



The Sustainable Tourism Observatory of Hongcun

Annual Progress Report 2024.12 Edition



INSTO

International Network
of Sustainable Tourism
Observatories

**The Sustainable Tourism Observatory
of Hongcun**
Annual Progress Report-2024.12 Edition

MCSTO, China

Acknowledgments

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Foreword

Since 2006, Sun Yat-sen University has collaborated with the World Tourism Organization (WTO) to apply sustainable development indicators for tourism destinations. In 2010, they established the "UNWTO Monitoring Center for Sustainable Tourism Observatories" (MCSTO) to oversee sustainable tourism observatories in China and the Asia-Pacific. Currently, observatories operate in locations like Yangshuo, Huangshan, and Zhangjiajie, conducting annual monitoring.

For ancient village tourism destinations, the impact of tourism development extends beyond tangible structures to include its intangible cultural elements, such as agricultural traditions, customs, and local community life. Huizhou architecture, as one of the most significant schools of traditional Han Chinese architecture, represents an essential component of Huizhou culture and holds substantial value for preservation.

In 2012, the Monitoring Center established observatories in the ancient villages of Xidi and Hongcun in Yi County, Anhui Province, and commenced continuous tourism monitoring efforts.

Executive Summary

Tourists value Hongcun's cultural heritage and natural beauty, with high satisfaction and intentions to revisit, though areas like facilities, cultural diversity, and sustainability practices require improvement. Research addressed topics including local satisfaction, economic benefits, heritage conservation, and environmental management, aligning with SDGs.

Key findings highlight:

- Improved but still insufficient environmental management.
- Enhanced heritage conservation with rising local support.
- Resilient tourism industry recovery.
- Growing awareness of sustainable development.
- Dominance of sightseeing tourism, with culinary experiences favored but limited activity diversity.
- Slightly declined but still high visitor satisfaction, with rural landscapes and Huizhou architecture praised, though infrastructure needs upgrading.

Recommendations are provided for identified improvements.

Hongcun in brief






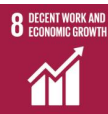








Hongcun, located in Yi County, Huangshan City, Anhui Province, in eastern China, is one of the most representative ancient villages of Huizhou architecture in southern Anhui. Renowned as the 'Village in the Chinese Painting', Hongcun was inscribed as a World Cultural Heritage site in 2000 for its well-preserved ox-shaped village layout, traditional Hui-style architecture, and ingenious water system, which demonstrate the ingenuity of its ancestors. Among the earliest village-type World Heritage sites, Hongcun showcases the lifestyle of residents living under traditional Chinese agrarian civilization. After being designated a World Heritage site, Hongcun was also awarded the title of 'National 5A-Level Tourist Attraction' and subsequently included in the first list of China's traditional villages.















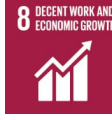


The well-preserved state of Hongcun also indicates that it has been on the margins of traditional economic development, leading to the loss of opportunities to diversify into other industries over the past centuries. Local residents have a strong desire for development. Therefore, leveraging its rich cultural heritage to develop tourism has become their best option. Since the 1990s, Hongcun has gradually developed its tourism industry, which has now become a pillar of the local economy. Tourism has not only created numerous employment opportunities for local residents, stimulated regional economic growth, and enhanced the influence of Hui culture, but also promoted the concept of sustainable cultural heritage preservation to visitors.

In order to monitor changes at the heritage site and guide the sustainable development of tourism in Hongcun, the Monitoring Center has established observation points in the village to conduct long-term monitoring and specialized research on several indicators, including the preservation of ancient architecture, local residents' attitudes toward tourism, visitor satisfaction, environmental protection, infrastructure, and commercialization. The goal is to support sustainable decision-making through professional and effective field research data.

Methodologies and Issue Areas

The monitoring process consisted of three stages: preparation, field research, and report writing. During preparation (June 1 – July 17, 2024), the team developed plans, collected data, designed questionnaires, and coordinated with local authorities. Field research (July 18 – 24, 2024) involved observations, surveys, and interviews, yielding 292 valid tourist responses (97.3%) and 96 resident responses (96%). Stakeholders such as government representatives, managers, residents, and tourists were interviewed. After July 24, the team analyzed data and prepared comprehensive and specialized reports addressing 15 monitored issues aligned with SDGs.

ISSUE AREA	INDICATORS	DIMENSION	SDGs
1 Local satisfaction with tourism	<ul style="list-style-type: none"> Local satisfaction with the government's execution in tourism development Local satisfaction with the development of local tourism 	Social-cultural	   
2 Destination economic benefits	<ul style="list-style-type: none"> Total tourism revenue Tourists' expenditure in destination 	Economic	  
3 Employment	<ul style="list-style-type: none"> The willingness of residents to participate in local tourism Occupational distribution of tourism practitioners in the sample 	Social-cultural	   
4 Tourism seasonality	<ul style="list-style-type: none"> Monthly tourist number 	Economic	  

5 Energy management	<ul style="list-style-type: none"> Infrastructure improvement Changing the way the countryside uses energy 	Economic Environmental	 
6 Water management	<ul style="list-style-type: none"> Improve water management practices 	Economic Environmental	 
7 Waste water management	<ul style="list-style-type: none"> Enhance sewage treatment capacity 	Environmental	  
8 Solid waste management	<ul style="list-style-type: none"> Environmental pollution ; Sustainable development 	Environmental	 
9 Governance	<ul style="list-style-type: none"> Heritage conservation and management system Informal discussion mechanism 	Social-cultural	 
10 Climate action	<ul style="list-style-type: none"> Coping with extreme weather 	Economic Environmental	
11 Accessibility	<ul style="list-style-type: none"> Offer convenient services for disadvantaged groups 	Social-cultural	 
12 Heritage conservation	<ul style="list-style-type: none"> General overview of historical residential buildings Distribution of historical residential building types 	Social-cultural	  



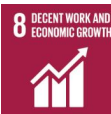





13 Commercialization	<ul style="list-style-type: none"> General Overview of commercial Distribution of commercial facility types Spatial distribution of commercial facilities 	Economic Social-cultural	   
14 Multi-sensory experience	<ul style="list-style-type: none"> Definition of multi-sensory The advantages and disadvantages 	Social-cultural	 
15 Digital technology applying	<ul style="list-style-type: none"> Application Scenarios of Digital Technology Attitude of residents and tourists towards the application of digital technology 	Economic Social-cultural	 

Table 1: Issue areas respectively with corresponding indicators, dimensions and SDGs

Issue Areas





Local Satisfaction With Tourism

1 Local Satisfaction with Tourism

From July 19 to 23, 2024, the research team conducted a sampling survey at Hongcun Scenic Spot, distributing 100 resident questionnaires with 96 valid responses (96% response rate). The questionnaire covered six areas: tourism impact awareness, life satisfaction, livelihood capital, tourism development suggestions, heritage protection suggestions, and demographics. Likert scales were used for the first three parts, while subjective and objective questions were used for the others.

The sample comprises 43.7% males and 56.3% females, with the 25-44 age group representing the largest segment at 40%. A majority of residents (74%) have attained a high school education or higher. Long-term residents are predominant, with 71.9% having lived in Hongcun for over seven years, and 84.2% employed in tourism-related industries.

In this analysis, approval combines "strongly agree" and "agree," while opposition combines "strongly disagree" and "disagree." Only 53.1% of residents approve of government enforcement of tourism development, and 50% are satisfied with Hongcun's tourism, both down 6.7% from 2023, indicating room for improvement.

The survey also assessed residents' willingness to provide suggestions and their support for tourism development in Hongcun. Results show 60.42% actively offer suggestions, and 86.46% continue to support tourism development, indicating a positive and proactive attitude towards ongoing tourism growth.



Destination

Economic Benefit

2 Destination Economic Benefit

With the lifting of pandemic control measures, Hongcun's tourism market has experienced significant growth, demonstrating resilience. The number of visitors in 2023 saw a marked increase compared to the previous year. In the first half of 2024, visitor numbers remained stable compared to 2023. Additionally, Huangshan City introduced a new ticket-free policy to further promote tourism, which contributed to maintaining a steady flow of visitors.

A total of 300 visitor surveys were collected for this monitoring, with 292 valid responses, achieving an effective rate of 97.3%. The survey on visitor spending at the destination revealed that 83 tourists (27.67% of the total) spent less than 1,000 yuan during their visit. The majority, 102 tourists (34%), spent between 1,001 and 2,000 yuan. Those spending between 2,001 and 3,000 yuan numbered 57 (19%). There were 19 visitors (6.33%) whose spending ranged from 3,001 to 4,000 yuan, 13 visitors (4.33%) who spent between 4,001 and 5,000 yuan, and 18 visitors (6%) who spent over 5,000 yuan. Overall, visitor spending levels in Hongcun were relatively low. Analysis of the survey data indicates that this trend can be attributed to two main factors: the predominance of low-spending groups such as students and young travelers, and the generally short duration of their visits, which in turn affected the overall expenditure levels.



Employment

3 Employment

The development of tourism in Hongcun has stimulated the growth of related industries and has a positive impact on employment. In the survey, 91.66% of residents agreed that tourism development has brought more job opportunities, an increase of 10.26% compared to 2023. Additionally, 66.67% of residents agreed that their own job opportunities have increased, which is roughly the same as in 2023. These results clearly demonstrate the positive effect of tourism development on employment opportunities in Hongcun.

The study investigated the ways in which residents are involved in tourism, with 83.3% of residents participating in tourism-related work. Among them, 59.4% chose to stay in their original location and open their own shop, while 8.3% opted to move to county and operate a shop or guesthouse in their old house. This indicates that Hongcun residents are widely engaged in the development of tourism, and their involvement can be broadly categorized into two main methods: running their own business and renting out property, depending on personal preferences and management capabilities.

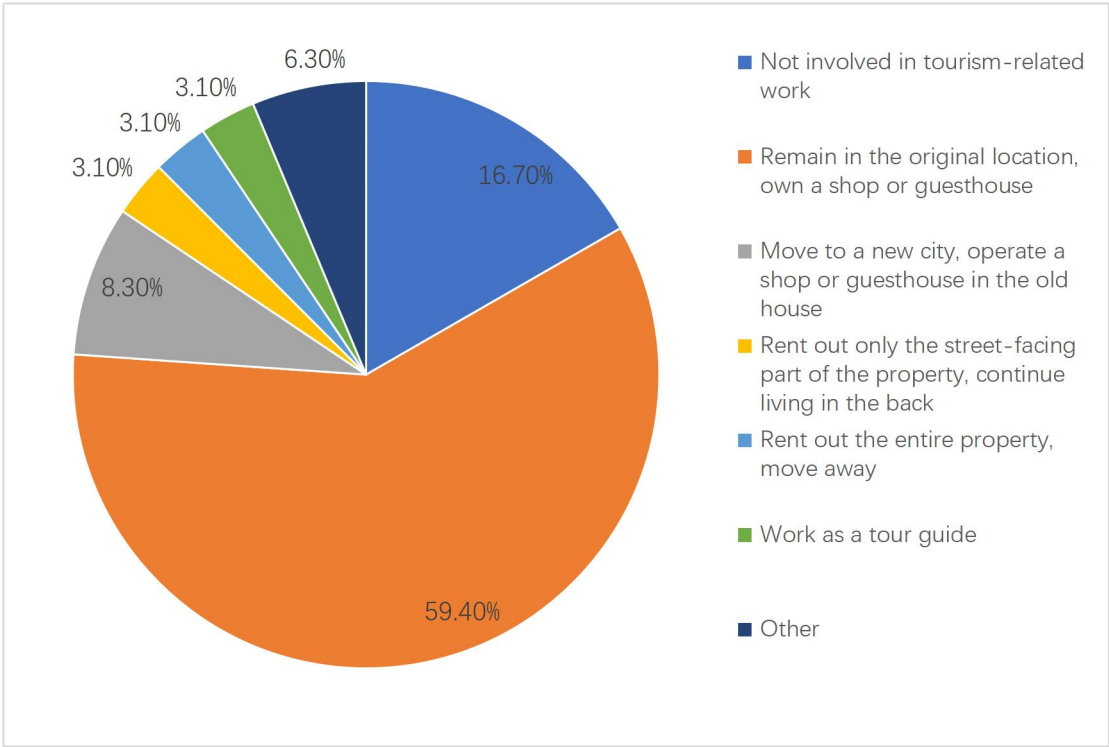


Figure 1: The way residents participate in tourism development



Tourism Seasonality

4 Tourism Seasonality

Hongcun's tourism exhibits clear seasonal patterns, with peak periods in spring and autumn and relatively quieter winters. Recently, the impact of seasonality has diminished. Previously, tourism peaks coincided with summer vacations and national holidays, but the appeal of spring tourism has grown, supported by holidays like Qingming and Labor Day. Additionally, cultural events and festivals have boosted off-season tourism, blurring the lines between peak and off-peak periods. This shift has eased operational pressures on tourism practitioners and fostered stable, sustainable industry growth.



Figure 2 : Monthly tourist number in Hongcun in 2023



Energy Management

5 Energy Management

5.1 Rural power grid upgrading to create an "all-electric scenic spot"

Hongcun traditionally uses coal, and liquefied petroleum gas for energy. With tourism development, energy consumption has surged, particularly during peak seasons. The increased demand for electricity and fuel, driven by visitors and local commercial activities, has put additional pressure on the village's energy resources.

Thanks to the strong promotion of rural electrification project by Yixian Power Supply Company, the sightseeing environment of ancient villages has been optimized and the economic benefits of the scenic spot have been greatly improved. Through the transformation and upgrading of rural power grids, the promotion of electric energy replacement technology to create Huizhou style characteristics of "all-electric scenic spot". In the past, Hongcun residents used coal and gas as the main energy sources for heating and kitchen. Coal burning and gas not only cause certain environmental pollution, but also have fire safety risks. The development of the electric energy replacement project in the scenic spot has replaced the old equipment in the residents' homes with electric cookware, which has greatly improved the safety while protecting the environment. In addition, the use of electric energy efficiency is good, low cost.

5.2 Infrastructure improvement

Hongcun's public infrastructure, such as lighting facilities, has undergone a new round of improvements, and buildings have also undergone energy-saving renovations, including smart meters and energy-saving lighting. Charging stations for electric vehicles have been added to meet the growing demand from residents. The improvement of public facilities has promoted energy conservation and the use of green energy by residents and enterprises.

5.3 Changes in the way energy is used have reduced carbon emissions

Through renewable energy adoption and efficiency upgrades, Hongcun has effectively controlled energy consumption, particularly during peak tourist periods. These changes have reduced carbon emissions, improved air quality, and raised public awareness about energy-saving practices.



Water Management

6 Water Management

6.1 Challenges of increasing water resource pressure in Hongcun

Hongcun boasts abundant water resources and relies on ancient Huizhou water system engineering to maintain the circulation of its water bodies. However, with the development of tourism, the influx of visitors has led to a surge in water demand, putting immense pressure on water resources. Traditional water systems are insufficient to meet modern water demand.

6.2 Measures to improve water resources in Hongcun

Hongcun has intensified the restoration and maintenance of ancient Huizhou water system engineering, repairing infrastructure such as ditches and embankments to ensure effective allocation of water resources within the village, maintaining water circulation and quality.

6.3 Improvements and protection of water resources

Through water system restoration and the implementation of water-saving measures, the water quality of major water bodies in Hongcun has significantly improved, with reductions in turbidity and eutrophication and increased water clarity.

Enhanced water system infrastructure has improved resource allocation capabilities, effectively alleviating water supply pressure during peak tourist seasons.

Improved water quality and source protection have gradually restored the village's ecological environment, stabilizing aquatic ecosystems and enhancing Hongcun's natural scenery and tourist appeal.



Waste Water Management

7 Waste Water Management

7.1 Sewage issues in Hongcun

Hongcun faces challenges in sewage management, particularly with the increase in wastewater discharge from tourism and residential activities, leading to aggravated water pollution. Traditional sewage treatment methods — natural infiltration and manual canal discharge — are limited in handling modern sewage volumes. During peak tourist seasons, inadequate facilities result in untreated wastewater being discharged directly, polluting surrounding water bodies.

7.2 Enhanced sewage treatment capacity

- New facilities include multi-stage filtration systems and biochemical treatment devices, effectively removing pollutants and harmful substances from water.
- The sewage pipeline network has been expanded to cover more residential and commercial areas, reducing direct discharge incidents.
- Regular inspections are conducted to monitor residents' and businesses' compliance, addressing violations and ensuring environmental standards are met.
- Environmental education has been strengthened, especially among residents and businesses, to promote the importance of sewage treatment.

7.3 Effective control of water pollution

- New and upgraded treatment facilities have significantly improved sewage management.
- Pipeline expansion and facility upgrades have alleviated pollution issues within the village and surrounding areas, leading to improved water quality and gradual ecological recovery.
- Continuous environmental education and strict enforcement have raised awareness, reducing improper sewage discharge.



Solid Waste Management

8 Solid Waste Management

Solid waste issues stem from tourism, residential, and production activities. Increased visitor numbers contribute significantly to tourism waste, compounded by insufficient environmental awareness and an inadequate number of waste bins, leading to delayed cleanup. Residential waste disposal is hindered by uneven bin distribution, especially in remote areas. Construction waste, due to high transport costs, is often piled around the village, affecting the aesthetic of the area. These issues not only harm the environment but also threaten the sustainability of the scenic area.

8.1 Policies for solid waste improvement

- Hongcun has increased the number of waste bins and optimized their placement, implementing 24/7 cleaning schedules to ensure timely disposal.
- Management of waste from commercial activities has been enhanced, with regular inspections and strict enforcement to reduce illegal dumping.
- Efforts to raise environmental awareness among residents and visitors have intensified, including the installation of signs at key points and the addition of bins in high-waste areas to encourage sorting and proper disposal.

8.2 Solid waste management outcomes

- The number of waste bins has increased, but further improvements in placement within commercial and residential areas are needed to ensure timely disposal.
- Reformed cleaning schedules have enhanced waste disposal efficiency, reducing accumulation and improving environmental quality.
- These measures have significantly improved waste management, reducing scattered litter and improving overall hygiene.



Governance

9 Governance

As tourism continues to thrive, Hongcun is actively refining tourism regulations and holding regular informal discussions on the industry.

9.1 Heritage conservation and management system

Hongcun's management system focuses on the preservation of its ancient architectural heritage through a top-down structure. The Yi County Government oversees key departments, including the Yi County World Cultural Heritage Management Office and Hongcun Town Government, which directly manage the cultural assets. Subordinate entities, such as the Hongcun World Heritage Committee, Cultural Relics Management Office, village committee, and local associations, operate under the town government's supervision.

To address the challenges posed by tourism commercialization, the system emphasizes sustainable tourism by enhancing regulations for building maintenance in the heritage core and establishing a comprehensive heritage inventory.

9.2 Informal discussion mechanism

Key stakeholders in Hongcun's tourism management include the town government, the village committee, and tourism companies. These parties have developed a flexible informal dialogue mechanism to resolve tourism-related issues.

The town government facilitates communication between higher-level authorities and the scenic area, while the village committee manages patrol teams, focusing on heritage protection, resident activities, and collective development. Tourism companies handle scenic area operations, including ticketing, guide management, and upkeep of heritage buildings.

When issues arise, representatives convene promptly to propose solutions, allowing for timely and adaptive decision-making.



Climate Action

10 Climate Action

Hongcun's climate action mainly involves dealing with floods and high temperatures.

10.1 Withstand flood

Hongcun uses an elaborate artificial drainage system to withstand the increasingly frequent heavy rainfall. To ensure the safety of Hongcun, the rainwater is managed by comprehensive measures such as source control, middle and end regulation and storage, regulation and discharge. The traditional water system design has made an outstanding contribution to the flood resistance of Hongcun.

10.2 Cope with the heat

Hongcun Scenic area has adjusted outdoor working hours to avoid staff working during the highest temperatures of the day to reduce the risk of heat stroke. The scenic spot has prepared heatstroke prevention and medical supplies at the service points, and provided drinking water for tourists. A high temperature heat stroke emergency plan has been developed to ensure that in the event of heat stroke, it can be dealt with quickly and effectively.



Accessibility

11 Accessibility

To ensure a safe and convenient travel experience for groups such as the disabled, children, and the elderly, Hongcun has implemented measures to protect their rights and create a more accessible tourism environment.

Hongcun has improved barrier-free facilities, with accessible public restrooms and convenient sightseeing buses to enhance the experience for visitors with disabilities and special needs. It also consistently offers convenient services for disadvantaged groups.

But at the same time, there are problems in the construction of barrier-free facilities in the scenic spot. The design and implementation of accessibility facilities in the scenic area are inadequate, making it difficult for people with disabilities to fully enjoy the area. The barrier-free toilet at the west gate is located in the basement, accessible only via stairs, preventing independent access. Additionally, there is no barrier-free passage, and the uneven stone roads and waterways make it hard for people with reduced mobility to use wheelchairs or other assistive devices.



Heritage Protection

12 Heritage Conservation

Significant progress has been made in protecting Hongcun's heritage, thanks to government efforts, professional oversight, and community involvement.

12.1 Heritage Protection and Development Challenges in Hongcun

In 2023-2024, Hongcun has successfully preserved many traditional buildings, including national treasures, through government-supervised restoration that maintains the Huizhou architectural style. However, the separation of residential usage rights from ownership and external operators' focus on profit pose challenges, with the government addressing this through a "subscription" model for preservation. Tourism-driven commercialization threatens the authenticity of heritage sites, but strict regulations and policies ensure renovations respect the Huizhou style and promote cultural preservation.

12.2 Current usage of residences in Hongcun

This year, in order to better protect the heritage, the task force has established digital archives for 11 protected residential buildings.

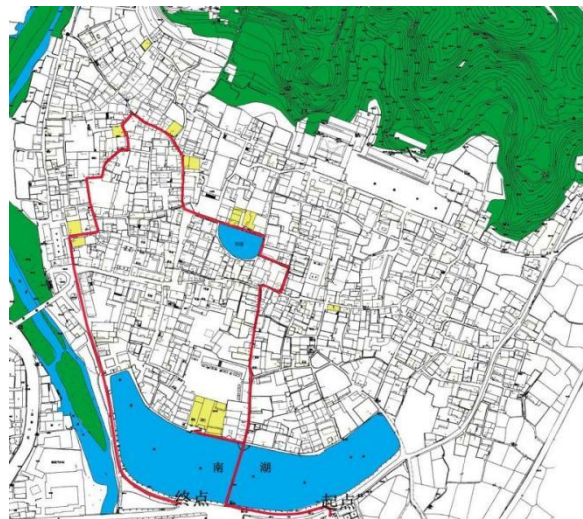


Figure 3: Construction of residential buildings in Hongcun in 2024

Residences in Hongcun serve various purposes: many remain dwellings, some combine residential and commercial use, and others are fully converted into shops, guesthouses, or tourist attractions. To strengthen the protection and utilization of these ancient homes, a monitoring team employed 3D scanning technology to create digital models for residences.



Commercialization

13 Commercialization

In 2024, the commercialization rate of Hongcun Scenic Spot has reached 72.28%, showing a steady increase from 64.52% in 2022 and 64.97% in 2023. Currently, a significant portion of the village's buildings are engaged in commercial activities, with areas like Nanhui, Qianjie, and Tingqian exhibiting the highest levels of commercialization.

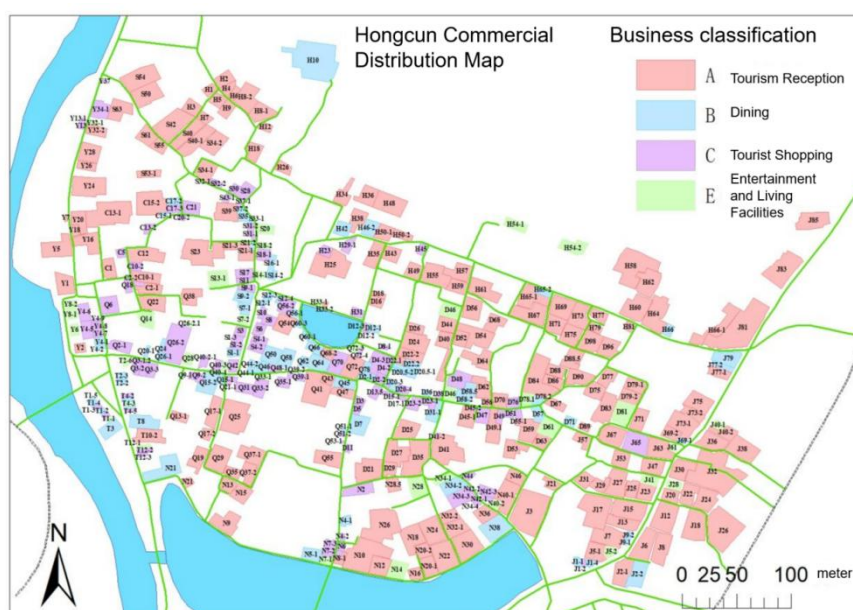


Figure 4: Hongcun commercial distribution map

Hongcun's commercial facilities are primarily focused on tourism-related services. Tourism reception facilities (Category A) make up 44.44% of the total, with 36.06% offering dining services. Dining establishments (Category B) account for 19.23%, with some also providing tourism shopping. Tourism shopping facilities (Category C) comprise 28.21%, and entertainment and living facilities (such as travel photography shops) make up 8.12%, with most being photography-related. Notably, there are no facilities exclusively for local residents.

Compared to previous years, the proportion of tourism reception and shopping facilities in Hongcun decreased in 2024, while the proportion of entertainment and living facilities significantly increased, mainly due to the addition of travel photography experience shops offering more diverse, experience-oriented tourism products.

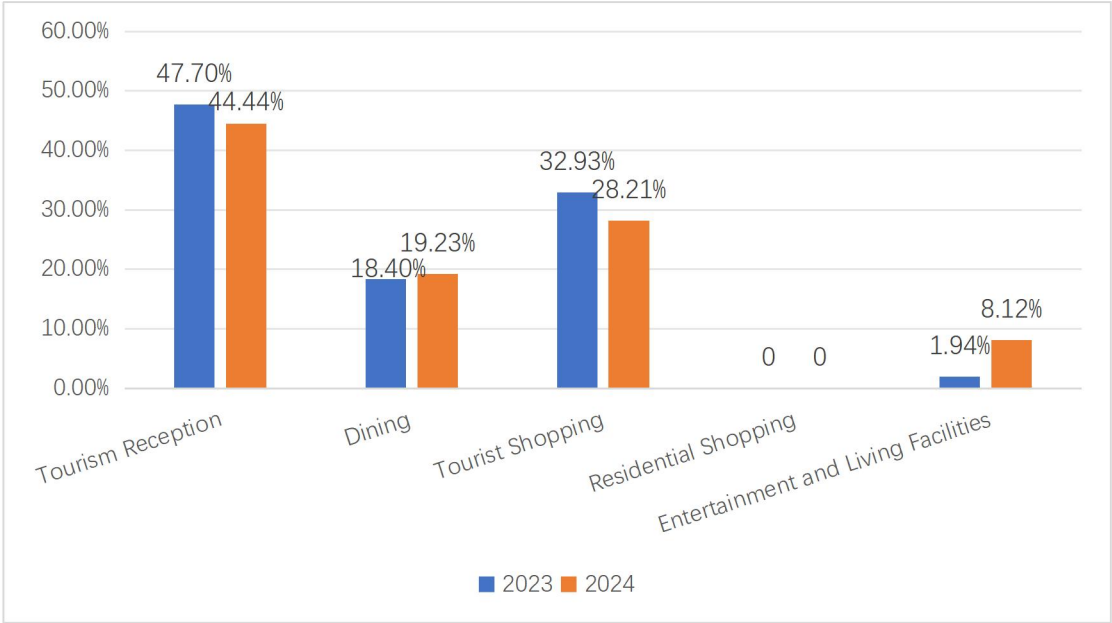


Figure 5: Commercial facility distribution type

The Hongcun Scenic Area was divided into nine regions based on key corridors and landmarks: Tea House Alley (C), East Street (D), Back Street (H), East Well (J), Nanhui (N), Front Street (Q), Upper Water Ditch (S), Tingqian (T), and Riverside (Y). Upper Water Ditch (S), East Street (D), and Front Street (Q) remain the most commercialized, accounting for 50.64% of the total shops across all regions, similar to the 52.30% in 2023. This is due to their location in the core area of Hongcun, which attracts high visitor traffic.

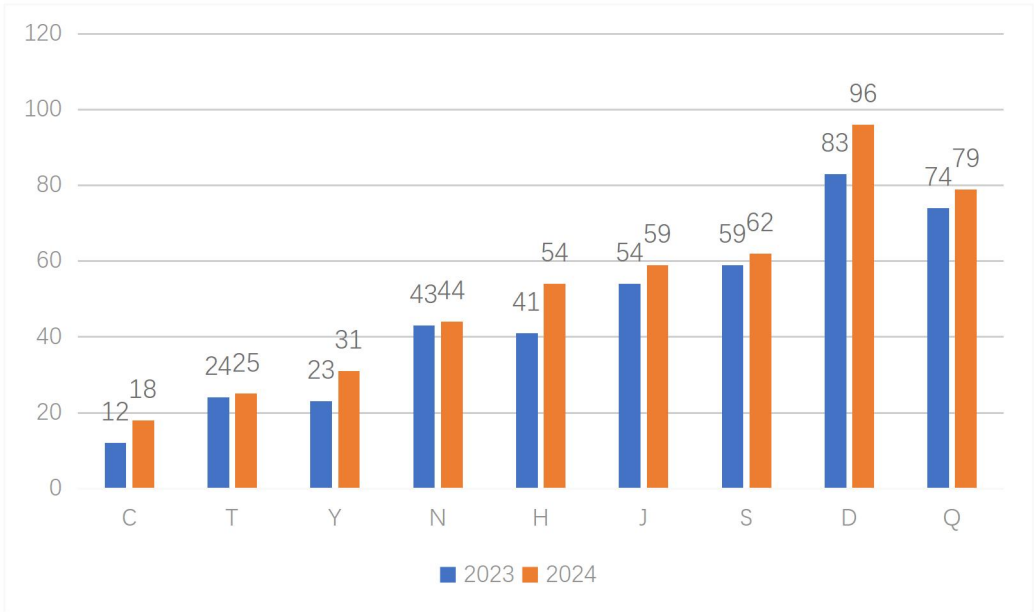


Figure 6: Number of commercial facilities by region



Multi-sensory experience

14 Multi-sensory experience

The landscape experience in Hongcun is a blend of the five senses, with each sense influencing the others, shaping visitors' overall impression. The survey found that the primary experience was visual, with interactions between sight, sound, smell, taste, and touch enhancing visitors' perception. External factors, such as the time of day, also influence sensory experiences. For instance, hot midday temperatures discourage outdoor sightseeing, while the quiet of the evening deepens the sense of village tranquility and cultural atmosphere.

14.1 Description of the multi-senses

The visual landscape, defined by its natural beauty and Hui-style architecture, is praised for the harmony of features like Nanhu Lake, Moon Marsh, and ancient buildings. The auditory landscape combine natural sounds with man-made sounds. Visitors generally love the sounds in the natural environment, and some visitors are dissatisfied with the noise caused by commercialization. Visitors' olfactory experience blends local specialties, such as edamame tofu and stinky mandarin fish, with natural plant fragrances, while commercial odors like oil smoke and garbage detract from the experience. Taste is shaped by local food and tea, reflecting the culture. Tactile interactions with stone roads and buildings are positive, though hot weather may cause discomfort.

14.2 Advantages and weaknesses

Hongcun, an ancient village with a rich cultural history, offers a unique five-sense landscape, particularly in visual perception. However, other sensory experiences need further enhancement. The village provides diverse sensory experiences, supported by its natural beauty, cultural heritage, and growing commercial development. While the five senses are well represented, the soundscape lacks distinctive local features, and commercialization has somewhat diminished the sensory experience for visitors.

14.3 Optimization suggestions

- Strengthen the protection of Hongcun's cultural heritage, optimize lighting design, and enhance the nighttime landscape.
- Control noise pollution, improve tourism environmental hygiene, and enrich the auditory and olfactory experience.
- Develop local specialty cuisines and provide diverse dining options.
- Improve the stone pavement and add outdoor cooling facilities to enhance the tactile experience.



Technology

15 Technology

Digital technology plays a vital role in advancing the 17 Sustainable Development Goals. In Hongcun Village, a UNESCO World Heritage Site, it offers great potential for sustainable rural tourism, smart scenic areas, cultural heritage protection, rural governance, and green development.

15.1 Application scenarios of digital technology in Hongcun tourism

Digital tools in Hongcun include online ticketing, automated souvenir vending machines, navigation and guide services, QR code information, and safety systems for fire and power. Despite these offerings, visitor awareness and usage are low, with digital payments being the most utilized. While tourists generally welcome digital innovations, 80% are unwilling to spend over 300 yuan on such experiences, and few engage with tools like smart guides or QR codes. Residents broadly support digital adoption but have a limited understanding of its potential. Teenagers, however, show notable enthusiasm for its applications.

15.2 Challenges and opportunities

Hongcun faces challenges in adopting digital technology, including limited investment, low community involvement, insufficient cultural integration, and poor compatibility between online and offline systems. However, emerging technologies like AI, big data, and blockchain offer opportunities to drive innovation and foster high-quality tourism development, enabling Hongcun, as a UNESCO World Heritage site, to strategically balance heritage preservation with sustainable growth.

15.3 Solutions for digital technology

- Digital applications should focus on preserving cultural heritage.
- Hongcun should use digital technology to enhance the visitor experience by collaborating with technology providers to ensure solutions reflect the village's cultural identity, improve experiences, and optimize site management.
- Effective coordination among stakeholders — local government, developers, operators, and residents—is crucial for aligning digital strategies with the village's needs, considering rural development and residents' requirements.
- Training stakeholders in digital skills is essential for effectively utilizing technology, minimizing risks, fostering cultural sensitivity, and ensuring long-term success.

Conclusions and Suggestions

Based on research and data analysis of tourism, environmental and cultural heritage conservation, economic impacts, and local perceptions, six conclusions have been drawn. These highlight commendable aspects as well as areas for improvement, with corresponding suggestions provided for the identified shortcomings.

Environmental Management Capacity in Hongcun Needs Further Strengthening Despite Significant Improvements. The natural environment is key to sustainable tourism in Hongcun, with its scenic landscapes and abundant water resources. As of 2023, air quality, including PM2.5 and PM10, met optimal standards, and drinking water consistently met Class II quality levels. Despite these positive outcomes, challenges persist, including uneven waste bin distribution, pollution from tourism enterprises, and noise and air pollution due to tourism activities. To address these issues, the government should enforce regulations, adopt advanced technologies, promote clean energy, and raise environmental awareness. Tourism businesses must enhance environmental management, foster innovation, and train staff to support sustainable development.

Significant Progress in Heritage Conservation in Hongcun: Growing Resident Support and 2024 Approval Increase. The Hui-style ancient architecture is a valuable cultural heritage and a key tourist attraction. Under unified management by the government and scenic authorities, important architectural sites have been preserved, and buildings along tourist routes have been restored to maintain historical authenticity. Resident satisfaction with heritage conservation has grown, with most supporting preservation. However, tourism development has led to varying street views, with commercialization evident in high-traffic areas. Challenges with repairs and renovations persist, impacting both daily life and heritage conservation. Moreover, many residential properties face a separation of operational rights and ownership. Moving forward, Hongcun should strive to balance commercial activity with heritage authenticity through policies and educational efforts. The government should enhance safety management, improve the tourism environment, increase investment in heritage protection, and standardize repair practices.

Resilience of the Tourism Industry: Rapid Recovery and Continued Development Amid Unprecedented Challenges. Hongcun's tourism market has seen

remarkable growth following the lifting of pandemic restrictions, showcasing strong resilience and a rapid recovery. In 2023, both visitor numbers and tourism revenue increased significantly, highlighting the critical role of tourism in driving the village's economic growth. To further stimulate tourism development in 2024, Huangshan City introduced a new ticket-free policy for Hongcun Scenic Area: free admission for pre-booked visitors every Wednesday and a 50% discount on tickets before May 1st. Additionally, special ticket exemption activities for specific groups were implemented. As a result, despite the steady number of visitors, tourism revenue was slightly lower compared to the same period.

The concept of sustainable development has continued to deepen, and residents' awareness of tourism development has further improved. Residents' attitudes towards tourism development in Hongcun center on five aspects: engaging with tourists, satisfaction with government efforts, willingness to offer suggestions, contentment with the current situation, and support for continued growth. In 2024, overall attitudes improved, with strong support for further tourism development, reflecting enthusiasm for the industry. Most residents are open to engaging with tourists, satisfied with government efforts, and willing to provide suggestions, while half are content with the tourism situation. Overall, residents show confidence in the future of the tourism industry. Residents' suggestions reflect a deeper understanding of sustainable tourism. They call for better public health management, focusing on waste and sewage treatment, and emphasize protecting traditional dwellings and local cultural ambiance. In business management, they seek stronger regulation of the scenic area, standardized commercial practices, and control over commercialization. For tourism development, they advocate for new business models, integrated cultural and tourism experiences, immersive projects, and expanded promotion. Additionally, improvements in transportation and sanitation facilities are desired.

Sightseeing tourism dominates in Hongcun, with significant visitor spending on culinary experiences, while there is still a need for improved activity diversification. Visitor spending in Hongcun remains low, primarily due to the prevalence of budget-conscious groups such as students and the short duration of visits. Most visitors choose budget accommodations, with over 60% staying for a day or less. However, the rise in overnight stays suggests increasing interest in extended visits. Food expenditures have grown, highlighting the appeal of culinary experiences, though spending on activities and shopping remains limited. Tourism in Hongcun is

still dominated by sightseeing focused on historical buildings, streets, and natural scenery, underscoring a lack of diverse and immersive activities. Excessive commercialization threatens cultural authenticity and sustainability, as an overemphasis on entertainment could homogenize tourism products, erode traditional cultural value, and destabilize the local economy. For future tourism development, Hongcun should aim to expand these offerings to enhance and diversify visitors' travel experiences while safeguarding the local economy and cultural heritage from potential vulnerabilities caused by over-commercialization.

Visitor satisfaction has slightly declined from 2023 but remains high. Tourists are more satisfied with the rural landscape and Huizhou architecture, while tourism infrastructure still needs enhancement.

Compared to previous years, overall visitor satisfaction in Hongcun remains stable, with most tourists expressing contentment. High satisfaction is attributed to Hongcun's natural and cultural resources, particularly its rural landscape and Huizhou architecture, both significantly above average satisfaction levels. While air quality was praised, lower scores were noted for crowding, noise, and overall cleanliness, which dropped compared to 2023, mainly due to commercial and visitor waste in the shopping areas. Thus, maintaining cleanliness remains a priority. Safety facilities were rated as generally satisfactory.

There is room for improvement in infrastructure and tourism services. Infrastructure ratings were moderate, not exceeding 4 points, indicating the need for enhancements. Tourists expressed dissatisfaction with the availability of tourist information and ticket prices, highlighting the necessity for better information services. Integrating modern technology for sustainable development continues to pose challenges for Hongcun's tourism sector.