Study on the Landscape Improvement and Recreational Landscape Design of Mountain Village Settlements in Yunnan Province

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ABSTRACT

The formation of mountain village settlements in Yunnan results from the combined effects of specific historical background, natural environment, and human environment. Its landscape comprehensively reflects the dual influence of nature and humanity on the regional landscape, showing distinct characteristics of the times and regional characteristics. However, with the tremendous changes in the living environment, the mountain village style and settlement texture have suffered severe damage, resulting in the increasingly severe problem of settlement style homogeneity. This study aims to propose a feasible strategy for improving the landscape of rural settlements through an in-depth analysis of the spatial characteristics and landscape value of mountain village settlements in Yunnan. Ultimately, the study will form a systematic strategy for improving the landscape of rural settlements in Laoshan to respond to the critical issues facing the protection and development of rural settlements in China and seize the opportunities brought by the construction of beautiful villages.

Keywords: *Yunnan mountain village, Settlement landscape, Recreational landscape.*

1. INTRODUCTION

The formation of Yunnan mountain village settlements is the comprehensive result of historical, natural, and cultural environments. Its landscape reflects the dual influence of nature and humanity on the regional landscape and presents unique characteristics of the times and regional characteristics. However, with the significant changes in the living environment, the mountain village style and settlement texture have suffered severe damage, resulting in an increasingly severe problem of settlement style homogeneity.

2. RESEARCH ON STRATEGIES FOR IMPROVING RURAL SETTLEMENT LANDSCAPE

In the context of rural revitalization, the development of rural settlement landscapes must rely on the concept of green development to comprehensively improve the quality of life, production, and ecology. Green development emphasizes sustainability and requires promoting economic development and social progress while protecting the natural environment. The optimization of rural settlement landscapes is not only the transformation of physical space but also the restoration of the ecosystem and the improvement of the human environment [1].

In this process, people play a dual role as rural settlements' most critical experience subjects. They are the direct beneficiaries of the rural settlement landscape environment, enjoying the improved quality of life and beautiful landscape; at the same time, they are also the builders of the rural settlement landscape environment, actively promoting the sustainable development of rural landscape by participating in community planning, ecological protection, and cultural inheritance.

2.1 Highlighting the Relationship Between Mountains and Water and Sorting out the Spatial Pattern

As the most critical skeleton foundation of rural settlements, the landscape pattern determines the layout and arrangement of rural settlements and the

landscape conception of rural settlements. Overall, the landscape optimization of Yunnan mountain village settlements should be carried out based on conforming to its original mountain shape and water potential. In the process of improving the landscape of rural settlements, water resources should be fully considered. The development of settlements is inseparable from water sources, so the site selection of Yunnan mountain village settlements is primarily biased toward rivers and dam areas. For the finger-shaped settlements with valleys embedded in mountains, there is a sufficient water source in the settlement, the distance between the settlement and the water body is very close, the relationship is relatively close, and the activities of the crowd have a more significant impact on the water body. Therefore, this type of rural settlement should coordinate the relationship between hydrology and settlement, strictly control the water body's blue line, consider the river's flood flow at normal and high water levels, and match the landscape with plants to create a beautiful waterfront environment.

2.2 Paying Attention to Farmland Foundation and Strengthening the Interaction Between People and the Landscape

Yunnan mountain village settlements can be divided into clustered settlements on dam areas, strip settlements on gentle slopes, composite settlements on hills and mountains, and finger-shaped settlements on valleys and mountains. Significant differences exist in the agricultural and forestry landscapes of different rural settlements. Therefore, in landscape improvement, it is necessary to fully use the regional advantages of various settlements for scientific design.

The clustered settlements near the mountains in the dam area are usually located in the flat dam area, close to the mountains, and form a clustered distribution. This type of settlement should focus on improving the interface between farmland and residential areas and enhance the landscape's layering and ecological functions by planting trees and building ecological corridors. The strip-shaped settlements along the gentle slopes are distributed in strips along the gentle slopes, and the terrain is relatively gentle. Attention should be paid to soil and water conservation and ecological restoration. The gentle slope terrain should be used for terraced landscape design. Native plants with strong adaptability should be planted to enhance the landscape's ecological benefits and visual beauty.

The hilly-in-mountain complex settlements are distributed in hilly areas and are highly integrated with the mountains to form complex settlements. Three-dimensional landscape design should be combined with the hilly terrain to build a multi-level greening system to enhance the settlements' ecological carrying capacity and landscape diversity. The valley-embedded-mountain finger-shaped settlements are located between valleys, distributed in finger shapes, and have sufficient water sources. The relationship between hydrology and settlements should be coordinated, the blue line of water bodies should be strictly controlled, the flood flow of rivers at normal and high water levels should be considered, and a beautiful waterfront environment should be created through scientific plant configuration.

In addition, attention should be paid to constructing farmland infrastructure to improve agricultural production efficiency. The organic combination of farmland and landscape can be promoted by building ecological farmland and leisure agricultural parks. Sightseeing agricultural projects can be set up to attract tourists to participate in agricultural activities and increase villagers' income and tourists' experience. Sightseeing trails and rest areas can be set up in terraced landscapes to enhance the interaction between people and nature. By setting up viewing platforms and pastoral trails, human-landscape interaction can be promoted to enhance the experience of villagers and tourists. Ultimately, the sustainable development and ecological protection of rural settlements can be achieved, the harmonious coexistence of man and nature can be promoted, and the comprehensive revitalization of rural areas can be promoted[2].

2.3 Relying on Mountain and Foresting Landscape to Improve Regional Climate

As one of the indispensable natural resources of Yunnan mountain village, the settlement landscape, mountain, and forest treescape have significant differences in how they are presented in different rural settlements. Therefore, in the transformation strategy of mountain and forest treescape, it is necessary to scientifically improve its forest land foundation to improve the overall landscape quality and ecological benefits.

The mountain forest landscape of the clustered settlements near the dam area is mainly concentrated in the mountains around the settlements and the edge of the dam area. Through reasonable tree species selection and scientific planting layout, windbreaks and ecological barriers should be formed to enhance the region's microclimate regulation capacity. At the same time, combined with local characteristic plants, a multi-level and multi-functional greening system should be constructed to enhance the landscape's visual effect and ecological function.

The mountain forest landscape of strip settlements on gentle slopes should focus on soil and water conservation and ecological restoration. By planting deep-rooted trees and shrubs, soil erosion can be prevented, and the stability of the slopes can be improved. At the same time, the gentle slope terrain can be used to design terraced green landscapes and plant local plants with solid adaptability to form a rich ecosystem and improve the regional microclimate.

The mountain and forest landscape of the hilly-mountain complex settlement should be designed in a three-dimensional manner in combination with the hilly terrain. By constructing a multi-level vegetation structure, the settlement's ecological carrying capacity and landscape diversity can be improved. Appropriate native tree species can be selected to create a mountain and forest landscape with local characteristics, thereby enhancing the settlement's ecological barrier function and aesthetic value.

The forest landscape of the finger-shaped settlements embedded in the valley should focus on water source protection and ecological restoration. Through scientific plant configuration, a beautiful waterfront environment can be created to enhance the water body's self-purification capacity and landscape value. Protective forest belts can be planted on both sides of the valley to prevent soil erosion and enhance the region's ecological stability and microclimate regulation capacity.

In transforming the mountain forest landscape, the local climate conditions and soil characteristics should be fully considered, suitable tree species and vegetation should be selected, and scientific planning and management should be carried out. At the same time, by setting up viewing platforms, trails, and rest areas, the experience of villagers and tourists can be enhanced, and the harmonious coexistence of man and nature can be promoted. Ultimately, the sustainable development and ecological protection of mountain village settlements can be achieved, and the comprehensive revitalization of rural areas can be promoted [3].

2.4 Improving the Living Environment and Deepening Local Experience

The architectural style of rural settlements refers to the overall style of the spatial pattern, architectural color, and construction style of the residential buildings in the settlements. With the development of tourism, some rural settlement buildings in scenic areas have been influenced by foreign aesthetics and gradually deviated from the original regional style, making the overall landscape of rural settlements lack regional characteristics. Therefore, in landscape improvement, as the core factor in the human settlement landscape of rural settlements, architecture should focus on the planning and guidance of its style to ensure that the construction of architecture combines the regionality, timeliness, and culture contained in the rural settlements.

There is a must to follow the village's architectural texture in the architectural layout and focus on integrating architecture with mountains, terrain, and environment [4]. For the four types of rural settlements, the layout of buildings can be combined with existing models, retaining the morphological characteristics of rural settlements, increasing the green space of the settlements, and adding public spaces to the settlements. Specifically:

- Clustered settlements near mountains in dam areas:

  Architectural style: It takes advantage of flat terrain and maintains the traditional cluster layout. Architectural colors should be in harmony with the natural environment, and local materials and traditional building techniques should be used [5].

  Green space: Public green spaces and small parks are set up in the center and surrounding areas of settlements to enhance community interaction and leisure functions.

  Public space: It will be built into a market square and cultural activity center, which will improve the quality of life of villagers and the visitor experience.

- Gentle slope mountain strip settlement:

  Architectural style: The buildings are laid out in strips along the mountain. The

buildings should conform to the uneven terrain, and the colors and materials should blend naturally with the mountain.

Green space: Plant highly adaptable native plants in the gaps between buildings and on slopes to form green belts with rich layers.

Public Space: It is provided with viewing platforms and walking paths, and provides rest areas and viewing spots to enhance the interactive and attractive landscape.

- Hilly and mountain-melting complex settlements:

  Architectural style: The architectural layout should be combined with the hilly terrain to form a multi-level spatial structure, and the colors and materials should reflect regional characteristics and cultural connotations.

  Green space: Ecological green spaces and orchards are set up around buildings and among hills to enhance the landscape's ecological benefits and aesthetic value.

  Public space: Leisure trails and viewing platforms are set up using the hilly terrain to provide abundant space for outdoor activities.

- Finger-shaped settlements with valleys embedded in mountains:

  Architectural style: Buildings should be distributed finger-likely along both sides of the valley. The colors and materials should be coordinated with the surrounding environment and maintain the traditional style.

  Green space: Plant shelterbelts and aquatic plants on both sides of the valley and between buildings to enhance the water's self-purification capacity and landscape value.

  Public space: Waterfront walkways and rest areas are set up in public Spaces to provide viewing and leisure places to enhance the interaction between people and nature.

Roads in rural settlements connect landscapes and traffic and are essential to the rural settlement landscape experience. Rural settlement roads are more complex than urban roads, and the landscapes of different rural settlement roads vary greatly. Therefore, the road design of rural settlements needs to be adapted to local conditions to save energy and improve the functionality and aesthetics of the roads.

- Road design: It should be planned with the terrain characteristics to avoid large-scale earthwork projects and reduce damage to the natural environment.
- Landscape improvement: native plants are planted along both sides of the road, and landscape nodes and rest areas are set up to enhance the road's landscape effect and user experience.
- Function optimization: It can make it clear the road function zoning, and set pedestrian, bicycle and motor vehicle lanes, which is conducive to improving road capacity and safety.

Through scientific building layout and road design, the living environment of rural settlements can be improved, the quality of life of villagers and the experience of tourists can be enhanced, and ultimately, the sustainable development and ecological protection of rural settlements can be achieved, promoting the comprehensive revitalization of rural areas.

3. STRENGTHENING THE DESIGN OF RECREATIONAL LANDSCAPES AND DEEPENING THE EXPERIENCE OF RECREATIONAL ACTIVITIES

In the context of China's rural revitalization strategy, in order to promote the development of "recreational landscapes" and make their planning and construction truly meet the requirements of the rural revitalization strategy, rural "recreational landscapes" need to respond to the five major goals of "prosperous industry, livable ecology, civilized rural customs, effective governance, and affluent life". As an important means of developing rural tourism, the construction of rural "recreational landscapes" should be fully investigated and analyzed before planning to ensure the sustainable development of the project and achieve long-term and stable benefits for farmers [6].

The four major recreational resources of the mountain village, namely, mountain, water, field and village, are combined in the form of recreational space to form a recreational base map, which carries various recreational activities. These resources can be divided into natural landscape space and cultural landscape space. With a water tour as the recreation clue, a rural recreation complex of field tours, farm tours, mountain tours and water tours is created.

For urban residents, the rural environment is a scarce leisure resource; for rural residents, tourism activities can increase income, drive the construction and development of local agriculture, and effectively adjust the agricultural industry development structure. Protecting the unique landscape and human culture of each village is the unique value of experiential rural recreation.

Some gamification experience activities in agricultural production and life are popular among tourists. For example:

- Fish catching activity: Fish catching activities are set up in the environment of rice field fish farming, allowing tourists to experience the traditional field fish farming method and increase interactivity and fun.
- Harvest season activities: Harvest season activities are carried out during the rice harvest period, and harvest-themed garden parties are held to allow tourists to participate in the crop harvesting process and experience the charm of farming culture.
- Maze duck driving project: A maze duck driving project is set up. Tourists need to drive the ducks to the finish line successfully. After completing the task, they can get rewards, such as a box of duck eggs, to fully mobilize the enthusiasm of tourists to participate.

These activities not only provide an interesting and fun experience but also allow tourists to transform their identities into those of farmers through interaction, giving them an unforgettable immersive experience.

Yunnan mountain villages are rich in mountain delicacies and agricultural and sideline products. The Mountain Village project fully utilizes the site's advantages and business characteristics to carry out activities. For example:

- Activities to find wild mushrooms: visitors can be organized to search for wild mushrooms or artificially cultivated mushrooms in the mountains, so that tourists can experience the fun of picking mushrooms and understand the growing environment and characteristics of mushrooms.
- Food experience: Tourists can be organized to bring mountain dishes, agricultural and side products directly to the table, under the blue sky, under the countryside, under the fruit trees, placing hot pot, barbecue, river food and other food experience; giving participants unforgettable recreational memories.

Through scientific planning and design, strengthening the construction of recreational landscapes and deepening the experience of recreational activities, people can not only enhance the attractiveness and competitiveness of rural tourism but also achieve the sustainable development of rural areas and long-term benefits for farmers and promote the comprehensive revitalization of rural areas.

4. CONCLUSION

In recent years, rural sustainable development has attracted much attention, especially rural recreational landscapes that highlight the humanistic attributes of rural landscapes and integrate immersive experiences. These landscapes creatively combine the local rustic rural environment with the immersive experience of advanced technology, bringing tourists a rich and unforgettable experience. At the same time, these landscapes also provide urban residents with an excellent experiential agricultural life and science education environment, emphasizing the interactive experience between people and the environment. Therefore, rural recreational landscape design and tourism planning have become essential research directions for future development.

Based on clarifying the connotation, characteristics, and development trend of experiential rural recreation, this paper takes "Rice Country Fisherman's Song" as an example to explore the core issues and ways to improve the rural recreation landscape. Through scientific planning and design, strengthening the construction of a recreation landscape and deepening the experience of recreation activities can not only enhance the attractiveness and competitiveness of rural tourism but also achieve sustainable development of rural areas and long-term benefits for farmers and promote the comprehensive revitalization of rural areas [7].

In the future, experiential rural recreation landscapes will play a more significant role in revitalization. By transforming traditional rural tourism into experiential rural recreation, designers can better meet tourists' needs for natural, cultural, and interactive experiences, promote the high-quality development of the rural tourism industry, and ultimately achieve comprehensive rural revitalization and sustainable development.

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