Research on Inner Mongolia's Ecological Governance Experience

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Abstract: Inner Mongolia spans China's 'Three North' regions and borders eight provinces, making it the largest and most diverse ecological functional zone in northern China. Inner Mongolia serves as a crucial gateway for China's northern opening-up strategy, and its long-term mission is to leverage its geographical advantages and resource endowments to enhance its role as a gateway. To fulfill this challenging national task, it is essential to fully leverage Inner Mongolia's ecological advantages to provide ecological support for the comprehensive construction of a socialist modernized country. This research, focusing on 'Ecological Governance in Inner Mongolia,' reviews the ecological governance practices in Inner Mongolia, analyzes successful cases, and summarizes Inner Mongolia's ecological governance experiences. The aim is to provide recommendations for the construction of a socialist modernized country.

Keywords: Inner Mongolia, ecological governance, experience

Ecological civilization is a social form with the fundamental aim of harmonious coexistence among humans and nature, among individuals, among people and society, featuring virtuous cycles, comprehensive development, and sustained prosperity. The vast expanse of Inner Mongolia, abundant mineral resources, and its position as a vital gateway to the north make it a key player in China's development strategy. Given its diverse geographical features, including grasslands, deserts, forests, and mountains, Inner Mongolia's governance is multi-dimensional, multi-perspective, and employs various methods. Traditional and innovative approaches are used for desert and sandy land control, given the region's substantial desert area. Industrial pollution is a modern challenge, making soil and groundwater pollution control relatively recent issues. The growing problem of household waste is another pressing concern due to the spread of modern lifestyles and urbanization.

1.Desert Control

Inner Mongolia possesses the largest area of sand ecosystems in China. It includes four major deserts—Badain Jaran, Tengger, Ulan Buh, and Kubuqi—and four major sandy lands—Maowusu, Hunshandake, Horqin, and Hulunbuir. Covering an area of 280,100 square kilometers, these deserts and sandy lands are distinctive

geographical features of Inner Mongolia that must be considered in production, life, and national planning. These regions experience abundant summer sunshine, scarce rainfall, and high evaporation, along with frequent strong winds during winter and spring. This unique ecological and geographical environment has shaped Inner Mongolia's grassland culture. Historically, nomadic ethnic groups in the north have maintained and developed traditional nomadic industries for thousands of years in these desert areas, creating classic desert nomadic economies such as Ejina Banner, Alxa Right Banner, the camel culture of Ordos, and the desert pastoral and agricultural cultures of Chahar, Xilingol, and Horqin. The production and life, folk songs, ecological laws, and religious beliefs of nomadic ethnic groups in desert and sandy land areas represent their splendid achievements over thousands of years and provide us with materials rich in cultural heritage, historical lessons, and economic value.

These deserts and sandy lands are the result of human production activities and global climate change. Traditional desert control methods in Inner Mongolia mainly include afforestation and returning farmland to forests. Since the adoption of the 'Resolution on Launching the Nationwide Tree Planting Campaign' in 1981, Inner Mongolia has witnessed the participation of 390 million people in voluntary tree planting, with over 2 billion trees planted and more than 3,800 voluntary tree planting bases established.[1]

In recent years, Inner Mongolia has deepened the prevention and control of land desertification and desertification, gradually establishing a restoration mechanism for desert and sandy desert ecosystems with a focus on natural recovery. During the 13th Five-Year Plan period, Inner Mongolia completed the treatment of 7,197.5 million mu (about 4.8 million hectares) of desertified and sandy land, accounting for over 40% of the national control target. The area of desertification and sandy land continued to decrease. Overall achievements include further consolidation of the southeastern sand fixation forest belt in the Ulan Buh Desert and Tengger Desert, continued improvement of the ecological conditions in the Horqin and Maowusu sandy lands, reduction in the extent of desertification and sandification in the Hulunbuir sandy land, and the formation of a basic ecological protection system in the southern fringe of the Hunshandake sandy land and the northern foothills of the Yinshan Mountains. Among them, the Kubuqi Desert became the world's only desert to be comprehensively controlled, with one-third of the desert transformed into an oasis, setting a global example in desertification control. The success story of the Kubuqi Desert control is a textbook case from which we can learn a great deal. Similarly, Inner Mongolia's strict protection of natural forests in desert areas, improvement of enclosure protection quality, and the promotion of ecological protection and restoration in oasis areas to enhance ecological carrying capacity; improvement of scientific desert control capabilities, centralized control of treatable sandy land, and strengthened protection of already treated sandy land.

The success of Inner Mongolia's desert control mainly lies in: 1.Balancing prevention and treatment, combining prevention and utilization. The comprehensive

control of the Horqin Sandy Land is a systematic project. [2]For example, Tongliao City has increased its protection efforts for natural reserves at all levels and implemented the construction of biodiversity protection demonstration areas. Take the example of Bashunhu Gai Village in Horqin Left Rear Banner, Tongliao City, where over 150,000 trees such as poplars, willows, and apricots and 3 million sand-fixing plants have been planted over more than 20 years of afforestation activities, greening 1,200 mu of sandy land.[3] 2.Adopting an overall desert control mindset, integrating the market and industry, closely linking sand prevention and control with local economic development and increasing the income of farmers and herders. 3.Following a clear top-down design, with a well-defined path for sand prevention and control, stable progress in sand prevention and control steps, strong motivation for sand prevention and control, and significant results achieved through technological empowerment."[4]

2.Treatment of pollution

Improving the living environment for urban and rural residents is a key task and foundational work in implementing the rural revitalization strategy and building a beautiful China. It requires continuous efforts and persistent work. Inner Mongolia, with unity and cooperation from top to bottom, has responded to the national calls and policies by formulating multiple laws and documents related to pollution control. Eight departments in Inner Mongolia, including the Department of Ecology and Environment, the Department of Natural Resources, and the Department of Water Resources, jointly issued and implemented the "Inner Mongolia Autonomous Region '14th Five-Year Plan' for Soil, Groundwater, and Rural Ecological Environment Protection."[5] The plan aims to maintain the overall stability of soil and groundwater environmental quality in the region during the '14th Five-Year Plan' period, effectively control agricultural non-point source pollution in key areas, and continuously improve the ecological environment in rural and pastoral areas. The specific actions for soil and groundwater management in Inner Mongolia are as follows:

Regarding soil pollution prevention and control, a thorough investigation of the soil pollution status of contaminated farmland was conducted in 2022. By 2023, special emission limits for particulate matter and certain heavy metal pollutants will be enforced. By 2025, key units responsible for soil and groundwater pollution will complete a round of inspections to identify hidden risks.

Concerning groundwater pollution prevention and control, zoning for groundwater pollution prevention and control across the entire region will be completed by 2023. Supervisory monitoring of groundwater environments around key pollution sources will be conducted. By 2025, a comprehensive map of groundwater environmental conditions for the entire region will be established. Pilot projects for groundwater pollution prevention and control will be carried out in Erdos and Baotou, and regional management for groundwater pollution prevention and control will be implemented.

For rural and pastoral pollution prevention and control, by 2024, the delineation and demarcation of town-level centralized drinking water source protection areas

will be completed. By 2025, the task of treating domestic sewage in 1,600 administrative villages will be accomplished, with a rural and pastoral area sewage treatment rate of 32%. The river-lake chief system will be extended to the village level to effectively control black and odorous water bodies in rural and pastoral areas.[6]

Inner Mongolia, being rich in mineral resources, has encountered numerous issues during the long processes of mining, extraction, processing, and transportation. As a crucial ecological security barrier in northern China, Inner Mongolia has recently focused on ecological priorities and green development, launching a governance campaign for ecological construction. In 2017, it issued the country's first provincial-level government-initiated green mining construction plan, and the construction of green mines in the region has accelerated. In 2020, the "Inner Mongolia Autonomous Region Mining Environmental Governance Implementation Plan" was issued to comprehensively address various environmental issues associated with mining. In 2021, the "Inner Mongolia Autonomous Region Geological Environmental Protection Regulations" were enacted, marking the inclusion of green mining construction in the regulations. The legal and institutional framework for green mining construction has become increasingly perfected. Currently, Inner Mongolia has clearly stated its commitment to regional mining ecological restoration, coordinated development of open-pit mining areas, and a ban on the development of mineral resources that significantly impact the ecological environment.

Regarding specific actions for mining ecological restoration, Inner Mongolia has made vigorous efforts.[7] As of June 2022, 360 green mines have been established in the autonomous region, including 47 national-level green mines. Over the years, extensive mining activities in Inner Mongolia have created thousands of mine pits, causing significant damage to the natural beauty of mountains, rivers, and grasslands.[8] They have disrupted underground rivers and contributed to adverse weather conditions in the local and even larger North China region. Presently, Inner Mongolia has made clear its commitment to regional mining ecological restoration and coordinated development of open-pit mining areas, prohibiting the development of mineral resources that have a major impact on the ecological environment.

3.Treatment of household garbage

Household waste refers to solid waste generated by people in their daily production activities and in providing services for daily life. According to laws and administrative regulations, solid waste deemed as household waste includes residential waste, market trade and commercial waste, public place waste, street sweeping waste, and waste from enterprises and institutions, among others. Inner Mongolia has allocated 50 million yuan of subsidies from the autonomous region to support the construction of a rural and pastoral area household waste collection and disposal system. As of now, the coverage rate of the collection and disposal system in the entire region has increased from 43.14% at the end of 2021 to 58.5%.[9]

With the rapid economic development, accelerated urbanization, and improved living standards in Inner Mongolia, the generation of garbage and waste from urban and rural production and daily life has increased significantly. The occupation of land

by household waste and environmental pollution have become increasingly prominent, posing health risks to the population.

Inner Mongolia's experience in household waste management includes the following:

In-depth implementation of the concept of ecological civilization, elevating the governance of geological and environmental conditions in mining areas to an unprecedented level. The development should be planned from the perspective of harmonious coexistence between humans and nature. Correctly managing the relationship between ecological environmental protection and development is an inherent requirement for achieving sustainable development and a major principle for promoting modernization.

Shifting the management focus and ensuring the effective implementation of policies. Increased efforts have been made in propagating household waste management, and comprehensive efforts have been undertaken to improve governance. Regular inspections of household waste classification are conducted to urge urban and rural streets to enhance propaganda efforts, raise public awareness of waste sorting, and ensure the effectiveness of waste classification work.

Through historical transformations and the waves of socialist national development, Inner Mongolia has achieved significant success in ecological governance. It has accumulated rich experiences. Currently, Inner Mongolia shoulders the five major tasks of becoming an important ecological security barrier in northern China, a security and stability barrier in the northern borderlands of the motherland, a strategic energy and resources base, a major agricultural and animal product production base, and an important gateway for opening up to the north. Among these tasks, the foremost is being an "ecological security barrier," as it is related to the ecological security and food security of the entire China and many other significant issues. Inner Mongolia has achieved good results in the traditional battlefield of desert control and in addressing the common issue of pollution control in the industrial era. However, in the modern world's common issue of "household waste management," the effectiveness of governance is still average. This situation urges us to change our views and thinking, stand on the new perspective of socialist national development, fully embrace the "five major tasks" of the autonomous region, and embark on a comprehensive renewal of values, a transformation of ideas, and innovation. Particularly in household waste treatment, classification, reuse, and development, we face significant challenges."

4.Summary:

Inner Mongolia adheres to the guidance of ecological civilization thinking and focuses on the overall layout of "one line, one zone, two belts." It coordinates the integrated protection and systematic governance of mountains, waters, forests, fields, lakes, grasslands, and deserts. Scientifically advancing the protection and restoration of important ecological systems, such as land greening, desertification control, the establishment of nature reserves, and the prevention and control of harmful organisms, the region's role as a crucial ecological security barrier in northern China is becoming increasingly solidified.

The management of soil and groundwater in Inner Mongolia emphasizes targeting key areas, involving both urban and rural pastoral areas, and addressing both the overall and specific details of the issues. Due to industrial pollution being a phenomenon that emerged in Inner Mongolia after the founding of the People's Republic of China, public awareness of it is relatively limited compared to the widespread impact of desertification on daily life. As a result, public participation in the governance of soil and groundwater pollution is not high, partly due to the specialized nature of the issue. In contrast, desertification control and afforestation activities involve the entire population and society, covering public welfare and voluntary labor from elementary schools to government institutions, thus encompassing the entire society. In comparison, the governance of soil and groundwater is directly carried out by national or regional governing bodies.

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