

The Contradiction of Suburban Environment Conservation and Use

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Abstract

With the rapid development of urban suburbanization, a plenty of commercial operation of suburban environmental resource, the environment in suburb is more and more deteriorated. It also leads some passive effect on ecology, human, society and nature etc. At the same time, a serial of emergency rescue action has been implemented to decrease the deteriorating of suburban environment. For example, some important ecology nature reserves were built up; some compulsive protections have been put in practice for some key resource development region and gotten some good achievements. However, we still face the problem is that how to balance the contradiction between suburban environment resource development and conservation. It's necessary to introduce some western advantage management ideas, combined our actual situation, to find a way which is the most benefited to combine our country's suburb environment development and use.

Key Words : Suburban Environment Conservation, Contradiction of Conservation and Use, Solution

Since 1980's, with the development of urban and the increase of people life level, many enterprise, plants and people in the most of country large cities have started to move from the center city area to the suburb, and enter in the suburbanization development time. The suburbanization for one city is encouraged to develop and use the suburban resource. Although it brings a lot of profit, it also impacts the suburban ecology environment. In this article, we will give an example based on Beijing, and try to analyze the use status of suburban resource & the protecting solution that government has been launched to avoid passive effect. At last, some methods and/or proposals are presented to solve the contradiction of conservation and use.

I. SUBURBAN ENVIRONMENTAL USE

1. Suburban Environment

"Environment" is clearly defined in the environment conservation law of the people's republic of China, includes atmosphere, water, soil, mineral, forest, grassland, wild animal and plant, hydrobiology, famous and historic site, landscape zone, hot spring, recuperating district, nature reserve and living areas.

Now, we will talk about the current status of suburban environment use regarding to some points mentioned in above.

2. The Current Status of the Use of Suburban Nature Resource

1) The use of soil resource

(1) The industry, enterprise in city center area

moving to the suburban

Some polluted & disturbed industries in city center have to be moved to suburb under the order of urban general design. Some encouraging policy has been established for industry moving by government, promoting the most of polluted & disturbed industries to move to the suburb. There are more than 100 metallurgy, car components, chemistry engineering and medicine industries inside of Beijing the third loop road had been moved to suburban areas by the year 1990.

The industry structure re-organization makes the industry mobility. Since the 1980's, our city started the policy of no-free use of soil. Because of the high price of land in the center of city, some industry can't afford the high land price and rent. They had to exit and move to the low price land such as near suburb or far suburb.

(2) The development of suburban resident building

With the expansion of city, the people's aspirations of sun shine and refresh air and a lot of population migration from countryside to urban, some people who lived in city at first started to move to outside of city, suburban areas. There are more and more living building, town house are constructed in suburb.

(3) Built up the child shopping site in suburban areas

In the nearest of suburb, some of them is easy to arrive and potential value added, some new super-markets and shopping malls are opened. The city is enlarged to close the suburb.

2) The use of water resource

(1) Construction of large and middle reservoir for Beijing

There are 85 large and middle reservoirs which volume is greater than 100 thousand m^3 in Beijing. The most of them are located in mountain area, and

the total volume is about 9.3 billion m^3 , 99.5% of the total reservoirs volume. There are many small reservoirs located in everywhere. They not only supply the plenty of water but also improve the Beijing's ecology environment.

(2) Beside of irrigation for agriculture and forest, the water resource has to afford the more and more water-consumed request from living, industry and commerce.

3) The use of tours resource

(1) Build up tour landscape zone by using the nature resource, construct the mountain area to the vacation palace for capital people.

There is fantastic topography, great mountain, rich plant, wonderful landscape, rich and unique relic and royalty garden etc in Beijing. For example, Zhou-KouDian pithecanthrope relic, BaDaLing Great wall, ShiSanLing royalty tomb and Shi Ma Tai Great wall etc are listed in world culture relic site.

(2) Encourage the development of tour agriculture

Construct many fruit garden in suburb like cherry, watermelon, apricot, vegetable and peach etc. Allure the tourist to purchase some agriculture foods or fruit.

(3) Open tour vacation village, traditional custom village by using the local region advantage and potencies. Such as the HongZun Fish valley, Farmer visiting etc.

(4) Based on the abundant water resource, open some water tour items. Such as swimming pool, children happy pools in YanXi lake, ShiShanLing reservoir and GuanTing reservoir.

4) The use of mineral resource

The mountain area is the main mineral resident in Beijing. Currently, more than 62 types of mineral are discovered and located in 323 places. There are 95% of mineral and 88 % of resident are located in

mountain areas. Some mineral reserves are proceeding of all country, PingGu and HuaiRou has become county that has rich gold.

II. THE CONTRADICTION OF SUBURBAN NATURE RESOURCE USE AND ECOLOGICAL ENVIRONMENT CONSERVATIONS

Many industries and enterprises migration, thousands of people migration and some city commercial construction projects migration to suburb, drive the development of suburban industry and other enterprise, stronger promote the construction of suburban and it's urbanization. However, the city suburbanization has introduced the passive effect to Beijing suburban ecological environment, conflicted with the ecological environmental conservation.

1. The Contradiction of Green Insulation Zone Urban-Satellite Town and Urban Extension

The urban layout of Beijing is generally a "distributed group". The center zone is called central group, other 10 satellite towns is designed as fringe group. The plow land, vegetable land, forestland, pool are kept between two groups and green insulation zone are opened. This layout mode has significant to Beijing urban development and ecological environment conservation. However, constraint of economy and traffic level, the center population and industry can't or is impossible to move too far away. More and more nearest moving leads the city to expand to around. It can't be avoided that the city will be extensive layout. Then the green insulation zone will be eaten slowly and slowly. The Beijing distributed group layout mode will be failed. According to Beijing statistic report, the

area of green insulation zone is 290 km² in 1980, 240 km² in 1990, and less than 200 km² in 1998. The central group has closely connected to other 10 fringe group.

2. The Contradiction of Expropriation and Protection of Plenty of High Grade of Plow Land

Many migration industry and/or enterprise' occupy a plenty of high-grade land at the beginning of suburbanization. The urban around land are allocated: plow land and vegetable land are invaded. There are some critical issues like advance occupy land, circle land as wanted, and desolation of occupied land, illegal transfer. The construction of large-dimension, low-density suburban living building occupied most of countryside land. All these issues make plow land smaller and smaller. Many villages are pursuing the profit that they can see today, sale the land by low price or build up house in the plow land for rent. All above issues threatens the sustainable development.

3. The Contradiction of Development and Conservation of Suburban Ecological System

The suburban ecology system is composed of farmland, vegetable land, fruit garden, forestland, nursery, river, park and avenue etc nature element. It is the most important component of urban ecology system. The city must dependent on the suburban ecology system to input the material and energy that the city is required for normal operation, and output trash. We should protect it to avoid corruption. However, The construction of Beijing suburban plenty of, out of order plant house and living building occupy not only much more farmland and vegetable land, but also fruit garden, forestland and nursery. The rapid consumed water in industry and living leads to

overage exploitation of ground water in some districts. The green land and forestland around of city are more and more reduced. The ground water is more and more less and polluted. The internal communication and order of suburban ecology system is broken, also for space integration. It's frangibility is worse and it's support and adjustment control ability for whole urban ecology system is also decreased.

4. The Contradiction of Suburban Environmental Pollution and Protection

Because of a lot of population migration, industry and enterprise migration, and the environment conservation establishment can't be equipped in time, a more serious pollution for suburb is caused. For example, the water and soil are polluted since lack of disposal equipment for polluted water coming from new residential areas and suburban migration industry. The polluted water is directly ejected to river, ditch and plow land without any disposal or disposed not exceed national standard. Many waster water, waster gas and solid trash polluted surrounded farmland. Currently, the more and more family has owned cars, and it leads traffic jam and serious air pollution.

III. THE CURRENT GOVERNMENT CONSERVATION POLICIES AND STEPS

The suburbanization of Beijing has already started and progressed very fast. The suburb is the most of fragile area in the ecological environment and is easily corrupted. Once it's corrupted, the rescue/resume will be very difficult. Face with the many contradictions of suburbanization development, and find a way for city healthy development, the government must focus

on existing issues and implement a serial of conservation policies.

1. Bring The Suburban Layout Design Into Urban Layout Design, Strengthen the Government Macro Adjustment & Control

The government should carefully investigate the suburbanization rules and mechanisms, organize & harmonize the suburban land and it's construction, lead the healthy development of suburb. The government should adjust the urban layout design, work for a consolidated design to fit the sustainable development of suburbanization. The government should bring the suburban residential areas development plan, suburban industry zone development plan, suburban construction land plan, suburban infrastructure and service establishment into urban general layout design. Enlarge the cover range of the urban general design: follow the rules of suburban construction. Moreover, it should be stressed that suburban ecological environment conservation is the most important component of urban design and construction. The government should define the standards or laws for suburban water protection, plow land protection, ejection trash, noise control, and gardens. The suburban construction should be as possible as to use more barren sloping field and sands land, use less plow land. It is suggested to grade and evaluate the suburban lands and set up rules for suburban lands sales and transferring to fit the marketing. It is encouraged for far counties to develop the ecology module district and ecology agriculture. The residential areas development should be reasonable and good design. The estate project should be centralized control, has a reasonable location, then the ecological community sustainable development and ecology system fine circulation will be realized.

2. Powerful Action to Protect the Suburban Ecological Environment

In order to prevent the unlimited expansive of Beijing area & ecology corruption caused by suburbanization, conserve the existing green land, farmland and garden, we can take some experience from western country: encourage small land trade, legislate for environment sanitation, encourage to build high density residential district and industry areas to save land. The more and more land could be used as landscape garden. This will improve the clean capability of suburban ecology system to pollution.

In addition, we should work out the rules, standards and evaluation index system to conserve the ecology environment. It is stressed to strengthen the construction of nature reserve, strengthen the conservation of culture relic and nature relic, improvement of tour management, develop ecology tour, intensify the construction of forest garden and landscape park. The government should implement the compulsive conservation to water, land, forest, grassland, mineral, fishing, biological species and tour resource. There should be some areas assigned as no exploitation, no cultivation and no cutting at the places that the ground water is severely over-exploitation and it is a weak ecology system.

3. Sufficiently Exert the Landscaping to Protect the Suburban Environment

Landscaping is important to improve the suburban environment. We should development more landscape in suburb. Every discrete green lands could be connected in whole through the planting reserve forest zone, landscape isolate zone and conserving the original nature forest. Open suburban large landscape park, forest park to clean the air, reduce the noise, anti hurricane and block sand storm, lighten hot island

effect. All these work can eliminate the city pollution, reserve suburban crops, and protect the suburban environment resource. The suitable land and tree should be used in the landscaping construction: select diverse tree, multiple layout to change the former single tree and layout. It also should be noted that the use of tree color and season, adopting of man-made and nature tree. It is prescribed in the solution of Beijing Urban construction general layout design that: turn green the 6.5 million acres of 10 million acres of Beijing mountain areas, construct a green strip around the Beijing city along the XiaoXiSan, WenYu river, BeiYuHe, SanHaiZi, TuanHe palace and YongDing river.

4. Strengthen the Management of Water Resource, Make It Sustainable Use

Water is the basic element of all life in the world. It's one of the indispensable basic substances for human life and production. However, with the development of suburbanization, a serial of water resource crisis is caused like industry and life water is excess use, water pollution, ground water excess exploitation, less precipitation because of environment deterioration and corrupted vegetation. To realize the water resources sustainable use, it is necessary to construct high-efficiency and sequent water resource management mechanism. For example, advocate using water economically, conserve water resource, strengthen the control of water pollution and develop the recycle water. In addition, the reserve forest can be constructed around the urban polluted water and the heavy metal in polluted water can be absorbed by forest tree root system instead of enter in food loop. These reserve forests exerts on the block of wind sand and filtration of the polluted water.

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