

The Exploration of Improving the Quality of Rural Environment

Ren Xiaofei & Yin Jun & Zhang Yijie

College of Urban and Rural Construction, Agriculture University of Hebei, P.R.China, 071001

ABSTRACT: The article describes the main environmental status and issues in the rural planning; Analysing the reasons of the environmental issues in the rural planning and exploring the strategies of improving the environmental quality in the rural planning; Describing the operable strategies of improving the environmental quality.

KEYWORD: Rural Planning; Environmental Quality of Village; Planning measures ;Environmental Policy

1 THE BACKGROUND TO EXPLORE THE ENVIRONMENTAL QUALITY IN RURAL PLANNING

Since entering the 21st century, the concept of sustainable development has become an international consensus. Due to the impact of long-term urban-rural dual structure, the tendency to ignore the importance of villages has not fundamentally reversed, it has a considerable gap in quality of living environment between city and country. Therefore, it is an urgent problem to improve the environmental quality in rural planning.

The concept of sustainable development should be treated as the guide to dealing with the environmental issues in the construction planning process of rural planning. It is not only the necessary of the rural sustainable development that how to improve the rural quality of environment, but also the important content to build the socialist beautiful country.

2 THE MAIN ENVIRONMENTAL PROBLEMS IN RURAL PLANNING IN CHINA

Since initiating the reform and opening-up policy, people living in rural areas have improved significantly, productive conditions have been markedly improved. But the environmental problems in rural areas have appeared a series of issues.

2.1 *Diffused pollution is serious in agriculture*

It reflects in excessive use of fertilizer, pesticides and plastic products, and the rural environment has

been seriously polluted ,and also it has become one of the important factors in water and soil pollution. The excessive use of pesticides and chemical fertilizer causing soil compaction, permeability and fertility decline, leading to the drop production of crops.

2.2 *Environment is polluted by the scale raise of livestock and poultry*

Many livestock farms lack of general considerations in dealing with animals' dung harmlessly, so that a considerable part of the manure discharged into the river directly. On one hand, nitrogen and phosphorus also discharged into the river, lead to eutrophication of rivers and lakes. On the other hand, a variety of pathogens in the livestock manure has a severe pollution to water, and this effect has become an important cause of organic pollution in water. Moreover, manure also pollutes the environment of surroundings, and it can cause epidemic diseases easily.

2.3 *The pollution of the garbage in the life has been increasingly serious*

Due to the lack of infrastructures and regulations there exists a phenomenon that sewage pours casually and garbage dumps promiscuously. The garbage stacks in the open air with untreated, so it not only becomes a breeding bed for mosquitoes and flies, but also becomes an important diffused pollution to surface water and ground water.

2.4 The pollution produced by the rural industries and enterprises is getting serious

There are many factors in the rural industries and enterprises that lead to the environment polluted, such as the small scale, the humble equipments, the backward technology, the unreasonable enterprises' layout, the weak awareness of environmental protection and so on. Industrial wastes pollute the rural environment without treatment. It will constraint the construction of the beautiful country if the pollution of rural industries and enterprises is not changed timely and effectively.

2.5 The urbanization appears in villages, the villages lose their traditional style and features

With the gradually increasing level urbanization in rural, there appears a phenomenon that asphalt roads and buildings in villages, the farmland losses their original role, farmland used for construction, the agricultural landscape has lost gradually. There is no link between urbanization and agricultural production, and the villages lose their traditional style and features gradually.

3 THE PLANNING MEASURES OF IMPROVING THE ENVIRONMENTAL QUALITY IN THE RURAL PLANNING

To protect the rural environment, it should to find the main reasons why the environmental problems come from. We can explore in many ways to improve the environmental quality.

3.1 Improving the protection policy system of rural environmental

A legal protective law system for rural environment should be established in the rural planning, so that we can rely on the law if there exist the pollution in rural. Resolving the diffused pollution by establishing laws and guiding the villagers reconstruct the toilets, the kitchens, livestock pens and so on.

3.2 Enhancing the awareness of protecting the environment, and improving the environmental infrastructure

By propagandizing the importance of the importance of environmental protection, it should guide the villagers bring up the concepts of civilized product, lifestyles, and green consumption. Improving the environmental infrastructure, placing recycling bins and transfer vehicles, classifying and transporting garbage on time. Strengthening the collection and management of rural medical garbage and establishing recycle bins for medical and industrial

garbage. Building methane-fermentation system to realize the energy recycling.

3.3 Protecting the natural and cultural characteristics in rural and region

Rural residential planning should highlight the local and national characteristics. Rural residential not only should be harmony with the natural landscape, but also focus on the cultural characteristics, the original spatial pattern and the unique cultural activities in the local residential. Only by doing so, can the historical and cultural value of ancient villages and ancient houses be protected.

3.4 Realizing the agricultural sustainable development by turning the traditional agricultural development pattern into a modern and intensive one

Agricultural modernization is an important foundation for sustainable development of agriculture. It can be summarized as mechanized, irrigation and electrification, that is to say, agriculture should be equipped with modern industry, modern science technology and modern management methods. By doing this, traditional agriculture transforms into the advanced level of agriculture in modern times.

3.5 Changing the industrial layout and promoting enterprises to take the road of sustainable development

Industrial layout in rural areas is of great significance for the sustainable environmental. In the industrial planning it should be combined with the local development of objects, and following the principle of saving energy saving land and using of less energy produces more products. At the same time, it should collocate the industrial structure properly, generating a industry chain to improve the utilization of energy.

3.6 Creating a beautiful landscape system and improving the environment of the landscape

The landscape system of a country should be combined with the form of the country. A series of principles should be insisted to improve the landscape system, such as principles of people-oriented, cultural heritage, to suit the measure to local conditions, native plants, economy and benefits, and so on. Make full use of the space near the water and the land next to the village and so on, to plant crops and other green plants.

4 THE APPLICATION IN PLANNING PRACTICE

From the case of improving the appearance planning of Dongying village to analysis the effective measures of improving environment quality in the planning of rural construction.

4.1 *The protection of traditional culture in village*

Han village is the hometown of wicker since it was ancient times, the workmanship of the wicker is exquisite, wicker crafts become an important industry to improve the villagers' income. For the production of wicker industry, firstly, we should pay attention to integrate the traditional resources in modern life way and innovate products. Secondly, building a regional and excellence brand to expand the popularity of wicker.

The development of Dongying stilts has been more than 170 years. For the protection of stilts culture should be combined with wicker industry characteristics. Integrating the traditional culture with modern culture, show the unique rural characteristics.

4.2 *The protection of dwellings' traditional feature*

For Dongying village's traditional dwellings, it should be combined with local feature to improve its traditional feature, using the measures of partial renovation, structural reinforcement. We should choose the traditional material to improve the roofs and windows, and keeping the traditional styles and features of local dwellings. Cornices can be set in the north-south direction, and their length should more than 0.8m. Roofs can be designed for local accessible roof, and should consider the requirements of sunshine. To meet the security, lighting, ventilation and other performance requirements, the doors and windows transform to use modern technology to improve the insulation effect and modelling, attention to increase the beauty. To enhance the thermal insulation effect by transforming the damaged and doors and windows. The reconstruction of damaged doors and windows should choose the better insulation material, double-glass structure is good, and the color should be in white.



Figure 1. Effect picture of roof



Figure 2. Effect picture of windows and doors

4.3 *The green planning of the village*

North of the village is the external window, in order not to block the peripheral landscape in the east of the village, planting economical shrubs and using the way of trees inline in periphery. Village road greening adopts the way of arbors, shrubs and flowers of three layers of planting to improve road greening environment. Courtyard greening should be closed to the villagers' life, use small trees and native flowers to form the strong rural flavor residents landscape, encouraging villagers to beautify and green the courtyard environment through planting persimmon, apple, pomegranate and other fruit trees. The public activity center greening is given priority to with concise and practical, should choose beautiful crown type tress as the shade place of the cultural square, form the village landscape center.

4.4 *The ways of dealing with garbage and the measures of planning*

Dispose of household garbage should configurate indoor garbage sorting boxes and garbage collection vehicles, adopt motor tricycle, configurate one. According to the principle of autonomy of villagers, formulate rules. Villagers' residence construction should follow the relevant procedures and regulations, don't have open cesspit, don't have all kinds of garbage, and accept the supervision and management of the village committee.



Figure 3. Planning of environmental sanitation facilities

4.5 The treatment of sewage

There are no sewers and storm sewers in the village, rain flows into the pond in the south and west of the village. In accordance with the requirements of the residents' kitchen and bathroom renovation construction, the toilets are transformed to the flush toilets, planning is combined with the layout of the village roads, considering from the aspects of environment protection, maintenance and management fees to plan drainage system with rain and sewage separate system.

The planning of rain drainage takes advantage of the terrain, following the principle of scattered and nearby emissions. Combined with the status quo of drainage, storm sewers should be buried under the east and north sides of the road as far as possible, the rainwater discharged into the pond in the west and south of the village by setting up storm sewers.

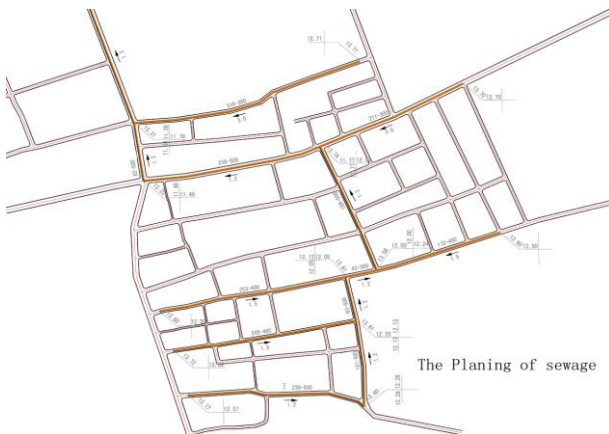


Figure 4. Planning of sewage

4.6 Advocate comprehensive utilization of new energy and straw

At present, there is no farmers use biogas in the village. This planning mainly recommend the village to promote the use of solar energy. Making full use of solar energy, install solar water heaters, solar ovens and solar lights, which has great significance for reducing the pollution of the rural air and environment.

5 CONCLUSION

1) First of all, by protecting the natural environment to improve the quality of the rural environment. By greening of the village, establishing the garbage and sewage treatment systems, to improve the village's natural environment.

2) By protecting the cultural and social environment to improve the quality of the rural environment. Dongying village is famous for tis wicker and stilts, by establishing wicker association and stilts courses to protect them. Rural planning should respect the local culture and features, protecting its unique cultural characteristics.

3) By protecting the traditional style to improve the quality of the rural environment. Dongying village by protecting its unique roofs and windows to protect the traditional houses' style. Therefore, rural planning should protect the houses' traditional style, the traditional layout of the villages, ancient architecture protection, to protect the village's traditional style.

In a word, improving the rural environment quality should be guided by the concept of sustainable development firstly. Coordinating various resources in rural areas, setting up the concept of ecological construction, respecting the local culture and features, deploying the service facilities which adapt to modern life, using new energy, etc. By doing this, it can create conditions for healthy environment and coordinated development in the new century village.

REFERENCES

- [1] Liu Jing. The Research of Ecological Civilization Construction Under the China Socialism. *Party School of the Central Committee of CPC*.2011.
- [2] Miao Fanglin. The Environmental Protection in Urban Planning. *Science and Technology of Henan*. 2014(05).
- [3] Li Dongyang. The Methods and Strategies of Solving the Environmental Pollution in the Village. *Resource Conservation and Environmental Protection*. 2013 (12).
- [4] Zhou Hui. The Environmental Issues in the Rural Construction. *Water Resources of Hebei*. 2009(04).