

Realistic Difficulties and Policy Orientation in Rural Ecological Revitalization*

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Abstract—Rural ecological revitalization is the key link and important content of rural revitalization strategy in China. This article thoroughly analyses the theoretical logic and realistic difficulties of rural ecological revitalization and proposes the corresponding policy orientation to speed up rural eco-civilization construction and carry out the significant strategy of rural revitalization in China.

Keywords—rural ecological revitalization; “Two Mountains” theory; stock of ecological capital; ecological capital operation; ecological revitalization policy

I. INTRODUCTION

Ecology is the support point of rural revitalization. Green is the basic color of rural revitalization. Rural ecological revitalization is the key link and important content of the strategy of Rural Revitalization in China. On March 8, 2018, Xi Jinping put forward the scientific judgment of “Five Revitalizations” when he participated in the deliberations of the Shandong delegation. For the first time, he discussed the revitalization of rural ecology, and put the revitalization of rural ecology in the same important position as the revitalization of rural industry, rural talents, rural culture and rural organizations. On September 26, 2018, the Central Committee of the Communist Party of China and the State Council issued Strategic Planning for Rural Revitalization (2018-2020), which further clarified the main content of rural ecological revitalization. “It is important to firmly establish and practice the concept of ‘green water and green hills are golden mountains and silver mountains’”, adhere to respecting and conforming to and protecting the nature, coordinate the management of landscape, forestry, lake and grass systems, and accelerate the transformation of

production and lifestyle, promote the revitalization of rural ecology and build a beautiful and livable ecological village with clean living environment, stable and healthy ecosystem and harmonious coexistence of man and nature. “Lucid waters and lush mountains are invaluable assets”. Ecology plays a fundamental role in agricultural production, rural development and farmer life. Good ecological environment is the greatest advantage and precious wealth of rural development. However, in the tide of industrialization and urbanization, the construction of agricultural ecological civilization has not shown enough adaptability, and the contradiction between agricultural ecological protection and economic development has not been effectively alleviated. At present, how to practice the “Two Mountains” theory and rebuild the rural ecological civilization system is the main task of rural ecological revitalization in the new era.

Through literature review, it is found that the research on rural ecological revitalization by scholars at home and abroad is still in its infancy, and there are few and scattered related literatures, such as elaboration of the relationship between rural revitalization and ecological civilization construction, analysis of the ecological ethical dimension in rural revitalization, exploration on the constraints and countermeasures of rural ecological revitalization. Although some opinions are provided to clarify the connotation of rural ecological revitalization and protocol strategies, there are no scientific measures and lack of theoretical speculation and practical reflection on the revitalization of rural ecology. In view of this, this paper intends to further explore the following issues from a systematic point of view: What is the scientific connotation and theoretical logic of rural ecological revitalization? From a realistic point of view, what difficulties exist in the realization of rural ecological revitalization? From the perspective of government decision-making departments, how to further promote rural ecological revitalization?

II. THE REALISTIC DIFFICULTIES IN RURAL REVITALIZATION

A. Constraints of Agro-ecological Capital Stock

The insufficient stock of agricultural ecological capital will reduce the security threshold of the rural complex ecological economic system, restrict the steady-state level of rural ecological economy, and lead to the failure of rural

*Project: The key project of the National Social Science Foundation “Research on Policy System Construction of Natural Resources Capitalization Market Construction in China” (No. 15AZD062); General Project of the National Natural Science Foundation of China “Research on the Pro-poverty Effect of Agricultural Eco-capital Operation and Its Synergistic Mechanism with Precision Poverty Alleviation”(71673302); Youth Project of the National Natural Science Foundation of China “Research on Ecological Capital Operation for Poverty Alleviation in Ecologically Vulnerable Areas” (71303261); Youth Project of National Natural Science Foundation “Evaluation of Investment Performance and Innovation of Investment Modes of Ecological Capital in Rural Revitalization” (No. 71804196); Education Innovation Plan Project for Zhongnan University of Economics and Law’s Postgraduates “Construction of Livable Environment for Agricultural Ecological Capital Operation” (Approval No. 201811050).

ecological revitalization. Because of China's basic national conditions of less land and more people and the long-term extensive agricultural production mode in the past, the resource and environmental pressures faced by agricultural and rural development are tightening, and the constraints of ecological capital stock are becoming increasingly prominent. In terms of the quantity of ecological resources, the relative shortage is that the spatial and temporal distribution of resources is very uneven. The area north of the Yangtze River has 65% of cultivated land, but only 20% of water resources. Water resources are the lifeblood of agricultural development. The proportion of agricultural water in total water consumption has been maintained at over 60%. The relative shortage will inevitably lead to the imbalance and inadequacy of rural ecological revitalization.

B. Insufficient Inducement of Green Technologies in Agriculture

Insufficient guidance of agricultural green technology is the key factor hindering the efficiency of agricultural ecological operation. According to the theory of ecological capital operation, agricultural ecological resources and agricultural technology are the core elements to support the supply of high-quality agricultural products and services. Forced by feebleness of agriculture, the "38699" troop in agricultural production and the part-time choice of young rural labor force are the decision-making under the "rational" division of labor among farmers. This kind of decision-making will inevitably lead to the weak human capital of the labor force engaged in agriculture, unable to adapt to the green production and management of agriculture. It has a psychological exclusion of the application of green technologies.

C. Farmers' Lagging Ecological Ethics

Farmers' ecological ethics has an active role, and the lag of ecological ethics leads to the intensification of "human-land conflict". In the investigation of ecological ethics in Guanzhong rural area, it is found that most villagers know the importance of ecological protection and are attached to land, forestry and other ecosystems. But they are still guided by anthropocentrism and egoism in their actions, pursuing economic benefits unilaterally, and have not yet established scientific ecological ethics. The reason is that social consciousness is determined by social existence, and farmers' ecological ethics is influenced and restricted by rural social and economic conditions.

D. Lack of Rural Ecological Management System

Traditional rural ecological governance is regarded as a typical "passive" rural public affairs activity. In environmental management, "the government shoulders great responsibility" has become a social consensus. This system lags behind the requirements of rural ecological revitalization in the new era. It lacks the protection and incentive for the development of agricultural ecological economy and cannot meet the needs of rural ecological revitalization. The management system of rural ecological resources is relatively lagging behind, and the ownership of

rural ecological resources has not yet been clear. Lack of clear property rights makes it difficult for market mechanism to play its role, and the value of rural ecological environment factors cannot be realized. The monitoring system of rural ecological environment needs to be improved urgently, and the agro-ecological characteristics are not taken into account in depth.

III. STRATEGIES FOR REVITALIZING RURAL ECOLOGY

Based on the above analysis, the constraints of rural ecological revitalization mainly lie in the stock of agricultural ecological capital, the application of agricultural green technologies, farmers' ecological ethics and rural ecological governance system, etc. Government departments should "invest" to provide "guarantee" and steadily develop rural green productivity, act properly to the situation and give full play to the role of agricultural science and technology, govern people with "morality" and "etiquette" and guide farmers' green production scientifically, make innovations and deepen the reform of ecological governance system continuously, promote the revitalization of rural ecology, and promote the sustainable development of agriculture and rural economy.

A. Providing "Guarantee" Through "Investment" and Steadily Developing Rural Green Productivity

Government departments need to "invest" to provide "guarantee", carry out a series of purposeful and planned ecological construction, environmental governance, environmental protection investment, research and development of ecological technology and other ecological investment activities, strengthen the protection and restoration of the ecological environment, and enhance the green productivity of the countryside. First, pay back "old debts" more and strengthen the investment of construction-type ecological capital. In areas with impaired ecological restoration capacity, ecosystems disturbed and destroyed by human activities are restored and rebuilt in accordance with the principles of ecology. Second, don't run into "new debts" and strengthen investment in alternative ecological capital. It is good to encourage the development of green production technologies, reduce the consumption of ecological capital, and realize the technological substitution of ecological capital. Third, "consolidate the foundation" and strengthen the investment of savings-based ecological capital. The natural productivity of ecological capital can be maintained through the construction of ecological nature reserves in the areas where the ecological restoration ability still exists. Fourth, "change our mind" and strengthen the investment of compensatory ecological capital. It is suggested to promote the supporting funds of ecological compensation, internalize the external effects of ecological protection, and encourage farmers to change from the traditional development mode of high consumption and pollution to green and sustainable production mode. Fifth, allocate resources flexibly and strengthen maneuverable ecological capital investment. Through rational allocation of ecological capital across regions, such as the South-to-North Water Transfer Project, the relative shortage of ecological capital among regions can

be alleviated, and the optimal allocation of ecological resources elements can be realized.

B. Acting Properly to the Situation and Giving Full Play to the Supporting Role of Agricultural Science and Technology

Government departments should acting properly to the situation and actively cultivate new professional farmers, strengthen the market application value of agricultural green technologies, and explore the subsidy policy of agricultural green technology application. In view of the contradiction between farmers' by-business state and the revitalization of rural ecology, it is necessary to quickly cultivate a group of new professional farmers who know green operation by establishing agricultural vocational education system, setting up local training institutions such as "field university" and "farmer university". The new-typed professional farmers still have the characteristics of "socialized small-scale farmers", and can independently improve the green agricultural technology according to the code of conduct of "monetary ethics" and expand the scale of operation to obtain the marginal benefits of green production, which can not only strengthen the rural ecological economy but also produce a strong technological demonstration effect. It is also necessary to strengthen the market application value of agricultural green technology while cultivating new professional farmers. It is important to lead enterprises, scientific research institutes and other technology providers to respect market rules, enhance the practicability and ease of use of agricultural green technologies, and make agricultural green technologies more "people-friendly". At the same time, the market order of agricultural green products should be maintained, the supervision and certification of agricultural green products should be strengthened, the formation of "lemon market" should be eliminated, and the due benefits of agricultural green management should be guaranteed. Finally, it is necessary to actively formulate a green ecological-oriented agricultural subsidy policy. Agricultural green technology subsidies can be put into agricultural support subsidies to encourage farmers to adopt green agricultural technologies.

C. Governing with "Morality" and "Etiquette" and Guiding Farmers' Green Production Scientifically

Government departments should guide people with "morality" and "etiquette" and cultivate farmers with scientific and ecological ethics, and guide farmers to green production and management. The development of eco-ethics education should take into account the characteristics of Chinese farmers. Chinese farmers have a relatively short education years and outdated ideas. They need to pay attention to the popularity of educational content and enhance the practicality of educational methods. Chinese rural elites have a strong ability to influence others and farmers' neighborhoods have a great influence on each other. They need to pay attention to the order of educational objects and enhance the dissemination of educational achievements. At the same time, pay more attention to fostering farmers' scientific ecological ethics in production. Only when

"ecology" can bring enough "benefits" to farmers, can farmers recognize and form scientific ecological ethics. Therefore, increasing farmers' ecological income is the most important part of cultivating farmers' scientific ecological ethics. It is suggested to speed up the increment of agricultural ecological capital, establish a reasonable distribution mechanism of capital value-added benefits and really benefit the people ecologically. Once farmers find out through practice that scientific ecological ethics can guide their production practice activities and bring enough personal benefits, they will strengthen the recognition of this concept, and then engage in green agricultural production and operation activities.

D. Making Innovations and Continuing to Deepen the Reform of Ecological Governance System

Government departments should make innovations and continue to deepen the reform of rural ecological resources management system, rural ecological environment monitoring system and the legal system of rural ecological protection. First, it is necessary to optimize the management system of rural ecological resources and accelerate the pace of property rights reform of rural ecological resources. The confusion of ownership of ecological resources leads to the failure of farmers' ecological interests, the failure of ecological market function and the slow growth of agricultural ecological economy. Based on the principle of separation of property rights, a rural ecological property rights system can be built which covers the rights of "non-operational ownership" and "operational ownership". "Non-operational ownership" mainly refers to the property rights of ecological resources with significant ecological functions due to the characteristics of ecological resources and policy restrictions, such as the rural ecological assets strictly protected in the main functional areas and the ecological assets that have a significant impact on the capacity of regional ecosystems. These assets with significant ecological functions should be managed by the government. "Operational ownership" mainly refers to the property rights of ecological resources with strong regenerative capacity and non-policy restrictions, such as agricultural land, lakes and other ecological resources, which can be handed over to the market for operation. On the one hand, the transaction of "non-operational ownership" can be realized through government purchases to prevent major ecological risks. By purchasing ecological services, farmers are required to restrict some economic behaviors and participate in the supply of "non-operational ecological products". On the other hand, the transaction market of "managerial ownership" should be fully improved, the ownership of rural ecological property rights should be further clarified, the capitalization of "managerial ecological assets" should be encouraged, and the agricultural ecological economy should be developed through market mechanism. Second, it is necessary to improve the monitoring system of rural ecological environment and the monitoring scheme of agricultural ecological environment, pay more attention to the characteristics of rural ecological environment, and construct the quantity of rural ecological resources and the quality monitoring system of rural ecological environment. It

cannot only strengthen the meticulousness of monitoring, but also lay a good foundation for further exploring ecological laws and better developing agricultural ecological economy. It is suggested to improve the system of information disclosure of rural ecological environment, promulgate and implement relevant measures or regulations for environmental information disclosure, clarify the catalogue of environmental information that the governments at all levels of the state and local governments need to disclose and the detailed rules for its implementation, and provide information support for the management and decision-making of farmers and enterprises. Third, it is necessary to take measures to improve the legal system of rural ecological protection. For instance, accelerate the promulgation of special laws on rural environmental protection, adhere to the principle of giving priority to ecological protection, and promote the transformation of rural economic and social development into an environment-friendly one. Further, it is suggested to promote strict law enforcement of rural environment, set up environmental protection departments in villages and towns, and assign full-time rural environmental protection personnel to county or district environmental protection bureaus to manage rural environmental affairs according to law.

IV. CONCLUSION

The revitalization of rural ecology is a key strategic measure for the CPC Central Committee to build a new pattern of rural development in which man and nature coexist harmoniously and to realize the overall rural revitalization. Under the guidance of the "two-mountain" theory, it is a key link to construct a new agricultural ecological civilization system, which focuses on the added value of agricultural ecological capital and aims at improving farmers' ecological welfare, gives full play to the comparative advantages of rural ecology and thus realizes the strategic objectives of strong agriculture, beautiful rural areas and rich farmers. The formulation of China's rural ecological revitalization policy must be based on the theoretical logic and realistic difficulties. It is necessary to purposely innovate the investment mode of ecological capital, steadily develop the rural green productivity, strengthen the popularization and application of agricultural green technology, give full play to the supporting role of agricultural science and technology, cultivate farmers with scientific ecological ethics, guide farmers' green production scientifically, break down the obstacles of system and mechanism and continue to deepen the reform of the ecological governance system.

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