

An Analysis on the Construction of Ecological Civilization from the Perspective of Shanxi Province

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Abstract: Since the 18th national congress of the communist party of China, China has expounded the significance of strengthening ecological civilization construction and has clearly put forward the important principles that must be adhered to in strengthening ecological progress. At the same time, China has made comprehensive arrangements to strengthen ecological and environmental protection and fight against pollution. These measures have great practical significance to promote the construction of ecological civilization to a new level and promote the transformation and development of China's ecological industry. Based on the development of resource-based cities in Shanxi, this paper focuses on the comprehensive analysis of ecological civilization construction and development methods based on the development status of Shanxi. Firstly, the basic concept and classification system of ecological civilization are analyzed; Secondly, this paper systematically analyzes and summarizes the development cases in key cities of Shanxi, so as to get the development status and existing problems of ecological civilization construction in Shanxi; Finally, based on the problems, this paper explores the specific development suggestions and countermeasures of ecological civilization construction in Shanxi.

1. Introduction

When ecology prospers, civilization prospers; when ecology decays, civilization decays. A good ecological environment is the foundation of urban economic development, and also an important symbol to measure the comprehensive competitiveness of a city. At the national level, 17th CPC national congress took building an ecological civilization and improving the ecological environment as one of the basic requirements for building a well-off society in an all-round way; 18th CPC national congress further identified ecological progress as an important part of the overall layout for “five-sphere integrated plan “ ; The Fourth Plenary Session of the 19th National Congress of the CPC also puts forward a strong consensus on “upholding and improving the system of ecological civilization and promoting harmonious coexistence between man and nature”. Therefore, to realize the Chinese dream of the great rejuvenation of the Chinese nation, we must build an ecological civilization and build a wild China.

At the local level, in recent years, Shanxi provincial party committee has resolutely implemented the spirit of President Xi Jinping's speech. In view of the vital interests of the 37 million people in Shanxi and the possibility of achieving the transformation and development, Shanxi has put ecological civilization construction in a prominent position in the overall work. This paper mainly based on the characteristics of Shanxi, combined with the status and problems in Shanxi's key cities, put forward a reasonable development direction of ecological civilization construction, so as to provide a theoretical basis for the case of regional ecological civilization construction.

2. Basic Theory of Ecological Civilization

2.1 The Origin and Concept of Ecological Civilization

The theoretical research on China's ecological civilization began in 1984, Ye Qianji, a famous ecologist, first used the concept of ecological civilization. He defined ecological civilization from the perspective of ecology and ecological philosophy. He believed that ecological civilization means that human beings not only benefit from nature, but also benefit nature. While transforming nature, human beings protect nature and maintain a harmonious and unified relationship between man and nature. [1] In 1997, Qiu Gengtian put forward: "ecological civilization refers to the sum of the material and spiritual achievements made by human beings in transforming the objective world while actively protecting the objective world, improving and optimizing the relationship between human beings and nature, and building a good ecological environment". [2] In 2006, Pan Yue defined ecological civilization as "the sum of material and spiritual achievements made by human beings following the objective law of harmonious development of man, nature and society, and a cultural ethical form with the basic purpose of harmonious coexistence, virtuous circle, all-round development and sustained prosperity of man and nature, man and man, man and society. [2]

To sum up, the concept of ecological civilization mostly includes society in the category of the relationship between man and nature, and emphasizes the organic unity of man, nature and society in the way of thinking. It indicates that the development of the concept and the theoretical understanding of ecological civilization are constantly improving and deepening.

2.2 The Basic Classification System of Ecological Civilization

According to the analysis of Gu Shuzhong and others, the ecological civilization is divided into four parts: construction subject, construction content, construction field and construction means. Among them, the construction subjects include government, enterprises, families, NGO, mixed subjects and so on; The construction content includes water ecological civilization construction, forest ecological civilization construction, farmland ecological civilization construction, desert ecological civilization construction and urban ecological civilization construction etc.; The construction fields include global scale, national scale, regional scale and community scale; The construction means include means of consciousness, planning, system, science and technology and capital. [3] From this classification system, it can be seen that the construction of ecological civilization is a kind of construction form from different perspectives, relying on different ecological environments, coordinating the interests of all parties, and adopting various policies and means to realize the harmonious coexistence of man and nature.

3. Cases of Ecological Civilization Construction in Shanxi Province

3.1 Background of Ecological Civilization Construction

Shanxi Province, rich in coal and short of water, has historically been an important supplier of national energy demand. With the rapid development of economy, the problem of energy consumption is exposed increasingly, and the unreasonable industrial structure seriously limits the economic development, and has become one of the provinces with prominent ecological and environmental problems. Especially compared with some provinces with developed tertiary industry, finance and economy, Shanxi, as a large resource province, is gradually declining in the new round of economic tide. Resource and environment problems have become the bottleneck restricting the comprehensive coordinated and sustainable development of Shanxi's economy. During a visit to Shanxi in June 2017, President Xi Jinping pointed out that green development is a profound revolution in the concept of development.

Combined with the understanding of the degree and length caused by the essay, this paper mainly selected two representative cities in Shanxi Province for analysis. Taiyuan, the capital of Shanxi Province, is located in the northern end of Taiyuan basin and has abundant energy resources. Long-term dependence on high input and high consumption of energy resources to drive economic

development, the problems of uncoordinated and unsustainable development, such as resource constraints, ecological degradation and reduction of environmental bearing capacity, have become increasingly prominent. Its terrain is special, north high south low and the shape of it just like a dustpan. SO due to the special terrain plus dust, vehicle exhaust, coal pollution and many other factors, the quality of Taiyuan's atmospheric environment is worrying, and the index of major pollutants in Taiyuan ranked lower in the whole province and even the whole country.

Datong, the provincially administered municipality, is located in the Datong basin, belonging to the junction of Shanxi, Hebei and Mongolia. It has a temperate continental climate which has less rainfall, more sunshine and big temperature difference between day and night. It's also one of the areas lacking water resources in China. It is rich in mineral resources and can provide sufficient raw materials for building materials industry and non-ferrous metals industry; It's also rich in electric power resources and has long used thermal power generation. Due to the restriction of the geographical environment, natural resources and development mode, the contradiction between man and nature is increasingly prominent, and sandstorms and other severe weather occur frequently in Datong.

3.2 The Construction of Ecological Civilization in Taiyuan

Taking Western Hills's ten thousand Acre Ecological Park in Wanbolin district of Taiyuan as an example, it is a typical case of improving the quality of atmospheric environment. Its construction started from coal, power, chemical, coking, building materials and other energy heavy industrial areas. Since 2006, Wanbailin district has seized the opportunity of constructing six forest areas in Taiyuan and establishing a national forest city in China, forming a strong consensus of "greening Wanbailin, constructing ecological zone and serving big Taiyuan". Through assessing the situation and making scientific decisions, Western Hills's ten thousand Acre Ecological Park has been built. The measures included clearing coal yard, landfilling waste, repurposing usable land, leveling depression and planting landscape trees and economic forests.

In greening construction, more than 1 million trees were planted which has more than 100 types and more than 30 kinds of flowers were planted. The greening area reached more than 70%; In landscape construction, more than 10 scenic spots such as "Qichun pavilion", "Central park" and "Perfume ditch" have been built, as well as an "Incorruptible garden" base; In education construction, it shows the incorruptible stories of outstanding historical figures in Shanxi, such as: Sima Guang, Yu Chenglong, Yang Jizong, which conveys the rich connotation of self-foundation, family management and public morality to tourists; In infrastructure construction, the park adopts solar street lighting or wind power to complement, and at the same time it uses a system of powering generation and heating which applied the solar and light complementary to supply the scenic spot and office needs of the whole ecological park. The construction of this ecological park has deeply embodied the value of ecological protection, created a good local microclimate, coordinated the harmonious development of the relationship between man and nature, and has profound value to improve the regional air quality and improve the living environment.

Take the promotion and use of new energy electric vehicles in Taiyuan city as a case. With the compulsory implementation and government subsidies, the city's taxis have been upgraded to pure electric vehicles within one year, making it the only city in the world where all taxis are pure electric. This measure effectively reduced the consumption of automobile fuel, alleviated the contradiction between fuel supply and demand, and improved the atmospheric environment quality of Taiyuan. It's also improved the image of the city and deeply implemented the concept of "green travel".

3.3 The Construction of Ecological Civilization in Datong

Due to the special geographical environment of Datong and years of disordered development, the monitoring shows that in the early 1980s, the sandstorm weather in the city reached about 102 days, and the air quality problem was very serious.

In response to this problem, Datong municipal government proposed an ecological restoration project for the ancient Great Wall in 2017. This key project is a major ecological restoration project

centering on the reconstruction and construction of forest landscape along the Great Wall tourist highway, focusing on the creation of forest ecological landscape and tourism cultural characteristics. The project is mainly divided into four parts: base afforestation, scenic spot construction, passageway greenway and planting guidance. Through the construction of this ecological restoration project, the sandstorm weather in Datong has been distinctly reduced, the air quality has been improved, the natural green barrier has been formed at the edge of the city, the function of forest to conserve water has been fulfilled, and the development of tourism has been promoted.

In addition, Datong relies on the construction of ecological civilization to promote the quality and efficiency of economic development, and strives to solve the problems of agriculture, rural areas, and farmers and poverty alleviation. Municipal government arranged the project that used to improving the quality and efficiency of economic by planting dry fruit economic forest, like apricot and walnut. And through weeding, pruning, grafting and turning over the land, the yield of economic forest is increased, the income of forest farmers is increased, the soil quality is improved and the land yield is increased and the harmonious coexistence between man and nature is realized.

4. Problems in Ecological Civilization Construction

4.1 The Ecological Reconstruction Projects of Heavy Chemical Industry Areas Lack Clear Orientation

The Western Hills's ten thousand Acre Ecological Park in Taiyuan mentioned above lacks clear orientation, and its transformation mode has no essential difference with most restored forest parks. The ecological park lacks its own attraction, the living environment hasn't reached the ideal state, the construction investment is insolvent, it is difficult to attract investment, the function development is not perfect, the scenic spot lacks clear division, and the ecological and economic benefits are low.

4.2 Technology and Planning in Key Industries Lack Mature Experiences

The promotion of pure electric vehicles in Taiyuan is compulsory promotion and lacks certain market adaptability. The technical and ecological construction planning of key industries is not perfect. For example, for the use of electric vehicles, charging infrastructure has not been fully covered the whole city and charging infrastructure costs are high. [4] But the large area coverage will fall into the contradiction between the large investment of infrastructure funds and the increase of electricity load.

4.3 The Relationship between Ecological and Environmental Protection Needs to Be Straightened out

In order to promote the construction of ecological civilization, the municipal party committee and the municipal government have taken positive measures. But there is still the phenomenon of divide and rule in the government department, which makes the support services, supervision and management of ecological environment construction have departmental limitations. This limitation leads to the difficulty in coordinating the actions of ecological construction and environmental protection. At the same time, the performance appraisal system based on economic growth can easily leads to the short-term behavior of emphasizing the pursuit of immediate economic interests while neglecting long-term ecological management.

4.4 The Concept of Ecological Civilization Has Not Formed Social Consciousness

Residents have a weak concept of ecological protection and environmental protection. It often happens that residents destroy the environment to gain economic benefits. For a long time, due to the lack of the awareness of protecting the ecological environment, the disordered development of coal and other non-renewable resources for the purpose of purely economic interests has led to increasingly serious resource crisis. Therefore, citizens' concept of ecological civilization needs to be improved.

5. Countermeasures to Promote Ecological Civilization Construction

5.1 Clear the Orientation of Ecological Transformation and Pay Attention to the Cultivation of Human Resources

The tertiary industry has a strong driving force and obvious advantages. The planning of cultural tourism resources should be emphasized in the construction of ecological reconstruction projects. We should be good at creating tourism projects, make clear orientation of ecological construction, strictly prevent the phenomenon of only repairing but not maintaining, improve functional division, and create a good living environment.

5.2 Improve Industrial Technical Ability and Strengthen Successful Experience Learning

Ecological environment management and ecological civilization construction need strong technical support and divergent, creative thinking ideas. We need to actively explore efficient and low-cost production methods, eliminate outdated production capacity timely, broaden the investment and financing channels for ecological development, and take the road of healthy development with improved ecological environment and sustained economic growth.

5.3 Improve the System of Government Governance and Straighten out the Scope of Departmental Supervision

The government is the leader and the main force of the construction of ecological civilization. So government needs to gradually establish and improve government regulations for ecological and environmental protection. And it needs to strengthen the law enforcement capacity, clarify the supervision functions of various departments, and decentralize the power to form an effective restriction system. Meanwhile, individuals and enterprises should be severely punished by the law when they damage the environment.

5.4 Carry out Education in Ecological Protection and Form a Good Social Consensus

The government should strengthen ecological and environmental education in order to foster the concept of sharing resources, co-building ecology and green development. It also needs to strengthen the publicity of various systems and reforms for promoting ecological progress and actively cultivate ecological culture. About us, we can advocate an economical, moderate, green, low-carbon, civilized and healthy lifestyle and create a dynamic situation and form a situation where “everyone participates in ecological protection and everyone shares in a beautiful Shanxi”.

6. Summary

This paper takes Shanxi Province as the object of investigation and makes a comprehensive analysis on the construction of ecological civilization. Through summarizing the concept of ecological civilization and the basic theoretical system to form the basic understanding of ecological civilization theory; Based on the geographical location information and economic development status of Shanxi, this paper gives the ecological civilization construction cases of Taiyuan and Datong, and obtains the problem that lack clear orientation in the ecological reconstruction projects of heavy chemical industry areas, lack mature experiences technology and planning in key industries, the relationship need to be straightened out between ecological and environmental protection and the concept of ecological civilization have not formed social consciousness. And give advice on clearing the orientation of ecological transformation and paying attention to the cultivation of human resources, improving industrial technical ability and strengthening successful experience learning, improving the system of government governance and straightening out the scope of departmental supervision and carrying out education in ecological protection and forming a good social consensus.

Finally, in order to solve the bottleneck problems of economic and social development, such as resource shortage, serious environmental pollution and ecological degradation, Shanxi Province has continued to promote pollution, resource transformation and ecological governance. Shanxi

province has made positive progress in ecological environmental management. But ecological environment management and ecological civilization construction is a difficult revolution, the task of ecological restoration and management is still arduous. The construction of ecological civilization in Shanxi Province still needs further efforts.

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