

# Research on Rural Environmental Governance by Polycentric Theory

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**Abstract:** Rural environmental governance is a major move to improve the quality of life of the rural population. It is related to multiple governance entities such as the government, the market, and society. This article uses polycentric theory to analyze rural environmental governance. At present, rural environmental governance faces the challenges including weak awareness and ability of the villagers, insufficient participation of market players, and weakness of grassroots social organizations. Effective rural environmental governance can be achieved through equal cooperation, effective supplementation and mutual supervision. Finally, suggestions are put forward from the perspective of the government, the grassroots social organizations and the villagers.

**Keywords:** Rural area; Environmental governance; Polycentric theory

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Although the development of economy improved the life quality of citizens, it also has negative impact of externality on environment, such as pollution. The United Nations and countries across the world pay more attention to the environmental problems. Environmental governance has become an important and hot global topic. In academia, many scholars have conducted various discussions on environmental governance. Meanwhile, some focus on Co-governance. Exactly, Environmental cooperative governance helps raise public awareness of environmental policies and encourage the public participation in environmental technology.<sup>[1]</sup> In another perspective, There are more advantages in urban areas than rural areas, such as economic advantages, talent advantages, and more government attention, so that urban environmental governance has achieved more achievements than rural areas. Rural areas face greater challenges in environmental governance, because of lacking technologies and infrastructure and poor environmental awareness.

Rural environmental governance is a public and private matter which involves social public interests, rural collective interests and villagers' personal interests. If we only rely on the government to solve this problem, it must expend huge management cost which is a economic burden for the government. Otherwise, excessive government intervention in rural affairs is obviously not conducive to the realization of rural autonomy and social democracy. On the contrary, if we only rely on villager autonomy, it is also difficult to achieve the desired results due to villagers' short-sightedness and the absence of rural environmental governance infrastructure and macro-control and supervision. In addition, the market mechanism is inherently not suitable for environmental governance due to its profit-seeking nature. It concludes that market mechanisms or government mechanisms cannot solve rural environmental problems well by itself. Under this circumstance, Polycentric theory has become an efficient theory in rural environmental governance which advocates the cooperation network between the government and citizens to maximize public interests. At the same time, the cooperation between government subject and other subjects will naturally transfer responsibilities to them, which will help multi-subject to share environmental responsibilities.<sup>[2]</sup>

## 1 Polycentric theory

The concept of "polycentricity" first appeared in Michael Polanyi's book. Eleanor Ostrom inherited the concept of "polycentricity" and put forward the theory of polycentricity. It is believed that the environmental governance is not only the responsibility of the government, but also requires extensive attention from all sectors of society. Therefore, It is necessary to establish a multi-subject governance system, with members of society taking the responsibility for environmental governance.<sup>[3]</sup> The theory of polycentric governance advocates that, besides the two hands of the market and the government, the society is the third hand to participate in the governance of public affairs, in order to make up the "market failure" and "government failure". "Multi-subject" governance emphasizes autonomous governance, allowing multiple independent power centers and service centers to coexist and jointly manage public affairs. The social factors are complex, the environmental resources are public, and the single-subject governance model can no longer meet the status. Only the pluralistic environmental governance model can meet the requirements of environmental

rationality.<sup>[4]</sup>The polycentric governance theory states that enterprises, the public, and environmental NGOs all can be the subjects of environmental governance. The value of this theory lies mainly in communalism and pluralism. Multi-subject public governance and diversified systems and public policy arrangements can curb opportunism in collective action to the greatest extent and realize the sustainable development of public interests.<sup>[5]</sup>

Using polycentric theory to study rural environmental governance has both theoretical and practical significance. Firstly, the polycentric theory provides a theoretical basis for other subjects to participate in rural environmental governance. Secondly, the polycentric theory can introduce more social funds for rural environmental governance to make up for the gap between the actual investment and actual needs of rural environment governance funds. Finally, with the help of polycentric theory, we define the responsibilities of multiple subjects in the process of rural governance, and encourage social subjects to actively participate in the public affairs of rural environmental governance, and establish a rural environmental governance network of multi-subject cooperation.

## **2 The current situation of rural environmental governance**

Promoting rural environmental governance is the key point to the success of the rural revitalization strategy and sustainable development strategy, and it is also the emphasis of improving the living quality of rural residents. Rural environmental governance is a complex and systematic project that cannot be completed by a single subject. For multiple subjects participating in rural environmental governance, there are currently the following problems to resolve.

### **2.1 Villagers' consciousness and abilities are weak**

For a long time, The government had undertaken most of the work of rural environmental governance. Villagers have formed a path dependence on this and lacked the subjective consciousness of participation, thus, the ability of villagers to participate in environmental governance is weak. In the rural area, it is difficult to avoid the dilemma of collective action and the tragedy of the commons. What's worse, with the development of urban households, there has been a serious brain drain in rural areas. Lots of young capable people have moved to cities, participating in the city construction. Due to weak rural infrastructure, few people have moved from cities to rural areas. The problem of rural hollowing is serious. Moreover, the rural areas lack a standardized management system. Villagers' random environmental pollution behavior brings bad consequences. If the behavior of environmental pollution on villagers cannot be prevented and punished in time, it would encourage other villagers' environmental pollution behavior in disguise. Over time, the rural environment problems will become more and more difficult to manage.

### **2.2 Less market participation**

The market follows the price and interest mechanism. Market players are less involved in public affairs, especially in the environmental governance project which require large investment but small in return. Most of the environmental governance in rural areas is mainly based on government governance or rural autonomous governance as the main governance model, with less market participants. The rural environmental governance market mechanism is still immature. The market subject dominated by enterprises lack the motivation to participate in rural environmental governance. This leads to the lack of important subjects in rural environmental governance, which makes it difficult to improve governance efficiency.

### **2.3 Weakness of grassroots social organizations**

The advent of the era of diversification provides a good environment for the development of social organizations. However, social organizations have more frequent activities in cities and seldom get involved in rural affairs. Grassroots social organizations are often small in scale, simple in structure, and lack of funds. In addition, the development of rural grassroots social organizations has insufficient motivation and weak strength. Moreover, in rural environmental governance, the cooperative relationship between grassroots environmental NGOs and local governments has many difficulties, mainly manifested in the lack of consensus, trust and communication. Grassroots social organizations should become the main part of rural environmental governance.

## **3 Selection of polycentric governance mechanism**

### **3.1 Value orientation: to ensure equal status of governance subjects**

The rural environmental governance system is implemented by the government, market, grassroots social organizations and villagers with different interests and preferences. The respective interests and common interests of the different subjects are carried out through the collaborative governance model. All entities should reach a consensus through equal consultations and act in concert. In a polycentric Governance system, unless appropriate autonomy is granted to each subject, the advantages of the multi-subject system will not be fully realized. The core of polycentric theory is that there are multiple subjects, which emphasizes that multiple subjects, regardless of size or strengths, conduct collective actions around specific public affairs through equal negotiation.

### **3.2 Effective supplement: Realize the complementarity of the advantages**

Each governance subject in the rural environmental governance system has its own strengths. For example, the advantage of the market is that it pays more attention to costs and income, so that it can complete environmental governance more effectively. The advantage of the government is that it can make overall planning and pay more attention to fairness. The advantage of grassroots social organizations is that it is more professional and close to the people, which is easy to trigger villagers' recognition and participation enthusiasm. The benign interaction and effective connection between them are important features of multiple co-governance, which can stimulate the enthusiasm and creativity of each subject, and realize the complementarity between the advantages and disadvantages of governance subjects.

### **3.3. Supervision checks and balances: standardize the behavior of governance entities**

A sound supervision network is a guarantee for the effectiveness, legitimacy, transparency and fairness of the rural environmental governance by multiple subjects. The supervision network is multi-directional supervision rather than one-way hierarchical supervision. While the government supervises the governance behaviors of enterprises and social environmental protection organizations, it is also

under the supervision of other governance subjects. Only in this way, can we standardize the behavior of those governed subjects and achieve efficient governance.

## **4 Path optimization of rural environmental governance**

Multi-subject governance advocates the realization of coordination, integration and interaction in governance levels, governance functions, and public and private sectors. A diversified rural environmental governance system should be built in which the government, market, environmental protection organizations, and villagers complement and coordinate each other. We should proceed from the following aspects to optimize the rural environmental governance of multiple subjects.

### **4.1 The government should play a leading role**

Environmental governance is a big project that benefits the country and the people. As the governor of public affairs and the provider of public services, the government assumes the indispensable responsibility. The government should give full play to its guiding role and guide other organizations, and individuals in the society to play their own roles, and further realize and improve governance efficiency and governance results. The government should gradually transform from the oarsman to the helm, getting rid of the micro-affairs of environmental governance, and handing it over to other subjects such as the market and social organizations. The government is mainly responsible for the macro-control of environmental governance. First, the government should shoulder the responsibility of environmental governance publicity, enhancing the awareness of other subjects of environmental governance and their enthusiasm for participating in environmental governance. Second, since the economic foundation is weak and environmental protection technology is poor in the rural area, the government should provide special funds and technical support. Third, the government, as a macro-controller and supervisor, should play a supervisory and coordinating role in rural environmental governance, and act as a meta-governance role. Multi-level governance may have the phenomenon of fitness failure, and the governance effect is difficult to guarantee.<sup>[6]</sup> So the government is here to prevent the occurrence of governance failures. In short, the leading role of the government is mainly to guide the behavior of other subjects in rural environmental governance and to ensure the effectiveness of the governance system.

### **4.2 The rural social capital should be improved**

As a self-sustaining improvement behavior of villagers, environmental protection not only requires input from the government and non-governmental organizations, but is also closely related to the development of local social capital.<sup>[7]</sup> First, wider social networks should be established including the relationship network among villagers, the government, the market and social organizations, as well as the social network among villagers and villagers. The environmental governance communication platform should be built to broaden the social network. Second, in addition to the original social network in rural areas, environment governance network can further enhance the villagers' endogenous motivation for environment governance. Second, social capital also includes rural norms, trust, and recognition. Compared with urban communities, rural areas are a society of acquaintances. Informal rural systems and village regulations can be fully utilized to restrain villagers' environmental pollution behaviors. Positive and negative incentive measures should be used to encourage villagers to participate in rural environmental governance. The villagers will have such a mentality with trust in other villagers: if I implement environmental protection behaviors, other villagers will also implement environmental protection behaviors. Under the effect of this trust mechanism, the occurrence of free-riding will be reduced. Third, the villagers' identification with the countryside is also conducive to villagers' participation in rural environmental governance. If the villagers have a sense of identity and belonging in the countryside, they will inevitably devote themselves to building a beautiful community home. Therefore, it is necessary to improve the construction of rural social capital and use social capital to standardize and encourage villagers' environmental governance behavior.

### **4.3 Grassroots social organizations should participate actively**

Social organization groups, with non-profit characteristics, are spontaneous non-governmental organizations which are independent of the government and the market. With the development and growth of social organizations, more and more of them are participating in environmental governance, such as environmental NGOs. The environmental NGOs refer to environmental protection as the main purpose and not for profit. First, grassroots environmental protection organizations specialize in environmental governance and therefore have professional advantages. They are more possible to provide more scientific and reasonable suggestions for rural environmental governance. Simultaneously, grassroots environmental protection organizations can provide more resources. Second, rooted in the countryside, grassroots environmental protection organizations are closer to the grassroots, so that it is easy for them to promote the coordination and cooperation of multiple subjects and mobilize the enthusiasm of multiple subjects to participate in environmental governance. Finally, it is more fair for grassroots environmental protection organizations to supervise the behavior of other governance subjects from the standpoint of a third party, and they can act as a lubricant for the multiple governance of the rural environment. It is necessary to encourage the development of grassroots environmental protection organizations by providing them with good policy conditions and enabling them to play a good synergy. At the same time, grassroots environmental protection organizations should also make efforts to improve themselves.

### **4.4 The PPP model can be introduced**

The application of the PPP model to rural environmental governance is good for the government, enterprises and society. The PPP model of rural environmental governance should be completed under the push of the government and the attraction of the market, in other words, it is the government's policy promotion and the market's interest attraction. The government can formulate policies to encourage market players, such as enterprises, to participate in rural environmental governance. For example, the government can make tax reductions and exemptions for enterprises participating in rural environmental governance. And at the same time, rural environmental governance projects can be contracted to market subjects by market mechanisms through government purchasing of services which can relieve the government pressure on rural environmental governance as well as improve the efficiency of

rural environmental governance. PPP model is quite useful to bond the government, market and society, and promote diversified governance of the rural environment.

#### **4.5 Improve villagers' environmental governance capabilities**

Villagers are the direct participants in the rural environment and the first beneficiaries of rural environmental governance. They are also the biggest power in rural environmental governance. The cooperation between rural communities and the government is more conducive to considering comprehensive economic, social and environmental issues.<sup>[8]</sup> Rural environmental governance involves the daily behavior of villagers. Only the endogenous motivation of villagers to participate in environmental governance be mobilized and the ability of environmental governance be improved, can the rural environmental problem be solved. Therefore, villagers' opinions and suggestions should be taken as important decision-making basis. First, strengthen the consciousness of environmental governance of the village cadres since village cadres can be leaders and practitioners of rural environmental governance. So that they can be role models and encourage all villagers to participate in rural environmental governance. Second, environmental governance should be integrated into the construction of rural culture in rural areas as a part of rural culture. The impact of culture on people is most lasting. Competitions about waste classification and waste transformation can be held regularly to incorporate the concept of environmental governance. In rural culture, environmental protection awards should be set up to mobilize villagers' enthusiasm for environmental governance. In addition, rural environmental governance lectures can be set up to gradually improve the villagers' consciousness and capabilities.

#### **Conclusion**

Rural environmental governance is a major livelihood issue involving agriculture, rural areas and farmers. Rural environmental governance is of great significance to the development of rural areas and the improvement of villagers' living standards. It is also an important manifestation of national development and revitalization, and it is a direct measure of national governance capabilities. Therefore, rural environmental governance is a major project involving the interests of multiple subjects. It is necessary to mobilize the resources and strengths of multiple subjects, to integrate the government, market and social organizations to achieve efficient governance. The polycentric theory provides a theoretical basis for the multiple governance of rural environmental governance. Under the guidance of the polycentric theory, each subject performs its own duties and responsibilities to create a better rural community.

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