

Research on the Planning and Design of Beautiful Countryside Reproduction from the Perspective of Cultural Inheritance

-- Taking Hainan Boao Liuke Village as an Example

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Abstract: Taking Hainan Boao Liuke Village as an example, this paper discusses how to realize the reproduction of beautiful villages through planning and design from the perspective of cultural inheritance. This paper studies and analyzes how to protect and utilize traditional village culture in the process of rural revitalization, and how to promote rural economic and social development through tourism development. Through the case study of Liuke Village, this paper provides a reference for the protection and development planning of other traditional villages in Hainan Province, and helps the sustainable development of rural areas in Hainan Free Trade Port. The research focuses on the protection of historical sites, cultural inheritance and innovation, landscape planning and design, community participation and sustainable development, and puts forward specific planning and design strategies to achieve the coordinated development of rural economy, society and environment.

Keywords: Cultural Heritage; Rural Planning; Jingcun Integration; Ecological Protection; Sustainable Development.

1. Introduction

In the construction of Hainan Free Trade Port, the sustainable development of rural areas is of great significance. Hainan Island, 80 % of the land in rural areas, 60 % of the household population is farmers, 20 % of GDP from agriculture [1]. In this context, the construction of beautiful countryside is not only an important starting point for rural revitalization, but also a key path for cultural inheritance. As an important part of Hainan's rural areas, traditional villages carry rich historical culture and are living cultural heritage [2]. However, with the development of urbanization, many traditional villages gradually decline, facing the problem of survival and development, Hainan is no exception [3].

In Boao Town, Qionghai City, Hainan Province, Liuke Village has become a model for rural revitalization with its unique historical culture and natural landscape. Liuke Village has a history of more than 400 years. It was an important node of the ancient Maritime Silk Road and a famous hometown of overseas Chinese in Hainan [4]. The village retains a large number of ancient buildings with the characteristics of overseas Chinese hometowns, such as Caijiazhai, which is known as the "First House of Hainan Overseas Chinese Hometown" [5]. In recent years, Liuke Village has successfully created a beautiful village with both 'local style' and 'international style' by introducing social capital and combining traditional village protection with tourism development through the 'homeland co-construction' model [6].

This study takes Liuke Village in Boao Town as an example to explore how to realize the reproduction of beautiful villages through planning and design from the perspective of cultural inheritance. The research will analyze how Liuke Village protects and utilizes traditional village culture in the process of rural revitalization, and how to promote rural economic and social development through tourism

development. Through the case study of Liuke Village, it provides reference for the protection and development planning of other traditional villages in Hainan Province, and helps the sustainable development of rural areas in Hainan Free Trade Port.

2. Overview of Boao Liuke Village

2.1. Geographic Position

Liuke Village is located in the lower reaches of Wanquan River in Boao Town, Qionghai City, Hainan Province. It belongs to Guyuehui County and is adjacent to the Boao Forum for Asia. Thanks to its superior geographical location, Liuke Village has been an important official ferry 'Liumadu' location for hundreds of years in the Yuan, Ming and Qing dynasties [7]. Here to undertake Wanquan River, Jiuqu River, Longgun River tripartite water, the shoreline is gentle, along the way coconut shadow, beautiful natural landscape.

2.2. Natural Condition

Liuke Village has superior natural conditions and good ecological environment. The village is located in the lower reaches of Wanquan River, surrounded by rivers and developed water system, which provides rich water resources for the village. In addition, the village is surrounded by hills, coconut forest, beautiful natural landscape, with high ecological value [8]. This unique natural condition not only provides a good living environment for the villagers, but also provides a basis for the development of rural tourism.

2.3. Community Economy

Luoliuke Village has rich tourism resources and cultural heritage. In recent years, social capital has been introduced through the 'homeland co-construction' model, which has promoted the construction of beautiful villages. At present, the shared economic formats such as food, housing,

transportation, tourism, shopping and entertainment in Liuke Village have begun to take shape, forming a complete tourism industry chain. In addition, Liuke Village also actively explores the agricultural collective cooperative production

model, through the integration of ' non-grain ' farmland, the establishment of agricultural cooperatives, etc., to open up the economic ' internal circulation ', forming a driving force for sustainable development [9].



Fig 1. Liuke Village geographical location

2.4. History and Culture

Liuke Village has a history of more than 400 years. It is a famous hometown of overseas Chinese in Hainan and an important node of the ancient Maritime Silk Road. The village retains a large number of ancient buildings with the characteristics of overseas Chinese hometown, such as the Caijia house of ' the first house of Hainan overseas Chinese hometown ', as well as historical sites such as ancient ferry, ancient post road and ancient tree king. These cultural heritages not only witness the historical changes of Liuke Village, but also become an important resource to attract tourists. In 2016, Liuke Village was selected into the fourth batch of Chinese traditional villages list.

3. Analysis of the Characteristics and Value of Liuke Village

3.1. Analysis of Village Characteristics

Liuke Village is located in Boao Town, Qionghai City, Hainan Province. It has a history of more than 400 years. It is

a famous hometown of overseas Chinese in Hainan and an important node of the ancient Maritime Silk Road. The traditional buildings in the village are well preserved, mostly in the form of green bricks and gray tiles, accounting for 61.4 % of the total area of the village buildings. Among them, Caijia House is known as ' the first house in Hainan Qiaoxiang ' and is a national key cultural relics protection unit [10]. In addition, Liuke Village has rich historical elements, such as two ancient wells, one ancient tree and three ferries. These historical sites have witnessed the long history and cultural heritage of the village. In terms of natural environment, Liuke Village is located in the tropical area, on the north bank of Wanquan River, with beautiful scenery. The village is scattered between the countryside and the betel nut garden. The unique natural environment not only provides a good living environment for the villagers, but also provides a basis for the development of rural tourism. In terms of cultural inheritance, Liuke Village retains rich folk culture, such as " Gongqi " and " Lantern Festival " lion dance, " Lift to Dang " and other activities. These activities not only enhance the villagers ' cultural identity, but also attract a large number of tourists, and promote the development of rural tourism.



Fig 2. Liuke village village distribution map

3.2. Analysis of Village Value

As a representative of traditional villages in Hainan, Liuke Village has many values. Its historical and cultural value is reflected in the rich historical relics and traditional buildings. These cultural heritages are not only an important carrier of Hainan's history and culture, but also an important resource for studying the culture of Hainan's overseas Chinese hometown. In terms of tourism development value, the natural landscape and historical and cultural resources of Liuke Village provide unique conditions for rural tourism development [11]. By introducing social capital through the 'homeland co-construction' model, Liuke Village has successfully created a beautiful village with both 'local style' and 'international style'. This model not only enhances the economic value of the village, but also provides a reference

for the protection and development of other traditional villages. In terms of social and economic value, the development of rural tourism in Liuke Village has driven the growth of local economy and promoted the increase of villagers' income and the improvement of their quality of life. At the same time, through the integration of village collective land and the introduction of social capital, Liuke Village has realized the optimal allocation of resources and promoted the sustainable development of the village. In terms of ecological protection value, the natural environment of Liuke Village is beautiful, the ecological environment is good, and it has high ecological value. Through the development of rural tourism, Liuke Village has achieved a win-win situation of ecological and economic benefits while protecting the natural environment.



Fig 3. Liuke Village village value landscape distribution map

4. The Design Principle of Beautiful Countryside under the Perspective of Inheritance

4.1. Protection of Historical Sites

The physical relics of the ancient ferry, such as the foundation of the wharf, the mooring pile, the ancient ferry archway, etc., are finely mapped and repaired according to the original process and materials. Using 3D scanning technology to establish digital archives, provide accurate model reference for subsequent maintenance [12]. Establish a historical heritage protection area, delineate a clear boundary, control the height, style and color of the surrounding new buildings, ensure that the heritage features are not blocked and destroyed, and ensure the integrity of its visual corridor. In cooperation with cultural relics protection departments and university research teams, regular health monitoring of relics is carried out to analyze the impact of natural weathering, rainwater erosion, tourist flow and other factors on relics, and to formulate targeted protection plans.

4.1.1. Cultural Inheritance and Innovation

In-depth excavation of ancient ferry-related legends, stories, ballads, collated into a book, published a series of cultural readings, and through the village radio, cultural promenade regularly told, so that villagers and tourists to understand its cultural heritage. Encourage local artists to create handicrafts such as wood carving, coconut carving and bamboo weaving with the theme of ancient ferry, and display them in the village, which not only inherits skills but also

spreads culture. The Gudu Cultural and Creative Competition was held to collect multi-field programs covering cultural and creative products, architectural design, event planning, etc., and implement them. Combined with modern digital technology, create an immersive experience hall of Gudu culture, use VR (virtual reality) and AR (augmented reality) to show the past prosperous business scene of Gudu, the picture of immigrants leaving their hometown, and enhance cultural appeal [13].

4.2. Landscape Architecture

4.2.1. Landscape Quality Promotion

Optimize plant configuration, select local native plants such as coconut trees, areca nut trees, bougainvillea, etc., and create multi-level landscapes according to different seasons and different regions. Create a wetland landscape in the waterfront area, plant aquatic plants such as calamus and lotus, purify water quality and add natural wildness. Improve the lighting system, use warm yellow, low-illumination lighting in key areas such as ancient ferries, trails, and squares, outline the building outline, illuminate the path, avoid light pollution, and create a quiet night tour atmosphere. To enhance the texture of the pavement, the ancient ferry terminal is paved with quaint and heavy stone slabs. The trails in the village are assembled with bricks and stones, and the cultural symbols of the ancient ferry, such as the anchor pattern, are integrated to increase the beauty of the details.

4.2.2. Tourism Function Improvement

Create a viewing node, set up multiple viewing platforms along the river bank, high and low, equipped with telescopes

and seats, so that visitors can fully appreciate the beautiful scenery of the intersection of the three rivers and the ancient ferry style; build a viewing tower at a high place, overlooking the panoramic view of the village and the surrounding landscape pastoral scenery. Planning characteristic tour lines, designing ' Gudu Root Line ' to connect historical sites, ' Nanyang Style Line ' to connect Nanyang-style buildings, and ' Pastoral Experience Line ' to connect agricultural picking gardens to meet the needs of different tourists ' interests. Improve supporting facilities, build a tourism service center in the tourist distribution area, and provide one-stop services such as consultation, tours, rest, and shopping; reasonable layout of toilets, rest kiosks, trash cans along the way to ensure the convenience of play.

4.3. Community Participation and Sustainable Development

4.3.1. Community Participation

The villagers ' Gudu Cultural Protection Association was established to organize villagers to participate in relics inspection, environmental maintenance, cultural activities and other work, to give certain labor subsidies or honorary awards, and to stimulate the sense of ownership [14]. Carry out training courses on the inheritance of Gudu culture, invite experts to impart historical knowledge, tour guide skills and traditional skills to villagers, train a group of local cultural interpreters and craftsmen, and help improve rural tourism services. Regularly hold villagers ' consultation meetings to listen to villagers ' suggestions on planning and design, project construction, tourism operation and other links, so that villagers can effectively participate in village development decisions.

4.3.2. Sustainable Development

In terms of ecological sustainability, we should promote ecological agriculture technology, reduce the use of pesticides and fertilizers, use biogas digesters and sewage treatment wetlands to treat domestic sewage, and realize the recycling of water resources. Protect forest and wetland ecosystems and maintain biodiversity [15]. In terms of economic sustainability, villagers are encouraged to invest in rural tourism cooperatives with land and houses to participate in dividends ; support villagers to develop industries such as homestays, agritainment, and processing of characteristic agricultural products, and broaden income-increasing channels. At the level of social sustainability, use the ancient ferry cultural activities to unite the people, inherit the fine traditions of respecting the elderly and loving the children, and helping each other in the neighborhood ; improve public service facilities such as education, medical care, and old-age care, improve the quality of life of villagers, and ensure the long-term development vitality of villages.

5. The Planning and Design Strategy of Boao Liuke Village under the Perspective of Inheritance

5.1. Protection and Utilization of Cai 's House

As the core cultural heritage of Liuke Village, the protection and utilization strategy of Carbon Cai House is very important. In terms of protection, a professional cultural relics protection team was set up, and non-destructive testing technology was used to accurately evaluate the damage of walls, beams and columns, carvings and other parts of Caijia House. For the rotten wooden structure, the same material and the same process of ancient wood replacement ; the damaged bricks and stones are remade and repaired according to the original formula to restore the architectural style to the greatest extent. At the same time, we should clean up the messy buildings and debris around Caijiazhai, delimit a certain range of protection buffer zone, plant local characteristic green plants such as triangle plum, traveler banana, etc., create a landscape environment suitable for the architectural style, control the flow of tourists, and avoid excessive stampede and destruction. In addition, in-depth excavation of Cai 's family history, architectural design drawings, construction anecdotes and other information, through visits to descendants, access to ancient books and archives, the establishment of Cai 's exclusive cultural archives, for the follow-up display and research to lay a solid foundation.

In terms of utilization, the internal space of Cai 's house is rationally planned, the family history exhibition hall is set up, and the photos, letters and old things of Cai 's ancestors are displayed to show the arduous course and entrepreneurial brilliance of Nanyang in that year. Open up the exhibition hall of architectural culture, and interpret the architectural style characteristics of Chinese and Western styles in detail, such as the exquisite integration of European verandas and Chinese wood carvings. Regularly held in Caijiazhai ' Nanyang customs and cultural festival ', invite tourists to experience Nanyang traditional costumes, food production, appreciate Nanyang song and dance performance; carry out research activities on ancient architecture, let students draw architectural drawings, learn carving skills, and inherit architectural culture. In addition, some ancillary buildings or adjacent dwellings of Caijiazhai are selected, and they are unified and transformed according to Nanyang style. Supporting modern facilities, high-end homestays are created to allow tourists to immersively feel the living atmosphere of overseas Chinese hometown, prolong the residence time and drive consumption.

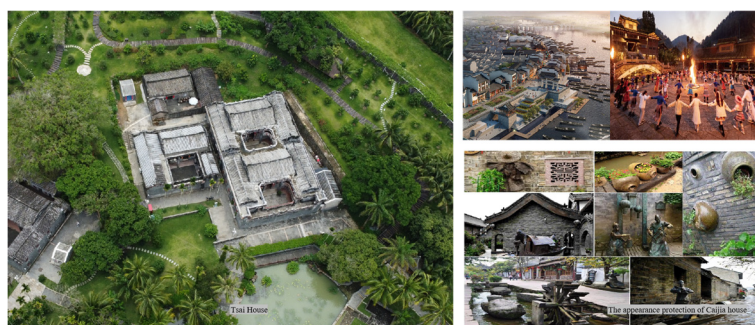


Fig 4. The planning of Cai 's house from the perspective of cultural inheritance

5.2. Construction of Riverside Landscape Belt

The construction of riverside landscape belt aims to enhance the overall tourism attraction of Liuke Village through ecological restoration, landscape building and cultural integration. In terms of ecological restoration, the riverside wetland is ecologically replenished, and aquatic plants such as calamus and reeds are planted to purify water quality ; the ecological slope protection is constructed, and materials such as stone cages and ecological bags are used to provide habitat and breeding space for fish and birds, and reshape the riverside ecosystem. In terms of landscape construction, multi-level landscape is designed according to the terrain of the river bank, and a hydrophilic platform is set up near the water, which is made of wood materials and equipped with protective railings. Create a gentle slope lawn at a distance, dot the local characteristic landscape stone, plant coconut trees, betel nut trees, etc., to create a tropical atmosphere ; the jogging track and bicycle lane are planned along the coast, and each landscape node is connected in series. In terms of cultural integration, cultural sketches are set at intervals in the riverside landscape belt, such as sculpture groups with the theme of ancient ferry shipping,

showing the loading and unloading of goods at the wharf in the past and the scene of boatmen pulling fibers ; create a cultural corridor, tell the historical changes and legends of the ancient ferry in the form of relief and color painting, so that tourists can stroll to feel the cultural heritage.

In terms of operation and management, a special landscape maintenance team was set up to regularly inspect hydrophilic platforms, roads, lighting facilities, etc., and repair damaged parts in time; clean up the floating objects in the river, ensure the clean water surface, and provide a safe and comfortable tour environment for tourists. In combination with seasons and festivals, a series of riverside theme activities are held. In spring, the ' Huahai Riverside Music Festival ' is held, and in summer, the ' Water Sports Carnival ' is held to attract tourists. Daily set up cruise ship projects, so that tourists can boat on the river, close to appreciate the scenery on both sides of the river and the ancient ferry scenery. In addition, we will strengthen the linkage with surrounding villages and scenic spots, and jointly launch routes such as ' one-day tour of ancient ferries ' and ' rural ecological leisure tour ', so as to realize the sharing of tourists and complementary advantages, and enhance the overall attraction of regional tourism.



Fig 5. The planning of riverside landscape from the perspective of cultural heritage

6. Conclusion

1.Cultural inheritance and protection: through fine mapping, restoration and digital filing, the historical sites of Liuke Village have been effectively protected. Cultural inheritance and innovation activities, such as traditional handicraft exhibitions, cultural and creative competitions and the construction of immersive experience pavilions, have enhanced the villagers ' and tourists ' sense of identity with the ancient ferry culture.

2.Landscape planning and design: optimizing plant configuration, improving lighting system to enhance pavement texture, significantly improving the landscape quality of Liuke Village. Create a viewing node and plan a characteristic tour line to further enrich the tourist experience.

3.Community participation and sustainable development: through the establishment of villagers ' cultural protection association, the development of cultural inheritance training and the holding of villagers ' opinions, Liuke Village has

realized the deep participation of the community. The promotion of ecological agriculture technology, the exploration of sustainable economic development model and the improvement of public service facilities provide a solid foundation for the long-term development of the village.

4.Comprehensive benefits: the planning and design strategy of Liuke Village not only improves the economic value of the village, but also promotes social harmony and ecological balance, and provides a reference model for the sustainable development of rural areas in Hainan Free Trade Port.

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