

Auditing Sustainable Urban Development: Experience from China

National Audit Office of China



Introduction

SDG 11 is about Make cities inclusive, safe, resilient and sustainable, reflecting the international community's shared vision of governance with cities as both the subject and the object.



China's audit institutions have always taken it as an important tool for promoting the high-quality development of the economy and society. The continuous auditing of relevant policies and funds has played an important role in promoting the implementation of major policy measures, maintaining the security of financial funds, and assisting the construction of ecological civilization.

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01. The housing conditions of residents have improved markedly

➤ **China has continuously improved the housing supply system**

A total of over 63 million government-subsidized housing units and housing units in rundown urban areas have been built, and about 150 million people in difficulties have realized their dreams of having a home to settle in.

➤ **Comprehensively promoted the renovation of old urban residential communities.**

Renovation of 217,000 old urban residential communities has been started, benefiting over 37 million households and nearly 100 million residents.

➤ **Improved the real estate market policy**

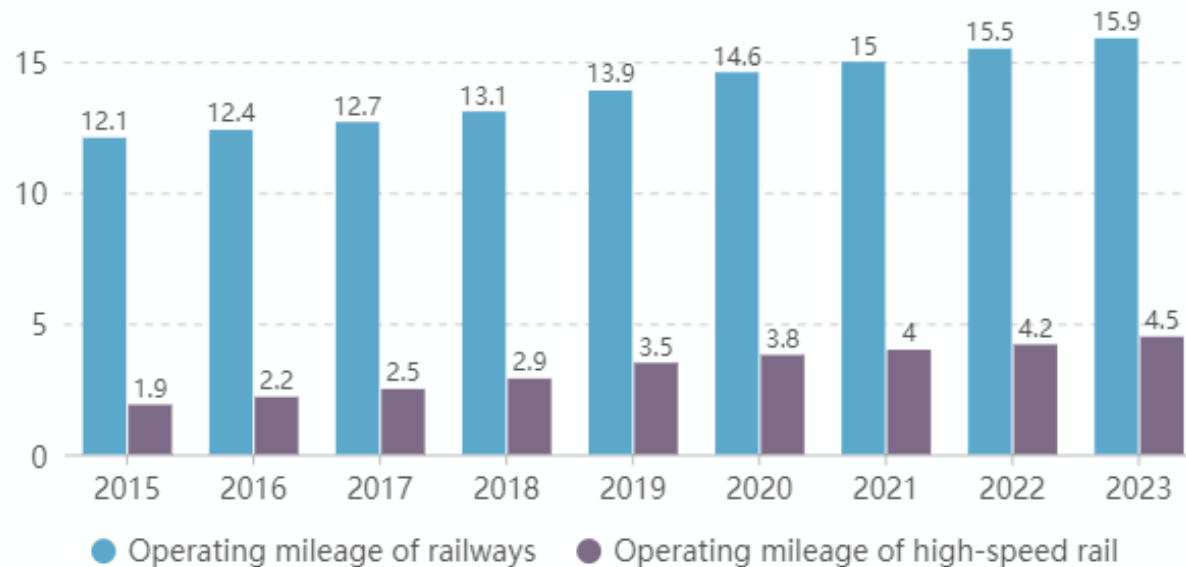
By adhering to the principle that housing is for living in, not for speculation, local governments are guided to implement targeted, differentiated policies to stabilize the market and meet the housing needs of all people.



02. Infrastructure construction has been improved

Railway operating mileage in China from 2015 to 2023

Unit: Ten thousand km



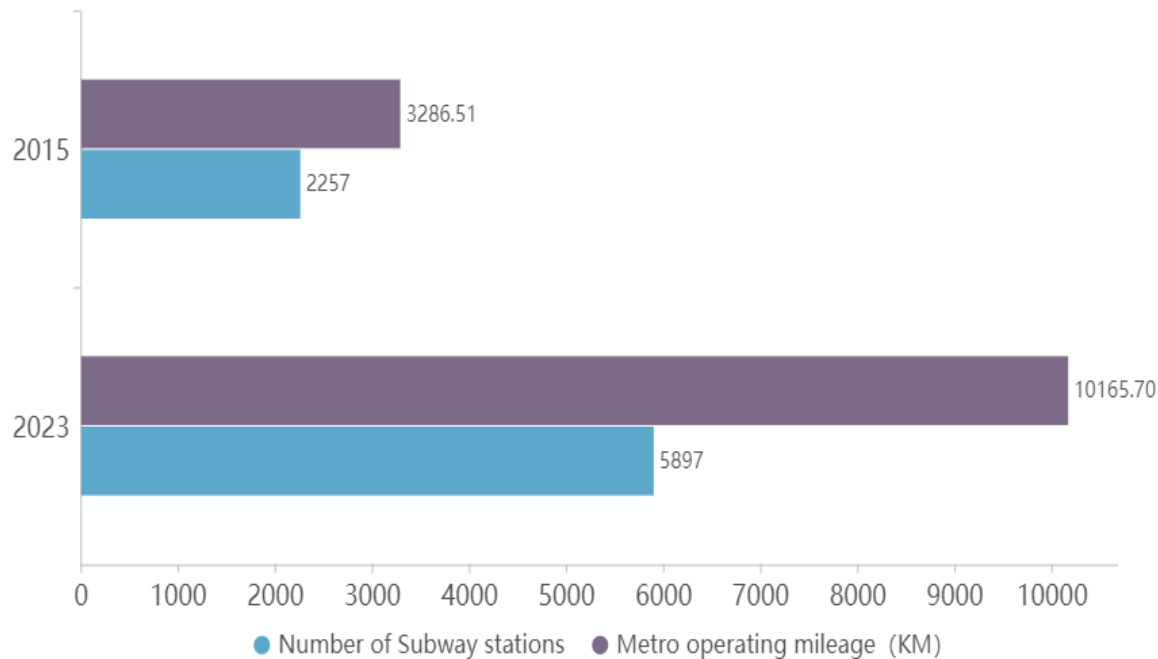
China has accelerated the construction of a modernized comprehensive transport system.

- The total mileage of China's operational railway has reached **159,000 km**, among which the mileage of high-speed railway has reached **45,000 km**.
- The total mileage of roads in service has reached **5.441 million km**, among which the mileage of expressways has been **184,000 km**.
- The number of civil-transport airports has reached **259**, 38 of which have an annual passenger throughput over 10 million.



02. Infrastructure construction has been improved

Subway construction in China from 2015 to 2023



By prioritizing the development of public transportation & Municipal public utilities in cities



55 cities have launched urban rail transit networks, **30** more than in 2015. The mileage of operational urban rail transit has reached **10,165.7 km**, about **three times** that of 2015.



New business models such as online car-hailing services, shared bikes and shared cars are flourishing, and the proportion of green travel has increased significantly.



The percentage of water supply, gas supply and sewage treatment have reached **99.39 %**, **98.05 %**, **98.11%** respectively.

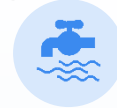


03. Improve urban living environments



Air quality has improved significantly.

- The ratio of days with excellent air quality in cities at and above prefecture level has reached **85.5 %**, up **4.3 percentage points** from 2015
- The PM_{2.5} density has been reduced to **30 micrograms per cubic meter**, down **35%** from 2015



Promoted the construction of water-conserving cities

- **145 cities** across the country have been honored as national water-saving cities
- The annual recycled water consumption in cities across China is approximately **18 billion m³**
- The recycled water utilization rate reaching **29%**



Promoted the construction of national forest city and urban park systems

- **219** national forest cities have been built
- Urban park green space per capita increasing to **15.59 m³**
- The green coverage rate of built-up areas of cities rising to **42.96%**



01. Adheres to a systematic and holistic approach to building livable, resilient, and smart cities.

Targets and Pathways

Committed to creating harmonious, livable, vibrant and unique modern cities, and improving the level of new urbanization

Landscape and Patterns

Changed single-focused and overspread development model, reasonably managed the scale and construction intensity of cities

Living environments

The development concept that "lucid waters and lush mountains are invaluable assets" has been carried through in all aspects during the whole process of urban construction.

Basic requirements

Aiming to build a modernized infrastructure system that is intensive, efficient, cost-effective, safe and reliable, to enhance the resilience and safety of cities

Governance models

Continued to improve the width and depth of 5G and gigabit optical network coverage to promote the transformation and development of smart cities.



02. Focuses on the pilot and demonstration work of sustainable development driven by innovation



In 2016, China officially started the construction of Innovation Demonstration Zones for Implementation of the 2030 Agenda for Sustainable Development. This project aims to promote the deep integration of technological innovation and social development, solve the key bottlenecks of sustainable development, and provide reference and inspiration for the sustainable development of similar regions at home and abroad.



Over the past **7** years since the launch of the demonstration zones, China has adhered to the principle of "**One city, one development goal**", approved the construction of **11 innovation demonstration zones**, including Shenzhen of Guangdong Province, Chenzhou of Hunan Province, and Xuzhou of Jiangsu Province, and accumulated much replicable and generalizable typical experience.



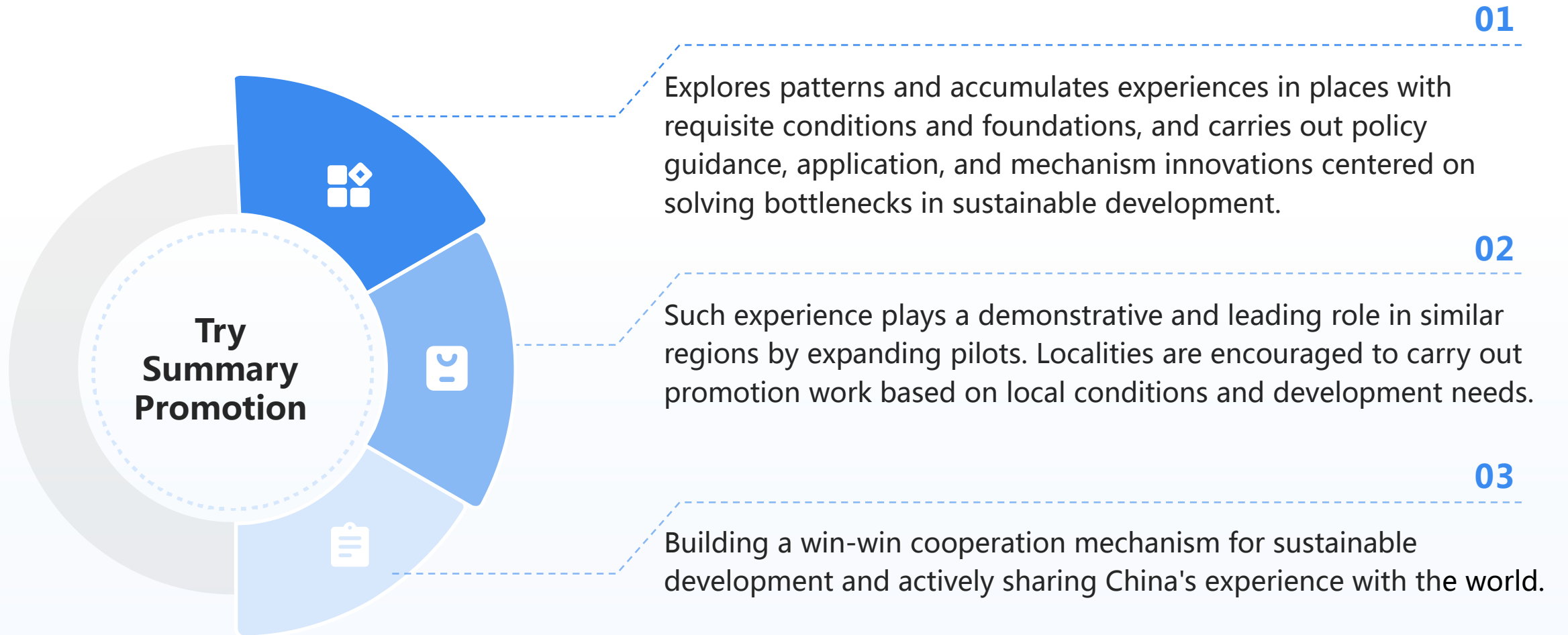
02. Focuses on the pilot and demonstration work of sustainable development driven by innovation



Take Xuzhou, Jiangsu Province, China as an example, based on the practical needs of high-quality development as a central city in a resource-exhausted region, Xuzhou actively promotes the transformation of **industry, city, ecology, and society**. The proportion of high-tech and emerging industries has increased by **10.6 and 23.8 percentage points** respectively in five years. The energy consumption per unit of GDP has dropped by **34.5 %**, and a total of **20,600 hectares** of coal mining subsidence has been restored, realizing the transformation from "**a city full of coal ashes and dirt**" to "**a city with lucid waters and lush mountains**".



03. Trying out new things first, summing up experience later, and promoting such experience in the end



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For example, **Beijing** has launched a pilot program to address the housing problems. By improving **local laws and regulations**, introducing **financial resources**, and **broadening supply channels**, the city is able to ensure the stable and healthy development of the housing rental market and continue to promote the improvement of the housing support system featuring both renting and housing purchase.





01. Carried out an audit on the construction of the housing supply system to meet the housing needs of all people

Centering on the management of housing supply funds such as **housing provident funds**, and special housing maintenance funds.

Emphasis has been put on the implementation of policies such as the **renovation of old urban** residential communities, construction of **government-subsidized rental housing**.

Improve the housing market system and housing supply system, increase the effective supply of housing, promote **urban renewal projects**.

Contribute to addressing the housing difficulties of people in straitened circumstances and key groups such as **new citizens** and **young people** in big cities.



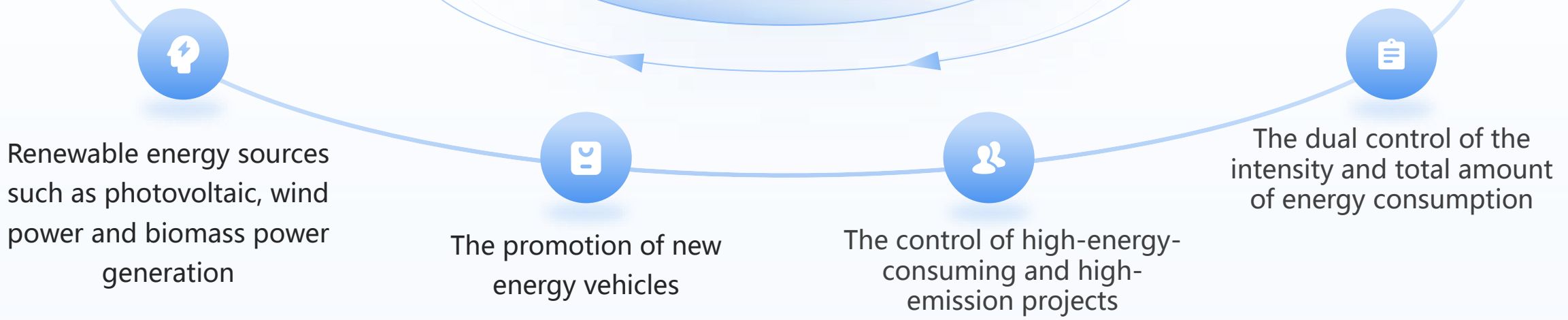


PART 03

Auditing Provides Strong and Effective Guarantee for Sustainable Urban Development

02. Carried out audits on funds related to energy saving and emission reduction to promote the construction of an environment-friendly society

Help build green and low-carbon cities





PART 03

Auditing Provides Strong and Effective Guarantee for Sustainable Urban Development

03. Carried out special-purpose audits on major water diversion projects to help build a resource-conserving society

In order to promote the implementation of water conservancy work policy of "**water-saving priority, spatial equilibrium, systematic governance, and two-handed force**" and to implement the new development philosophy in a complete, accurate and comprehensive manner, China has conducted audits on major water diversion projects.



With a focus on the restraints of water resource that affect sustainable development, special attention has been paid to the realization of policy objectives of major water diversion projects in the conservation and efficient use of water, as well as the effective allocation of water resources, so as to promote the optimized allocation and conservation of water resources, and contribute to the water sustainability in cities.



04. Carried out natural resources accountability audits on leading officials to promote the practice of the green development concept

- In order to promote local governments to effectively fulfill their responsibilities for **natural resource asset** management and **ecological protection**, and to implement the concept of **ecological civilization development** and related decisions and plans, natural resources accountability audits on leading officials have been conducted.
- By expanding the scope of audit elements, emphasis has been put on the implementation of major tasks such as the natural resource **asset management, territory development plan, carbon peaking, carbon neutrality**, and nationwide battle to prevent and **control pollution**.
- Accelerate the establishment and improvement of audit evaluation standards and indicator systems to help promote the construction of a beautiful China.





01. Overview of Xuzhou

Xuzhou is located in the northwest of Jiangsu Province, China. It is an important city along the New Eurasian Land Bridge Economic Corridor.





01. Overview of Xuzhou

Xuzhou has a coal mining history of more than 130 years, with more than 250 coal mines at its peak, and a heavy industry system dominated by coal, steel, cement and chemicals. The long-term large-scale coal mining created 28,220 hectares of subsided land, accounting for 2.4 percent of Xuzhou's whole area, which had caused serious ecological problems.



Xuzhou Coal Mining Group Xiaqiao Well, 1830s



Xuzhou used to have a single industry, dominated by coal, with most of it being traditional industries that relied on coal. The development of emerging industries was relatively slow.

Since 2010, Xuzhou has faced enormous challenges in promoting industrialization and urbanization. Technological backwardness has led to the loss of competitiveness of resource-based enterprises, severe ecological protection situations, and relatively poor urban living environment have become key bottlenecks restricting Xuzhou's sustainable development.



02. Background of the audit project

The national "14th Five Year Plan" development plan proposes the goal of promoting green development and building a modern harmonious coexistence between humans and nature. As a typical old industrial base and resource-based city, Xuzhou faces a major issue of how to achieve transformation and development as a resource depleted city.

- In 2022, the State Council approved the construction of a sustainable development demonstration zone in Xuzhou, with the development goal of "innovation leading the high-quality development of resource-based regional central city".
- Through the in-depth analysis of challenges confronting development, Xuzhou has regarded **ecological restoration and green development** as an important channel to solve the **bottlenecks of urban development**, and has developed a distinctive path of urban and ecological transformation. It has provided a reference for resource-exhausted cities to achieve transformation and development.
- Xuzhou's audit institution pays attention to ecological restoration and green development from multiple perspectives and at a deep level in various audits, in order to effectively audit and supervise the construction of sustainable development demonstration zones.



03. The Focus Of the audit project



Implementation of ecological restoration policies

The focus has been placed on the implementation of policies such as comprehensive improvement of coal mining subsidence areas, revealing problems such as failure to carry out ecosystem protection and restoration in accordance with regulations, damage to the ecological environment, and encroachment of industrial land into natural protection areas.



The management of special funds

The focus has been put on the allocation efficiency and expenditure effectiveness of various types of financial special funds for ecological restoration and governance, revealing problems such as the fragmentation of funds allocation, overspending of funds, and withholding and misappropriation of financial special funds.



The construction of the ecological restoration mechanism

The focus has been put on the establishment and implementation of systems such as the mechanism for the use of funds for ecological protection and restoration, revealing problems such as a lack of clarity on duties and responsibilities, a lack of effective coordination at different levels, and a lack of balanced spatial distribution.



The implementation and effectiveness of restoration projects

The focus has been put on the rationality of the feasibility study of ecological restoration projects, the compliance of construction management, and the effectiveness of investment control, revealing problems such as hasty project launch, loose investment control, and poor restoration results.



04. Experience Of the audit project

Understand policies thoroughly, and strengthen pre-trial research

- Studying policies related to ecological civilization construction, ecological protection and restoration, and enhancing the systematic understanding of ecological restoration related work.
- Conduct research through multiple channels, collect relevant materials and information, and continuously strengthen pre-trial research.
- Summarize typical problems of ecological destruction discovered in recent years through auditing, and form an audit problem list.

Overall planning & comprehensive coverage

- Carry out various special fund audits around ecological restoration, mine management, green development, and other matters.
- Carry out economic responsibility and natural resource asset departure audits around the "two account books" of the economic ecology of leading cadres.
- Carried out audits of various ecological restoration projects on the ecological environment restoration, improvement of flood control and drainage and project cost-effectiveness, covering all aspects.

Auditing with innovation

- Take the lead to introduce the Evaluation Indicator System for Natural Resources Accountability Audits on Leading Officials of Township Party and Government Bodies in Xuzhou (Trial).
- Fully utilized the combined audit method of "online analysis + on-site investigation" to lead the new development of auditing with innovation.



PART 04 Sustainable Urban Development Audit Cases

04. Experience Of the audit project

For example, in the real-time audit of Phase III project of the comprehensive treatment of Pan'an Lake coal mining subsidence, Xuzhou has paid attention to issues such as bidding compliance, project budget accuracy and project change rationality, and put forward more than 170 pieces of audit recommendations.



View of the wetland landscape in the coal mining subsidence area of Jiawang District after rectification



The favorable ecological environment has attracted various wild birds to breed and inhabit here





PART 04 Sustainable Urban Development Audit Cases

04. Experience Of the audit project



Comparison of scenery before and after ecological restoration of Pan'an Lake in Jiawang District



Comparison of wetland landscape before and after treatment of coal mining collapse in Jiawang District



Comparison of Basic Farmland before and after treatment of Coal Mining Collapse in Jiawang District



Comparison of Civil House before and after treatment of Coal Mining Collapse in Jiawang District



05. Main Auditing Results

1. Better ecological environment.

The audit has accelerated the implementation of projects such as the comprehensive treatment of coal mining subsidence, promoted the continuous increase in urban green coverage and per capita park green space in urban area, and continued to improve the water environment.



After ecological restoration, the Tuolongshan Quarry in Xuzhou is lush with greenery and blooming flowers all year round



After ecological restoration, the quarry of Jinlong Lake (Dongzhu Mountain) in Xuzhou City has been transformed into a mountain park, forming a waterfall and ladder scenic spot



After ecological restoration, the quarry of Anran Mountain in Xuzhou City has been transformed into a suburban park



PART 04 Sustainable Urban Development Audit Cases

05. Main Auditing Results

The area of protected wetlands in Xuzhou has grown by **1,780 hectares** and urban green space has grown by **390 hectares**, contributing to ecological development.



The Yunlong Lake Scenic Area in Xuzhou City, has transformed into a national level tourist attraction and a provincial-level scenic spot.



05. Main Auditing Results

2. The comprehensive ecological benefits are increasingly evident day by day.

The audit has promoted the implementation of the action plan for the construction of a regional science and technology innovation center. Xuzhou has carried out 13 municipal-level science and technology projects related to dual carbon goals, guided and improved the implementation of science and technology policies and the management of science and technology projects. The scale of core industries such as the green and low-carbon energy and digital economy has exceeded RMB120 billion, evidently increasing the comprehensive ecological benefits.





05. Main Auditing Results

3. Co-construction and sharing of achievements in ecological civilization.

The audit has promoted the systematic implementation of ecological restoration projects and built 15 pilot demonstration models. Xuzhou and the United Nations Human Settlements Programme jointly released the "Technical Standards for Ecological Restoration of Coal Mining Subsidence Areas in the Huanghuaihai Plain" to the world, provide technical references for ecological restoration in other similar cities. In 2023, Xuzhou attended the 3rd International Forum on Big Data for Sustainable Development Goals and the International Forum on Sustainable Utilization and Green Development of Water Resources, as a representative of the demonstration zones.



SUMMARY

In the past 45 years since the reform and opening up, China has experienced the largest and fastest urbanization in the history of the world. China's audit institutions have promoted the practice and experience of sustainable urban development from multiple dimensions such as livability, green and low carbon, water conservation, water security, and governance concepts. This exchange aims to draw attention from audit institutions of different countries to the audit of sustainable urban development, and to promote experience and knowledge sharing, and capacity enhancement of the audit work in this field. We are confident that with our joint efforts, through the continuous auditing on sustainable urban development, audit institutions from all over the world will make new and greater contributions to improve urban governance system and governance capacity, enhance the functional quality and comprehensive carrying capacity of cities, and realize the comprehensive sustainable development of economy, society and ecological environment.



THANK YOU

