

THE SIGNIFICANCE AND PRACTICE OF ECOLOGICAL AGRICULTURAL COMPLEX CONSTRUCTION IN THE PROTECTION OF TRADITIONAL VILLAGES AND CULTURAL INHERITANCE (1115)

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Abstract. The development of China's ancient agricultural civilization formed traditional villages and unique agricultural culture. Traditional villages carry China's long history and extensive regional culture. With the development of China's economy and cultural level, the protection of traditional villages and the inheritance of agricultural culture have been increasingly valued by society, and various regions are exploring traditional village protection practices based on the reality of traditional villages. Due to the complexity of the geographic environment, ethnic diversity, and cultural fusion and evolution, traditional villages in Yunnan Province, China have distinct regional and ethnic characteristics, forming world cultural heritage sites such as the Yuanyang Hani Rice Terraces and the Jianshui Ancient City. The protection of traditional villages in Yunnan should be based on the actual development needs of traditional villages, comprehensively considering the restoration and development of traditional village agricultural ecological environments, relying on innovative planning ideas and advanced technological support, in order to effectively protect traditional village spaces and inherit agricultural culture.

First of all, an eco-agricultural complex can revive the agricultural ecological environment by combining traditional agricultural practices with modern technology, enhance the level of the agricultural industry, help revitalize the rural economy, create new job opportunities, retain rural populations, and thereby ensure the complete protection and inheritance of local cultural heritage and traditions. Secondly, by combining agricultural production with cultural tourism and carrying out various activities such as ethnic festival celebrations, traditional skills workshop experiences, and so on, an eco-agricultural complex can build a platform for cultural exchange and educational innovation, enhance the local residents' and tourists' understanding and appreciation of rural historical and cultural heritage, thereby enhancing the influence and social value of traditional agricultural culture and realizing its inheritance and development. In addition, the construction of supporting facilities for eco-agricultural complexes and related derivative industries, such as the construction of village cultural museums, cultural activity centers, and commercial service facilities for public services

and activities, can improve the living environment quality in rural areas from the hardware infrastructure level, enhance the living standards of rural residents, help to improve the overall quality of the original rural population, and benefit the protection and inheritance of rural historical and cultural heritage.

In conclusion, the ecological agricultural complex can not only improve the rural ecological environment, expand the path of rural industrial development, and enhance the level of rural economy and industrial development but also help to improve the overall social and cultural level of rural areas, enhance the cohesion and attractiveness of rural society, and thus achieve the effective protection of traditional villages and the continuation and inheritance of distinctive agricultural culture.

Keywords: ecological agricultural complex; traditional villages; cultural heritage Planning practice.

1. Introduction

China is a country with multiple ethnicities and diverse cultures, and traditional villages across the country showcase the diversity and uniqueness of regional cultures. Each traditional village has its own distinct architectural style, customs, and festive activities, reflecting the historical and cultural characteristics of different regions ⁽¹⁾. Protecting traditional villages contributes to the preservation of regional cultural diversity and promotes cultural exchange and understanding among different ethnicities and regions.

Traditional villages are important bearers of China's agricultural culture. Agricultural culture is the cornerstone of ancient Chinese civilization, encompassing agricultural production techniques, farming customs, the spirit of farmers, and values. The traditional agricultural cultural heritage in these villages not only holds academic value but also provides valuable agricultural experiences and sustainable development insights for modern society. Protecting traditional villages helps preserve and inherit agricultural culture, offering references and guidance for agricultural development and the construction of an ecological civilization. Traditional villages serve as important carriers of community life, where residents live, work, and celebrate festivals together, forming close social relationships and a sense of community. Protecting traditional villages enhances community cohesion, promotes residents' sense of identity and belonging, and cultivates the foundation for social harmony and stability.

Many traditional villages possess unique natural landscapes and cultural attractions, making them important tourism resources. Protecting traditional villages not only attracts tourists and promotes the development of the tourism industry but also stimulates local economic activities and employment opportunities, thereby improving

the living standards of residents.

2. Characteristics and Current Issues of Traditional Villages in Yunnan Province

2.1 Characteristics of Traditional Villages in Yunnan Province

Traditional villages in Yunnan Province are renowned for their complex geographical environment, ethnic diversity, and the blending and evolution of cultures, showcasing rich regional and ethnic features.

Complex Geographical Environment: Yunnan Province is located in the southwestern border of China and possesses diverse topographical features, including mountains, hills, basins, river valleys, and more. This geographical environment provides unique agricultural ecological conditions and landscape features for traditional villages in Yunnan, such as terraced fields, basins, lakes, and so on. Traditional villages in different geographical environments have their own agricultural production methods and cultural characteristics.

Ethnic Diversity: Yunnan Province is one of the provinces in China with the highest concentration of ethnic minorities, with 25 different ethnic groups residing there. Each ethnic group has its unique cultural traditions and customs. Traditional villages often serve as settlements for these ethnic minorities, preserving distinct architectural styles, folk activities, and handicrafts that reflect their ethnic characteristics. The ethnic diversity contributes to the diverse and rich cultural landscapes of traditional villages in Yunnan Province.

Richness of Agricultural Culture: Traditional villages in Yunnan Province are important bearers of agricultural culture. Within these villages, farmers have cultivated the land for generations, developing unique agricultural production techniques and farming customs. For example, the Hani ethnic group's terraced landscapes showcase the wisdom of farmers and embody the concept of harmonious coexistence with nature. Traditional villages also preserve a wealth of traditional festivals, folk arts, and handicrafts, all of which are integral parts of agricultural culture.

2.2 Difficulties and Challenges in the Preservation of Traditional Villages

Impact of Urbanization and Modernization: With the advancement of urbanization, some traditional villages face threats from urban expansion and the impact of modernization. Urbanization brings issues such as land development and infrastructure construction, exerting pressure on the natural environment and traditional culture of traditional villages.

Population Decline and Aging: Due to economic development and increased job

opportunities, some young people choose to leave traditional villages and seek better lives in cities ⁽²⁾. This results in population decline and aging in traditional villages, posing challenges to the preservation of traditional culture and craftsmanship.

Environmental Degradation: Human activities and long-standing inefficient agricultural practices have led to environmental degradation in some traditional villages. Problems such as vegetation deterioration and soil erosion become increasingly prominent, posing threats to agricultural ecological environments and landscape features.

Challenges in Cultural Inheritance and Preservation: Traditional villages face challenges in cultural inheritance and preservation under the impact of modernization. Many traditional craftsmanship techniques, folk activities, and traditional festivals are gradually losing their successors, putting traditional knowledge and skills at risk of being lost.

3. Concept and Characteristics of Ecological Agricultural Complex

The ecological agricultural complex is a development model in agriculture that takes into consideration the ecological, economic, and social benefits. It aims to achieve sustainable agricultural development, protect the ecological environment, increase farmers' income, and improve the quality of rural residents' lives ⁽³⁾.

The ecological agricultural complex emphasizes reducing the negative impact of agricultural activities on the environment and adopts ecologically friendly agricultural production methods. Through scientific and rational land use and water resource management, the complex controls the use of pesticides and fertilizers, reduces soil erosion and water pollution, and preserves the stability and diversity of ecosystems. Additionally, the complex emphasizes ecological restoration of farmland through measures that enhance soil fertility and water conservation.

Sustainability is a key focus of the ecological agricultural complex, which aims to maintain long-term stability and development of the agricultural industry while meeting the food demands of the population. This is achieved through scientific farming techniques, rational allocation of agricultural resources, and diversified agricultural production, which improve agricultural productivity and the quality of agricultural products. Furthermore, the complex encourages farmers to adopt resource-efficient and low-carbon emission agricultural practices, promoting green agricultural development.

By increasing farmers' income and improving the quality of rural residents' lives, the ecological agricultural complex facilitates comprehensive development of farmers. Measures such as providing agricultural technology training, agricultural science and technology support, and market development enhance farmers' production skills and increase the added value of agricultural products, thus expanding their income sources.

Simultaneously, the complex focuses on improving rural infrastructure, enhancing living environments, education, and healthcare conditions, and elevating the living standards and social welfare of rural residents.

The ecological agricultural complex also emphasizes the preservation of the spatial pattern and cultural heritage of traditional villages while developing agriculture. Through appropriate planning and layout, it integrates agricultural production with the landscape and cultural elements of traditional villages, preserving and restoring their architectural styles, traditional farming culture, and local characteristics. Furthermore, measures such as cultural activities, tourism promotion, and cultural education are undertaken to enhance the cultural value and attractiveness of traditional villages, fostering the inheritance and development of traditional culture⁽⁴⁾.

In conclusion, the ecological agricultural complex not only focuses on the economic benefits of agricultural production but also emphasizes environmental protection, increased farmers' income, and improved quality of life for rural residents. By promoting sustainable agricultural development and integrating with the preservation and cultural inheritance of traditional villages, the ecological agricultural complex provides an important pathway and model for sustainable development in rural areas.

4. Strategies and Approaches of Ecological Agricultural Complex in the Protection and Cultural Inheritance of Traditional Villages in Yunnan

4.1 Restoring Agricultural Ecological Environment

Restoring the agricultural ecological environment is one of the key strategies for protecting traditional villages and preserving agricultural culture. By implementing sustainable agricultural practices and restoring cultivated land and ecosystems, it is possible to achieve ecological agriculture, enhance the level of the agricultural industry, protect and restore farmland ecosystems, and promote biodiversity conservation.

Sustainable agricultural practices involve emphasizing environmental protection, resource utilization efficiency, and the improvement of agricultural product quality in the agricultural production process. For example, adopting organic farming methods can avoid the use of chemical pesticides and fertilizers, thereby reducing soil and water pollution. Organic agriculture focuses on natural cycles, optimizing crop planting structures, utilizing organic fertilizers, and implementing biological pest control methods to maintain soil health and fertility.

Additionally, restoring cultivated land and ecosystems is also an important measure. In the vicinity of traditional villages, cultivated land often faces challenges such as excessive cultivation and soil degradation. By implementing land reclamation and soil conservation measures, it is possible to restore degraded cultivated land and revive its agricultural

productivity. Furthermore, protecting and restoring agricultural ecosystem elements such as wetlands and forests can enhance biodiversity, provide ecological services, and maintain the stability and productivity of farmland.

The Honghe Hani Rice Terraces in Yunnan Province, China, are a traditional village and agricultural cultural heritage site. The agricultural culture in this area is based on the terraced farming system. However, long-term cultivation and land erosion have caused environmental issues. To protect the terraced ecosystem and preserve agricultural culture, local governments and social organizations have implemented a series of measures.

Firstly, ecological agricultural technologies have been introduced. By promoting organic farming and biodiversity conservation measures, the use of pesticides and fertilizers is reduced, improving soil quality and crop quality while protecting the agricultural ecosystem. Additionally, ecological engineering techniques are utilized to restore soil erosion and prevent soil loss. Secondly, water resource management is strengthened. For the terraced irrigation system, improved irrigation methods are implemented to enhance water resource utilization efficiency and reduce soil erosion. In some terraced areas, techniques such as rainwater collection and water diversion are employed to ensure a stable water supply, maintaining the stability of the terraced fields.

Thirdly, eco-tourism and agricultural product processing are developed. By promoting eco-tourism, attracting visitors to explore and experience the terraced culture, local residents' income sources are increased, reducing reliance on agricultural production and alleviating the pressure of excessive land cultivation. Simultaneously, the development of agricultural product processing enhances product value-added and increases farmers' income.

4.2 Integrating Agricultural Production with Cultural Tourism

Combining agricultural production with cultural tourism is an effective strategy that can facilitate the preservation of agricultural cultural heritage and the development of rural economies. By organizing activities such as farm tours, folk experiences, agricultural tasks, and cultural exhibitions, visitors are attracted to rural areas to explore, experience, and learn about agricultural culture, thereby increasing farmers' income and enhancing the social and cultural level of rural communities.

Taking Honghe Prefecture in Yunnan Province, China, as an example, this region possesses abundant ethnic and agricultural cultural resources, which have been effectively utilized in conjunction with cultural tourism to achieve positive outcomes.

The traditional villages and agricultural landscapes of Honghe Prefecture have attracted a large number of tourists. By establishing farm tour routes and points of interest,

visitors can personally experience the agricultural production process, gain insights into the agricultural ecosystem and the labor practices of farmers. Additionally, with the presence of guides and interpreters, tourists are introduced to local agricultural culture, crop cultivation techniques, and traditional farming tools, thereby increasing their understanding and appreciation of agricultural culture.

The ethnic culture and traditional customs of Honghe Prefecture provide rich resources for the integration of agricultural production and cultural tourism. By organizing ethnic festivals, traditional handicraft production, and folk performances, visitors can delve deeper into the unique charm of local ethnic culture ⁽⁵⁾. Yuanyang County in Honghe Prefecture holds traditional Hani ethnic harvest festival celebrations in its traditional villages, allowing tourists to actively participate in the festive rituals, experience the traditional culture, and enhance their experiential connection and emotional resonance with agricultural culture.

To encourage greater visitor participation in agricultural production, the village of Xizhuang in Jianshui County, Honghe Prefecture, offers various agricultural activities, such as farmer experience programs and orchard picking. Tourists can actively engage in farming activities such as plowing, sowing, and harvesting, experiencing the hard work of farmers and the joys of traditional farming. Simultaneously, demonstration activities showcasing the processing and production of agricultural products are organized to demonstrate the local expertise in processing distinctive agricultural products, promoting the development of rural industries.

Furthermore, cultural facilities such as Agricultural Cultural Exhibition Halls and Farmers' Art Exhibitions are established in rural areas to showcase the history of agricultural culture, traditional craftsmanship, and artistic achievements. These exhibitions and showcases provide platforms for visitors to understand agricultural culture and also offer opportunities for farmers to display their talents and increase their income.

Through the integration of agricultural production and cultural tourism, Honghe Prefecture has achieved diversified rural economic development and the preservation of agricultural cultural heritage. Farmers have gained additional income by participating in tourism activities, while also adding value to agricultural products. Visitors, through active participation and immersive experiences, gain in-depth knowledge of agricultural culture, enhance their understanding and interest in rural areas, and contribute to the development of rural tourism industry.

4.3 Infrastructure Development

Infrastructure development is an integral part of an agricultural eco-complex, as it enhances the quality of living environment in rural areas and promotes the preservation

and inheritance of rural historical and cultural heritage. These facilities include village cultural museums, cultural activity centers, themed commercial services, and other public service and activity facilities.

Village Cultural Museums: Establishing village cultural museums allows for the exhibition of local historical and cultural heritage, including agricultural culture, ethnic culture, traditional craftsmanship, and more. Through exhibitions, artifact displays, and cultural preservation efforts, visitors can be introduced to the rich historical culture of rural areas, enhancing their awareness and understanding of agricultural culture. In some traditional villages in Jianshui County, Honghe Prefecture, agricultural cultural museums have been established, showcasing the evolution of agricultural tools, farming practices, and everyday items used by farmers, providing insights into local farming traditions and history.

Cultural Activity Centers: Constructing cultural activity centers enables various cultural exchanges, performances, and educational activities, providing a venue for gatherings and interactions ⁽⁶⁾. These centers can host ethnic festivals, traditional art performances, handicraft workshops, and other activities, attracting tourists and local residents to participate and fostering the inheritance and innovation of agricultural culture. In some villages in Xizhuang Town, Jianshui County, Honghe Prefecture, cultural activity centers have been established, hosting annual celebrations of local traditional festivals, attracting a large number of visitors and locals to enjoy and take part in the festivities.

Themed Commercial Services: Developing themed commercial service facilities caters to the daily needs of tourists and residents, providing services such as dining, accommodation, and shopping. These facilities can be themed around agricultural culture, promoting local agricultural products and distinctive goods, driving rural industrial development, and increasing farmers' sources of income. In certain rural areas of Xizhuang Town, Jianshui County, Honghe Prefecture, themed commercial service facilities centered around agricultural product processing and the sale of rural handicrafts have been established, offering visitors the opportunity to purchase agricultural products and souvenirs while also boosting the local rural economy.

Through the development of supporting facilities, Honghe Prefecture has improved the quality of living environment in rural areas and promoted the preservation and inheritance of agricultural culture. These facilities provide visitors with places to understand and experience agricultural culture, while offering farmers opportunities to showcase agricultural products and unique handicrafts, thereby driving diversified rural economic development. Combined with the supporting facilities of other agricultural eco-complexes, the rural areas of Honghe Prefecture have become a unique and appealing tourist destination, further promoting the development of rural areas and the inheritance of agricultural culture.

5. Key Points for Planning and Implementation of Ecological Agricultural Complexes

The key points for planning and implementing ecological agricultural complexes include formulating comprehensive plans, integrating with the local community, establishing policy support, introducing technological support, and strengthening publicity and promotion. The following provides a detailed discussion of these points:

5.1 Formulating comprehensive plans

Developing comprehensive plans tailored to the specific conditions of each traditional village is crucial for ensuring protection and development. The plans should consider factors such as the historical and cultural characteristics, natural environment, and socio-economic conditions of the traditional villages, while clearly defining protection goals and development directions. The planning content should encompass village landscapes, farmland layout, restoration of agricultural ecosystems, and also take into account principles of sustainable development, aiming to enhance rural economy and ecological environment while preserving cultural heritage.

5.2 Integrating with the local community

Valuing the participation and opinions of local residents is vital for the sustainability of protection and development efforts. During the planning and implementation process, active communication and cooperation with the local community should be fostered, respecting their wishes and needs. Building consensus can enhance residents' engagement in conservation work, making them active stakeholders in protection and inheritance. Additionally, community residents possess rich traditional knowledge and skills, and their involvement can effectively contribute to the preservation of agricultural culture.

5.3 Establishing policy support

Developing relevant policies and regulations is an important means to support the protection and inheritance of ecological agricultural complexes. Policies can provide support in terms of economy, technology, and management, encouraging private capital and social organizations to participate in conservation and inheritance work. Government departments should increase investment efforts, provide financial support, tax incentives, and reward measures, encouraging farmers to participate in the preservation of traditional villages and the inheritance of agricultural culture.

5.4 Introducing technological support

The application of modern technological methods can assist in conservation efforts and the restoration of agricultural ecological environments within ecological agricultural complexes. For example, remote sensing technology can provide monitoring and assessment data on farmland and ecosystems, facilitating informed decision-making and planning. Digital technology can provide information management and communication platforms, promoting the inheritance and promotion of agricultural culture. Technological support can improve work efficiency and conservation levels, while also providing innovative agricultural production methods and value-added services for farmers.

5.5 Strengthening publicity and promotion

Promoting the cultural value of traditional villages through media, online channels, and other means can attract more people to participate in conservation and inheritance work. Publicity activities can include organizing agricultural cultural festivals, exhibitions, and lectures, enabling more individuals to understand and appreciate the charm of traditional villages. Furthermore, utilizing social media and internet platforms for publicity and promotion can expand influence, attract tourists and investors, and provide greater support for the inheritance of agricultural culture.

6. Conclusion and Future Research Directions

6.1 Research Conclusions

In the protection and cultural inheritance of traditional villages in Yunnan, ecological agricultural complexes can adopt the following strategies:

Developing protection plans: Formulating plans specifically for the protection and development of traditional villages, clarifying protection goals and measures, and planning agricultural land and ecological conservation areas in a coordinated manner to ensure the harmony between agricultural development and environmental protection.

Promoting ecological agricultural technologies: Popularizing ecological agricultural technologies such as organic farming and ecological restoration agriculture to reduce the use of chemical pesticides and fertilizers, improve the quality and safety of agricultural products, and protect the health of soil and water resources.

Establishing agricultural cooperatives and farmer professional cooperatives: Organizing farmers to establish cooperatives and improving their economic benefits and bargaining power through centralized procurement, production, processing, and sales, thus

increasing farmers' income.

Introducing technological support: Introducing advanced agricultural technology and management practices to enhance farmers' production skills and management capabilities, promoting agricultural modernization and sustainable development.

Developing agricultural eco-tourism: Utilizing traditional villages and agricultural culture as tourism resources, developing agricultural eco-tourism projects to attract tourists, increase the economic income of villages, and promote the inheritance and development of traditional culture.

Strengthening education and training: Conducting education and training on traditional techniques and knowledge of agricultural culture, cultivating young people's interest and identification with agricultural culture, and increasing the number of inheritors of traditional culture.

Enhancing community participation: Encouraging local residents in traditional villages to participate in protection and management work, enhancing their environmental awareness and cultural pride, and forming a collaborative force for protection through collective efforts.

By comprehensively implementing the above strategies, ecological agricultural complexes can play an active role in the protection and cultural inheritance of traditional villages in Yunnan. They can promote sustainable agricultural development, protect the ecological environment, increase farmers' income, and contribute to the sustainable development and prosperity of traditional villages in Yunnan.

6.2 Future Development Directions

The future development directions for ecological agricultural complexes involve further enhancing their sustainability, innovation, and social benefits to meet the demands of socioeconomic development and environmental changes.

Promoting technological innovation and intelligence: Introducing advanced agricultural technology and information technology such as the Internet of Things, big data, and artificial intelligence to achieve precise management and intelligent decision-making in agricultural production. Through techniques like precision fertilization, intelligent irrigation, and drone inspections, production efficiency can be improved, resource consumption reduced, and product quality and safety ensured.

Developing circular economy and comprehensive resource utilization: Advocating for the resource utilization and energy recovery of agricultural waste, establishing agricultural product processing and utilization systems to minimize waste and pollution. Developing agricultural circular economy practices will promote the comprehensive utilization of

agricultural products, increase added value, and enhance economic benefits.

Advancing agricultural branding and marketing networks: Strengthening agricultural product branding and market development, enhancing the added value and competitiveness of agricultural products. Developing forms of agricultural cooperatives and agricultural product cooperatives, constructing integrated industry chains for agricultural production, processing, and sales, expanding sales channels and market share for agricultural products.

By advancing these development directions, ecological agricultural complexes will better adapt to societal needs and environmental changes, achieve sustainable agricultural development, promote increased income for farmers, protect the ecological environment, and drive the prosperity of rural economies and rural revitalization.

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