

# Problems and Solutions of Ecological Pollution Control From the Perspective of Urban and Rural Integration

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**Abstract:** With the continuous development of the national urban-rural integration, the rural areas have a great development. However, it is necessary to improve the governance of rural ecological environment. In some areas, the urban-rural dual economic structure makes the ecological environment more vulnerable, and the rural ecological environment continues to deteriorate in the process of sustainable development of rural areas. Therefore, it is particularly important to explore effective ecological and environmental protection strategies and improve the rural ecological environment in the process of urban-rural integration.

## 1. Introduction

Due to China's economic development and rapid population growth, the invasion of household waste from urban areas, especially from urban to rural areas, is spreading more and more pollution. As a result, the rural ecological environment has been seriously damaged[1]. The most obvious is the sharp increase of pollution sources and pollutants, and the rapid expansion of pollution scope. The deterioration of rural ecological environment not only directly affects the quality of agricultural products and farmers' income, but also seriously affects the living environment of rural population, which lays the foundation for sustainable development of rural areas[2]. In March 2008, China established the Ministry of environmental protection, which gave the environmental protection department a wide range of functions and powers to improve environmental awareness in both urban and local areas[3]. This shows that our government has really realized the importance of environmental protection. Now, most of the urban environment has been improved, and the rural environment has not changed much. In some areas where the ecological environment itself is relatively fragile, its performance is more obvious.

## 2. Principles of Ecological Environment Protection

### 2.1. Adhere to Overall Planning, Comprehensive Decision-Making and Reasonable Development

Correctly handle the relationship between resource development and environmental protection, protect while developing. Economic development must follow the laws of nature and be able to bring economic benefits to the region at the expense of the ecological environment.

### 2.2. Insist on Both Ecological Environment Protection and Ecological Environment Construction

At the same time of strengthening the construction of ecological environment, we must insist on the priority of protection, prevention first and combination of prevention and control, and completely reverse the passive situation of construction and destruction in some areas.

### 2.3. Pay Equal Attention to Pollution Prevention and Ecological Environment Protection

Fully consider the interaction and effect of regional and river basin environmental pollution and

ecological environment damage, and implement the unified plan of pollution prevention and ecological environment protection. Please organically combine urban and local pollution prevention and control with ecological environment protection, and strive to achieve the unity of urban and local environmental protection.

## 2.4. Principle of Complex Ecology

The social, economic and natural systems of modern cities are interconnected, interdependent and indivisible organic whole. Plan and design should be combined organically. Plan and design make use of the complementarity of these three situations to coordinate the opposites and contradictions among them and strive to find a balance among them.

## 3. The Impact of Urbanization on the Protection of Ecological Environment

### 3.1. Serious Rural and Agricultural Pollution Around the Town

With the background of modern agricultural development, the large-scale use of various chemical fertilizers and pesticides on the agricultural land and plastic film combined with large-scale agriculture has brought great pollution to agriculture[4]. The production, living, garbage and other serious air pollution discharge of the residents in the areas and cities[5]. The most serious problem is that chemical fertilizer instead of organic fertilizer is harmful to regional environment. Research shows that a lot of chemical fertilizers are accumulated in groundwater for a long time, which brings fatal hidden danger to human health.

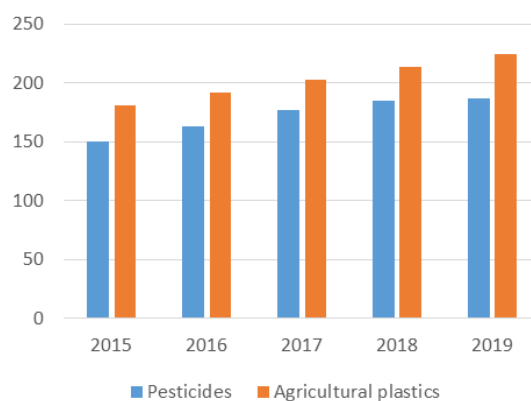


Figure 1 Use of agricultural pesticides and plastic films in China in 2015-2019

### 3.2. Serious Pollution of Rural Industry to Ecological Environment

The devastating impact of rural industry on regional industry is not surprising. For example, sulfur refining in Southwest China has resulted in sulfur dioxide content in most areas around the atmosphere far exceeding national standards. There is also a lot of acid rain in the area[6]. There is a phenomenon of "balding" in the mountain area near the sulfur refinery, and large-scale agricultural land in the surrounding area will die in a short time. In order to survive, thousands of farmers lost their laziness and created conditions for the next generation of agricultural production and life. Although a series of measures have been implemented to control industrial pollution, due to the constraints of the basic conditions of enterprises, economic environment and management level, the industries in many backward areas are still the same, and there is no obvious improvement.

### 3.3. Gradual Expansion of Pollution Sources in Villages and Towns

Township and village enterprises are the central task of urban and rural construction and rural economic development. In this strategic process, the ecological environment is closely related to the development of village enterprises[7]. After the reform and opening up, county and village enterprises have achieved epoch-making development and promoted the climax of rural economy. However, village and village enterprises are generally small in scale, scattered together and have a

large scale of operation[8]. These adverse factors seriously pollute the urban and rural ecological environment and affect the physical and mental health of urban and rural residents. Health is also very harmful.

#### **4. Measures to Strengthen Ecological Environment Protection in the Process of Urbanization**

##### **4.1. Consideration of Rural and Agricultural Development**

The three main goals of rural and agricultural sustainable development are production goal, income goal and environment goal. Urban and rural construction and development continue to reduce arable land, agricultural harvest is facing great pressure[9]. As an important indicator of agricultural development, production indicators directly determine the income of farmers and rural market capacity. Only by setting these two goals can industrial development and labor production continue to expand market demand. The environmental goal is to maintain the healthy development of ecological environment and provide the basis for the transformation and sustainable development of rural agricultural economy[10]. This shows that the most important factor for the normal and healthy development of urban and rural construction in China is the natural ecological environment. Therefore, the accounting mechanism of agriculture and rural natural resources should include the actual and reasonable statistical calculation and evaluation of rural natural resources in relative time and space, as well as the new natural resources, physics, quality and value in order to confirm. Modify the balance level and utilization level, and initially change the excessive damage to natural resources.

##### **4.2. Strengthen the Government's Management Intervention**

Administrative measures, economic restraint and legal supervision are the basic methods to control the rural agricultural environment. There are many administrative measures. However, the previous administrative system was not standardized, and the deficiencies were binding. Therefore, administrative measures need to be further implemented, optimized and improved. The economic strategy is to limit the enterprises through compensation, handling fees and emissions trading. This method has been used in China for a long time, and the problem is very serious. For example, the charging standard of sewage charging system is pollution concentration, but the standard is very low. Enterprises with large sewage discharge pay more for sewage than for pollution countermeasures. Legal supervision refers to the legal acts that restrict legislative and judicial activities, restrict economic activities, promote urban and rural construction, supervise the economic activities of shiding village, and make it conform to the social and economic development goals. Today, through legal governance, China's rural agricultural environment governance has made a breakthrough. A series of decrees on natural resources and environmental protection have been issued. Adapt to laws, institutions and regulations. This phenomenon has seriously affected the intensity of supervision and implementation, so that the environmental protection of small cities can not be carried out normally. In order to solve this problem, we should strengthen the legal supervision institutions and improve the importance and authority of legal means.

##### **4.3. Strengthening Environmental Protection**

The environment is the basis of the development of human society. To strengthen the law of nature protection, we must abide by "natural law, scientific plan, prevention of public hazards in an all-round way, responsibility of administrative interpretation, and participation of citizens". In the process of integration of urban and rural areas, we should develop regional agricultural environment, ecological industry and eco-tourism, and gradually establish an environment-friendly economic structure and industrial layout that takes into account the regional environmental carrying capacity. And realize the dynamic balance between environmental protection and economic development. Please actively explore the establishment of Low-carbon Economic Experimental Zone and explore the mode suitable for the development of low-carbon economy in the region. Improve the quality of urban and rural civilization. Realize nationalization of buildings, neat appearance of villages,

industrial ecology and democratic management.

#### **4.4. Adhere to Ecological Concept**

The mode of innovation and development for poverty alleviation, the natural environment for poverty alleviation and development, the backwardness of most of the poor, economic and social development, the construction of infrastructure, industrial development, and the promotion of ecological environment protection. At the same time, promote the sound and rapid development of rural economy and society. We will promote coordinated development between urban and rural areas.

### **5. Afforesting and Beautifying the Environment of Living Area**

#### **5.1. Ecological Construction of Roads**

According to the historical form and direction of the road, maintain the village structure and build rural roads by classification. The village main road can meet the external traffic of village vehicles, cement road and asphalt road. Village level secondary roads can pass agricultural vehicles and small agricultural machinery, and stone, brick and inorganic adhesive roads can be considered. The roads, porch roads and driveways of the house connect all the houses. It's just pedestrian and non motor vehicle traffic. The width of the road is very narrow. Some gravel, gravel, waste brick, gravel and other ecological materials are selected to promote rainwater infiltration. Groundwater. The main road should have soft shoulders on both sides. Trees and flowers are planted on the shoulders, and trees on the sidewalk are one-way or two-way. Trees on sidewalks do not need to be evenly spaced. Extensive ecological breakwater for trees, irrigation and grass. Road greening plants are mainly natural trees, shrubs, weeds and weeds. Some weeds and weeds are generally removed from heterogeneous plants and clusters. Peanut, soybean, sweet potato and other crops can also be used as roadside. When the green road passes through the vegetables and farmland, it is slightly higher than the farmland on both sides. The roads near the villagers shall be managed according to the principle of each section. Villagers are rewarded with planting vegetables and fruit trees on the roadside. Keeping the side of the road clean and tidy is not only conducive to the maintenance of the road, but also conducive to farmers.

#### **5.2. Courtyard Greening**

There are some problems in the rural middle courtyard, such as high wall, hardening or pavement is not in place, and the greening of the middle courtyard is not in place. The low atrium wall or wall + the rural atrium surrounded by vegetable fields can better reflect the simple beauty of the countryside. The playground of the atrium can be paved with bricks or stones. The laying range is suitable for walking in the rain and daily production and life. Horticultural greening includes planting trees, flowers and fruit trees, flowering shrubs and potted plants. According to the size of each courtyard, beautiful trees can be planted. Generally speaking, two or three trees can be planted in the yard. Flowers and fruit trees are mainly small trees with beautiful colors and full fruits. 5-6 trees are planted in one corner of the courtyard. Smaller courtyards can be planted with horned owls, or potted plants can replace the ground. Three dimensional greening can make the walls of atrium climb up smoothly and weaken the rigidity. Considering the high scale of surrounding walls, footholds are set in villages. In order to make up for the amount of village greening, footholds are set in roofs and roofs.

### **6. Conclusion**

Cities and rural towns should be places with better sky, greener ground, cleaner water and natural healthy life. Under the principle of building a beautiful China, the improvement of urban and rural environment must follow the principle of ecological priority. Before taking concrete measures, we must make full use of the impact on the environment, natural resources and natural forces to continuously analyze the environment. All aspects of agricultural production and rural life

reflect the ecological rationality. Understand the importance of urban and rural urban ecological environment protection, as well as the specific measures of urban and rural urban environmental protection, so as to make the comprehensive construction of beautiful cities and rural towns embark on a healthy development path.

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