

---

# EcoStudy on Rural Environmental Improvement under the Background of Rapid Urbanization-----Taking Zhaoqing as an example

Hong Zhang

School of Life Sciences, Zhaoqing University, Guangdong, China

---

## Abstract

In the context of rapid urbanization, the rural environment has been severely affected. Based on the overall evaluation of the impact of urbanization on rural environment, the methods of investigation and research are used to analyze the causes of rural environmental pollution. The main reasons include: local governments have insufficient restrictions on “three high” enterprises due to economic interests; rural environmental protection construction work Failure to keep up with the urbanization process; underdeveloped areas still focus on economic benefits and light environmental protection; urban and rural integration environmental protection system has not yet been established; imperfect policies and regulations are not in place; farmers are light and environmentally friendly. Through investigation and analysis, we will explore the navigation mechanism for establishing urban and rural environmental planning, optimize the layout system of villages and towns, and clarify the long-term mechanism of sharing responsibility and responsibility. The “Public Environmental Protection Fund” participates in rural environmental protection, vigorously develops rural circular economy and other measures to protect the countryside. Environment, revitalizing the rural economy.

## Keywords

Rapid urbanization; rural environment; remediation mechanism.

---

## 1. Introduction

Urbanization has brought about economic prosperity. Although the city's living standards have improved, it has also caused huge problems in the rural ecological environment. For example, in the eastern provinces of the frontier of reform and opening up, although the level of urbanization ranks in the forefront of the country, problems such as regional imbalances in development, heavy urban areas, heavy economics, and environmental protection have severely restricted the overall level of urbanization. Especially in economically underdeveloped areas, the level of rural development is very low, environmental pollution is serious, and the happiness index of villagers is low. In recent years, urban development has escalated, and environmental protection requirements have been continuously improved. Some traditional high-pollution enterprises have been forced to “transfer” to the countryside. Some leaders have accepted some heavily polluting enterprises in order to quickly “goal achievements” and without planning and demonstrating. As a result, some rural areas have serious pollution; some enterprises have ignored environmental protection laws, and have not upgraded their pollution discharge standards and lacked environmental awareness. This has led to serious pollution of rural soil, destruction of water environment, decline in the quality of agricultural and sideline products, and shrinking agricultural economy. Therefore, it is necessary to strengthen urban and rural overall planning, coordinate governance, strengthen the legal system, while vigorously developing urbanization, delineate the rural ecological red line, prepare rural environmental development plans, strengthen farmers' environmental awareness, and retain rural green mountains and green waters.

At the moment, attention to environmental issues is unprecedented in the international community, especially in rural environments. In the eastern areas with high urbanization, such as the Pearl River Delta region, rapid urbanization has made rural environmental pollution serious, and rural environmental governance has become a major problem. In this respect, some experts and scholars with foresight have conducted preliminary research on the governance of rural environment from the perspectives of environment, ecology and economy. From the perspective of the impact of rapid urbanization on rural environment in the eastern region, this paper uses environmental investigation and research methods to analyze the causes of rural pollution caused by rapid urbanization and explore the countermeasures for rural environmental governance.

## 2. General overview of the impact of urbanization on rural environment

Urbanization refers to the development of social productivity in a country or region, the advancement of science and technology, and the adjustment of industrial structure. The society is dominated by the traditional rural society with agriculture as the industry (second industry) and service industry (the first The historical process of the gradual transformation of modern urban society dominated by non-agricultural industries. Since the reform and opening up, China's urbanization rate has reached 50% in 2011 and reached 56.1% in 2015 (National Bureau of Statistics data). On the whole, urbanization is still positive for the development of the country's economic structure, providing a solution path for rural human resources and improving the market utilization efficiency of resources. However, from the urban-rural "dualistic" system, the agricultural and rural environment has been seriously affected by the rapid urbanization process. Rural environmental pollution and ecological damage are gradually dissolving the basic conditions of China's agriculture and giving sustainable development to China's economy and society. There is great uncertainty<sup>[2]</sup>. In particular, the eastern provinces with advanced economic development have large environmental differences in the urban-rural "dualistic" institutional structure, and the overall development of the rural areas is in a weak position, which leads to more serious environmental pollution in the countryside than in the cities. After years of hard work, the urbanization level in the eastern region reached 60% in 2015. Overall, the eastern region is higher than the western region. For example, the urbanization rate of Guangdong Province in 2015 was 68.71%, which is at the leading level in the country. However, in the rapid development of urbanization and industrialization, the "scissors difference" in environmental protection has made the environmental protection between urban and rural areas more unbalanced, the rural environmental protection mechanism system is not perfect, and the environmental infrastructure construction is lagging behind, which has seriously affected The production and life of the broad masses of peasants and the sustainable development of the rural economy and society<sup>[1]</sup>. Rural environmental pollution is higher than that of cities, so the current rural environmental governance and rural revitalization are urgent.

Table 1 Comparison of the evaluation of urban and rural ecological environment in 2015

Resident type	Satisfaction with the ecological environment (%)					
	satisfaction	Quite satisfied	general	Not so satisfied	Not satisfied	Hard to say
Citizens	33	12	33	6	15	1
rural resident	30	9	25	9	26	1

Note: survey of authors of data sources

### **3. The main problems of the rural environment in the process of urbanization**

#### **3.1 Environmental pollution brought by industrial transfer**

With rapid urbanization, urban land prices have skyrocketed, urban environmental standards have been continuously improved, and some industrial projects with high energy consumption and environmental pollution have shifted to rural areas, which has brought enormous environmental risks to the rural environment. For example, in order to narrow the regional development differences, Guangdong Province has shifted traditional industries to less developed areas in the province since 2005. Most of these “industrial transfer industrial parks” are located in rural areas, and most of them lack reasonable planning, which has had a significant impact on the rural environment. The mode of sewage discharge has been changed from the decentralized to the rural areas in the city. In particular, some traditional enterprises have not threatened the safety of rural ecological environment and water source. This phenomenon is not unique to individual provinces. The eastern region is more common, so environmental pollution caused by industrial transfer should be taken seriously.

#### **3.2 Extensive rural garbage disposal methods**

The harmless treatment of rural garbage lags behind the city seriously, the garbage collection and transportation facilities are insufficient, and there is a lack of cleaning personnel, causing serious environmental pollution problems. The two most common methods of rural waste disposal are simple incineration and composting. According to the survey, most of the rural landfills were not disinfected and flattened, and a large amount of garbage was exposed, causing a second pollution to the environment. Take Guangdong Province, the amount of garbage that is easily handled every day is about 13,314 tons<sup>[1]</sup>. Even after simple incineration and composting treatment, the hidden dangers still exist, and the second pollution also occurs. Therefore, the extensive garbage disposal method has a great impact on the rural environment, and the rural garbage disposal method should attract our attention.

### **4. Analysis of the causes of rural environmental pollution**

#### **4.1 Vacancies in the rural environmental protection system**

Compared with urban environmental supervision and management, rural environmental supervision is almost lacking. The grassroots management departments have insufficient understanding of new environmental protection issues in the process of urbanization, and few institutions in the villages and towns have seen environmental planning and environmental monitoring. According to the Zhaoqing survey, most county and township environmental protection agencies have not set up rural environmental protection full-time departments, while the town-level environmental protection departments have fewer personnel, and the monitoring scope is difficult to cover the rural areas, resulting in a blank environmental protection law enforcement in rural areas. In the face of the rapid development of urbanization, the new problems of rural environmental monitoring, environmental monitoring is difficult to put in place, facing the pollution problems of small rural workshops, most of them rely on the masses to report and supervise. The establishment of a rural environmental protection system has reached an urgent point.

#### **4.2 Heavy economic benefits, light environmental protection**

China's economic development is unbalanced, the eastern economy is developed, and the western region is relatively backward. Underdeveloped local governments generally lack the restrictions of highly polluting enterprises in order to attract investment. In order to increase GDP figures and increase local fiscal revenues, some local governments have reduced the conditions for attracting investment, cheaply transferring land, reducing taxes and waiving environmental standards, and seriously affecting rural environmental security. The introduction of corporate environmental supervision and environmental assessment is ineffective, and the arable land and water source next to the factory may be threatened by pollution. From the perspective of industrial development, if it is

rationally planned, scientifically laid out, and the use of rural environmental capacity is large, and the density of rural population after urbanization is small, it can still bring new opportunities for local economic development. However, in order to make political achievements in a short period of time, some local officials lacked reasonable planning and layout for a short period of time, re-developed and lightly environmentally friendly. When some high-risk and high-pollution enterprises were transferred, the environmental supporting facilities were not yet built. This phenomenon has led to the lack of environmental protection supervision and risk assessment, which poses a serious threat to the rural ecological environment.

#### **4.3 The rural environmental awareness is weak**

In the process of rapid urbanization, rural areas are driven by short-term immediate economic interests, lack of understanding of ecological environmental pollution problems and their hazards, and lack of relevant legal knowledge on ecological environmental protection. Generally, there is a lack of urgency and initiative for rural environmental pollution. Sex. Take the villages in Guiyu Town of Shantou as an example. In order to save costs, the small workshops in the small workshops have neglected to seriously pollute the local environment. Due to environmental supervision and media pressure, from 2000 to 2016, Guiyu Town Electronic Waste The circular economy after the industrial upgrading has achieved initial results. In the face of huge economic benefits, rural workers are almost neglected, causing serious pollution of farmland, water bodies and air. Rural practitioners are weak in environmental protection in the face of economic interests. The local government has a game psychology in the face of economic interests, so the safety of rural ecological environment is seriously threatened.<sup>4</sup> Countermeasures for Rural Environmental Protection and Development under the Background of Beautiful Rural Construction

#### **4.4 Establish a navigation mechanism for government urban and rural environmental planning**

In the process of rapid urbanization, the leadership will be particularly obvious, the overall planning of the village and town environment is neglected, and the government's urban and rural planning changes frequently and other issues seriously affect the sustainable development of the countryside. According to the survey, some villages around the city have just completed the renovation of the rural environment and are classified as the development scope of the new urban area. In the process of rapid urbanization, it is necessary to guide the overall planning of the government, delineate the areas of ancient villages where the key protection is concentrated, renovate the villages in general rural settlements, develop villages for urban development, etc., and plan the urban and rural environment. Without the government's overall urban and rural planning guidance, urban planning is lost, and the rural environment is greatly wasteful. In the overall planning process of urban and rural environment, avoid simply applying urban environmental governance methods to rural areas. Rural environmental problems are more complicated, pollution sources are scattered, and old and old pollution problems are intertwined, which seriously affect rural environmental governance.

#### **4.5 Optimize the layout system of villages and towns**

Optimize the layout system of villages and towns and improve the infrastructure of rural environment. At present, urbanization requires a large amount of labor, rural labor resources are largely transferred to cities, and a large number of rural resources are idle, objectively requiring the reconstruction of village and town systems <sup>[2]</sup>. The village and town system is not the same as simply merging the villages. Instead, it is based on the optimal allocation of rural resources and rural environmental infrastructure, improving the infrastructure of the central rural gathering areas and guiding the proper gathering of the villagers' living areas. Looking at the improvement of the rural environment at home and abroad, Japan has been relatively successful. They also developed hollow villages in the process of urbanization. The government worked hard to promote the merger of villages to improve the efficiency of infrastructure and public services. By the end of March 2010, the number of cities, towns and villages in Japan has dropped from 9,868 to 1,727, and the average population of municipalities

has increased from 5,400 to 66,823. Only 27% of the municipalities have a population of less than 10,000. And laid the foundation for environmental remediation <sup>[2]</sup>. This model of optimizing the layout of villages and towns and integrating rural resources to promote environmental governance should be one of the ways worthy of environmental governance in our rural revitalization.

#### **4.6 Defining a long-term mechanism for sharing powers and responsibilities**

Improve the farmers' awareness of active participation in environmental governance, clarify the sharing of powers and responsibilities, and build a long-term mechanism for the improvement of rural environment. In the rural environment improvement, the peasants are the main body. The government should build a long-term mechanism of sharing powers and responsibilities, improve the planning framework for the overall control environment, and mobilize the basic role of the market in resource allocation. The government and the villagers jointly build environmental facilities, and the villagers are responsible. Management, not government responsibility. In the process of rectification of rural environment, it must be rebuilt in the form of community construction, giving full play to the core business status of villagers in rural communities, rebuilding the sense of identity of their homes, and relying on the strength of the masses to build a homeland relationship. While enjoying the beautiful environment, villagers must be responsible for the operation and maintenance of the environmental infrastructure. The supervision and appraisal of environmental and rural environmental remediation is handed over to third parties in the market to operate, giving full play to the positive role of social mechanisms. Only by clarifying the mechanism of power and responsibility can the rural environment be governed and the villages revitalized.

#### **4.7 “Private Environmental Protection Fund” Participates in Rural Environmental Protection**

Rural environmental governance and protection cannot rely solely on the government to mobilize the participation of civil society organizations. For example, some private environmental welfare funds provide financial and technical support for rural environmental governance and protection, and also provide protection for beautiful rural construction. In this respect, the United Kingdom was relatively early in 1964. In 1964, the National Trust Fund was used to “anti-repair” traditional villages and cultural heritage, so that the rural environment was governed and protected <sup>[3]</sup>. Taiwan’s “New Hometown Culture and Education Foundation” has taken Taomi Village in Nantou County, Taiwan, from “hollow village” and “garbage village” to guide the villagers’ entrepreneurship and industry assistance, becoming a “worldly paradise” for tourists in Taiwan. The rural environment is At the same time of industrial development, the environment has undergone earth-shaking changes. Therefore, civil environmental protection funds can play an important role in rural environmental protection and rural revitalization in the absence of government capacity.

#### **4.8 Vigorously develop rural circular economy**

In the face of the cost of urbanization and rural ecological environment caused by rapid urbanization, and then re-examine the lessons of urbanization and rural ecological environment, it is believed that only by developing rural circular economy and promoting development through development, can rural areas embark on sustainable development. the way. Rural environmental pollution is more complicated than that of cities. In addition to transferring enterprises and small workshops, there are also problems such as pesticide pollution, livestock and poultry manure pollution, chemical fertilizer pollution, and agricultural film pollution. It is very difficult to control. If we use the rural advantages to develop a circular economy, it will be an effect. Some scholars calculated according to statistics: if you can use more than 700 million tons of crop straw per year, 40% of livestock manure, 30% of forestry waste, develop about 5% (about 5.5 million hectares) of wasteland to plant energy plants, and build About 1,000 biomass energy conversion plants, then its production capacity can be equivalent to the annual production capacity of 50 million tons of oil (that is equivalent to a Daqing). Biomass energy conversion plants are factories that use biomass energy conversion technology to produce, and biomass energy conversion technology is an important technology of circular economy. It uses agricultural waste such as crop straw, domestic garbage, organic waste, livestock and poultry

manure, etc. Raw materials, producing biodiesel, fuel ethanol, bioplastics, solidified forming fuels and biogas power generation, can see the great potential of the biomass energy industry<sup>[4]</sup>. Therefore, the development of circular economy can not only reduce environmental pollution, solve current energy shortages in China, but also promote rural economic development and achieve sustainable development of new rural areas.

## 5. Conclusion

The impact of rapid urbanization on the rural environment is diverse and complex. In the face of Zhaoqing's large rural population moving to the city, the pollution of the “three high” enterprises seriously affects rural economic development and environmental remediation. Rural environmental governance is not a simple method of copying urban environmental governance. The government takes the whole process of governance and pays attention to the benefits before the new long-term mechanism. It is necessary to macro-ordinate the overall development of rural environment and governance, combine rural environmental governance with rural cultural construction, rural economic development, establish a long-term mechanism for rural governance, and promote the system.

## References

- [1] Li Jingxiu, Li Xiangwei, Kong Li. The Influence of Industrialization and Urbanization on Rural Environment——Taking Guangdong Province as an Example[J]. Guangdong Agricultural Sciences, 2016, 43(11): 142-148.
- [2] Liu Pingyang. Research on the Influence and Challenge of Rapid Urbanization on Rural Environmental Remediation[J]. Environmental Science and Geography, 2016, 41(02): 35-38+57.
- [3] Li Jianjun. The core concept of British traditional village protection and its realization mechanism [J]. Chinese History, 2017, 36 (03): 115-124+72.
- [4] Wang Yanan, Yang Jinxiu. Agricultural Circular Economy and New Rural Construction —— Based on the Analysis of Individual Behavior of Farmers Who Are Not Participating in Agricultural Circular Economy[J]. Rural Economy, 2006(11): 110-113.