

# The Path of Ecological Civilization Construction in Rural Areas of Western Jilin Province under the Background of Rural Revitalization

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**Abstract:** As the rural revitalization strategy gains momentum, rural ecological civilization construction emerges as a pivotal force for rural economic transformation and advancement. Central to the rural revitalization effort, this construction holds immense importance for fostering sustainable development and safeguarding farmers' welfare in rural areas. In the current context, rural ecological civilization encompasses not only the rural environment but also serves as the foundation for comprehensive rural economic and social progress. While the western region of Jilin boasts distinctive natural resources and ecological benefits, it confronts challenges like environmental degradation and ecological disruption. A pressing concern is how to foster rural ecological civilization scientifically and effectively, while maintaining agricultural growth, to attain green, ecological, and long-term sustainability. This article delves into the rural revitalization backdrop and examines the pathway for ecological civilization development in the western Jilin countryside. Through a thorough analysis of the local rural ecological backdrop, alongside domestic and international best practices, the article offers a range of practical and viable strategies and recommendations.

## 1. Introduction

As China's economy grows and people's living standards rise, their aspirations for a better life shift from mere material comforts to prioritize quality of life environments and ecological sustainability [1]. In this context, the importance of rural ecological civilization construction is increasingly prominent. It can not only effectively meet the actual needs of building beautiful rural areas in China, but also provide a new path for rural economic growth. It is the key to achieving the strategic goals of rural revitalization [2]. As modernization progresses, rural ecological civilization construction confronts unprecedented hurdles. The swift expansion of industrialization and urbanization poses significant threats to rural ecosystems. The increasingly serious problems of environmental pollution and ecological damage have become prominent shortcomings that hinder the resolution of the "three rural issues" and the comprehensive construction of a moderately prosperous society [3].

Specifically in Jilin's western region, being a key part of the agricultural landscape, rural ecological concerns are significant [4]. This western part boasts ample natural resources and ecological benefits, forming a robust base for agricultural output and rural economic advancement [5]. Nevertheless, due to historical factors and growth constraints, the region's rural ecology faces numerous hurdles [6]. Firstly, overuse of chemicals like fertilizers and pesticides in farming has caused soil and water contamination. Secondly, improper waste management from livestock and poultry farming has had a profound negative impact on the rural ecology [7]. Additionally, as urbanization gains pace, rural folks migrate to cities, resulting in issues like rural depletion and aging, intensifying the degradation of the ecological environment. Given these challenges, it's imperative to explore innovative ways and strategies for building ecological civilization in rural western Jilin.

This not only requires the joint efforts of the government, enterprises, and various sectors of society, but also requires drawing on advanced experience in ecological civilization construction at home and abroad, and combining with the local actual situation to formulate practical and feasible policies and measures. We have accumulated rich experience in ecological civilization construction

both domestically and internationally. Some developed countries have successfully achieved improvement and sustainable growth of the ecological environment by implementing strict environmental regulations, promoting green technologies and production methods, strengthening ecological education and public participation, and other measures. In China, some regions have also achieved significant results by implementing ecological restoration projects, promoting ecological agriculture and circular economy, and strengthening rural environmental governance. These experiences provide useful reference and inspiration for the construction of ecological civilization in rural areas of western Jilin. Based on the above background, this article focuses on the background of rural revitalization and deeply explores the path of rural ecological civilization construction in western Jilin.

## **2. The Significance and Current Situation of Rural Ecological Civilization Construction**

### **2.1. Significance**

The implementation of the rural revitalization strategy is an important strategic deployment for the growth of agriculture and rural areas in the context of the new era in China [8]. This strategy is not only aimed at meeting the basic needs of the people for production and life, but also an important measure to guide farmers to enhance their subjectivity and achieve urban-rural integration growth [9]. In the strategy of rural revitalization, the construction of rural ecological civilization plays a crucial role. It is not only an important component of China's ecological civilization construction, but also a key link in rural revitalization and the growth of agriculture, rural areas, and farmers [10]. Rural ecological civilization lays a critical foundation for rural revitalization. It aids in upgrading rural economies, fostering an intensive growth path that steers farmers toward rational use of natural resources like land and water. This green, ecological, and circular approach enhances agricultural products' value and competitiveness, sustaining rural economies and fostering job opportunities and income sources for farmers.

The construction of rural ecological civilization helps to enhance the environmental awareness and ecological literacy of farmers. In order to foster a deeper understanding of the significance of the ecological environment among farmers, the establishment of rural ecological civilization relies heavily on targeted propaganda efforts, educational initiatives, and strategic public opinion guidance. These approaches aim to empower farmers by strengthening their environmental consciousness and ecological comprehension, ultimately promoting their active participation in the construction of a sustainable rural landscape. This can not only promote farmers to actively participate in the construction of rural ecological civilization, but also provide a solid social foundation for the protection and improvement of rural ecological environment. The construction of rural ecological civilization is an important guarantee for achieving China's sustainable growth strategy goals. The construction of rural ecological civilization is not only related to the growth of rural areas and farmers, but also to the sustainable growth of the entire country. By strengthening the construction of rural ecological civilization, we can better protect and utilize natural resources, promote harmonious coexistence between humans and nature, and provide strong guarantees for achieving China's strategic goals of sustainable growth.

### **2.2. Current Situation**

Rural ecological civilization construction confronts several critical challenges (see Figure 1). Initially, the shift from traditional ecological mindsets to modern ecological perspectives is underway, a gradual and intricate transition. During this transition, some farmers persist in traditional farming practices, overemphasizing quick profits. This includes excessive use of fertilizers and pesticides, as well as unsustainable harvesting methods, leading to contamination of agricultural products, land, water, and air. These practices negatively impact the rural ecosystem and threaten farmers' health and quality of life. Furthermore, the tension between economic growth and environmental conservation is acute in rural communities. In underdeveloped regions, economic gains are often gained through environmental sacrifice, a trend that can persist for a

considerable time due to a lack of alternative economic models and farmers' limited awareness of environmental protection.

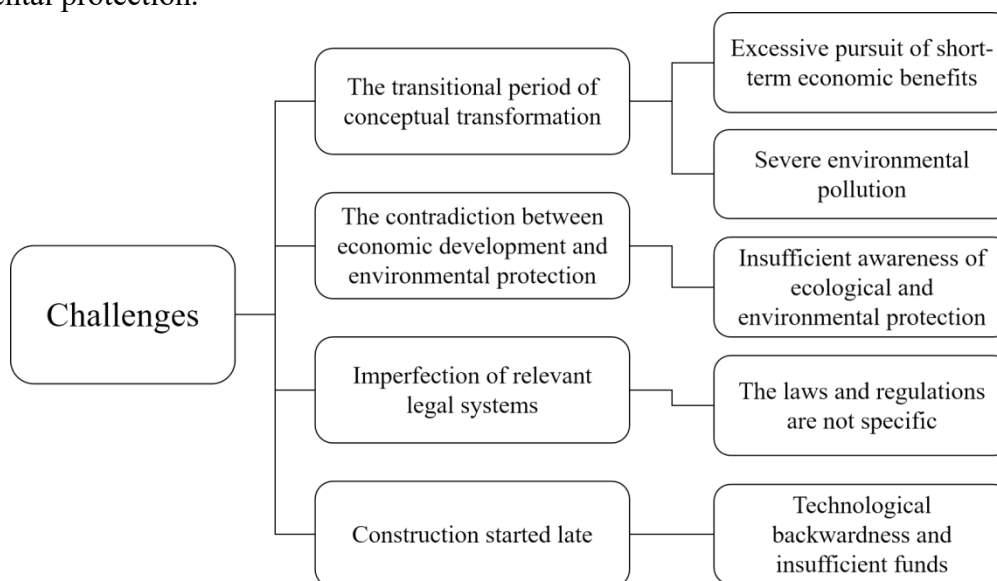


Figure 1 Challenges faced by rural ecological civilization construction

In addition, the imperfect legal system related to rural ecological civilization construction is also one of the important reasons for the current situation. Although the Chinese government has introduced a series of environmental protection policies and laws and regulations, the implementation and effectiveness in rural areas are not ideal. On the one hand, environmental supervision in rural areas is relatively weak, making it difficult to effectively supervise and punish illegal and irregular behaviors; On the other hand, some legal provisions are too general or not specific enough to be effectively implemented in rural areas. Finally, the overall ecological construction in rural areas of China started relatively late compared to cities, and various material conditions cannot meet the requirements of rural ecological environment well. This includes lagging rural infrastructure construction, outdated environmental protection technologies, and insufficient environmental protection funds. These factors all constrain the process and effectiveness of rural ecological civilization construction.

### 3. Path of Rural Ecological Civilization Construction

#### 3.1. Improve Rural Infrastructure and Related Systems

Enhancing rural infrastructure and systems is crucial for bolstering rural ecological progress. Recognition of the significance of infrastructure, like transportation networks, as a cornerstone is essential. This advances rural accessibility, stimulating economic growth and elevating farmers' quality of life. When developing these networks, environmental stewardship is paramount, requiring the adoption of green materials and sustainable practices to minimize ecological impacts.

Secondly, by formulating and improving relevant laws and regulations, we can further clarify the responsibilities and obligations of farmers in protecting the ecological environment, while safeguarding their legitimate rights and interests (as shown in Figure 2). To ensure the effective implementation of various policy measures, the government should establish a sound management system and operational mechanism for rural ecological civilization construction, including planning, implementation, supervision, and other links. Authorities should guide farmers to establish the concept of green growth, adopt green production methods such as ecological agriculture and circular agriculture, and reduce damage to the ecological environment. Based on the local situation, policymakers should formulate clear goals for rural ecological governance, including ecological environment protection, ecological industry growth, and other aspects. It is essential to clarify the division of responsibilities among relevant departments to ensure the effective implementation of various policy measures. At the same time, the government should strengthen coordination and

cooperation between departments to form a synergy. Establishing a strict assessment system is necessary to conduct regular assessments and evaluations of the work of various departments in rural ecological civilization construction, ensuring the effective implementation of various policy measures. Implementing a reward and punishment system is also crucial; commend and reward units and individuals who have shown outstanding performance in rural ecological civilization construction, and punish units and individuals who violate relevant regulations.

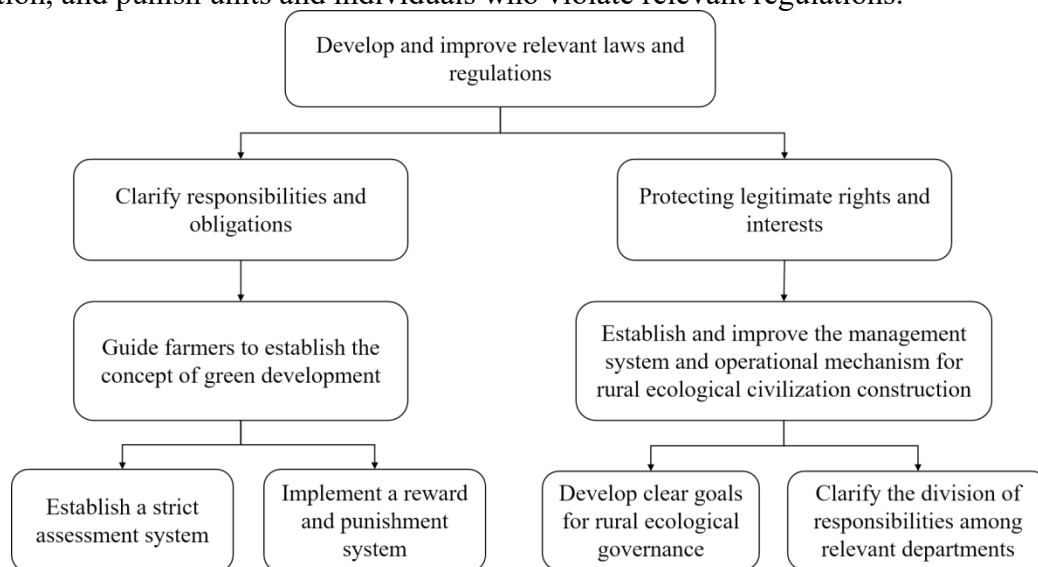


Figure 2 Formulating and improving relevant laws and regulations

### 3.2. Strengthen Technological Innovation

In the new situation, strengthening technological innovation is of great significance for promoting the construction of rural ecological civilization. Ecological modernization is a process of continuous technological innovation and diffusion, in which technological innovation plays a core role. Modern technological innovation and ecological governance technology are important tools for promoting the modernization of rural ecological governance. China should actively learn from advanced experiences in agricultural technology innovation and ecological governance both domestically and internationally, and explore a path of scientific and technological innovation that is suitable for China's national conditions, taking into account the actual situation in rural areas. With the help of advanced information technology such as big data, the Internet of Things, and cloud computing, real-time monitoring and data analysis of rural ecological environment can be achieved, providing strong support for scientific decision-making. Meanwhile, information technology can also help farmers improve production efficiency and reduce environmental damage.

The government should increase funding and talent investment in technological innovation, research and promote ecological governance technologies suitable for rural areas. For example, rural power generation technology can utilize clean energy sources such as solar and wind energy, reducing reliance on traditional energy sources; The straw returning technology can convert straw into organic fertilizer and improve soil fertility; Rural biogas technology can convert waste such as crop straw and livestock manure into clean energy, reducing pollution emissions. Through technological innovation, it is possible to further optimize and upgrade the way rural waste is treated. For example, using biodegradation technology to treat rural household waste can achieve harmlessness, reduction, and resource utilization; Using efficient water-saving irrigation technology to reduce water resource waste; Promote the use of environmentally friendly pesticides and fertilizers to reduce environmental pollution. Technological innovation can also help improve the efficiency of rural resource utilization. For example, reducing the use of fertilizers and pesticides through precision fertilization, precision irrigation and other technologies; Using intelligent breeding technology to improve the efficiency and quality of livestock and poultry breeding; Develop circular economy and achieve resource recycling.

#### 4. Conclusions

The linkage between rural revitalization and ecological civilization construction is profound. They mutually reinforce each other, advancing the holistic development of rural communities. Rural revitalization is not only an economic growth, but also a comprehensive revitalization of ecology, society, culture, and other aspects. In this process, the construction of rural ecological civilization plays a crucial role and has become an important force in promoting rural revitalization. In the new situation, facing the dual task of rural economic growth and ecological environment protection, the government, as a public sector, must assume the important responsibility of guiding and promoting. The implementation of optimization measures must be based on the current situation of rural economic growth, closely combined with the local actual situation, and formulate policies and plans tailored to local conditions. The application of science and information technology provides strong support for the construction of rural ecological civilization. The government must actively take optimization measures, based on the current situation of rural economic growth, fully utilize scientific and information technology, promote the upgrading and optimization of rural economic structure, and provide solid ecological protection for rural revitalization.

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