



# Research on Landscape Environmental Protection Strategy of Shangwu Village in Beichuan County Based on Rural Revitalization Strategy

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## Abstract

Since the implementation of the rural revitalization strategy, Chinese villages have ushered in a major historical opportunity for protection and development. In this context, this study uses methods such as literature research, field research, interviews and questionnaires to go deep into Shangwu Village, Beichuan County, to understand the composition of its landscape environment and the actual needs for rural revitalization. This study proposes several strategies for the protection of the village landscape environment, including: 1) Protecting the style of the village by protecting the mountains. 2) Strengthening ecological barriers by protecting vegetation. 3) Preserving the living environment by protecting rivers. 4) Maintaining the integrity of the village space. 5) Maintaining the original appearance of courtyards, streets and alleys. 6) Maintaining the characteristics of different ethnic buildings. These strategies will promote the protection and development of Shangwu Village and help the village achieve its rural revitalization goals.

## Subject Areas

Architecture, Rural Planning

## Keywords

Rural Revitalization, Landscape Environment, Traditional Villages, Protection and Development

## 1. Introduction

With the development of society, people's needs for a better life are becoming

more and more urgent. The government is also constantly promoting the protection and development of cultural resources in vast rural areas [1]. In 2017, the government formulated a rural revitalization strategy, proposing to promote farming civilization and fine traditions. “Adhering to the priority development of agriculture and rural areas, insisting on the dominant position of farmers, insisting on the overall revitalization of the countryside, insisting on the integrated development of urban and rural areas, and insisting on the harmonious coexistence of man and nature”, these put forward higher protection requirements for rural cultural resources.

Landscape environment mainly includes natural landscape resources and cultural landscape resources, which are respectively affected by natural environmental factors and social conditions. The villages in Southwest China have the characteristics of “multiple ethnic groups, multiple religions, wide distribution, and remote geographical location”, thus forming various natural landscape resources and cultural landscape resources with distinctive features and outstanding values. And these landscape resources have unique ornamental value, humanistic value and ecological value.

## 2. General Situation of Shangwu Village, Beichuan County

### 2.1. Overview of Shangwu Village

#### 2.1.1. Location

Shangwu Village is located in the northwest of Beichuan Qiang Autonomous County, Mianyang City, Sichuan Province. It borders Beichuan County, Mao County and Songpan County. It is 93 kilometers away from Beichuan County and covers an area of 153.6 square kilometers.

#### 2.1.2. Evolution History

In 1629 AD, a leader of the Qiang people came from Mao County to the deep mountains of Beichuan County. Due to the superior natural and defensive conditions in this area, he led his troops to live and thrive in the deep mountains of Qingpian Township. According to the “Shiquan County Chronicles (《石泉县志》<sup>1</sup>)” in the Qing Dynasty, Shangwu Village evolved from the ancient Shangwu Cu (上五簇)<sup>2</sup>. There were originally five Qiang tribes in Shangwu Village, forming five Qiang stockades of different sizes. Later, with the development of the village economy and the evolution of geological disasters, villagers living in the edge of the hillside gradually moved to live in Xiwo Qiang Stockade (西窝羌寨), forming the current structure of Shangwu Village (**Figure 1**).

## 2.2. Composition of Landscape Resources in Shangwu Village

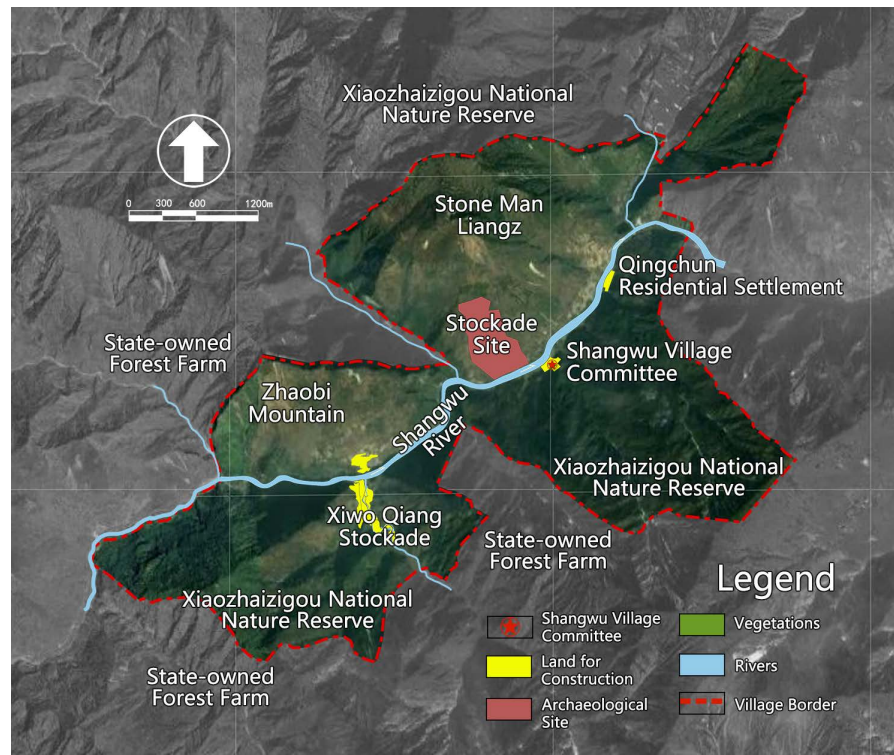
### 2.2.1. Natural Landscape Resources

#### 1) Mountains

Shangwu Village is located in the deep mountains of Beichuan County, forming a

<sup>1</sup>Shiquan County (石泉县) is the old name of Beichuan County (北川县). Because of the same name as Shiquan County in Shaanxi Province, Beichuan County began to be used in 1914.

<sup>2</sup>Cu (簇) means a group where the Qiang people live together.



Source: Author's Photo.

**Figure 1.** The current structure of Shangwu Village.

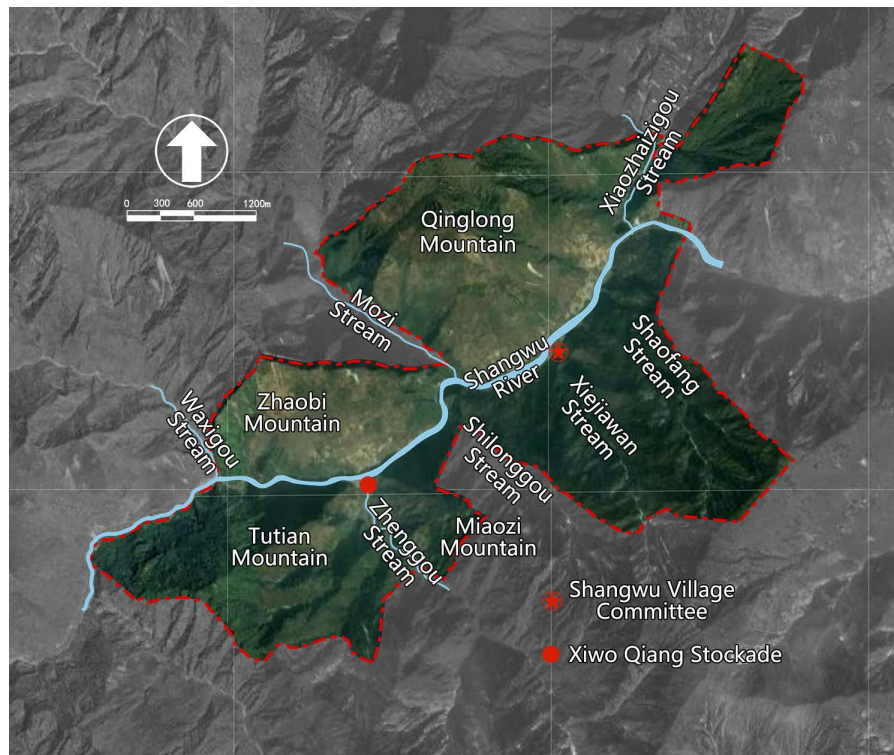
landscape environment of “mountains with multiple valleys”. The terrain of Shangwu Village is steep, and its terrain is high in the northwest and low in the east. The village is located in the alpine and canyon landform of the Longmenshan earthquake fault zone, with a large altitude difference, the lowest is about 1400 meters, the highest is 4769 meters, and the difference between the upper and lower reaches is more than 3300 meters (**Figure 2**).

### 2) Vegetations

Shangwu Village is located in the core area of Xiaozhaizigou National Nature Reserve. Xiaozhaizigou is a complete small watershed, with deep canyons, towering mountains, large natural vertical drop, great changes in topography and landforms, and complete vertical vegetation zones. Shangwu Village has the natural scenery of deep canyons, steep mountains, beautiful forests, and clear water, and its ecological environment is superior. The land type of Shangwu Village is mainly forest land. Its soil is suitable for the growth of various plants, with rich biological species and a high forest coverage rate of 82.73%. It has more than 147 negative oxygen ions per square centimeter in the air, known as China's Davos.

### 3) Rivers

The main river in Shangwu Village is Shangwu River, which belongs to the Yangtze River system (**Figure 3**). It originates from Chaqi Mountain in Qingpian Township, flows into Qingpian River, and finally flows into Fujiang River in Jianyou City. Along the Shangwu River, more than 10 streams such as Lingbinggou



Source: Author's Photo.

**Figure 2.** Landscape environment of Shangwu Village.



Source: Author's Photo.

**Figure 3.** The Shangwu River.

Stream, Waxigou Stream, Xiaozhaizigou Stream and Zhenggou Stream flow into it (**Figure 4**). The abundant precipitation and strong water conservation capacity of Shangwu Village help to maintain soil and water efficiency, providing the village with an ecological barrier and abundant clean water sources. At the same time, Shangwu Village also has a number of waterfalls, which contribute beauti-

ful scenery to the tourism industry.

### 2.2.2. Cultural Landscape Resources

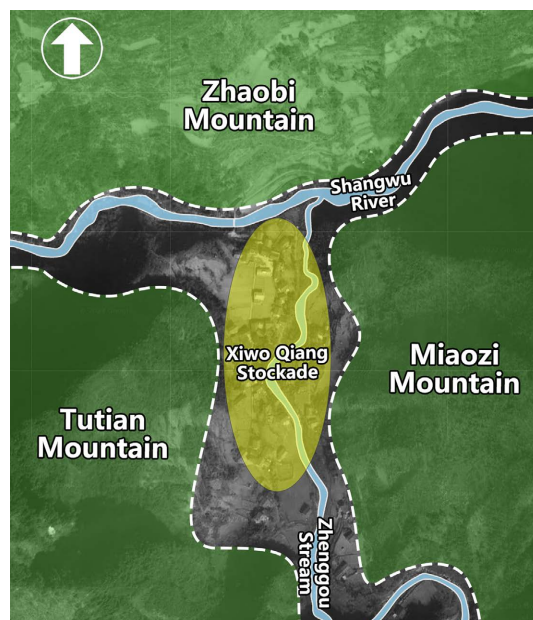
#### 1) The Stockade Environment

Xiwo Qiang Stockade presents a landscape environment of “surrounded by three mountains and flowed by two rivers”. The north of stockade is Zhaobi Mountain, the east is Miaozi Mountain, and the west is Tutian Mountain. Shangwu River and Zhenggou stream bypass the northern part of the stockade (Figure 5). It presents a natural pattern surrounded by mountains and rivers.



Source: Author's Photo.

**Figure 4.** The Zhenggou Stream.



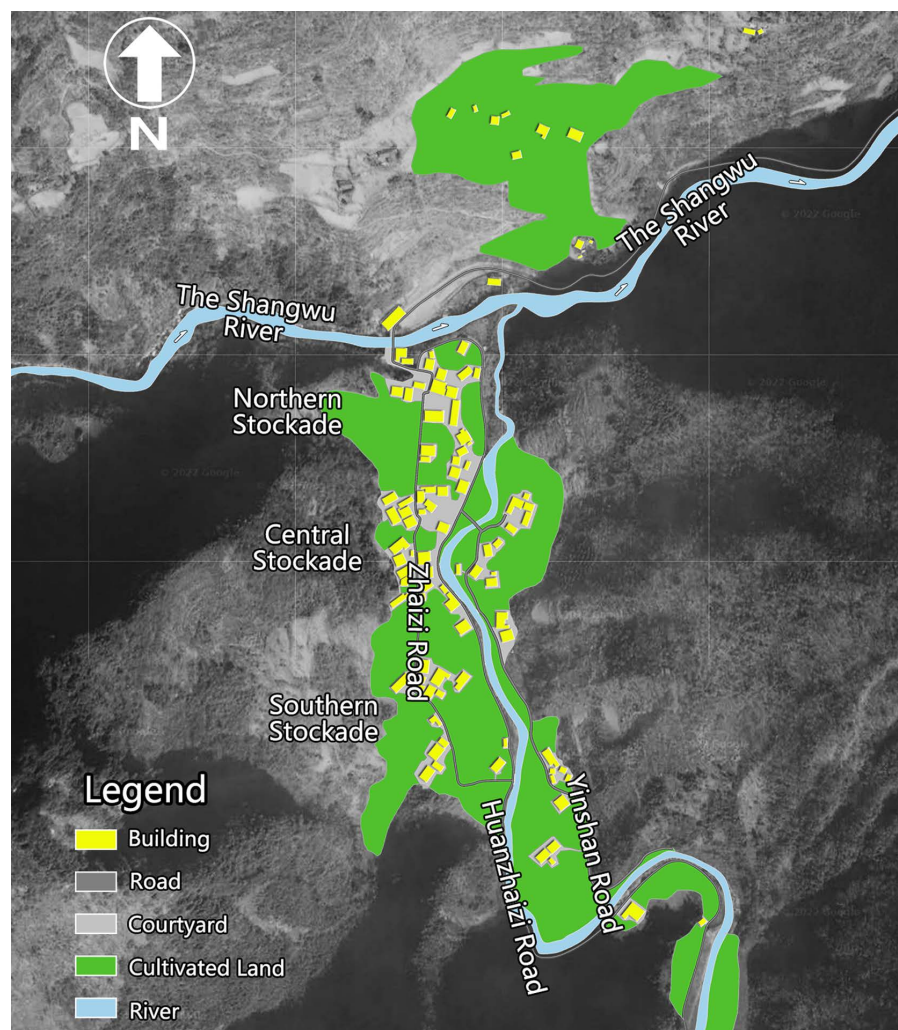
Source: Author's Photo.

**Figure 5.** The landscape pattern of the stockade.

The buildings in the sockade are concentrated in the valley, about 700 meters long from north to south, and about 80 meters wide from east to west. The overall sockade presents a strip-like spatial layout, but the architectural layout is not compact. There are Shangzhai sockade, Zhongzhai sockade and Xiazhai sockade scattered on the north-south axis. The outside of the buildings are surrounded by farmland, which are convenient for farming and have a beautiful environment. The sockade as a whole constitutes a spatial texture of “architecture-alley-field-river-mountain”, and each element complements each other (Figure 6).

## 2) The Alleys and Yards

The village was formed before the Ming Dynasty and has a long history. The existing historical environment is rich in elements. The village maintains a good traditional layout, the alleys and courtyards are complete, and they are all built together. The alleys of the village generally run in a north-south direction. After long-term construction, the village has taken the alleys as the axis, connecting

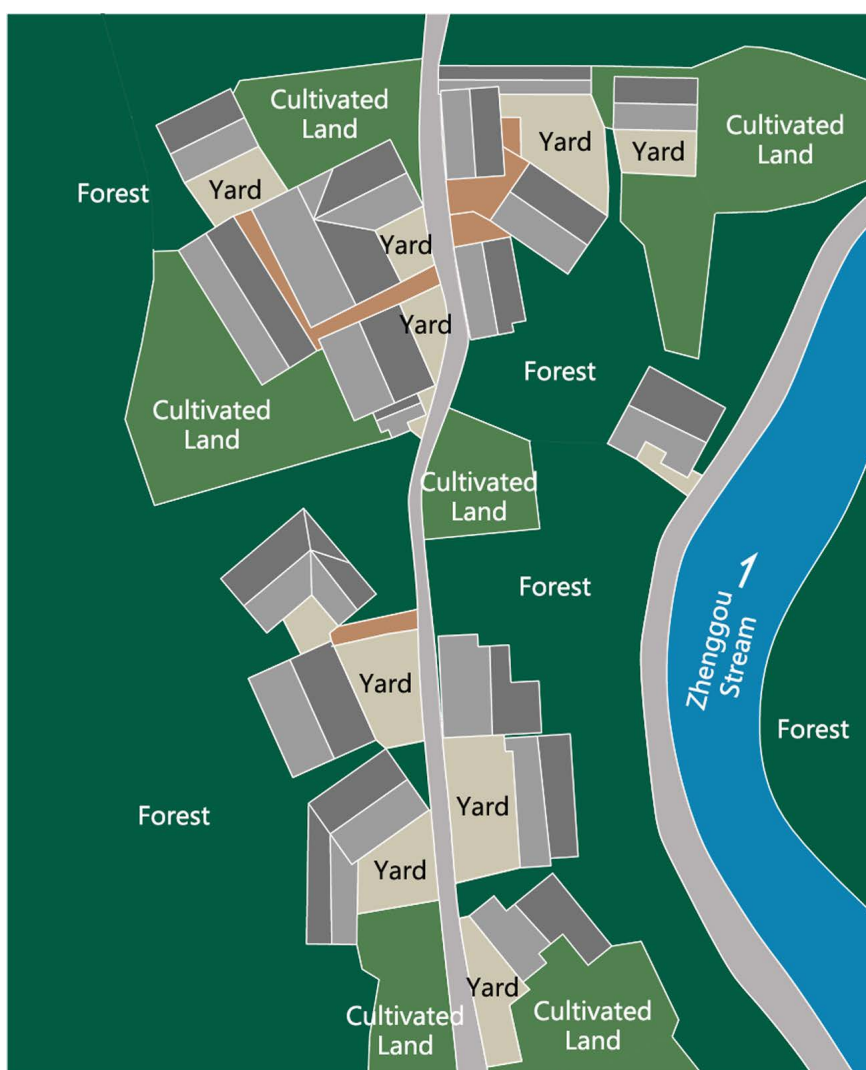


Source: Author's Photo.

**Figure 6.** The general land use of the stockade.

each courtyard in series, forming an overall “axis type” partially open street and alley space. The alleys undertake the main functions of production and living transportation in the village, meeting the needs of villagers for convenient access. On both sides of the alleys are mainly the traditional stilted buildings of the Qiang people, which are distributed row upon row, bringing the scenery of stilted buildings from different angles to the streets and alleys. It is highly ornamental (**Figure 7**).

The traditional buildings in the village are basically backed by the mountain and facing the stream, and are built on the flat part of the valley. Most of the buildings are equipped with exclusive courtyards located in front of the buildings and communicate with the alleys in front of the houses. The courtyards vary in size and have no fixed shape. For the Qiang people living in the valley, the courtyards of Shangwu Village are obviously different from the Qiang villages built on high mountains. Its courtyard plays a very important role, carrying



Source: Author's Photo.

**Figure 7.** The Street-yard Pattern.

many functions such as villagers' communication, leisure, drying, etc., and plays a significant role in the production and life of villagers.

### 3) The Traditional Buildings

Different from the traditional stone buildings of the Qiang people in people's impression, the traditional buildings in Shangwu Village are mainly wooden structures on stilts, which are mainly distributed in Xiwo Qiang Stockade. The layout of Xiwo Qiang Stockade is relatively cramped, showing a strip-like shape. With the uplift of the terrain, there are row upon row of stilted buildings in the Qiang Village, orderly, and quite imposing. Since the mid-Qing Dynasty, with the changes in the social environment and the improvement of people's living standards, the Qiang people in Shangwu Village have gradually eliminated stone buildings and used wood to build houses. The stilted buildings have sloping roofs covered with tiles, highlighting the rainproof and drainage functions. The buildings use wooden frames as the structure and planks as the ground. Most of the buildings have two floors, the bottom floor is hollowed out for storage and raising livestock; the second floor is used for various functions of the family, including living, kitchen and bathroom, rest and so on. In addition, many buildings have attics above the second floor to store important household supplies. There are two historical buildings in the village, one is an obtuse-angle dwelling, which was built in the style of the oldest stilted building of the Qiang. It has a history of 70 to 80 years and is in good condition. The other is the watchtower ruins, which has been destroyed by fire, and now only part of the outer wall of the watchtower remains. These two historic buildings are located in Zhongzhai Sockade (**Figure 8**).



Source: Author's Photo.

**Figure 8.** The traditional architectural complex.



### **3. The Practical Needs of Shangwu Village to Realize Rural Revitalization**

#### **3.1. The Connotation of Rural Revitalization**

The countryside is a regional complex with natural, social and economic characteristics. It has multiple functions such as production, life, ecology, and culture, and it promotes and co-exists with towns and cities, and together constitutes the main space for human activities. The main content of the rural revitalization strategy is to realize the comprehensive revitalization of “industrial revitalization, talent revitalization, cultural revitalization, ecological revitalization, and organizational revitalization” in the countryside. Its overall requirement is to realize “prosperous industries, livable ecology, civilized rural customs, effective governance, and affluent life” in rural areas.

Southwest China has a vast territory and complex topography. There are great differences in the development conditions of various regions, and the problems of uncoordinated and unbalanced regional development are obvious. Agriculture is an important supplier of ecological products and a great advantage of rural revitalization. The countryside is the main area of ecological conservation. Implementing the strategy of rural revitalization and improving the living environment in rural areas is conducive to building a new pattern of harmonious coexistence between man and nature. This will promote the unity of people’s prosperity and ecological beauty [2].

#### **3.2. Rural Revitalization Needs of Shangwu Village**

Shangwu Village is located on the southeastern edge of the Qinghai-Tibet Plateau in China, with beautiful mountains and rivers and rich natural landscapes. Shangwu Village has the most authentic Qiang history, culture and folk customs in Beichuan County, forming many material and non-material cultural resources. It is the unique natural region and traditional culture that provide a solid foundation for Shangwu Village to realize rural revitalization.

The industries in Shangwu Village are mainly planting, aquaculture and tourism, among which planting and aquaculture are largely regarded as supplementary industries of tourism. The tourism industry of Shangwu Village is centered on the landscape recreation in Xiaozhaizigou National Nature Reserve and the folk experience of Qiang Village in Xiwo Qiang Stockade. However, after years of construction, the development of the tourism industry in Shangwu Village is relatively slow, the overall popularity is not high enough, and the feedback from tourists is not good. As a national-level traditional village, the development of Shangwu Village is examined from the perspective of rural revitalization. Adhering to the requirements of industrial revitalization, ecological revitalization and cultural revitalization, Shangwu Village urgently needs to transform the natural and cultural landscape resources of the village to enhance its tourism attraction, and promote the realization of rural revitalization in villages.

## 4. Protection Strategy of Landscape Resources in Shangwu Village

Putting forward renewal strategies from the aspects of landscape environment and native culture is conducive to promoting the protective restoration and development of villages [3]. Through the summary and analysis of the landscape resources of Shangwu Village and the actual needs of realizing rural revitalization, it can be seen that rural revitalization needs to start from multiple dimensions. Combining the regional characteristics and ethnic characteristics of Shangwu Village, this study will propose corresponding protection strategies from the two aspects of Shangwu Village's natural landscape resources and cultural landscape resources.

### 4.1. Natural Landscape Resource Conservation Strategy

The mountains and rivers environment where Shangwu Village is located is the foundation on which traditional villages are rooted. This kind of landscape environment forms a picture-base relationship with traditional villages, which plays a very important role in the formation of the historical and cultural atmosphere of traditional villages. Strengthening the transformation of village mountains, vegetation, and rivers will help promote the improvement and protection of the ecological environment of Shangwu Village, and build the basis for the protection and utilization of traditional villages.

#### 4.1.1. Protecting the Style of the Village by Protecting the Mountains

Shangwu Village is surrounded by mountains on all sides, with rivers in the middle, and the Xiwo Qiang Stockade is brewing in the mountains, forming a distinctive traditional mountain dwelling style. Since ancient times, the idea of the unity of man and nature has been deeply rooted in people's minds, and protecting nature must be an important direction for village development. In the protection of natural landscape resources, the concept of green ecology should be taken as the first element to ensure the harmonious coexistence of man and nature. It is necessary to meet people's spiritual and spiritual needs in terms of vision and ecology, and ensure that they are truly close to nature [4]. First of all, villages should focus on protecting these natural mountains, and must not wantonly excavate the mountains to protect the original features of the mountains. In addition, protect the overall environment of the village and ensure that the mountain landscape is compatible with the architectural style.

#### 4.1.2. Strengthening Ecological Barriers by Protecting Vegetation

Ecological barrier is a special advantage of village development. Natural vegetation is an important part of the life, production and ecological space of the village. For the protection of natural vegetation, we must first follow the principle of adapting measures to local conditions. Make full use of the existing vegetation and plant local tree species in combination with the policy of returning farmland to forest, which not only meets the ecological benefits, but also considers the

landscape effect. Secondly, follow the principle of “prevention first”, that is, prevent fires, insect disasters, and protect forests. Finally, the forests in the villages are closed for afforestation, and trees are not cut down indiscriminately, so that the forests can maintain their original appearance. A good village ecological barrier can build a good village natural environment and form an ecological oxygen bar.

#### **4.1.3. Preserving the Living Environment by Protecting Rivers**

Xiaozhaizigou Stream, Zhenggou Stream and Shangwu River are important water sources for Shangwu Village to maintain production, life and ecological sustainability. In this regard, protection should be strengthened to ensure the sound development of the village. In terms of water source protection, the water quality must be protected first, and garbage should not be dumped in waterways. Secondly, the flow direction, cross section and width of the river should be kept in their original state and not be changed arbitrarily. Third, all kinds of facilities built along the river must not destroy the traditional style, and the river must not be buried for any reason. Finally, cleaning up the river bank in time to create a leisurely water-friendly space and a pleasant waterfront landscape.

### **4.2. Cultural Landscape Resource Conservation Strategy**

On the basis of protecting the natural landscape resources of the village, an in-depth analysis of the cultural landscape resources of Shangwu Village is carried out, and the research is carried out step by step from the aspects of village pattern, streets and courtyards, traditional buildings, etc., to explore protection strategies suitable for this village.

#### **4.2.1. Maintaining the Integrity of the Village Space**

Shangwu Village has a unique natural environment, and the protection of the overall pattern of the village should be based on this feature. First of all, ensure that its protection framework is “three mountains, two rivers, one stockade, and multiple settlements” to form a complete landscape pattern. Specifically, the ancient buildings of Xiwo Qiang Stockade are taken as the core protection area, and the overall protection of the village is emphasized in combination with the surrounding environment. Secondly, protect the mountains and rivers on which the villages depend, and build a good environment for the overall protection of the villages. Then, emphasize the coordination of the spatial vision of the village, and protect the unobstructed sightlines on both sides of the Zhenggou Stream, the changeable landscape effects and the level of building heights. Finally, take into account the many other settlements in the village, and form a protection pattern of “promoting multiple points with the core”.

#### **4.2.2. Maintaining the Original Appearance of Courtyards, Streets and Alleys**

The alleys in Shangwu Village are winding, with courtyards on both sides of the them, and the walls and alleys form an interesting contrast. The houses are built along the trend, forming a rhythmic and changing alleyway landscape together

with mountains, streams and fields. The courtyards of Shangwu Village are composed of axis, area and texture. The axis of its historical inheritance should be protected first, and the combination of alleys and courtyards should not be destroyed. Secondly, it is necessary to protect the interior of the courtyard, prohibit random construction inside the courtyard, or destroy the original space and texture. For it, protection should be given priority and rescue should be put first. It is forbidden to build buildings with different styles and features, and it is forbidden to demolish traditional buildings at will. Since ancient times, streets have been the most important places in human life [5]. In the protection of streets and alleys, plants can be used appropriately to enclose different types of spaces, form different spatial effects, and affect people's vision and psychology [6].

#### **4.2.3. Maintaining the Characteristics of Different Ethnic Buildings**

The protection of the style and appearance of traditional buildings must ensure the rationality and sustainability of its historical style [7]. The traditional buildings in Shangwu Village have high historical, scientific and artistic value, and should be classified and protected. In general, it is necessary to focus on protecting its traditional style and appearance, restrict villagers from self-demolition or self-construction, and ensure the unity of village style and appearance. Secondly, corresponding funds should be invested to improve and maintain the architectural style, and guide the villagers to fit the new buildings with the traditional style. Finally, we need to invest money in the facade of the building to ensure its cleanliness. Unsuitable facade materials need to be replaced, and the graffiti on the facade must also be cleaned.

### **5. Conclusion**

Shangwu Village has very regional and ethnic characteristics, and the village contains rich natural landscape resources and cultural landscape resources. It profoundly demonstrates the national character of the Qiang people in the process of constantly adapting to and transforming the environment. This paper analyzes the landscape resources of Shangwu Village and the needs of rural revitalization in detail through field surveys and interviews, and proposes several strategies for the protection of the village landscape environment, including: 1) Protecting the style of the village by protecting the mountains. 2) Strengthening ecological barriers by protecting vegetation. 3) Preserving the living environment by protecting rivers. 4) Maintaining the integrity of the village space. 5) Maintaining the original appearance of courtyards, streets and alleys. 6) Maintaining the characteristics of different ethnic buildings. These strategies will promote the protection and development of Shangwu Village and help the village achieve its rural revitalization goals.

### **Conflicts of Interest**

The author declares no conflicts of interest.

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