

Exploration and Classification: A Study of Park City in the Context of Ecological Governance

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Keywords: park city; ecological governance; green ecology.

Abstract: The park city is the development trend of the world in the future. In terms of ecological governance, it is necessary to sort out scientific and perfect park city development and construction indicators. Based on the understanding and analysis of the importance of green ecology to the construction of park cities, through the comparative study of multiple cases in New York's Central Park, the Netherlands, Xiamen, and Guangzhou. This paper points out that based on the correct awareness of the problems in the development process, from the development of more advanced countries or learning from the experience in the city is the key to the success of the park city planning and construction.

1. introduction

Since the industrial revolution in the 18th century, the rapid development of urbanization has brought serious negative effects on the living environment of mankind. Mankind began to re-examine the development of industrial cities. The concept of the park city firstly originated from the development of the ecological city concept. In the 1970s, the concept of eco-city development was first proposed in the study of "Man and the Biosphere (MAB)" [1]. In the 1980s and 1990s, the "Our Common Future" report was promulgated by the United Nations Commission on Environment and Development, proposing the concept of sustainable development. In 1987, the Chinese academic professor Ye Qianji first defined the concept of ecological civilization, which was later spread to the West [2]. The concept of the park city is different from the previous concept of urban development. It is a characteristic of the development of the new era in China. It pays more attention to the harmonious development of people and green ecology. Therefore, we need to consider more comprehensively how to promote the high-quality development of the city. In addition, the environmental problems in contemporary Chinese cities are becoming more and more serious. Carbon emissions, resource shortages, serious pollution, and ecosystems have led to the weakening of biodiversity. In this case, how to build an ecologically livable park city and build a harmonious and beautiful environment is particularly important [3]. The park city is dominated by green development, closely related to green governance, and creates a new era of high-quality urban form in which man and nature are harmonious and unified.

2. Park City and Green Ecology

With the development and popularization of green buildings, green has gradually developed into the background color of the city. Green ecology emphasizes that cities should start from planning and design and incorporate the concept of "greening", including the establishment of a resource-saving and environment-friendly city in terms of transportation, space, and architecture [4]. Cities should revolve around green, integrate them into green, and build green-based urban infrastructure, such as wetlands, ecological landscapes, micro green spaces, and park browsing spaces [5].

Park city is a green, efficient and low-carbon urban life operation mode. This specific performance is the following aspects. (1) Park cities no longer adopt a high-energy input and low-value output production method like the previous industrialization model, but insist on a green, low-carbon, and

environmentally friendly basis, and transform into a more green model. A development model with low input and high output. (2) The park city improves the efficiency of the energy cycle conversion system. The original single-item industrialized economic output mode is changed, so that the urban conversion system can realize more effective resource recycling. At the same time, enterprises and factories have also strengthened their independent innovation capabilities, leading the transformation of resources to be more effective and realizing high-efficiency production. (3) The perfect combination of the city and the green ecology can make the city more vibrant, thereby increasing the happiness of the people. One of the important characteristics of park city development is to enhance people's well-being and improve people's sense of happiness in life.

3. Existing problems of green ecology (evaluation index)

The park city is a new concept of the urban development model, and various experts and scholars have different knowledge and understanding of it, so that there is still no unified scientific concept. However, in China, there is no precise indicator system for the planning and layout of urban green space, ecological landscape environment, etc. to regulate what is a qualified park city system. As a result, the government blindly increases the urban green environment and builds green infrastructure to hinder urban development [6]. Therefore, by emphasizing the elements of ecological governance, this paper analyzes the existing typical domestic and international park city operation and maintenance models and evaluation standards, and understands the development context and implementation path of park cities based on ecological governance.

Through literature review, this article divides the evaluation system of Park City into five elements, as shown in figure 1:

a) *"People"* :people's life activities and reflect people's happiness.

b) *"Industry"* :the productivity of enterprises and factories, which includes economic benefits, technological development, product production, etc.

c) *"City"*: the organization and coordination of urban and rural planning.

d) *"System"*: the governance of higher-level departments such as the government, and is related to systems, policies, and laws.

e) *"Environment"*: the harmony and unity of green ecology and natural environment [7].

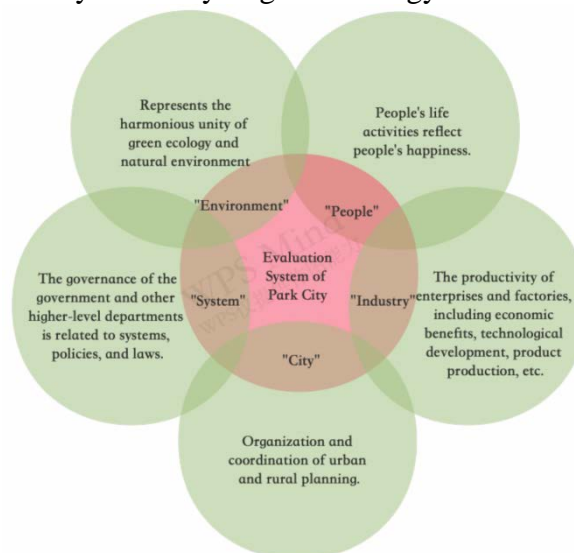


Figure 1. Evaluation System of Park City

In this study, the evaluation system related to the "environment" of the park city should be combined with the evaluation system related to the ecology of the city, so that the park city evaluation system can be formulated in a more systematic and detailed manner. A comparative analysis of the relatively well-planned green eco-city cases in foreign countries and the cities that are under development will help to find their own gaps, face up to their own development deficiencies and make up for their own

weaknesses. In order to sort out more unified, scientific and systematic indicators of the green ecological evaluation system.

4. Domestic and abroad case studies

4.1 New York Central Park



Figure 2. An aerial view of Central Park in New York jiangyin.jiwu.com



Figure 3. New York Central Park landscape map www.uniqueway.com

In the mid-nineteenth century, due to the industrial revolution and the continuous influx of immigrants, American cities such as New York and other major cities experienced unprecedented urbanization. The city is expanding urgently, the proportion of public space has been compressed, and the shortcomings of the original urban pattern have been exposed [8]. Federico Lowe Olmsted believes that the urban park system has "integrity". For planning a city's ecological system, it is very important to link nature, greening, infrastructure and people's health, leisure, and entertainment. Therefore, as shown in figure 2, the design system of the Central Park is divided into two parts: the exterior and interior: the exterior system is designed to consist of four highways that cross the park, which are arranged underground through the difference in topography, separated from the transportation system inside the park, forming a reasonable and reasonable ground and underground system. Ingenious transportation hubs are called Separate Circulation Systems. At the same time, internal system design: Control the density of plants according to the changes in the original terrain to help weaken the sense of rectangular borders. People can reach their destination quickly and conveniently by relying on a circular driveway that runs through the entire park and the dense second and third level road network. Designed for different road systems, including lanes, horse lanes and sidewalks. The design of dividing people and vehicles further enhances people's sense of beautiful park experience, as shown in figure 3 [9].

The success of New York's Central Park means that urban development must first uphold the concept of people-oriented and green development, discover problems in urban development in time, and actively formulate design and treatment strategies. The construction of a beautiful city park is the foundation of a park city. The design of a park should be adapted to local conditions. This means that the prerequisite for building an ecologically livable city or country is to first fully investigate and study the original local geology and landforms, and design and plan according to local conditions. The choice

of the designer is also particularly important. The concept of environmental protection should be adhered to and the urban ecological function should be optimized.

4.2 Netherlands



Figure 4. Dutch city landscape map

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Figure 5. Dutch city landscape map

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In order to protect the environment, reduce pollution, and improve citizens' awareness of environmental protection, the Dutch government issued the first comprehensive protection policy document "Memorandum of Emergency Environmental Issues" in 1972, and formulated a long-term strategy. However, facts have proved that only relying on top-down government governance can not solve environmental problems well, and its control effect on the target groups of environmental pollution is limited [10]. The Netherlands then tried to develop new ways to allow the public to participate well in the early stages of planning. This process is called "co-creation". Due to the well-developed social organization structure in the Netherlands, various social sectors send their representatives to participate in civil society to discuss their provincial public policies. Therefore, the process of "co-creation" involves the participation of government departments and major social organizations, not the direct participation of citizens.

In the province of Gelderland in the Netherlands, a plan called "Environmental Vision Plan" is carried out based on long-term development principles in transportation, industry, agriculture, and economy. The Gelderland government hopes to use the "co-creation" method to operate the environmental planning vision. It includes the three stages of "open discussion, public consultation, and political decision-making". The participants are the organizers, that is, civil servants of the provincial government; the participants are the stakeholder groups and the legal decision-making parties, that is, members of the provincial assembly. With close and orderly cooperation with social organizations, the province is more flexible in responding to changes and differences [11].

In the next ten years or so, the Netherlands successively released the "National Environmental Policy Plan", "Environmental Outlook" report, "Focus on the Future" report, "National Environmental Policy Plan 2", "Netherlands Environmental Plan 1", "Netherlands Environmental Policy Plan + "And "Netherlands Environmental Policy Plan 2". A series of activities to negotiate with the public to

remediate the environment has resulted in remarkable achievements in environmental governance in the Netherlands.

The Dutch government has also formulated a legal system for environmental protection, formulated different control laws for different environmental pollution factors, and implemented strict governance as a whole. mainly includes:

Sign a voluntary contract. The government and the enterprise jointly negotiate, jointly undertake the content of the contract, and sign a voluntary contract. This can give enterprises sufficient flexibility and subjectivity, and facilitate enterprises to focus more on production and business.

Introduce an ecological tax. The government levies taxes on resource consumption to protect the environment, including fuel emissions and use, and the use and disposal of chemical substances. Then this part of the tax will flow back into the pockets of taxpayers and companies in other ways.

Insist on using eco-labels. The environmental code of the advertisement is its predecessor, which is used to formulate the advertising content that has a negative impact on the environment. The Netherlands has its own eco-label to regulate its services and products.

Develop a green agreement. This is an agreement on environmental governance between the government, the public and private companies based on laws and policies [10].

As shown in figure 4 and figure5, the Netherlands has achieved remarkable results in environmental governance through continuous attempts and practices by the government. At the same time as economic growth, pollution has also been reduced, and various ecological modernization indicators in the plan have been completed, which has become a goal for other EU countries to catch up [10].

In the development of a perfect ecological city in the Netherlands, city planning should not only promulgate a series of environmental protection policies and laws, but also discuss and plan with the public based on the local socio-economic structure. Many Chinese cities today have also begun to focus on public participation in policy planning. The state and citizens negotiate together to make the city more effectively face the difficulties in the process of change and development.

4.3 Ximen, China.

Since 1981, Xiamen City has established a special economic zone, adheres to the scientific development concept as the guidance for all-round development, and adheres to the basic policy and advanced concept of "ecological development, civilized development, protection first, and scientific development" [12]. Xiamen has been successfully built as one of the representatives of China's ecological city construction and development. It has achieved remarkable results and won many honorary titles. It is a national-level ecological city. Throughout the creation and development of Xiamen's ecological environment, we can get practical experience in line with China's urban conditions from its policies and measures, and we can also obtain the shortcomings of China's urban development and analyze and find complementary methods [13].

1) Management and construction of ecological environment

Since the reform and opening up, Xiamen City has been actively building an ecologically civilized city. The government has issued a series of regulations and policies. The government establishes an ecological civilization construction committee in the city and district. State representatives and government committees conduct publicity and education on the environmental protection work of the city, from families to the entire community, to promote the general public to participate in environmental protection construction activities, and also to make good suggestions to the citizens and enterprises and factories and actively supervise them. At the same time, the ecological protection center has been established and the masses' whistle-blowing telephones have been publicized to protect the people's right to participate, to know, and to supervise. The environmental protection department also often organizes experts and citizens to participate in environmental assessment, encouraging more citizens to participate.

2) Encourage capital investment to participate in ecological construction

The government has adopted various financial subsidies, financial assistance and other measures to encourage economic participation in the development and construction of ecological civilization, and ensured that the public finances invested in ecological construction. Departments at all levels have also

actively encouraged enterprises to participate in the protection of ecological civilization, increased financial budgets, and expanded plans for ecological construction projects in cities. At the same time, it also provides adequate funding for expansion or reconstruction projects of water resources, marine environment, and land construction.

3) Development of high-tech industries

The Xiamen Municipal Government and the Municipal Party Committee insist on implementing the idea that science and technology are the primary productive forces and vigorously support the development of Xiamen's high-tech industries. Efforts will be made to promote the development of Xiamen's entire economy with the development of high-tech industries, and at the same time actively build ecological industrial parks. While developing, it also pays attention to the ecological transformation of the development zone, and carries out design and planning in strict accordance with the ecological industrial construction standards. Let Xiamen gradually develop into an environment-friendly, resource-saving ecological city [12].

As one of the development representatives of my country's park city, Xiamen City should learn from the province's governance plan. In addition to effective environmental protection publicity, the supervision and participation rights of the people should also be established. The participation of more citizens will effectively promote the development of the industry. With the government's encouragement funds held back, actively develop the development of the high-tech industry in the area, which will help the city develop into a livable and good environment city, and then further develop towards the goal of a park city.

4.4 Guangzhou

Since 2000, the Guangzhou Municipal Government has adhered to the goal of building a city suitable for entrepreneurial development and livability, using Guangzhou's unique good urban foundation and superior natural geographical conditions, adhering to the scientific development concept, and continuously promoting urban ecological construction. Based on the principle of "ecology first", urban development planning and construction shall be carried out on the basis of ecological sustainable development.

Guangzhou first establishes the "two suitable" ecological city development goals, so that material civilization and ecological civilization develop together. As material civilization continues to grow, the government has proposed two "appropriate" scientific development plans. It is believed that all planning must follow the people-oriented development concept, ensure ecological safety, and emphasize the implementation of the green development model.

In order to solve the problem of backward development of Guangzhou's production capacity enterprises, the central urban area has begun to construct and develop the tertiary industry. This industry is not only to optimize the structure of production capacity, but also to focus on ecological environment protection and resource and energy conservation. Renovate and upgrade the old urban area, continue to build the new urban area, develop new technology industries, and move towards the construction of a high-quality urban ecological civilization. While developing, we should optimize internally, expand space externally, retain local characteristics, pay attention to the construction of ecological infrastructure, and realize the sustainable and circular development of urban ecological economy.

Guangzhou is scientifically protecting the ecological environment and making urban construction more effective. Researches have been carried out on the eyelids of rivers and lakes, the problems between urban and rural growth and ecology, and urban green space system development planning. The organization of the "Two Asian Games" and the creation of a national civilized city has made Guangzhou a park city today [14].

The success of New York's Central Park means that the prerequisite for building an ecologically livable city is to fully investigate and study the original local geological and landforms, and design and plan according to local conditions; the perfect ecological city development model in the Netherlands is based on the local socio-economic structure and public participation The best choice. At the same time, after summarizing and analyzing domestic cities with better ecological governance,

it can be concluded that a city with successful ecological governance should first have reasonable and scientific plans and policies implemented by the government. Reasonable and scientific planning is the beginning of all construction and development. The local government should also actively explore ways to negotiate and develop with the people in an appropriate way, and jointly plan and build a beautiful and happy home. At the same time, the economy should be integrated with ecology, bringing ecology into industrial development, building high-tech industries, and paying attention to environmental protection.

5. Conclusion

This research focuses on the development of urban green ecology in Beijing Xiah. It analyzes classic cases at home and abroad, and explores the operation and maintenance mode and evaluation criteria of domestic park cities. According to case analysis, the ecological construction of the park city needs to be developed from the aspects of urban ecological infrastructure design, government policy formulation and capital investment, solution and improvement of urban old urban problems, and public participation and supervision in cooperation with the government to develop high-tech industries. When formulating the park city evaluation index for ecological governance, these aspects are taken into consideration, which will help the park city evaluation index to be more scientific and perfect. The makers of evaluation indicators and related scholars should conduct in-depth research on these aspects suitable for the development of the city. Learning the operation and maintenance model of scientific ecological governance is the key to establishing an accurate index system and standardizing the park city system.

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