

Planning and Design of Tourism-oriented Villages in Zhuhai in the Context of the Guangdong-Hong Kong-Macao Greater Bay Area: Taking Nanmen Village as an Example

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Abstract: In the process of achieving rural revitalisation, tourism is regarded as a crucial breakthrough. Zhuhai, with its favourable geographical location, possesses rich rural tourism resources and carries a long history and culture. With the development of the Guangdong-Hong Kong-Macao Greater Bay Area and the opening of the Hong Kong-Zhuhai-Macao Bridge, Zhuhai's rural tourism is facing new opportunities and challenges, so its development mode is constantly being innovated to meet the demand for higher-quality tourism development, but at the same time, existing problems have also been exposed. This paper takes Nanmen Village in Doumen District of Zhuhai City as the research object, and summarizes the experience of rural tourism development by studying the background of rural tourism development, relevant literature of scholars at home and abroad. It also conducts in-depth research on the history and culture, village environment and tourism development of Nanmen Village and Jiexiazhuang, and combines them with the actual situation to put forward a rural tourism planning and design strategy suitable for Nanmen Village Jiexiazhuang and apply it to the practice of Jiexiazhuang's rural tourism planning and design in an attempt to explore the possible innovative paths of Zhuhai's rural tourism development model under the background of the National Rural Strategy and the construction of the Guangdong-Hong Kong-Macao Greater Bay Area.

Keywords: Ancient village; Rural tourism; Planning and design.

1. Introduction

1.1. Background of the study

1.1.1. Policy Context

In the report of the 19th Congress, General Secretary emphasized that the importance of the strategy of rural revitalization is self-evident, while rural tourism is a key link in realizing this strategic goal, which has attracted great attention from the State. [1] In recent years, with the accelerating process of China's urbanization and the increasing improvement of people's living standards, the traditional mode of agricultural production in rural areas has been gradually eliminated, and tourism has seen rapid development. In the process of comprehensively deploying rural revitalization, the No. 1 document of the Central Government clearly puts forward that promoting the development of rural tourism is an important breakthrough in realizing rural revitalization. With the rapid development of tourism and the continuous improvement of people's living standards, people's demand for a better life is increasing, leisure and vacation has become a trend of consumption upgrade in the new era, and new business forms such as rural tours and farm tours are emerging one after another. As a result, the rural tourism market is showing colorful scenes around the world, and rural attractions and destinations are booming.

1.1.2. Social Background

With the gradual progress of urbanization, urban diseases are becoming more and more serious, environmental degradation and work pressure make people tired of the crowded, noisy rhythm of urban life, people are eager to go to the quiet and beautiful, fresh and natural space to relax and feel the nature, so the rural tourism has become an important

channel for the urban population to relieve the pressure and send their emotions. At the same time, with the development of the tourism market, tourists' demand for tourism has changed from traditional leisure and sightseeing to a higher level of activity experience. Compared with the traditional tourism model, rural tourism has been transformed and upgraded from the six aspects of "eating, shopping, entertainment, touring, living and traveling" to experiential tourism, which focuses on people's life experience, entertainment experience and cultural and educational experience in the rural environment.

1.1.3. Cultural Background

In the "14th Five-Year Plan" cultural development plan, it is proposed to take culture as the basis and tourism as the carrier, and further promote the concept of integrated development of culture and tourism, so as to create a uniquely charming rural cultural tourism experience. In recent years, due to the rapid construction of the countryside and the capital's eagerness to make quick profits, many villages have become more and more urbanized, resulting in the phenomenon of the lack of rural culture. Each countryside in the process of development will retain the formation of their own unique culture and spirit, and culture without a specific material or form as a carrier will be difficult to visualize. The development of rural tourism can quickly and intuitively allow tourists to recognize and understand the culture of the countryside, which is of profound significance for the dissemination and inheritance of culture.[2]

1.1.4. Opportunities In the Context of the Guangdong-Hong Kong-Macao Greater Bay Area

The construction of the Guangdong-Hong Kong-Macao Greater Bay Area is a major decision made by the CPC Central Committee with General Secretary as the core, whose

goal is to create a world-class first-class Bay Area, while committing to creating a high-quality living area that is pleasant to live in, pleasant to work in and pleasant to visit. As China's economy enters a new normal, factors such as optimization and upgrading of industrial structure as well as accelerated urbanization have an increasing impact on the tourism industry in the region, and as one of the pillars of the tertiary industry, the tourism industry plays a crucial role in the development of the national economy. The Outline of the Plan for the Development of the Guangdong-Hong Kong-Macao Greater Bay Area clearly puts forward the goal of turning the region into a world-class tourist destination, so the tourism industry is of vital significance to the construction of the Guangdong-Hong Kong-Macao Greater Bay Area. As China's economy enters a new normal, how to realize the integrated development of tourism and industry, promote the optimization and upgrading of industrial structure, and facilitate the coordinated development of the region has become one of the major issues that need to be studied and resolved urgently. The Guangdong-Hong Kong-Macao Greater Bay Area is a comprehensive Bay Area formed by the two Special Administrative Regions of Hong Kong and Macao as well as nine cities in the Pearl River Delta region of Guangdong Province. Based on its profound historical and cultural background, the Greater Bay Area is rich in cultural tourism resources of ancient villages. At present, the tourism industry in the Greater Bay Area is developing rapidly, but its rural tourism is still not well developed, and influential and competitive rural tourism products have yet to be formed, and rural tourism as a whole is still in its infancy. [3,4,5]

2. Analysis of the Current Situation of Nanmen Village from the Perspective of Rural Tourism

2.1. Basic situation of Nanmen Village

2.1.1. Location Conditions

Nanmen Village is part of Doumen Town, Doumen District, a district of Zhuhai, Guangdong Province, located in the southwestern part of the Pearl River Delta and the westernmost part of Zhuhai City. Nanmen Village is located in the north-west of Doumen District, at the foot of Huangyang Mountain, across the water from Xinhui District of Jiangmen City.

2.1.2. Natural Environment

Nanmen Village is located in the southern subtropical and tropical excessive oceanic climate zone, with pleasant climate, obvious alternation of winter and summer monsoon, warm and humid, abundant rainfall and sufficient heat, the beautiful natural environment provides good natural resources for the development of rural tourism.

Nanmen Village has a undulating terrain. connected with Zhuziling on the east side, adjacent to Jintai Temple, and connected with Ma'an mountain on the west side. and numerous mountain ranges such as Baishiling, Guanyinshan, and Fengshan. Extending southward, you can reach Xiazhou Mountain Range. The whole village is built on the hillside and surrounded by water. The village boasts a number of naturally occurring arable lands and dense woodlands, in addition to a fire-fighting theme park for the leisure and recreation of villagers and other visitors.

The water structure of Nanmen Village presents a pattern of the Tiger Gate Waterway in the west, and also has a number

of jetties such as the Jiangmen Meige Ferry Terminal, in addition to a number of manufacturing factories that have been established next to the waterway in order to facilitate the region's connection with the outside world; in the south, there is a vast, flat expanse of fields and villages. The village has a number of reservoirs, which promote the development of aquaculture as well as maintaining the living conditions of the local residents.

To the north and west of the village, extensive farmland and emerald green meadows provide fertile soil, while in the south-west, dense woodland adds life and vigour.

The architectural landscape of the village mainly consists of newly built residential buildings, traditional residential buildings, exotic lodging buildings and traditional ancestral halls, which together constitute the architectural landscape of the whole village.[6]

2.2. Analysis of Rural Tourism Development in Nanmen Village

2.2.1. Background of Rural Tourism Development

After more than 600 years of precipitation, Nanmen Village has nurtured unique ancient ancestral halls, villages and royal culture. In 2010, it was awarded the title of Famous Historical and Cultural Village of Doumen District; in 2014, it was named one of the 'Ten Most Beautiful Villages in China'; and in September 2019, it was selected as one of the 'Characteristic Villages of Culture and Tourism in Guangdong Province'. In the spring breeze of rural revitalisation, Nanmen Village has grasped the hard battle of habitat improvement, adhered to the development mode of 'culture + ecology + tourism', deeply excavated the culture of the Southern Song Dynasty royal family, hot spring culture and trade culture, and formed a unique 'one village, one product'. By insisting on the development mode of 'culture+ecology+tourism', it has formed a unique 'one village, one product' image of leisure and tourism, and has been revitalized, transforming the rich rural resources into tourism advantages, and has become a popular tourist spot for rural tourism, and one of the municipal rural revitalization model villages in Zhuhai City.[7,8]

2.2.2. Analysis of Rural Tourism Resources

Nanmen Village has a history of more than 600 years, the history carried by the rise and fall, contains cultural genes, highlights the unique value of the times, and has accumulated a rich humanistic history and colourful tourism resources, the village can appreciate the Zhao Ancestral Shrine of Raxuaiyitang built in the Ming Dynasty, and the five ancestral halls built in the Qing Dynasty and the early Republic of China. In addition, there are also historical monuments such as Jiexiazhuang and Yuxiu Ancient Village, of which Raced Hall and Jiexiazhuang are particularly renowned. The Rak-yi-tang consists of five buildings (three in the front and two in the back) and the ancestral hall, occupying an area of 427 square metres, making it one of the largest existing ancestral hall complexes in China. It is the seat of Zhao's Ancestral Shrine, and mainly focuses on sightseeing tours, but the time available for viewing tours is relatively short, and the attractions are fixed and single. Because the south side of the year is close to the high forested quartz hill - Xia Mountain, whenever the morning sun rises, Xia Qi surrounds the woods and the village over the meaning of auspicious auspicious, so named 'Jiexiazhuang'.

Jiexiazhuang has a beautiful natural environment and typical Lingnan ancient architecture that highlights the royal

family, accompanied by a clear royal seal. At present, there is only one ancient village in Guangdong Province with a length of nearly 1,000 metres, a width of 38 metres and a water depth of 2.5 metres surrounding the village's moat; a 192-metre-long, 4.5-metre-wide, five-block granite masonry slate street running through the whole village, as well as a rich history and culture. After Jiexiazhuang was assessed as an ancient village, the government has made efforts to protect the

original cultural heritage of the village, develop eco-tourism and speciality tourism, and increase the environmental improvement of the manor.

To sum up, based on the initial development of tourism in Jiexiazhuang, it can be updated and upgraded to enrich the dimensions of its tourism products and enhance the comprehensive attractiveness of tourism in Nanmen Village. As show in Figure 1 and Figure 2.



Figure 1. Nanmen Village Luyi Hall



Figure 2. Nanmen Village Jiexiazhuang

2.2.3. Cultural Characteristics

Nanmen Village has a rich cultural heritage with a long history. By proactively integrating and absorbing the essence of foreign cultures, Nanmen Village not only retains the unique flavour of the royal culture, but also demonstrates the beauty of the intermingling of Lingnan cultures; the tradition of cultivation and study inherited up to the present day is intermingled with the spirit of mercantilism nurtured by the marine culture, and the fusion of the royal culture, the culture of patriarchal etiquette and the culture of Lingnan, resulting in the formation of a distinctive cultural outlook. Especially prominent cultural characteristics are manifested in two aspects:

(1) respect for literature and rituals. Zhaozhuang people inherit the 'poetry and books' of the royal family, 'poetry and etiquette' of the reputation and is known, pay attention to etiquette, respect for unity, Jiexia Zhuang within the 'Wu

Xuan Zhao Gong family school' courtyard The most prominent, it was once the school of the descendants of the royal family, good family style continues to this day.

(2) Royal culture. The 'Royal Family Ceremony' in Nanmen Village is the traditional ancestor worship ceremony of the Zhao family of the Song Dynasty, including the New Year's ancestor worship ceremony, the wedding ceremony, the Spring and Autumn ancestor worship ceremony, and the ancestor worship ceremony. Generally, during the 'May Day' period or local cultural festivals, Jiexia Zhuang will hold the 'Song Dynasty Bar Mitzvah', which is held at the same time as the 'Royal Family Ceremony'. The Bar Mitzvah recreates the grand scene of the Bar Mitzvah ceremony held by the descendants of the Song royal family, presenting tourists with the essence of ancient folk culture and further appreciating the bright culture contained in the ancient Bar Mitzvah. As show in Figure 3 and Figure 4.



Figure 3. Wuxuan Zhao Family School



Figure 4. Bar Mitzvah in Song Dynasty

3. Rural Tourism Planning and Design Practice of Nanmen Village Jiexiazhuang

3.1. Overall Planning

3.1.1. General Positioning

The planning of Jiexia Village is rooted in its natural

environment and cultural heritage, enhancing service infrastructure to recreate the living scenes of the Song dynasty's royal descendants. By reimagining the interiors of ancient buildings, the goal is to create a rural tourism destination that blends historical and cultural experiences, folk traditions, and leisure activities into one cohesive whole. This vision aims to shape an overarching identity of "Ancient Village, New Charm—Cultural Jiexia." As show in Figure 5.



Figure 5. Masrerplan

3.1.2. Overall Planning and Design

Through field investigation, combined with the analysis of the current situation in the countryside, under the perspective of rural tourism, the land outside the area of Jiexiazhuang (currently used as a car park) is selected as the base for the planning and design of the commercial street, and through the fusion of architecture, landscape and planning, the Jiexiazhuang style commercial street is created in line with the aesthetic pursuits of the modern people and their entertainment methods, which is endowed with architectural functions, builds the industrial chain for rural tourism, introduces catering and lodging industries, and meets the It introduces catering, accommodation and other industries to

meet the rural tourism needs of tourists in terms of eating, living, travelling, touring, shopping and entertainment. Jiexiazhuang focuses on natural environmental protection and cultural gene excavation, based on the current situation of cultural tourism in Jiexiazhuang, and perfects the tourism route. Through AR augmented reality technology to reproduce the real life situation of the descendants of the Song imperial family in Jiexiazhuang, to enhance the sense of experience and visual enjoyment of tourists, to create a personalised, immersive cultural tourism product series.

3.2. Entertainment-style Rural Tourism Planning - Jiexiazhuang Style Commercial Street Planning and Design

3.2.1. Planning and Design Theme

The design of Jiexia Village's commercial street is anchored in the theme of "Charming Waterside Town, Rustic Lingnan, Modern Living." It aims to shape eco-friendly waterside architecture with a unified tone inspired by Lingnan style, where distinctive elements are showcased as broad, striking features. Blending the charm of traditional aesthetics with a sense of modern design, it seeks to elevate the street's commercial appeal.

The design theme, "Flowing Memories of Jiexia," embraces the natural extension of the streets, with building facades creating a seamless and diverse sensory experience.

By extracting the spatial textures of Jiexia Village, it crafts a cultural scene that invites visitors to immerse themselves in the narrative of the village.

3.2.2. Site Texture Planning and Design

3.2.2.1 Site Selection

The site selection for the commercial street is the open space on the south side of Jiexiazhuang, which is surrounded by wetland on the east side and a road on the south side, and is now used as a car park of the park, with a small number of old residential houses and low land utilisation rate. The site is adjacent to Jiexiazhuang, close to the road and situated next to the moat, so it is suitable for the construction of a commercial street, supporting the tourism service facilities of Jiexiazhuang to create a high-end tourism distribution centre. As show in Figure 6 and Figure 7.



Figure 6. Jiexiazhuang Shopping Street Site Selection



Figure 7. Rendering of Jiexiazhuang Commercial Street

3.3. Immersive Rural Tourism--‘AR+Cultural Tourism’ Planning and Design of Jiexiazhuang

3.3.1. Jiexiazhuang AR cultural tourism planning programme

AR cultural tourism project, with Jiexiazhuang scenic spot as the core, explores the in-depth integration of AR technology, immersive experience and local tourism resources, and realises the comprehensive combination of humanities, culture, landscape and science and technology in the intelligent cultural tourism by means of AR intelligent navigation, AR intelligent explanation, scene experience interaction, etc. It realises a series of cultural tourism routes, provides tourists with multi-level and multi-dimensional immersive experience, and enhances the sense of participation and interaction of tourists. It provides tourists with multi-level and multi-dimensional immersive experiences, enhances their sense of participation and interaction, and optimises their tourism, entertainment and

consumption experiences. According to the cultural resources of Jiexiazhuang, AR cultural tourism has the following projects:

(1) AR map navigation: through intelligent applications to understand the user's needs, the behavioural characteristics and behavioural patterns of tourists, recommending the optimal tour routes and attractions for tourists, so as to provide tourists with high-quality services.

(2) AR restore historical scenes: through AR technology to reproduce the real life scenarios of the descendants of the Song imperial family in Jiexiazhuang, such as bustling streets, private schools with the sound of books, etc., the depth of the cultural and tourism experience to enhance the sense of experience of tourists as well as breakthroughs in the enjoyment of the senses, tourists can experience the time and space travel, immersive experience of the history and culture.

(3) AR live-action interaction: tourists can participate in the restoration of historical events through AR applications, and can even play the role of historical characters immersive interaction with the scene characters.[9] As show in Figure 8-11.



Figure 8. AR Map Navigation



Figure 9. AR Reduction Scene



Figure 10. AR Live View Interactive Scene



Figure 11. AR Scene Effect Diagram of Jiexiazhuang

4. Conclusions and recommendations

4.1. Conclusions

In this paper, under the perspective of rural tourism, through the background of rural tourism development, domestic and foreign scholars' related research, to provide a theoretical basis for rural tourism planning and design, and summarise the valuable experience of rural tourism development. Then it analyses the status quo of Nanmen Village and Jiexiazhuang, combines the actual situation, puts forward the rural tourism planning and design strategy suitable for Nanmen Village Jiexiazhuang, and applies it to the practice of rural tourism planning and design in Jiexiazhuang. The main research conclusions of this paper are as follows:

(1) Through the analysis of domestic and foreign rural tourism development research, it is concluded that rural tourism needs to strengthen the characteristics, excavate the culture, strengthen the base, and at the same time, it is necessary to deeply integrate science and technology and intelligent system into the tourism Changwang, which can greatly promote the transformation and upgrading of rural tourism, and enhance the competitiveness of the rural tourist attractions;

(2) Through the analysis of the current situation of Nanmen Village, Jiexiazhuang is selected as the entry point for rural tourism planning. In the docking Xiazhuang preliminary research, found that the current situation of its tourism development has the following problems: ① tourism projects briefly reproduced, tourists visit a short period of time; ② village culture to show the form of a single, historical and cultural heritage is not enough to explore; ③ leisure tourism resources development is not in-depth enough, experience products; ④ lack of basic services and facilities

(3) Analyse and summarize the site analysis, historical evolution and cultural characteristics of Docking Xiazhuang through research. By improving the service infrastructure, recreating the living scenes of the descendants of the Song Emperor, reconstructing the internal functions of the ancient buildings, and creating a rural tourism scenic spot integrating historical and cultural experience, folk culture experience, and leisure and entertainment experience, it will eventually form the overall image of 'New Rhythm of the Ancient Village, Cultural Jiexia'. [10]

(4) Combined with the analysis of the current situation of Jiexiazhuang, the rural tourism planning and design strategies are proposed: ① Improve the tourism infrastructure, including supplementing and perfecting the industry, creating a style commercial street; building a cultural exhibition hall to show the characteristics of the culture; creating a waterfront space to activate the tourism function of the moat; ② Reinventing the experience of culture and tourism, including updating the internal functions of the ancient buildings to diversify the functions of the buildings; increasing the number of gourmet handicrafts workshops and promoting traditional cuisine; using AR technology to deepen the experience of culture and culture; and using AR technology to promote traditional cuisine. The project will

use AR technology to create in-depth cultural and tourism experiences to enhance visitors' experience and breakthrough sensory enjoyment.

4.2. Recommendations

With the rapid development of the economy and the promotion of rural vibration, rural tourism will also become the trend of tourism in the future. This paper proposes a planning and design strategy for the product development of rural tourism from the perspective of cultural experience as an entry point. In the process of rural tourism development, there are still a lot of problems that need to be solved, the need to integrate multi-disciplinary, from the economy, culture, art, science and technology and other perspectives on the construction of rural tourism in-depth systematic research, balancing the relationship between cultural protection, ecological environment and economic development, to enhance the tourists' sense of experience, to improve the countryside's basic service capacity, so as to promote the sustainable development of rural tourism.

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