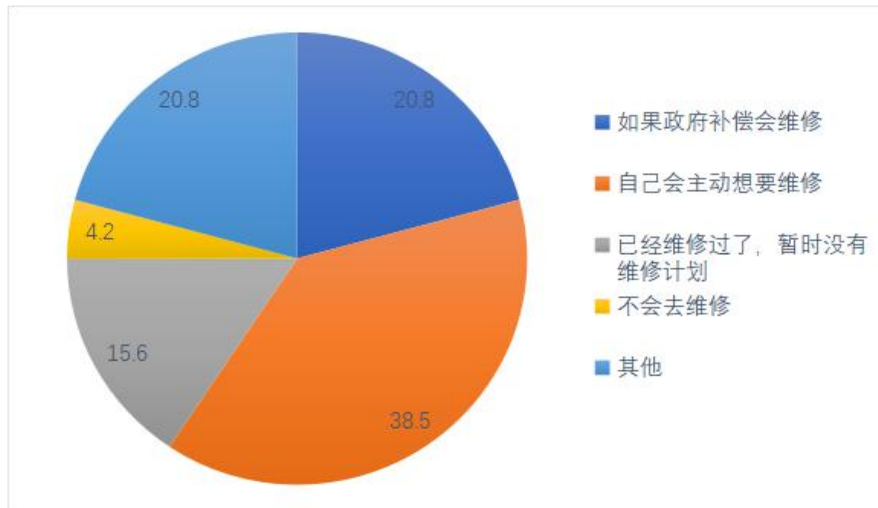


Figure 3.5 Surveyed residents' attitudes towards the maintenance of ancient houses

In the development of Xidi Heritage, the main problem that plagues residents is the approval of repairs, which takes a long period of time. This indicator accounts for 65.3%, followed by low government compensation and lack of maintenance funds, accounting for 35.7%. Other major problems that residents face include regulatory design drawings, inconvenient road pavements and widths, fixed building wood that is difficult to buy or expensive, etc., all of which account for over 20%. At the same time, it was found in the survey that residents also face various other restrictions in heritage protection. This indicator is close to 40% and needs attention.

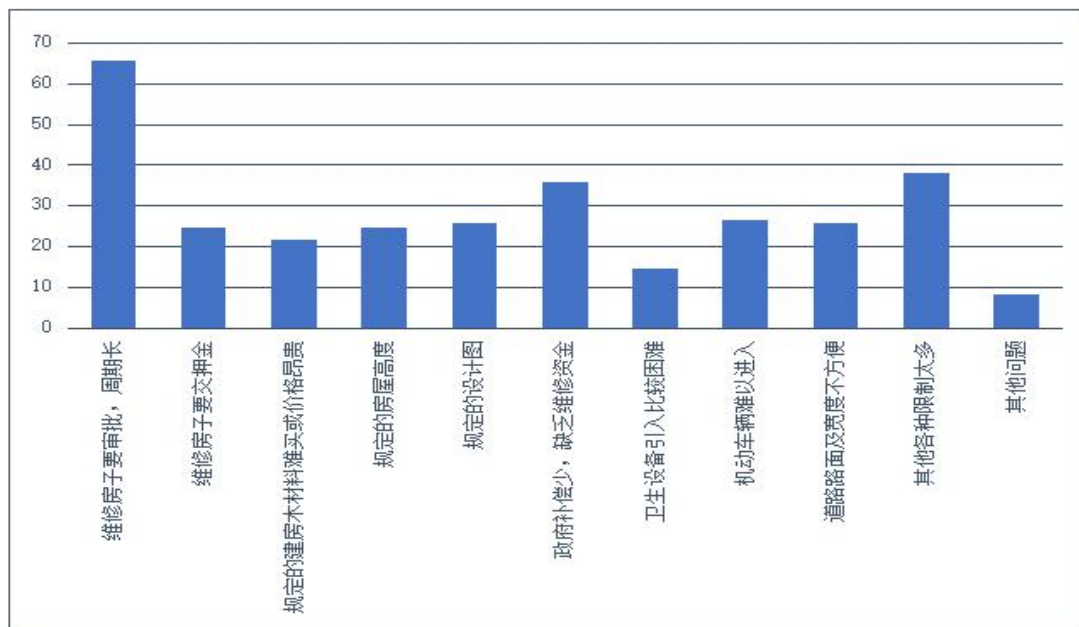


Figure 3.6 problems in the protection of the heritage of the surveyed residents

In terms of heritage protection and development, half of the residents indicated that they would like to build tourist accommodation and shopping facilities of a certain size around the heritage site. The heritage area will maintain the authenticity of the residents' living areas; but 20% of the residents also hope to accommodate tourists and provide shopping in the heritage area, and the surrounding area is kept idyllic. In addition, 14% of residents prefer to arrange tourist accommodation and shopping in the heritage area, which will spread to the surrounding areas after the heritage area is saturated.



Figure 3.7 Surveyed residents' preferences for the protection and development of heritage

The opinions of residents on the protection of Xidi's heritage can be summarized as follows.

Table 3.16 Respondents' opinions and suggestions on the protection and development of Xidi Heritage

- 1 While maintaining the original taste, develop appropriately and increase infrastructure construction 4
- 2 Strengthen the management of sketch students to avoid paint entering the river and students making loud noises 2
- 3 Strengthening publicity in scenic spots and inheriting cultural resources 2
- 4 Set up a special institution for heritage protection, and the protection behavior is linked to year-end dividends 1

5 Do not dismantle the heritage arbitrarily and repair ancient buildings in a timely and scientific manner 3

6 The government should attach importance to the protection of ancient buildings, and should not rely on prescriptive requirements and not make superficial articles. 3

7 Construction of Huizhou-style cultural and leisure corridor 1

3.9 Summary

As a typical tourist community, Xidi has obvious characteristics of residents' participation in tourism. Most residents are engaged in catering, homestays, selling tourist goods, and engaging in tourism services. Therefore, residents' perception of the impact of tourism on economy is often positive. Tourism does bring local residents an increase in income and an improvement in their living standards. In the perception of negative impacts, water pollution is more obvious, which is also closely related to the daily lives of residents. Compared with last year, the living conditions perceived by residents have generally deteriorated, which is largely affected by the number of tourists, and residents are generally more satisfied with their lives.

At the same time, residents have put forward opinions and suggestions on tourism development and heritage protection. The opinions are mainly focused on the management of the scenic spot and the development of the government. Some residents believe that there are still many problems in the current model, such as the government's human relationship management, poor service attitude, and low efficiency; lack of overall long-term strategy for tourism development planning and slow development. In terms of heritage protection, some residents believe that while retaining the original taste, they must also develop appropriately and increase infrastructure construction.

4 Tourist perception survey

4.1 Basic situation of the questionnaire

From July 16th to July 21st, the research team randomly distributed the questionnaire to tourists visiting Xidi. A total of 200 questionnaires were distributed and 184 valid questionnaires were recovered. The recovery rate of the questionnaire was 92%.

4.2 Basic situation of interviewed tourists

4.2.1 Gender, age and education characteristics

Among the 180 tourists interviewed this time, men accounted for 47.5% and women accounted for 52.5%. The age of the interviewed tourists is 15-44 years old, accounting for 80.2%, mainly young people. Tourists over 45 years old accounted for only 19.8%, and the proportion was relatively low. The educational qualifications of tourists are concentrated in undergraduates, and more than half of the tourists are bachelor degree holders. The proportion of tourists who have received college education or above is 68%, indicating that tourists have a high education level.

4.2.2 Occupational characteristics

The proportion of students among the tourists interviewed was the largest, accounting for 43.6%, followed by public institution personnel and corporate employees. This is consistent with the characteristics of age distribution and education level. And compared with 2018, the number of students has picked up significantly.

4.2.3 Characteristics of customer source market

Xidi's tourists mostly came from Anhui province itself, accounting for 24.4%, followed by Guangdong and Beijing, accounting for 12.5% and 8.2%, respectively. Tourist source markets are mainly located in Anhui, Beijing, Guangdong, Henan, Jiangsu, Shandong, and Zhejiang. The proportion of tourists from provinces bordering Anhui Province has decreased sharply, accounting for only 29.3%. The proportion of tourists in Guangdong rose sharply and became the second largest source of tourists, while the proportion of tourists in Shandong rose and became the third largest source of tourists, while Shanghai, Jiangsu, Zhejiang and other places suffered a decline.

4.3 Analysis of Tourism Behavior of Interviewed Tourists

4.3.1 Access of Tourists to Tourist Information

The channels for interviewed tourists to obtain travel information mainly include the Internet, relatives and friends, and travel agency brochures. Compared with 2018, the proportion of tourists who obtained newspapers and magazines has dropped significantly, which indicates that the proportion of middle-aged and elderly groups in the Xidi tourism group has fallen this year. The percentage of group tour tourists increased.

4.3.2 Tourism patterns and revisit rates of interviewed tourists

Among the tourists interviewed, 50.8% chose a group tour and 49.2% chose self-guided tour. Compared with 2018, the proportion of group travel has increased, and the proportion of self-guided travel has decreased. For the first time in two years, the proportion of self-guided travel is lower than the proportion of group travel. The trend of self-guided travel that continues to exceed group travel since 2017 has also ended in 2019. Among the tourists who choose to travel freely, 70.7% of them follow the guides, which is a relatively high proportion. Among the tourists who choose group tours, all tourists follow the guides. 85.5% of the tourists interviewed were visiting Xidi for the first time, and 14.5% were revisiting.

4.3.3 Tourist stay time

The proportion of tourists staying in Xidi for half a day or less is the highest, followed by more than two days, and one day. This is because the scenic spots in Xidi are densely set, and the area of the scenic spots is not large. Generally, travel agencies use Xidi, Hongcun, and Huangshan as a combination. Generally, tourists can complete the trip in one day or half a day; students who sketch usually stay for more than two days, so there is a small number of people who stay for exactly two days.

4.3.4 Tourist Excursions

The tourist activities in Xidi are mainly to visit ancient residents and watch the rural scenery. 80.3% of tourists visited the most distinctive ancient houses under the guidance of guides, 58.5% of tourists also visited some other ancient residents themselves, and up to 88.5% of tourists also went to visit places that they found interesting. There are not many tourists staying in Xidi Village, only 18.6%. 56.3% of tourists watched the rural scenery around Xidi. 34.4% of tourists will taste farm food, and 39.3% of tourists will buy tourism products, both of which are higher than in 2018. 25.1% of tourists will chat with residents.

4.3.5 Tourist impressions and suggestions

The impressions of tourists have on Xidi are mainly ancient houses, Hui architecture, long history and culture, and clean environment, which are not much different from the impressions of tourists in 2018. The ancient houses of the Hui style architectural style are

the main attraction of Xidi. The long history and strong cultural atmosphere of the ancient houses will also impress visitors. At the same time, most of the residents of Xidi still retain their original lifestyle, and the clean environment of Xidi will also leave a deep impression on tourists.

Tourists' suggestions on the development of Xidi tourism mainly focus on the degree of commercialization, the construction of public facilities, heritage protection and tourism development. Many tourists think that the commercial atmosphere of the scenic spot is heavier; many tourists think that the public facilities are inadequate, the rest area is not comfortable enough (lack of air conditioning), the sanitary conditions are not very good, the number of toilets is insufficient, and the roads should be smoother; many tourists suggest that they should adhere to protecting good ancient houses and regulate repairs of ancient houses; Many tourists report that the ticket prices are too expensive; some tourists report that the ecology of Xidi is not as good as expected, and there is garbage in the river and on the road.

4.4 Satisfaction of interviewed tourists

4.4.1 Destination landscapes and tours

The vast majority of interviewed tourists were satisfied with the landscape and excursions of Xidi. Among them, Xidi's traditional Hui dwellings are the landscape with the highest satisfaction among the respondents, and Xidi's pastoral scenery is closely behind. Respondents were slightly less satisfied with the attractiveness of tourist attractions, the comfort of the tourist environment, and the enthusiasm of residents in the surrounding areas than the former two, but still at a satisfactory level. Compared with 2018, tourists' satisfaction with various items of landscape and tour has increased to a certain extent.

4.4.2 Destination environment

The interviewed tourists were satisfied with the destination environment. Air quality in the scenic area is still the environmental factor with the highest tourist satisfaction, followed by sanitary environment and environmental protection management. Tourists have the lowest satisfaction with the commercial atmosphere, and secondly, the congestion of the scenic area. For two consecutive years, the same high satisfaction in the natural environment and slightly lower satisfaction in the construction of scenic spots also reflect

the same problem, that is, Xidi has unique natural and cultural resources, but it still lacks in scenic area planning and commercial construction. Compared with 2018, tourists' satisfaction with the environmental indicators of the scenic spot has increased, and the satisfaction of water quality has increased most obviously.

4.4.3 Infrastructure

The interviewed tourists were generally satisfied with the infrastructure of the scenic spot. Tourists' satisfaction with the scenic infrastructure has changed significantly. Tourists are most satisfied with the sanitation of local public toilets, followed by the completeness of public toilet facilities. These two items have improved significantly compared to last year. The infrastructure element with the lowest tourist satisfaction is the completeness of the garbage collection facilities.

4.4.4 Scenic Service

The interviewed tourists were more satisfied with the service of the scenic spot. Among them, the tour guide commentary is the most satisfactory service for tourists. Tourists' satisfaction with the reasonableness of the ticket price of the scenic spot has increased slightly compared with last year, but it is still the lowest compared with other factors of the scenic spot service. This is mainly due to the single tourism activity of Xidi and the short duration of the tour. In addition, tourists' satisfaction with the availability of tourism information and the clarity of the scenic area identification system has increased.

4.4.5 Safety and Health

The interviewed tourists were generally satisfied with the safety and health of the scenic spot. Among them, tourists have the highest satisfaction with the local public security situation. This is because there is almost no public security incident in Xidizhi. In addition, the existence of an atmosphere of mutual trust between shops, residents and tourists has virtually enhanced tourists' trust in local law and order. Tourists have the lowest satisfaction with medical equipment.

4.4.6 Experience the diversity of attractions-related activities

The interviewed tourists have a positive attitude towards the activities and attractions related to Xidi. Similar to last year, Xidi's rich history and culture are the most

recognized indicators for tourists. In addition, tourists also have a high level of recognition of traditional Hui dwellings, living conditions and simple folk customs. Tourists have a low level of recognition of local souvenirs, special food and beverages, and Xidi has the lowest recognition of rich and diverse tours. Through talking with tourists we learned that the main problem is that the local characteristics of souvenirs and catering in Xidi are not obvious, and the form of tourism is relatively simple, mainly for sightseeing.

4.5 Tourism Perceptions of Visitors

4.5.1 Perception of heritage

Tourists have a strong perception of Xidi as a World Cultural Heritage. Compared with previous years, tourists' perception of Xidi's heritage has fully picked up this year. More tourists have more recognized Xidi's World Heritage status.

There is also a stronger awareness of heritage protection.

4.5.2 Attitudes towards locals

The interviewed tourists rated the attitude of the locals high. More than 80% of tourists are satisfied with the local service staff and think that the locals are warm and friendly and willing to communicate and chat with the locals. Compared with previous years, tourists' perception of the attitudes of locals has increased significantly this year.

4.5.3 Overall satisfaction

The overall satisfaction of tourists from Xidi tourism was high. Compared with previous years' data, this year's tourist satisfaction, recommendation willingness, and willingness to revisit all increased, with the most significant increase in willingness to revisit.

4.6 Student Group Analysis

The overall satisfaction of student groups and ordinary tourists with Xidi tourism is similar, but there are some differences as follows. First of all, compared with ordinary tourists, the student group is more able to pay attention to the charm of traditional Huipai houses ($4.42 > 4.38$), but less experience in other aspects; as students, they are more satisfied with the scenic spot price ($3.62 > 3.49$). However, the comfort of the tour environment, the perception of the environment, and the satisfaction of local service staff are relatively low.

This may be related to the fact that students spend most of their time in Xidi to observe the Xidi traditional Hui school dwellings and finish painting, so they can better understand the charm of Xidi Hui school dwellings. Students' perception of the comfort of the tour environment, their perception of the environment, and the attitude of the service staff is relatively negative. This may be due to the attitude of dissatisfaction caused by restrictions on the choice of painting locations. Reasonable placement of student groups can improve student group satisfaction on the one hand, and the appearance of sketch groups on the other hand can also show Xidi's special artistic status, which can incorporate sketching into one of the characteristics of Xidi without affecting the landscape.

5 Conclusion

5.1 Houses are better preserved overall

According to this year's monitoring of Xidi's residential buildings, the overall status of residential protection is good. The overall architectural appearance of most residential buildings is traditional Hui style buildings, and there are changes and modifications in the residential buildings to varying degrees. Among them, most of the dwellings with a history of more than 100 years are mostly renovated, retaining the pattern of traditional buildings. Some ancient dwellings were refurbished with cement, etc., or covered with plastic cloth to cover the patio and re-strengthen the house beams to prevent collapse. The reason for the change is that the house is facing damage due to years of disrepair. In accordance with the protection requirements of "repair and restoring", residents need to complete the repair under the approval and supervision of the government; the second is due to the needs of modern life and commercialization. The disadvantages of poor lighting and dark and wet buildings in modern buildings are more prominent in the contrast of bright modern buildings. Therefore, the residential buildings have been renovated with ceilings or modern facilities have been introduced to meet the needs of life. The new buildings built in the second half of the last century are mainly new houses. With the development of tourism in Xidi, the ancient residences, as tourist attractions, have both residential functions and commercial uses. However, due to the influence of tourist routes, there is a significant difference in the development of commercial functions in Xidi. The tourist route divides Xidi into popular and not so popular areas for tourism. Due to the frequent commercial activities,

the residential buildings on the street have basically completed commercial development. The middle part of the road zone is affected by the geographical location. The residence function is mainly used, and the degree of commercialization is not high. The original state of ancient houses is well preserved.

5.2 Residents generally support tourism

As a typical tourism community, Xidi's residents participate in tourism. Most residents are engaged in catering, homestays, selling tourist goods, and other tourism services. Therefore, Xidi residents have a positive attitude towards tourism development and believe that tourism has positive impact on the economy, culture, society and environment. Among them, the most recognized is the role of tourism development in promoting the local economy. Residents generally believe that tourism brings local residents an increase in income and an improvement in their living standards. At the same time, with ancient residences as a tourist attraction in Xidi, tourism also made residents aware of the heritage value of traditional Hui architecture, and strengthened the sense of cultural pride and belonging.

However, tourism development has also brought negative impacts on local residents. In the perception of negative impacts, residents' pollution of water bodies is relatively obvious, which is also closely related to residents' daily lives. Compared with last year, although residents are generally more satisfied with their lives, residents' perceived living conditions are worse than last year, which is largely affected by the increase in tourists. Residents put forward opinions and suggestions on tourism development and heritage protection. The opinions mainly focused on the management of the scenic spots and the work of the government, including: the management efficiency of scenic spots needs to be improved.

Development planning requires overall long-term strategies; heritage protection must be properly developed to increase infrastructure construction.

5.3 Overall Tourist Satisfaction and Willingness to Revisit Rise

Xidi's tourists have high satisfaction, recognize the local Hui architecture culture and natural scenery, and agree that ancient houses need to be protected. The recognition of Xidi as a World Heritage and the satisfaction level of the protection status high. Among them,

tourists' perception of Xidi's heritage has increased significantly compared with previous years. After 2013, after a period of ups and downs, tourists' overall satisfaction with Xidi tourism has rebounded again this year, and their willingness to revisit has increased significantly. This should be inextricably linked to the strengthening of tourism supporting facilities in Xidi Scenic Area in recent years, and the emphasis on the development of various types of tourism products, reflecting the certain effects achieved in the construction of scenic areas in recent years.

Compared with ordinary tourists, the sketch student group is more able to pay attention to the charm of traditional Hui dwellings, but they experience less in other aspects. As sketch students who enjoy preferential tickets are more satisfied with the price of the scenic spot, the overall satisfaction is similar to ordinary tourists similar. However, it is limited by sketch locations in the scenic spot. Student groups are scattered in the more marginal areas of the scenic spot. Many people share the sketch area. The space is limited. Satisfaction is relatively low.

Special Session 1: Commercialization of Xidi Tourism

1 Research methods

The main purpose of this monitoring is to collect information for the stores located in the main streets of Xidi, and to update the changed store information based on the business monitoring of Xidi in 2018. The field survey was conducted from July 14 to July 22, 2019. The information collection method was mainly based on interviews, and a basic information registration form was prepared for the shopkeeper to fill in, supplemented by observation. By observing and recording the store's name and business content, the stores are classified according to the business content in the later period. Simple interviews with the merchants were conducted based on the required information, and the shop information was registered according to the number, including the basic information of the operator (sex owner, gender, age, place of origin, current residence); the current status of the shop operation (for group tourists or residents, shop opening time) Etc.); ownership of the shop house and its original use, etc. In addition, interviews focusing on the business conditions of the shops were also conducted. The locations for this commercial information collection include Henglu Street, Zhijie, Dalu Street, Qianbianxi, Houbianxi, Torii, Huishi Street, and marginal areas.

2 basic information statistics of shops

2.1 Shop distribution and type characteristics

In 2019, the business monitoring collected information on 239 stores. Compared with the actual number of stores monitored by business in 2018, the total number of stores decreased by 8. The specific distribution of shops is 57 on Dalu Street, 18 on Henglu Street, 24 on straight streets, 36 along Qianbianxi, 15 along Houbianxi, 24 Archway, 25 Huishi street, and 30 others. The information of all store types in Xidi is shown below. Different types of shops are densely distributed in the archway, southwest section of Dalu Street, Henglu Street, Zhijie, southwest section of Qianbianxi and Huishi Street, while regional stores such as Dalu Street and northeast section of Qianbianxi and Houbianxi stores are relatively rare. Small tourism enterprises rely on tourism routes. The design of the route determines the degree of tourism business coverage, the density of distribution, and the type of merchandise management.

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Figure 1 Distribution of Xidi business types

Of all the business types, the catering category occupies the largest number, followed by the accommodation category. There are up to 98 restaurants and 67 accommodation service facilities, of which a total of 25 provide accommodation and catering. There are 53 souvenir shops and 34 souvenir shops, all of which are mainly located on both sides of the tourist route. In addition, there are 7 community stores and 10 other types of shops in the scenic area

2.2 Shop operators and housing characteristics

Xidi business operators have a balanced male to female ratio, with their age mainly concentrated in the 30-60 age group. 71.13% of the owner's current residence is in Xidi Village, and 21.65% is in the center of Yi County. Most of the shopkeepers are Xidi locals, accounting for 57.22%. In the past two years, the number of foreign operators has increased significantly. 86.56% of the stores are individually operated stores, and 65.43% of the stores have only one staff member, who is both the store owner and the operator. The number of employees is a maximum of 5 and only accounts for 2.13%, indicating that most of the stores in Xidi It is a small tourism enterprise with a small scale.

Among the houses used by Xidi shops, 45.45% are owned by the owner and 52.53% are rented by the owner. More and more house owners choose to rent out their houses. The original use of commercial houses was the highest proportion of ancient dwellings, at 58.08%. 54.29% of the stores opened between 1-10 years, 20.57% of the stores opened within one year, and the total number of stores opened more than 10 years accounted for 25.14%.

3 Trends and causes of changes in business operations

In addition to collecting basic information on commercialization, the researchers interviewed the operating personnel of each store with emphasis on the business conditions of the stores. The specific interview information included: (1) the profit and loss for the year; (2) the change in revenue; (3) the product's adjustments; (4) countermeasures; (5) future expectations.

The survey found that most shops said that their operating income had fallen this year. 76.47% of the operators said that this year's operating income has decreased compared to last year, and many people even said that this year's income is only half of last year. Another 15.29% of the store's revenue this year is similar to last year, and only 8.24% of the store operators said that this year's operating income has increased compared to last year. The flow of tourists has not changed much, but the proportion of purchases has declined. The reasons for the downward trend are as follows: First, due to the economic situation, tourists' willingness to buy has declined; second, due to policy changes, the sales of some products have been banned after the strict control of corruptive behaviors; third, tourists can purchase online. There are more choices, and more emphasis on quality, tourists are afraid of being deceived in tourist destinations; Fourth, the network spread of hotel camera incidents in Xidi sketching bases, leading to a decline in the operation of the accommodation industry; fifth, most of Xidi's tour routes are only 1-2 hours, tourists come fast, walk fast, and there are fewer products at night, not staying guests.

In terms of future expectations, 32.91% of operators are pessimistic about the future and do not believe that future business will gradually improve. 26.58% of operators are optimistic about the future and believe that the decline in revenue is only temporary, and the other 40.51 % of people hold a neutral attitude and believe that future business conditions are affected by policies, economic conditions and other aspects, and it is difficult

to make accurate predictions. In terms of specific product strategy adjustments, businesses have no enthusiasm for change. Non-locals can't continue to operate and then change hands, leaving Xidi to do other work, instead of adjusting business strategies or products to continue trying.

Under the general trend of poor overall management, there are also some shops saying that business is good, mainly in several categories: boutique homestays, quality food and beverage, exquisitely decorated cafes and souvenir shops. Boutique homestays and quality food are the embodiment of the pursuit of high-quality accommodation and catering during the journey, reflecting tourists' pursuit of experience and quality. Exquisitely decorated cafes and souvenir shops reflect tourists' pursuit of environmental atmosphere. Local specialty shops use a new business model, benefiting from the development of social media and logistics.

4 Conclusions and recommendations

In 2019, Xidi's original stores decreased by 32 and there were 24 newly added. Catering is the most common type of business, followed by accommodation. In the past two years, there has been a significant increase in non-local operators, and more and more homeowners have chosen to rent out their homes. Most of the shops are exclusively small tourism businesses, small in scale and short in life cycle. The distribution of shops in Xidi is significantly different from different zones. Shops are mainly distributed on both sides of important tourist routes, thereby forming commercial hot zones; and the routes that visitors rarely pass through form commercial cold zones. The fixation of tour guide lines directly leads to the formation of cold zones, and the accessibility of tourists is low. For first-time visitors, the village routes are not familiar enough, and there are few signs. It is easy to get lost without a guide, so it is difficult for tourists to take the initiative to enter the places outside the guide route. On the other hand, the lack of business in the cold zone in turn hinders the possibility of more tourists entering, which will cause the difference between hot and cold areas to become more and more obvious, which is not conducive to the balance of business income of residents in the entire Xidi Scenic Area.

The overall business operation of Xidi is showing a downward trend, and product sales and operating income are decreasing. The formation of this trend is affected by the economic and political background and the overall consumption trend of the society.

Xidi's commercialization generally lacks economic vitality and the tourism industry is relatively backward. It is recommended that managers of Xidi Scenic Spots take some business-friendly measures to bring vitality to the local economy. It is recommended that small business owners of Xidi tourism accurately grasp consumption trends and upgrade their products.

Special Session 2 Xidi Environmental Protection

In order to understand the ecological environment of Xidi, we use the interview method and observation method to understand the current water resources status of Xidi, garbage disposal methods, relevant protection measures of the government, scenic spots and other relevant departments, and use APPs such as six feet and decibel tester to study placement of Xidi trash bins and noise pollution.

1 Waste disposal

1.1 Garbage generation

The garbage in Xidi Scenic Area is mainly generated by residents and tourists. The garbage generated by residents mainly includes daily garbage and construction garbage. The daily waste mainly includes kitchen waste and plastic bags, and the construction waste mainly includes cement bags, foam packaging materials, and cut-out construction materials. The garbage generated by tourists is mainly beverage bottles and food packaging bags consumed in the scenic area. There is also painting waste generated by sketch groups, such as waste paper, pens, paint bags, etc.

1.2 Waste disposal

1.2.1 *Solid waste treatment*

Waste management and regulation. Each household in the Xidi Scenic Area distributed garbage bins to allow villagers to collect garbage to facilitate the collection and removal of garbage by the clearing workers; the second is to formulate village regulations to strengthen the villagers' environmental awareness; the third is through dividends to restrain the villagers, let them pay attention to the maintenance of environmental sanitation.

In terms of garbage cleaning: the scenic area is divided into 8 areas through obvious physical boundaries. Each area is responsible for a cleaning staff. Each cleaning staff is responsible for cleaning the ground garbage, surface garbage and tourists' trash cans in

their own area. According to the route, the entire scenic area is cleaned. It is divided into four areas, four sanitation workers are responsible for garbage removal. Sanitation workers who remove garbage start to clear garbage around 5am every day. After the garbage truck is filled, they are transported to the garbage transfer station, and then sanitation workers from Zhonghuanjie transport the garbage to the urban area of Huangshan City for unified treatment.



Figure 1 Garbage removal vehicle Figure 2 Garbage transfer station

1.2.2 Food waste disposal

There are some differences in the amount of food waste generated by different types of businesses and their disposal methods. Through investigation, we can know that there are two main ways of processing food waste in the Xidi Scenic Area. One is to feed livestock; the other is to dump it directly into the garbage bin and be transported by the sanitation workers to the garbage transfer station.

1.3 Trash Bin Distribution

The trash bins in the Xidi Scenic Area are mainly divided into residential trash bins, commercial trash bins and tourist trash bins. The trash cans for tourists are flower-box trash cans, water tank-style trash cans, and wooden bucket-type trash cans. Flower-box trash cans are mainly distributed on tourist routes such as scenic spots, Dalu Street, and Hengjie. There are a total of 42 water tank-style cans. The trash cans and wooden trash cans are mainly distributed in the newly built Baijiangtang. Among them, there are 5 water tank-style trash cans and 16 wood trash cans. The residents' trash cans are diverse and distributed throughout the area. There are a total of 86 different locations in the scenic spot; there are 11 commercial garbage bins mainly located in Huishi Street.



Figure 3 Distribution of tourist trash bins

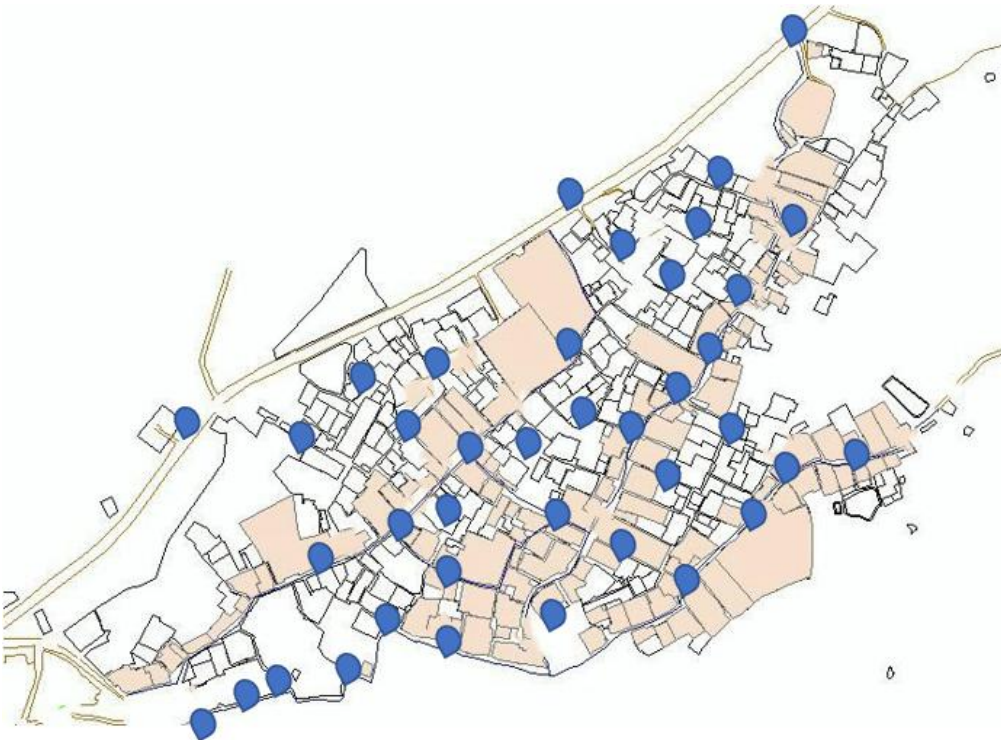


Figure 4 Distribution of residents' trash cans

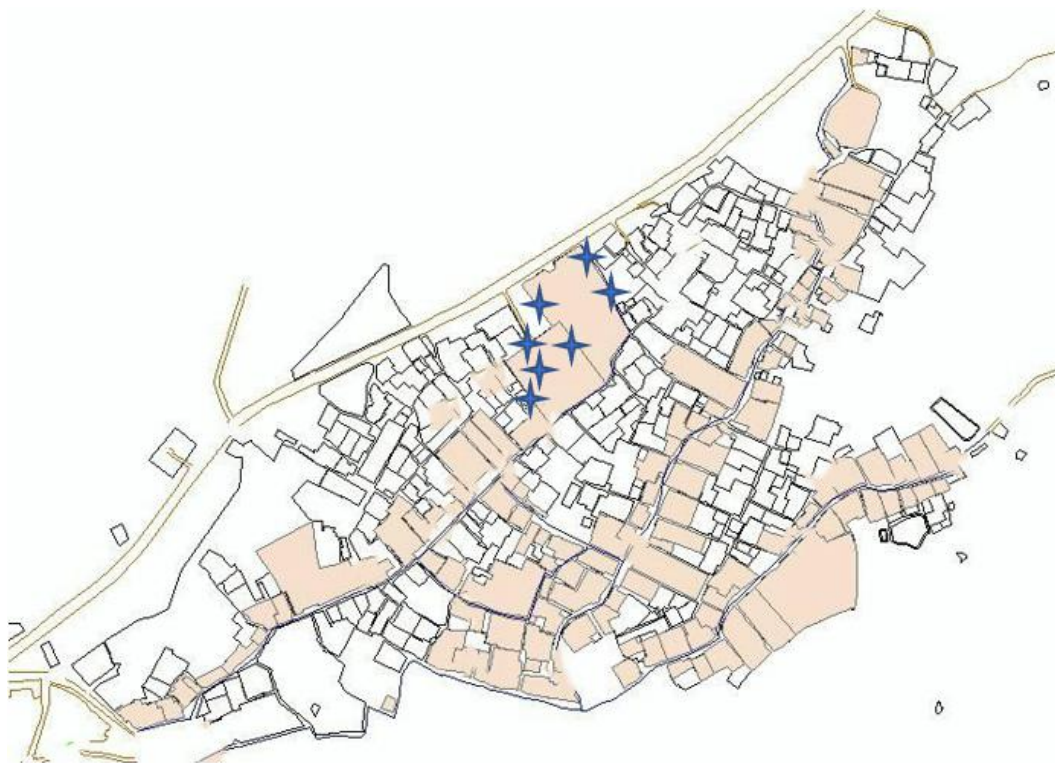


Figure 5 Distribution of commercial trash cans

2 toilets

2.1 Fecal treatment

There are three main types of manure treatment in the Xidi Scenic Area, one is for fertilizing crops; the other is to discharge it to the sewage treatment terminal for treatment through sewage pipes; the third is that the manure is naturally decomposed in the septic tank and penetrates into the groundwater.

2.2 Distribution of tourist toilets

There are a total of 7 tourist toilets in Xidi Village, 4 of which are newly built. The 3 larger ones are located near the parking lot outside the scenic area, at the junction of Qianbianxi and Houbianxi, and at Xiulu Street. The remaining 4 are distributed in Huishi Street and Baijiangtang.

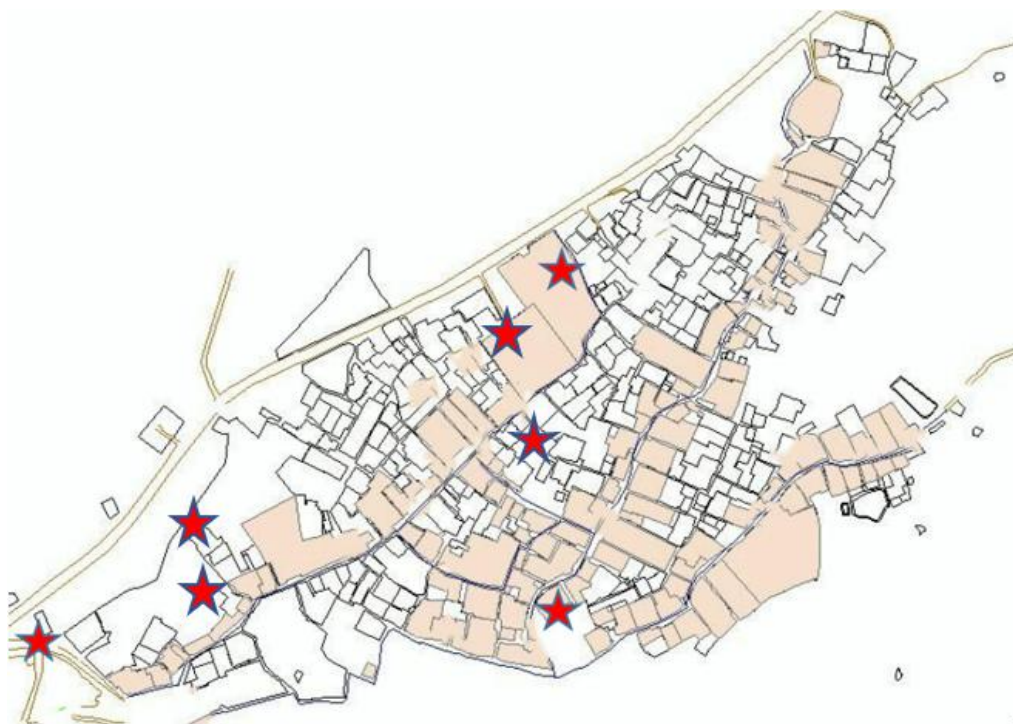


Figure 6 Distribution of tourist toilets

3 Water pollution

3.1 Sewage production

Xidi's sewage is mainly produced by tourists and residents. Domestic sewage is produced by overnight tourists and pigment water is produced by sketch students. The sewage produced by residents is mainly domestic sewage and business sewage.

3.1.1 ordinary sewage

Domestic water mainly comes from tap water. Except for rice water and vegetable washing water, which are used by residents to feed domestic animals, the rest of the tap water is basically converted into domestic sewage. The amount of domestic tap water sewage can be used to estimate the amount of domestic sewage. During the survey, three different types of households, namely ordinary residents, homestays, and restaurants, were selected to conduct daily water consumption surveys. The average daily water consumption of ordinary households was 0.474 m³, and the average daily water consumption of homestay households was 1.057 m³, the average daily water consumption of restaurant is 1.506 m³, and the average daily water consumption of the residents in the homestay category and the restaurant category is 2 times and 3 times that of the ordinary category

residents respectively, and the amount of sewage generated by the homestay and restaurant can be estimated to be twice or three times that of ordinary households.

3.1.2 Special Sewage—Sketch Pigment Sewage

The special sewage in Xidi Scenic Area mainly refers to pigment sewage. Every year, a large number of sketch groups come to Xidi to sketch. The pigments used in watercolor sketching for sketchbook groups contain a variety of heavy metal soluble substances, which are not biodegradable, and are easy to accumulate in animals and plants through the food chain, further harming human health, and will also reduce the self-purification ability of water bodies, resulting in eutrophication.

3.2 Sewage treatment methods

3.2.1 Treatment of ordinary sewage

Sewage drainage pipes have been laid in half of the area in Xidi Scenic Area. The domestic sewage generated by the businesses (residents) from the laid-up sewage modification pipelines is directly discharged to the sewage treatment terminals for sewage treatment through sewage pipes; The domestic sewage produced by some residents (businesses) is discharged into the stream water through the sewage pipe installed by themselves, and is naturally purified by the stream flow.



Figure 7 Domestic sewage discharged into stream water

3.2.2 Treatment of paint wastewater

Changes in sketch area. The distribution of sketching students in the scenic area is related to the sketching area and type of sketching delineated by the scenic area. The student sketch near the Mingjing Lake, Huishi Street, Baijiangtang, the edge of the scenic spot, and alleys far from the core area of tourist routes.

Treatment of paint wastewater: before the student group enters the scenic area, the relevant staff of the scenic area and the homestay owner of the student residents and the relevant leading teachers and students emphasize the pour of the pigment sewage into the paint bucket. After the paint sewage is poured into the paint bucket, sanitation workers will collect pigment water irregularly according to the number of sketch students in the scenic area, transport the pigment water to the garbage transfer station, and finally transport it to the Shexian Sewage Treatment Plant for centralized processing. The number of paint buckets will be flexibly adjusted according to the number of sketch groups. Currently, there are 43 paint buckets in the scenic spot.



Figure 8 Pigment sewage tank Figure 9 Pigment water collection tank

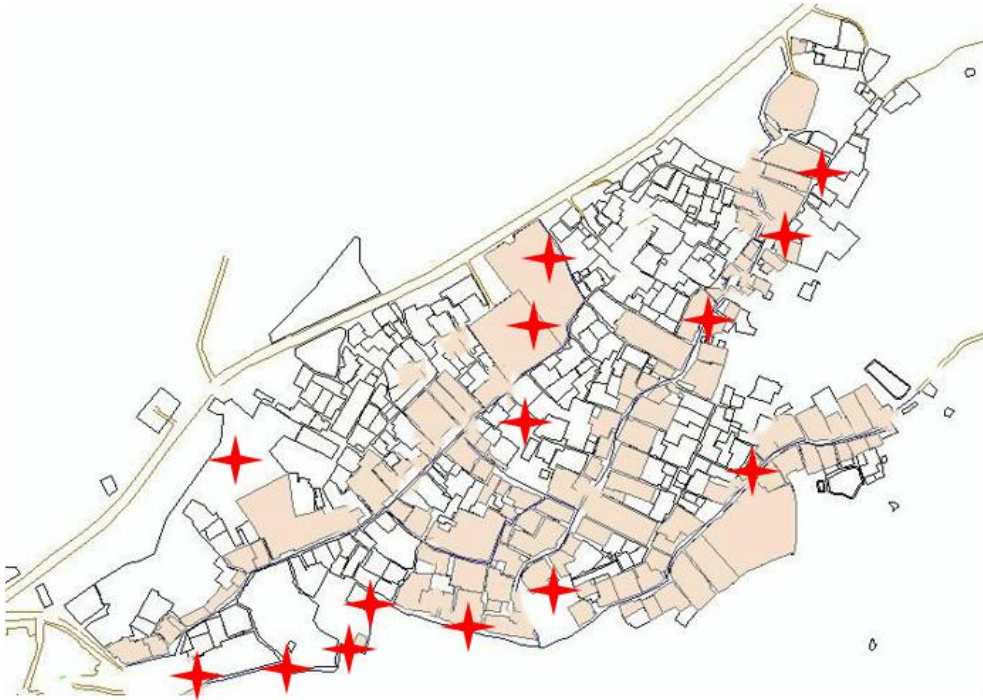


Figure 10 Distribution of paint buckets

3.2.3 Sewage related treatment measures of government, scenic spots and other related management departments

When the sketch group enters the scenic area, the staff in the scenic area will emphasize the problem of the dumping of pigment water with the homestay owner, sketch teacher and the sketching students, and inform the sketch water treatment method, and they have formulated a series of regulations. If a student is found to randomly dump paint water, the scenic spot will let the student write a guarantee that he will not dump paint water anymore. If he is found again, the student will be prohibited from entering the scenic spot.

In terms of sewage treatment. Sewage drainage pipes have been installed in half of the scenic area. The main pollution sources have been included in the sewage pipe network. A new sewage treatment plant was built near Taoyuan to treat the domestic sewage generated in Xidi Scenic Area. It is not in the sewage treatment pipeline network, and Xidi is a World Cultural Heritage Site. The development of the project is restricted by many aspects and it has not yet started.

4 Noise pollution

4.1 Noise Type

By using the Decibel Tester APP, the noise of Xidi includes building construction noise, transportation noise and social life noise were monitored. The noise of social life in the Xidi Scenic Area mainly comes from the music played by restaurants, advertisements, the voices of the interpreters/tour guides, the conversation of tourists, and the music of performances, etc., which mainly occur on the tour routes of ancient houses. The areas with more serious noise pollution are near Huishi Street and Zhuimutang. The streets and lanes in the Xidi Scenic Area are narrow. Most of the vehicles in the area are tricycles and electric motorcycles. The source of the noise is the whistle of the car and the sound of the motor. The time period for the noise is 8 00: 00-18: 00, mostly intermittent noise, mainly occurs in the periphery of the scenic area. There are not many sites under construction in Xidi Scenic Spot. The construction sites are mainly residential houses under renovation near Mingjing Lake and Alai Chicken Pai Shop. This kind of noise is intermittent throughout the day.

4.2 Local residents' perception and attitude towards noise

Residents said that noise would have some negative impact on their lives, but they have adapted to this noisy living environment. Huishi Street merchants think that the sound of music played on a stage in the central area is too loud and scares tourists.

5 Energy consumption

5.1 Main ways of energy consumption

The use of new energy and traditional energy coexist in the Xidi Scenic Area. The food and accommodation of tourists and sketch groups are all in Xidi, which also increases energy consumption. The energy consumption in the Xidi Scenic Area is mainly water resources, electricity resources, coal resources, solar energy, firewood, gas, etc.

5.2 Use of main energy sources

Considering various types of factors such as the type of energy used in Xidi Scenic Area, energy use, and data visualization of energy use, water resources and electricity resources are selected as the research objects, and the easily distinguishable ordinary residents, accommodation, and catering water and electricity meters are selected. Four records were made, and finally the team concluded that the restaurant consumes the most

water; the guest house consumes more electricity resources; the fluctuation trend of water consumption and the fluctuation trend of commercial electricity consumption are generally consistent, so that we can judge the amount of water and electricity delivered is mainly affected by the number of tourists in Xidi Scenic Area.

6 Impact of tourism development on local residents' water use

6.1 Local residents' use of water resources

In the past, villagers in the village used stream water to irrigate farmland, wash clothes, and vegetables. Now only villagers living in the first half of the back stream will wash clothes and vegetables in the stream. After washing in the stream, they go home and use tap water. Once washed, some residents will also wash clothes in the water pond outside the village; farmland near the archway is used for planting ornamental flowers, agricultural water depends on natural rainfall.

In terms of drinking water. Because the groundwater is contaminated, residents do not basically drink well water directly. Villagers in Xidi Village drink tap water, and residents drink drinking water from well water or tap water.

Water landscape shaping. Through investigation, it was found that many businesses purified the water in the well water and used it to raise fish, etc. as part of the shop landscape.

6.2 Local residents' perception of water pollution

With the development of tourism, the number of tourists in Xidi has increased year by year, the number of farmhouses and guesthouses in the scenic area has also increased, and the sewage generated has also increased. The newly opened shops in the past two years have not been included in the sewage pipeline. This part of the business sewage is discharged into the stream water without treatment, which is a great source of pollution. At present, groundwater is contaminated due to excrement penetration into the ground. The current residents basically do not use groundwater.

Another source of pollution for Xidi water resources is students' paint water. Due to the strict management of the sketch group in this scenic spot and relatively strict penalties, the dumping of paint water has been regulated more than in the past. The local residents of

Xidi think that the main source of pollution is the pollution of groundwater by sewage and excreta from septic tanks.

7 Conclusions and recommendations

Based on the investigation of Xidi's environmental protection, the summary and suggestions for Xidi's environmental health protection are as follows:

1) The sanitation situation in Xidi Scenic Spot is good, which basically meets the sanitary requirements of the current scenic spot. There is still room for improvement in the distribution of garbage bins in the scenic area; the classification of garbage in the scenic area still needs to be further strengthened; the welfare of employees needs to be improved, and the salary of cleaners or welfare can be appropriately increased to encourage sanitation workers to do better.

2) The main pollution sources in the Xidi Scenic Area have been included in the sewage treatment pipeline network, but there are still areas where sewage pipes have not been laid, newly opened shops and domestic sewage are discharged by local residents, plus residents are washing clothes in stream water. Excessive pollutants will weaken the purification capacity of Xidi water resources; non-compliant septic tanks penetrate the underground and pollute groundwater; projects that cover the entire pipeline of Xidi Scenic Area with sewage pipes need to be put on the agenda as soon as possible; The scenic area has strengthened the management of students' pigment water. The scenic area can consider arranging staff inspections in the scenic area.

3) Xidi's noise includes social life noise, construction noise and transportation noise. The main noise of Xidi is the noise of social life, which is concentrated along the ancient residential tour routes. Residents said that they are accustomed to the noisy environment, but the music sound of Huishi Street is too loud, and the volume of music can be appropriately reduced to maintain Within a more comfortable area that attracts tourists.

4) In terms of energy consumption, traditional and new energy sources co-exist, and water resources and ceremonial resources are the main energy sources consumed. After investigation, the team learned that residents have a low awareness of installing energy savers, which can strengthen the promotion of energy conservation and environmental protection. At the same time, it is recommended that homestays, inns, etc. use room cards to reduce power consumption when visitors leave the room.

5) The impact of tourism development on residential water use. In the past, residents of Xidi used stream water to wash clothes and irrigate farmland. The stream water and groundwater in the village were important sources of water for villagers. Nowadays, the groundwater is seriously polluted. The residents have changed from drinking groundwater and well water to drinking tap water now. The stream water exists mainly as a water landscape, and the residents' domestic water comes mainly from the Shexian Waterworks. The residents' dependence on water resources in the scenic area is not as strong as before. It is recommended that the scenic spot improve the sewage treatment system of the scenic spot as soon as possible to reduce the pollution of groundwater and surface water; the village committees in the scenic spot should strengthen the supervision of residents' littering behaviors, publicize the importance of environmental protection, and let residents realize the relationship between the environment and tourism development to strengthen residents' environmental awareness.