

Strategies for Creating Rural Plant Landscapes in the Context of Rural Revitalization

-- A Case Study of Fengjiang Community in Wenzhou

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Abstract: This study takes Fengjiang Village in Wenzhou City as an example, aiming to analyze the status quo and characteristics of rural plantscape creation through field investigation, and put forward design strategies in the comprehensive improvement and upgrading of Fengjiang Village in order to optimize the rural landscape and help rural revitalization. Based on the current situation of plant landscape in Fengjiang Village, combined with the strategy of rural revitalization, the design strategy is proposed by adopting methods such as field investigation and case study. Firstly, the landscape status quo of Fengjiang Village is analyzed, and the types of rural plantscape, the advantages and roles of creation are outlined; secondly, the strategy of creating plantscape in Zhoudian Village is proposed, including enriching plant configuration and enhancing landscape effect. Through the comprehensive improvement and upgrading of Fengjiang Village, the harmony, characteristics and economy of plant landscape have been realized, providing a good ecological environment for the construction of beautiful countryside and further promoting the implementation of rural revitalization.

Keywords: Beautiful Countryside; Plant Landscape Creation; Rural Remediation; Creation Strategy.

1. Introduction

As a key initiative in implementing the rural revitalization strategy, the Beautiful Rural Villages initiative has made significant progress in recent years under the strong support of governments at all levels. The central government has explicitly incorporated the development of beautiful rural villages that are livable and conducive to business into the overall framework of rural revitalization; Zhejiang Province has continued to deepen the “Ten Million Project”; Wenzhou City has proposed the “Ouyue United” development strategy; and Longgang City is committed to creating a model for rural development with demonstrative effects.

When it comes to creating rural plant landscapes, we should avoid simply replicating urban greening models and instead explore planting strategies that align with the unique characteristics of rural areas. Scientific plant selection not only enhances the quality of the rural environment but also embodies local sentiment and preserves regional cultural heritage. This helps us create a rural environment that is emotionally resonant and warm, making rural life more beautiful and comfortable.

Plant landscape development is a vital component of the Beautiful Rural Areas initiative. Rural plants are not merely scenic elements or guardians of the ecosystem; they also carry regional culture and historical memories. These plant landscapes reflect the cultural characteristics, geographical features, and folk customs of rural areas. Adopting planting models suited to the rural context helps create a more beautiful and livable rural environment.

Through measures such as optimizing plant species selection, improving planting structures, and refining maintenance management systems, we can create plant landscapes that balance aesthetic appeal with ecological functionality. This provides sustainable ecological support for

the Beautiful Rural Areas initiative and drives the in-depth implementation of the rural revitalization strategy [1].



Figure 1. Location of Fengjiang Community in Longgang City



Figure 2. Design Scope of Fengjiang Community

2. Creating Rural Plant Landscapes

(1) The Role of Plant Landscaping in the Development of Beautiful Rural Communities

The creation of plant landscapes offers multiple benefits for the development of beautiful rural communities, primarily reflected in the following aspects:

In terms of optimizing the natural environment, a properly configured vegetation system can effectively regulate the microclimate, release oxygen and absorb carbon dioxide through photosynthesis, and simultaneously serve to reduce dust and noise, thereby providing ecological support for improving the quality of the rural living environment.

From the perspective of cultural heritage, native plants are important carriers of local history and culture. Integrating plant species with regional characteristics into landscape design not only embodies the cultural heritage of the countryside but also highlights unique regional features and cultural memories, achieving a landscape-based expression of culture.

From the perspective of economic revitalization, high-quality plant landscapes can drive the upgrading of the rural tourism industry. The appropriate development of native plant resources with high economic value—such as fruit trees with ornamental value and distinctive medicinal herbs—can both extend the agricultural industrial chain and facilitate the value transformation of ecological products.

In terms of visual landscape creation, through scientific planning of plant layers and control of seasonal changes, it is possible to form three-dimensional landscape spaces that combine natural aesthetic value with ecological service functions, thereby comprehensively enhancing the rural environment.

Regarding sustainable development, plant arrangements that adhere to the principle of ecological priority can establish highly stable plant communities with low maintenance costs. This approach not only avoids the risk of invasive alien species but also preserves the natural state and integrity of rural ecosystems.

In summary, plant landscapes play a comprehensive role in rural development by providing ecological services, preserving cultural heritage, driving economic growth, optimizing the landscape, and promoting sustainable development. This multifunctional ecosystem development model has become a key implementation pathway and critical evaluation indicator in current Beautiful Rural Areas planning.

(2) Principles of Rural Plant Landscape Design

The specific practices of landscape design primarily revolve around the following principles:

Principle of Local Adaptability: Prioritize native plant species that are well-adapted to local climate and soil conditions, taking full account of regional geographical features and ecological characteristics. Such plants offer advantages such as stable growth, strong stress tolerance, and low maintenance costs, while fully reflecting local natural ecological features and cultural significance.

Multi-dimensional Value Principle: Beyond aesthetic appeal, plant resources with economic value—such as fruit trees and medicinal plants—are selected. This multi-value approach satisfies visual and aesthetic needs while generating economic benefits, achieving an organic integration of landscape development and industrial growth.

Ecological Balance Principle: We uphold the protection of species diversity and focus on establishing stable plant

community structures. Strictly control the introduction of non-native species to mitigate ecological risks and ensure that newly established plant systems coexist harmoniously with the surrounding natural environment.

Principle of Cultural Representation: Deeply explore regional cultural symbols and use characteristic plant arrangements to create distinctive landscape features. For example, in the water towns of the Jiangnan region, prioritizing the planting of aquatic plants such as lotus and lotus root creates a unique local landscape character, enhancing cultural appeal and tourism competitiveness.

Practice has demonstrated that in the case study of Fengjiang Village, the implementation of these principles has yielded significant comprehensive benefits. This landscape development model—grounded in ecology, characterized by culture, and supplemented by economic considerations—provides valuable insights for current rural environmental development. Through systematic plant landscape planning and design, it has not only improved the living environment but also promoted the comprehensive development of rural areas.

3. Introduction to Fengjiang Village and Analysis of Its Landscape

(1) Introduction to Fengjiang Village

A community under the jurisdiction of Longgang City, Wenzhou City, Zhejiang Province. It features a dense network of roads and waterways and enjoys a prime location. The primary design area covers approximately 185 hectares along Century Avenue, Kangzhuang Avenue, and the Longzhong River, as well as the surrounding landscape design implementation area. The key design area spans approximately 45 hectares. Fengjiang Village has a total of 827 households and a population of 3,037.

Located in the southwestern part of Longgang City, Fengjiang Community serves as the first gateway into Longgang from the Shenhai Expressway and is known as the “Western Gateway of Longgang.” Access is via the Xiaojiang Interchange, with Century Avenue running through the community, approximately 5 kilometers from the Longgang Municipal Government. Its favorable geographical location is a key factor driving regional economic development. This convenient geographical location effectively facilitates the flow of resources—including talent, goods, and other assets—both within and outside the region, thereby providing robust geographical support for enhancing regional economic vitality and ensuring sustainable development. By optimizing spatial layout and improving the transportation network, these locational advantages can reduce logistics costs, increase market accessibility, and ultimately create a competitive edge for regional economic development.

Fengjiang Community is situated on the southern bank of the lower reaches of the Aojiang River, within the alluvial plain of the lower Aojiang. Paddy fields account for a significant portion of the area. The region features an intricate network of waterways and crisscrossing rivers. Residential and industrial zones are primarily concentrated along both sides of the rivers, exhibiting a distribution pattern that follows the rivers and roads. Together, these elements form a natural landscape characterized by the interplay of fields and waterways, the integration of scenery and villages, and an ecologically livable environment.

The area is rich in historical heritage. The Chongzhen

Ancient Bridge, originally built during the Chongzhen era of the Ming Dynasty, dates back approximately 400 years. The Shangye Ancient Tree is situated on the south bank of the Longfeng River in Shangye Village, north of the Yibang Industrial Park. The Zhangming Ancient Tree is located northwest of the intersection of Xiaolong Road and Fengxiang Avenue in Zhangjiabao Village. Ancestral halls and temples include the Pan Clan Ancestral Hall, the Wu Clan Ancestral Hall, and the Guanyin Pavilion.

(2) Analysis of the Current Landscape

Fengjiang Community enjoys convenient transportation, with Century Avenue running through it. There are two main roads within the community: one is Kangzhuang Avenue, which is approximately 4 meters wide and about 900 meters long, featuring a concrete surface and lined mostly with villagers' residences and small vegetable plots. The other is Century Avenue, which is approximately 7.5 meters wide and about 300 meters long, with small vegetable plots and agricultural land lining both sides. Secondary roads within the community range in width from 2 to 5 meters, primarily featuring concrete surfaces, though some sections exhibit damage or lack paving.

Fengjiang Community has relatively complete infrastructure, but public service facilities still require further improvement and renovation. The community has access to tap water, electricity, and 5G connectivity, with multiple bus routes passing through the area. Fengjiang Community is crisscrossed by a dense network of waterways, though the ecological health of the waterways is insufficient; a reclaimed water treatment plant has been constructed. Fengjiang Community features modern agricultural greenhouses, and its water conservancy infrastructure is relatively well-developed. The community houses one neighborhood committee office, one school, three pocket parks, one health clinic, and two waste collection points (planned).

The built environment of this area exhibits typical characteristics of architectural fusion. Existing buildings primarily reflect the coexistence of two distinct stylistic systems, with modern architectural styles intertwined with traditional Ouyue architectural forms. The condition of building facades is poor, with varying degrees of wall spalling and structural deterioration; some structures have suffered significant damage due to their long service life. In terms of overall aesthetic control, the use of building colors lacks systematic planning, resulting in a rather chaotic visual effect.

In terms of the quality of the existing building stock, the structural condition of most buildings is acceptable, with two-story structures predominating. At the same time, vegetation coverage in the area is sparse and haphazardly distributed, and green spaces are poorly organized, resulting in limited landscape aesthetic value. The seasonal succession patterns of the vegetation system are not pronounced, and the overall ecological environment suffers from a lack of biodiversity.

4. Landscape Design Strategies for Fengjiang Community

(1) Diverse Plant Arrangements

As a vital component of landscape design, plant arrangement serves both ecological and aesthetic functions. Different types of plant arrangements create distinct landscape atmospheres. Arrangements that emphasize natural forms typically utilize native plants to achieve a seamless integration with the landscape. These designs primarily

employ clump and mass planting, utilizing the terrain to create diverse flowerbeds and tree groves. This results in a landscape with varying heights and dynamic forms, mimicking the beauty of natural plant communities. In different regions, native plants often demonstrate greater resilience than species from other areas[2], whereas non-native plants may fail to adapt to local conditions and die. By scientifically combining evergreen and deciduous plants, as well as fast-growing and slow-growing flowers, designers can maintain the landscape's longevity while creating a distinct visual appeal throughout the four seasons. This approach effectively avoids the visual monotony of a single season and achieves a dynamic continuity in the landscape. Additionally, during the plant selection process, factors such as light exposure, humidity, and plant attributes—including ornamental value, fire-resistant properties, and medicinal benefits—are considered to select appropriate plant species that meet the specific needs of the region.

For example, in the creation of the plant landscape at the Zhoujiadian Lock Site node, attractive plants such as trees, shrubs, and flowers should be planted around the lock site to make the landscape more vibrant and diverse; Second, plants capable of oxygenating and purifying the air, such as pine and willow trees, can be planted around the site to address air pollution issues; plants that improve water quality and absorb pollutants, such as aquatic and marsh plants, can also be planted to achieve the goal of greening the aquatic environment.

(2) Highlight the seasonal changes in vegetation

Plants that undergo seasonal changes not only bring diversity to a space but also add vibrant colors to the landscape. The seasonal progression of a plant's life cycle reveals a unique aesthetic value in nature, with its cyclical changes manifesting as budding and flowering in spring, lush foliage in summer, abundant fruit in autumn, and leaf fall and dormancy in winter[3]. This dynamic process not only enriches the visual layers of the landscape but also creates an ecological tableau characterized by temporal patterns.

Therefore, when planting in Fengjiang Community, species such as red-leaf photinia, Chinese tallow tree, goldenrain tree, Chinese privet, European beech, European birch, juniper, Chinese hackberry, Chinese catalpa, and Japanese maple can be selected. For spring flowering plants, options include wisteria, Chinese scholar tree, crabapple, Japanese apricot, and magnolia; for summer flowering plants, options include lotus, chrysanthemum, mimosa, and geranium; for autumn flowering plants, options include large-leaved clematis, red spider lily, aster, pansy, blue-calyx sweet alyssum, and phlox; Winter flowering plants include golden-edged Chinese scholar tree, winter jasmine, and bougainvillea. The composition of the rural vegetation landscape is rich and diverse, featuring ecologically functional vegetation that emphasizes the impact of plants on residents' sense of smell, sight, and touch. This creates a rich, diverse, and ecologically functional plant landscape.

(3) Enhancing the Cultural Significance of Plants

As a vital vehicle for the transmission of Chinese civilization, rural areas are imbued with rich historical and cultural memories. The core mission of contemporary rural planning and development lies in the systematic preservation and innovative development of traditional rural culture. In this process, landscape culture plays a pivotal role; it is not only a tangible manifestation of regional characteristics but also an indispensable core element in planning and design.

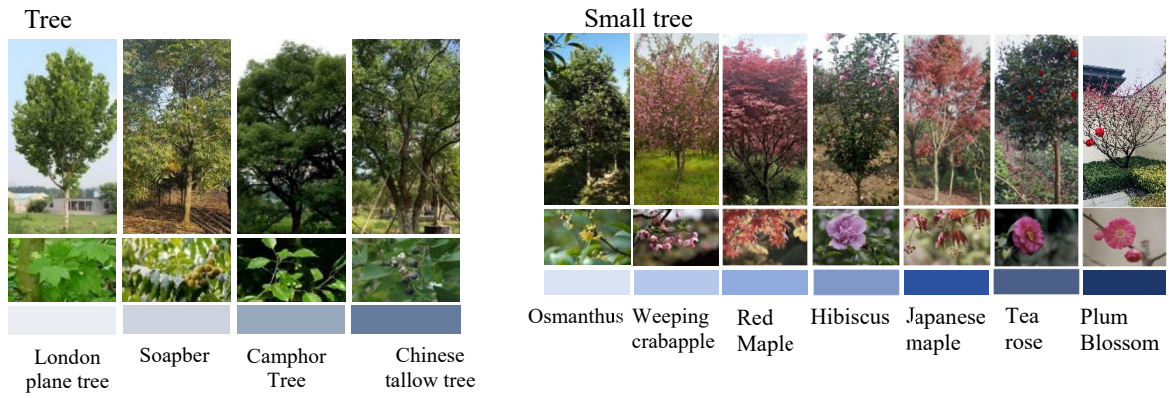


Figure 3. Selection of Trees and Shrubs

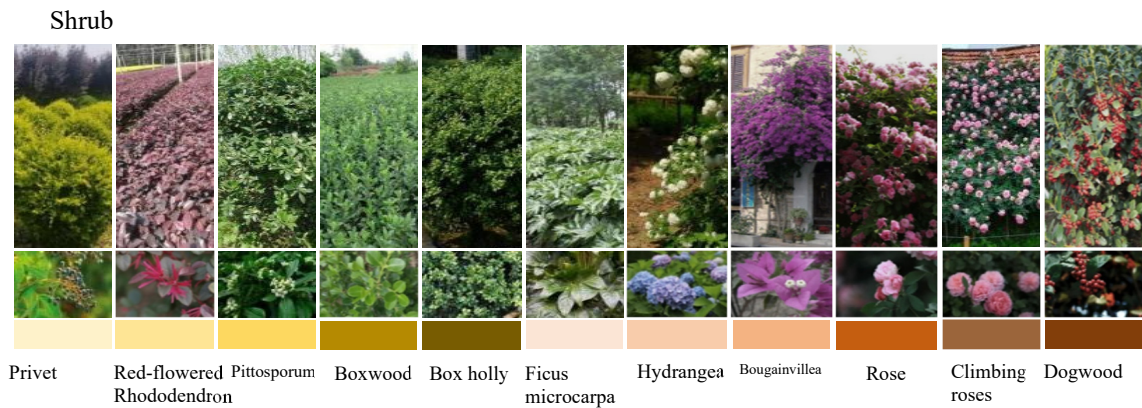


Figure 4. Selecting Shrub Varieties

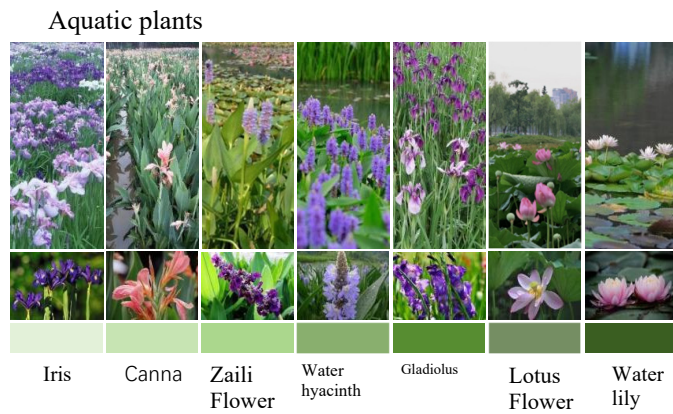


Figure 5. Selection of Aquatic Plants

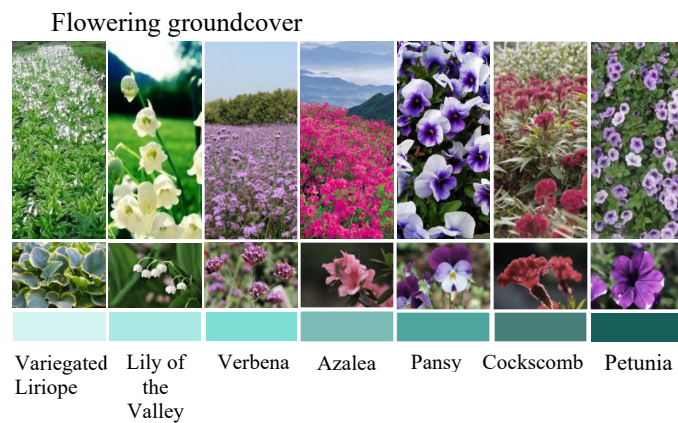


Figure 6. Selecting Flowering Groundcovers

The countryside serves as the primary foundation of Chinese culture, and the inheritance, preservation, and development of China's rural cultural heritage are among the foremost tasks in today's efforts to revitalize rural planning and development[4].

Landscape culture is a unique manifestation of local culture and one of the most important considerations in the landscape planning and design process. As a product of the mutual interaction between human activities and the natural environment, the material and spiritual achievements created by different people at different stages of development vary. At the same time, its material and spiritual connotations are a process of dynamic change and continuous enrichment.

Therefore, when conducting rural planning and design as well as public space renewal, it is necessary to study landscape culture. The practical significance of cultural elements within natural landscapes must be taken into account to ensure their effective protection and maintenance. Guided by the principle of "respecting the landscape and respecting traditional culture," the creation of rural vegetation landscapes should be innovative. Using natural landscapes as the foundation, pastoral scenery as the framework, and rural characteristics and wildlife as inspiration, floral plants, fruit trees, and landscape plants should be carefully arranged according to villagers' preferences and lifestyle needs to form distinct landscape themes.

(4) Emphasizing harmony between plant landscapes and the ecosystem

Rural landscape design should fully take into account native vegetation communities and topographical features to create a richly layered ecological landscape system. This design philosophy not only effectively improves the quality of greening but also enables the intensive use of land resources through three-dimensional layout, thereby creating diverse ecological landscape spaces[5]. Throughout the design process, the fundamental principle of "harmonious coexistence between humans and nature" must be upheld, placing equal emphasis on ecological conservation and the needs of the people to achieve the coordinated development of ecological and economic benefits.

In the creation of community plant landscapes, we must adhere to the principles of adapting to local conditions, prioritizing people's needs, and respecting nature, so that residents can live more comfortably in a beautiful environment. By following the natural growth patterns of plants, we should incorporate landscape elements such as mountains, water, forests, farmland, and lakes, while showcasing the seasonal color changes and the diverse sensory experiences offered by different plant species.

Currently, Fengjiang Community possesses a unique architectural style; however, the exterior walls of some buildings clash with the surroundings. The community lacks basic public facilities and does not provide cultural plazas or recreational spaces where local residents and tourists can appreciate and further explore the area's distinctive cultural heritage. Therefore, building upon Fengjiang Community's

existing foundation, a diverse array of plants should be integrated to further enhance aesthetic appeal, supported by public infrastructure and recreational spaces.

(5) Strengthen post-construction maintenance and management

To fully leverage the environmental value and multifaceted benefits of vegetation, conservation and management efforts should be based on a thorough understanding of vegetation growth patterns. By conducting scientific research tailored to specific local environmental conditions, appropriate conservation and management plans can be developed to ensure the healthy growth of vegetation and maximize its comprehensive benefits. A landscape adoption program can be implemented to increase visitor numbers and boost residents' enthusiasm for protecting vegetation. At the same time, public awareness campaigns should be strengthened to help society recognize the importance of environmental protection and encourage public participation in preserving the landscape, thereby promoting physical and mental well-being and providing spiritual enrichment.

5. Conclusion

In the development of rural plant landscapes, it is essential to build upon local characteristics, integrating the traditional village character with modern landscape design. By utilizing native plant communities to showcase a unique rural atmosphere, we can improve the quality of the living environment while promoting the preservation and continuation of local culture, thereby providing ecological and cultural support for the development of rural tourism.

Regarding plant arrangement strategies, it is necessary to integrate site characteristics, surrounding ecosystems, and the daily needs of villagers. By adopting multi-layered, three-dimensional planting patterns, a rich and organic sequence of natural landscapes can be created, maximizing the comprehensive benefits of plant landscapes in promoting community vitality, maintaining ecological balance, and driving the rural economy.

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