

The Construction of a Livable City in Daqing under the "Double Carbon" Goal

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Abstract: Building an ecologically livable city is not only a strategic choice to ensure the sustainable development of the city, but also the aspiration of the people to build an ecological society in response to the voice of the general public. In this study, by sorting out the previous research results of green livable cities, on the basis of drawing on the research results and development experience of livable cities at home and abroad, and combining the current situation of urban development in Daqing, it proposes the best urban livable construction from multiple perspectives path.

1. Introduction

According to the "17th Report on China's Urban Competitiveness" issued by the Chinese Academy of Social Sciences, Daqing ranked 26th in the 2018 National Livable Cities Competitiveness Index, ranking first in the province and at the upper level of the country. In the important period of the construction of the two-oriented society, the construction of livable cities and the urban ecosystem both promote and restrict each other. To study the internal relationship between the construction of livable cities and the urban ecosystem in Daqing, on the spatial scale of regions and counties, the use of regional The research method combining investigation and experimental verification, qualitative analysis and quantitative research, induction and deduction, constructs the coupling model of Daqing's green and livable city construction and urban ecosystem, and calculates the urban construction and urban ecosystem of Daqing. Based on the evaluation results, the corresponding countermeasures for the construction of a green and livable city in Daqing are put forward, which has important theoretical value and practical significance.

At present, the academic circles have paid more attention to livable cities. Zhang Wenzhong (2016) analyzed the connotation of livable cities, commented on the main experience in the construction of livable cities recognized internationally, and focused on the basic concepts and concepts of livable city construction[1]; Yang Puhuan (2019) believes that while paying attention to urban construction land planning, efforts should be made to improve the green coverage of the city, and to give full play to the ecological function of the greening system[2]; Zhou Lan, Shi Jiahong, Ding Zhigang (2020) took the exploration and practice of Jiangsu as an example, and explored the transformation of urban construction and development from the aspects of "problem raising-system planning-promotion of work"[3]; Liang Huajiang (2021) believes that the construction of a livable Qinzhou should

strengthen the employment support of urban industries through advanced industrialization, and build a new land-sea trade channel through the construction of a southward channel[4]. To sum up, the research work on urban livability needs to be further improved, and there are still relatively few studies on the construction of livable cities in Daqing.

The 2021 "Government Work Report" proposes to further enhance the green happiness of citizens. Under the "dual carbon" goal, urban construction should develop in harmony with the ecosystem. Therefore, the current status of livable city construction in Daqing City is discussed and a livable city is proposed. Construction strategies to achieve coordinated development of urban development and urban ecosystems.

2. The Concept of a Livable City

At present, a livable city, as its name implies, is a city that is livable, but the academic community has not yet formed a unified opinion on the definition of a livable city, such as "ecological city", "healthy city", "green city", "sustainable development" Different scholars have different understandings and different standards for similar concepts such as "city" due to different social stages. Comprehensive analysis, although different scholars have given different concepts of livable cities, they generally follow a common principle: the most suitable city for human living and life, with a pleasant natural ecological environment and an organic combination of harmonious social and humanistic environment city of.

From the perspective of scope, livable cities are generally divided into broad and narrow senses: livable cities in the narrow sense refer to A city suitable for human habitation generally has a pleasant climate, harmonious ecology, beautiful environment, good public security, and complete infrastructure; a livable city in a broad sense refers not only to human habitation, but also to sustainable economic development, social harmony and stability, cultural It has a strong atmosphere, reasonable urban planning, comfortable and convenient life, good ecological environment, beautiful landscape, sufficient educational resources, and perfect medical conditions.

3. Evaluation Indicators of Ecologically Livable Cities

In May 2007, the Science and Technology Department of the Ministry of Construction of the People's Republic of China passed the "Scientific Evaluation Standards for Livable Cities". Many cities in China regard livable cities as the goal of urban development. Improve the city's image, create a better business and living environment, and enhance the city's attractiveness, cohesion and competitiveness [5].

The "Scientific Evaluation Criteria for Livable Cities" consists of six major parts: social civilization, economic affluence, environmental beauty, resource carrying, cheap living, and public safety, involving 23 sub-items and 74 specific indicators. In the total score of 100 points, the ecological environment index accounts for the largest proportion, followed by urban housing, municipal facilities and urban transportation. The connotation and basic characteristics of easy living, comfortable living, comfortable living and comfortable living in livable cities emphasize people-oriented.

The creation of a livable city in China is a comprehensive creation system. Air quality, per capita disposable income, average life expectancy, open government affairs, employment rate and employment services for floating population have all become important scoring indicators. Simply put, a livable city has nothing to do with the size of the city, the focus is on the happiness index of the people living in the city.

According to the "17th Report on China's Urban Competitiveness" released by the Chinese Academy of Social Sciences, Daqing ranked 26th in the competitiveness index of 288 livable cities

in the country in 2018, ranking first in the province and in the upper reaches of the country. A livable city refers to a comprehensive evaluation of the livability of a city. Daqing ranks high in the competitiveness of a livable city and has a high score. It is the result of comprehensive measurement of the indicators of ecological environment, comfortable living environment, convenient infrastructure and active economic environment.

4. Measures for the Construction of a Livable City in Daqing

In recent years, Daqing City has grasped the laws and characteristics of the development of resource-based cities, continued to revitalize the city stock, optimized the city increment, improved the city quality, carefully constructed, managed and managed carefully, and gradually built Daqing into a livable, business-friendly and happy place.

4.1 Improve the quality of urban functions

Daqing actively adapts to the positioning adjustment from mining areas to towns and towns to cities, accurately grasps the new situation of urban development, new changes in reform and development, and new expectations of the people, adheres to the concept of industry-city integration, comprehensively considers the ground and underground, and the comprehensive carrying capacity of municipal public facilities is greatly improved. Heilongjiang Provincial Department of Housing and Urban-Rural Development was rated as the first in the province.

At present, 2 national-level parks and 7 provincial-level parks have been built, with a development and construction area of 84.8 square kilometers, providing a high-quality platform for the development of key industries. It has initially built up a geese-style industrial sector such as oil head and tail, and has grown into the second largest economy in Heilongjiang Province.

Daqing City aims to build a smart city, build a digital urban management supervision and command center, and build a digital management model of "one database for data, one network for management, and one line for supervision". Video and other modern information means to achieve dynamic monitoring, advance judgment, and precise management. At present, Daqing City has established 10 urban management subsystems such as public security, heating, property management, and law enforcement, and 300,000 infrastructure information has been entered into the database. The subtle trends of urban elements can be grasped in time, and accurate predictions and responses can be made.

4.2 Improve the city's carrying function

In urban planning and construction, famous institutes and experts were hired to scientifically demonstrate 5 basic plans such as urban space development strategies, scientifically formulated more than 40 special plans such as ecological city construction and ecological civilization construction, and launched the "Three-Year Action Plan for Accelerating Ecological Environment Construction", started the "tough battle" of ecological city construction. Based on resource endowments and location advantages, clarify the development direction of leading industries and characteristic industries, solidly promote the "return to the second and enter the third" in the main urban area, and guide industrial projects to be concentrated in standardized parks.

Adhere to the creation of a good living environment as the central goal of urban construction and development, seize the opportunity of national urbanization development, and rapidly improve the carrying function of the city. Build a three-dimensional transportation network, the Sui-Manchurian Railway and the Tong-Rang Railway meet, the Ha-Qi Passenger Dedicated Line, the Daguang Expressway, the Sui-Manchurian Expressway and the urban expressway are smooth inside and

outside. Daqing Airport is connected to 21 regional central cities across the country. The air bridge realizes the rapid flow of logistics and people. The city's cultural and sports functions have been improved, and the opera house, library, Olympic Park and other functional facilities are complete, which not only provides convenience for mass cultural and sports activities throughout the year, but also creates conditions for the landing of well-known international and domestic events.

4.3 Create a livable living space

Daqing City is committed to creating a fully functional, livable and moderate living space. Daqing has high-quality educational resources, advanced medical conditions, and perfect venues and facilities. Citizens' expenditures on education, culture, entertainment and other aspects account for more than 50% of consumption expenditures. Daqing is committed to creating an ecological space with clear water and blue sky and natural beauty. Practice the development concept of "lucid waters and lush mountains are invaluable assets", abide by the ecological red line and the environmental bottom line, and take "three-city joint innovation" as the carrier to improve the city's style and taste. Driven by the creation of a national model city for environmental protection, the system promotes the connection of urban water systems, the elimination of small coal-fired boilers and "yellow label vehicles", and the "three supply and two governance" infrastructure construction, and environmental problems have been effectively addressed.

With the support of building a national environmental protection model city and a hygienic city, accelerating the transformation of municipal infrastructure, improving management mechanisms, changing living habits, and improving city appearance It is at the leading level; guided by the creation of a national garden city, it will continue to focus on expanding green around the city, surrounding mines, adding greenery around lakes, adding greenery to parks, and inserting greenery in open spaces, and basically builds natural ecological parks, urban landscape parks, and community leisure parks. The multi-point urban garden system supported by parks and miniature pocket parks has polished the "golden business card" of the national garden city with solid ecological construction results.

In recent years, the reform of the medical and health system has been accelerated, and a more complete public health and medical security system has been established. At present, all 32 public hospitals in Daqing City have canceled drug additions, and 28 medical consortia have been established, becoming the only healthy city pilot in Heilongjiang Province. The standard of resident critical illness insurance has been raised and the coverage has reached more than 1.5 million people.

Focusing on the development of high-quality educational resources, the standardization construction of all compulsory education schools in Daqing City has been completed, and the acceptance rate of standardized schools is 100%. Established a basic situation ledger for 12,744 left-behind children and 36,780 children of migrant workers in cities, introduced support measures, and created conditions for left-behind children and children who moved with them to receive a good education.

4.4 Actively promote carbon neutrality

Actively and prudently promote the work of atmospheric control, carbon peaking and carbon neutralization, and have achieved remarkable results. Carbon neutrality is an inevitable requirement to promote high-quality development. As a resource-based city, Daqing actively organizes corporate carbon emission verification, participates in green and low-carbon market transactions, and plans carbon neutral projects.

In 2021, all 11 key carbon emission enterprises in Daqing City will complete the verification of carbon emission reports; 5 power generation enterprises including Daqing CNPC Electric Power Co., Ltd. and Huaneng Daqing Thermal Power Co., Ltd. will have a carbon dioxide emission quota of

28.6239 million tons, which has been successfully included in the carbon dioxide emission quota market place. Daqing Volvo Car Manufacturing Co., Ltd.'s green electricity trading project is the first 100% pure green electricity trading project in the province, creating a new situation for local consumption of new energy in Heilongjiang Province.

4.5 Adhering to the concept of green development and promoting the upgrading of traditional industries

Daqing adheres to the concept of green development, optimizes and upgrades traditional industries, uses the concepts and methods of informatization, marketization, and greening, grafts advanced technologies, eliminates outdated production capacity, and promotes traditional industries such as petroleum and petrochemicals to move towards the mid-to-high end. Include automobiles, new materials, modern agriculture, electronic information, modern service industries and other industries with high technology content, low resource consumption and relatively little environmental pollution into the city's key industry planning, and vigorously cultivate and support.

Daqing is committed to building a whole automotive industry chain integrating R&D and design, vehicle manufacturing, parts and components, sales and service, forming a 100 billion-level automotive industry cluster. In 2019, the third "Daqing Intelligent Manufacturing" Volvo S60 was successfully put into production, and the annual tax payment of Volvo Daqing plant exceeded 1.459 billion yuan.

4.6 Protection and improvement of Daqing's agricultural ecological environment

The government relies on agricultural high-tech to build agricultural science and technology innovation demonstration zones. Daqing Municipal Government should rely on agricultural high-tech, give full play to its resource endowment advantages, and build an agricultural science and technology innovation demonstration zone, which can not only improve agricultural labor productivity and agricultural green development, but also meet people's needs for safe, green, and high-quality agricultural products; Daqing Municipal Government It should actively integrate the scientific and technological resources of local enterprises and universities, deepen the cooperation between cities and schools, and encourage and support Heilongjiang Bayi Agricultural University, Daqing Branch of the Provincial Academy of Agricultural Sciences and other colleges and universities in the deep processing of agricultural products, facility agriculture construction, field big data collection and monitoring, intelligent The establishment of chemical fertilizer sprinkler irrigation system, biological prevention and control technology research and development, agricultural geological survey and other aspects to carry out technology research and development and industrialization practice, pay full attention to agricultural ecological environmental protection, and promote technology research and development and promotion of sustainable agricultural development.

Improve the guarantee mechanism for agricultural ecological environment construction. Daqing City provides institutional guarantees in terms of infrastructure construction, supports environmental protection work in hardware, strengthens the construction of environmental protection infrastructure such as rural domestic sewage and domestic garbage disposal, and establishes village garbage centralized treatment stations. Efforts should be made to improve rural environmental protection management methods, explore a good atmosphere for the whole society to participate, support, care and supervise the agricultural ecological environment, protect the agricultural ecological environment, and ensure the sustainable use of agricultural resources.

Improve the support capacity of agricultural science and technology, rely on agricultural waste to carry out joint research on industry-university-research-enterprise research, promote the effective

connection between the scientific research achievements of agricultural colleges and the needs of agricultural ecological environmental protection, and make every effort to promote the integration of industry and environmental technology issues. Daqing City should rely on scientific and technological innovation alliances such as livestock and poultry breeding waste, cost saving and efficiency improvement, and green environmental protection, to carry out joint research and development of industry-university-research-enterprise enterprises, and work together to solve the technical bottleneck problem of agricultural and rural pollution prevention and control. Promote the organic connection between the modern agricultural industry technology system and the key tasks of agricultural ecological environmental protection, and effectively solve industrial and environmental science and technology problems. The main body of agricultural environmental protection should increase investment in science and technology, and use scientific and technological means to plan and rectify ecological and environmental problems. The Daqing Municipal Government should allocate special funds for agricultural ecological environmental protection, establish a research institution for sustainable agricultural development, create a new type of agricultural technology extension system in China, and encourage agriculture. Enterprises carry out technological innovation.

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