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2025

REPORT ON THE STATE OF THE ECOLOGY AND ENVIRONMENT IN BEIJING



Beijing Municipal Ecology and Environment Bureau

The 2025 Report on the State of the Ecology and Environment in Beijing is hereby released in accordance with the *Environmental Protection Law of the People's Republic of China*.

Beijing Municipal Ecology and Environment Bureau
April 2026

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OVERVIEW

In 2025, Beijing thoroughly applied the principles established at the 20th CPC National Congress and the successive plenary sessions of the 20th CPC Central Committee, fully implemented Xi Jinping Thought on Ecological Civilization, took comprehensive steps to advance ecological civilization, and continued to fight the critical battle against pollution. Coordinated efforts have been made to cut carbon emissions, reduce pollution, expand green development, and pursue economic growth, achieving continued improvement of the environment and notable progress in building a Beautiful Beijing. The city's air quality continued to improve, we contained the annual average concentration of fine particulate matter (PM_{2.5}) at **27.0 µg/m³**, falling below the 30-microgram benchmark for the first time, and blue skies have become the new normal. The water ecological environment kept getting better, the proportion of river lengths with Grade I-III water quality rose to 95.2%, and all water bodies inferior to Grade V were dynamically eliminated, while aquatic ecosystem remained in good condition. The soil ecological environment remained good, the overall ecological environment steadily improved, the acoustic environment was basically stable, and the radiation environment stayed normal. Carbon dioxide emissions per 10,000 yuan of gross regional product (GRP) maintained a leading position nationwide.

Quality of the Ecological Environment



Atmospheric Environment

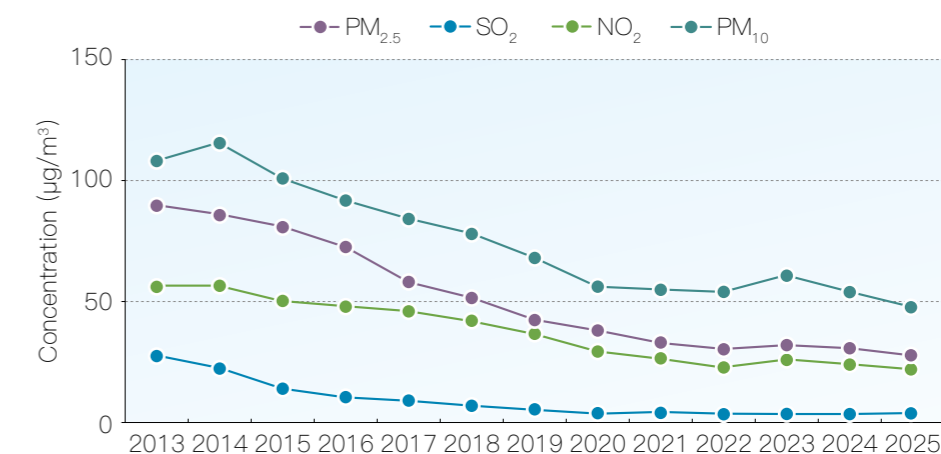
Beijing's air quality kept improving. The annual average concentrations of six major air pollutants, i.e. fine particulate matter (PM_{2.5}), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), inhalable particulate matter (PM₁₀), carbon monoxide (CO), and ozone (O₃), all met the Grade II national ambient air quality standards.

Citywide Air Quality Status

The annual average concentration of PM_{2.5} was 27.0 µg/m³, down by 11.5% year-on-year. The annual average concentration of SO₂ was 4 µg/m³, remaining at single-digit level for nine consecutive years. The annual average concentration of NO₂ was 22 µg/m³, down by 8.3% year-on-year. The annual average concentration of PM₁₀ was 48 µg/m³, down by 11.1% year-on-year. The 95th percentile of the 24-hour average concentration of CO was 0.9 mg/m³, remaining at a consistently low level. The 90th percentile of the daily maximum 8-hour average concentration of O₃ was 159 µg/m³, down by 7.0% year-on-year.

Compared with 2013, the city's annual average concentrations of PM_{2.5}, SO₄, NO₂, and PM₁₀ dropped by 69.8%, 84.9%, 60.7% and 55.6%, respectively; the 95th percentile of the 24-hour average concentration of CO and the 90th percentile of the daily maximum 8-hour average concentration of O₃ fell by 73.5% and 13.3%, respectively.

Compared with 2020, the city's annual average concentration of PM_{2.5} decreased by 28.9%; the annual average concentration of SO₂ remained at an extremely low single-digit level; the annual average concentrations of NO₂ and PM₁₀ fell by 24.1% and 14.3%, respectively; the 95th percentile of the 24-hour average concentration of CO and the 90th percentile of the daily maximum 8-hour average concentration of O₃ dropped by 30.8% and 8.6%, respectively.

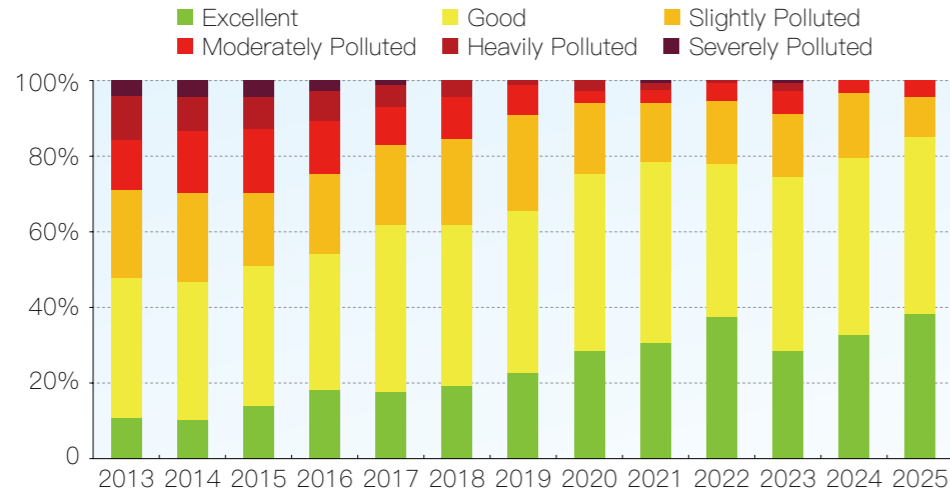


Annual Average Concentrations of Major Air Pollutants in Beijing, 2013-2025

Note: The assessment of air quality was based on the Ambient Air Quality Standard (GB3095-2012).

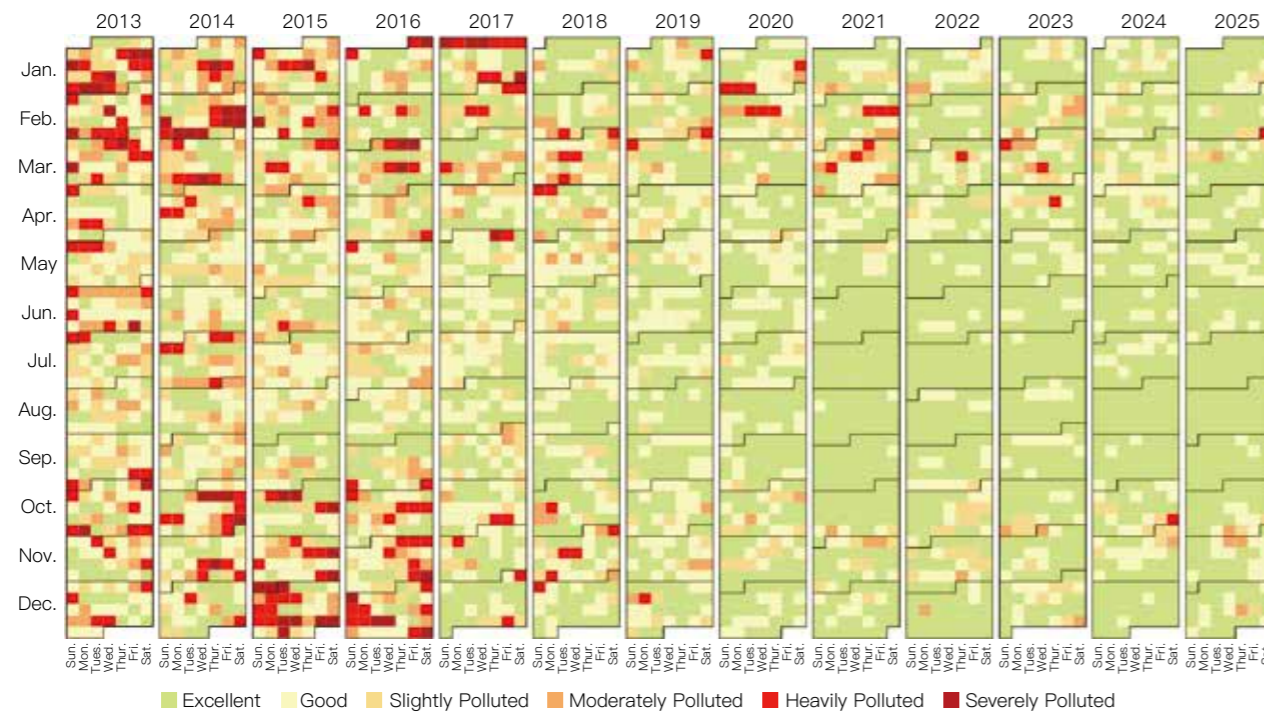


The number of days with good or excellent air quality reached 311, accounting for 85.2% of the year, the highest since monitoring began, which is an increase of 21 days year-on-year, 135 days more than in 2013, and 35 days more than in 2020. The number of heavy air pollution days totaled 1, with an occurrence rate of 0.3%, the lowest on record, which is 57 days less than in 2013 and 9 days less than in 2020.



Proportion of Days with Various Air Quality Grades in Beijing, 2013-2025

Days with good or excellent PM_{2.5} levels reached 348, which is 144 days more than in 2013 and 18 days more than in 2020. Notably, PM_{2.5} levels stayed good or excellent for 227 consecutive days from March to October.



Ambient PM_{2.5} Calendar in Beijing, 2013-2025

Air Quality at District Level

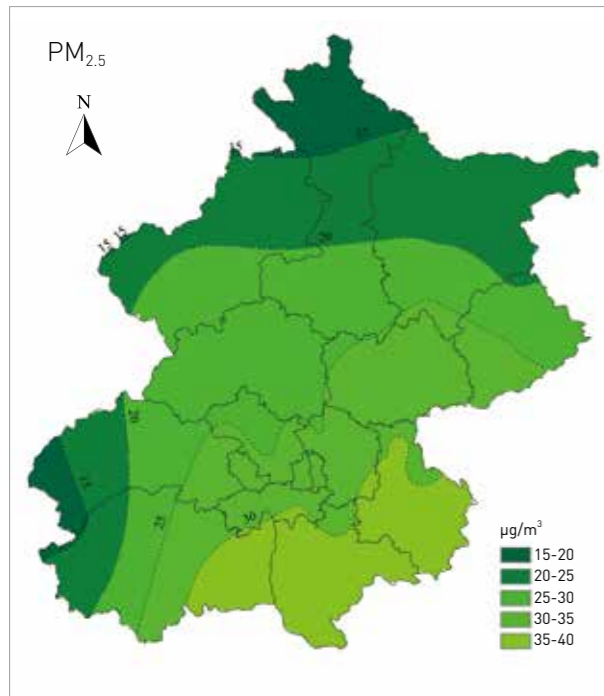
In terms of the different districts in Beijing, their annual average concentrations of PM_{2.5} ranged from 22.7 to 30.8 µg/m³, SO₂ from 3 to 5 µg/m³, NO₂ from 14 to 29 µg/m³, and PM₁₀ from 39 to 56 µg/m³, all in compliance with the Grade II national standard.

Annual Average Concentrations of Major Air Pollutants at District Level in Beijing

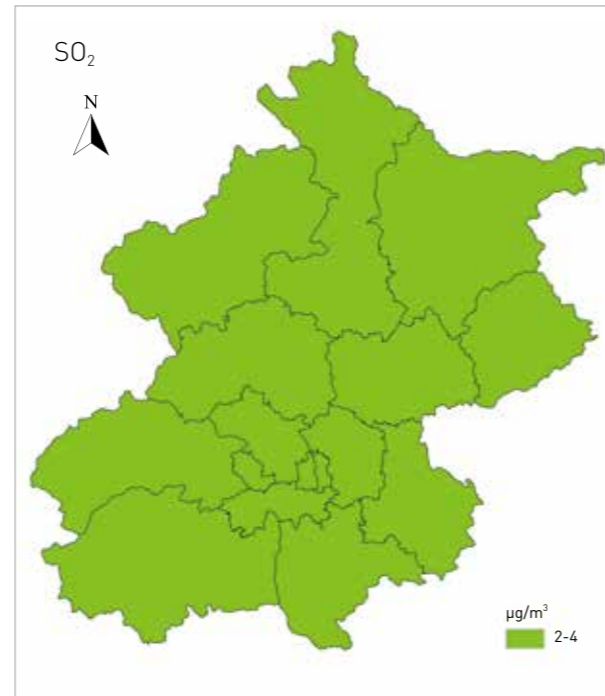
Unit: µg/m³

	PM _{2.5}	SO ₂	NO ₂	PM ₁₀
Dongcheng	29.0	4	25	51
Xicheng	29.3	5	27	52
Chaoyang	27.8	5	28	49
Haidian	25.7	3	26	47
Fengtai	28.7	3	26	54
Shijingshan	26.5	3	28	53
Mentougou	24.4	3	21	48
Fangshan	29.3	3	23	56
Tongzhou	30.8	4	29	56
Shunyi	25.6	4	21	47
Daxing	29.5	3	27	56
Changping	24.5	3	17	43
Pinggu	27.7	3	15	47
Huairou	24.2	3	14	39
Miyun	23.4	4	17	42
Yanqing	22.7	3	15	40
Beijing Economic-Technological Development Area	29.7	3	27	51

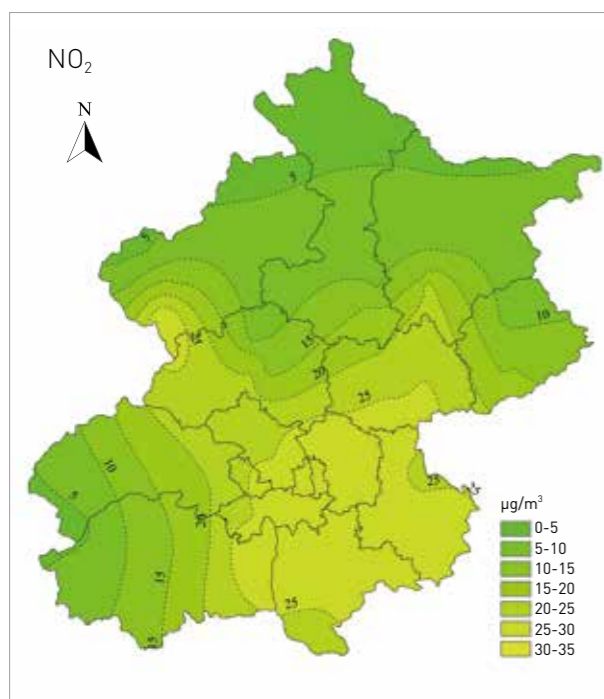
*Source: data from monitoring sites for urban environmental assessment at the district level



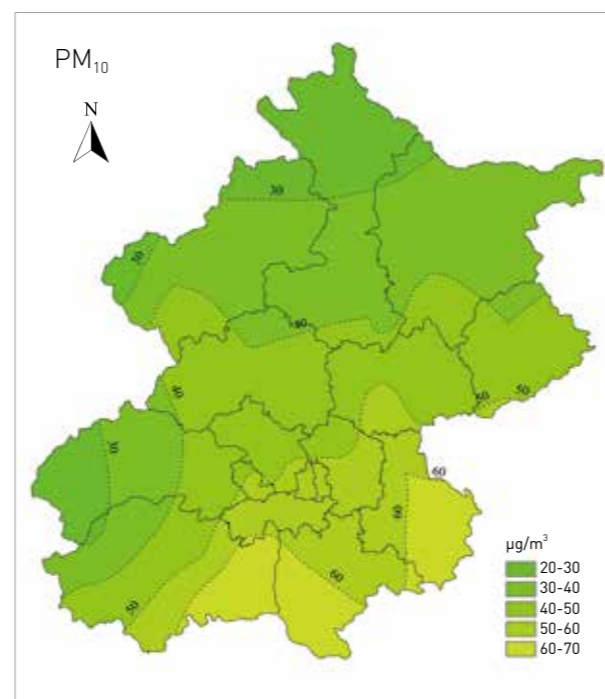
Spatial Distribution of Ambient PM_{2.5} Concentration in Beijing



Spatial Distribution of Ambient SO₂ Concentration in Beijing



Spatial Distribution of Ambient NO₂ Concentration in Beijing



Spatial Distribution of Ambient PM₁₀ Concentration in Beijing

Assessment by Monitoring Stations with Special Functions

Results from monitoring stations near inter-provincial boundary showed that, the PM_{2.5} annual average concentration monitored from the stations located near the southwestern, southeastern and southern boundary of Beijing was 32.4 µg/m³, 20.0% above the citywide average; the PM_{2.5} annual average concentration monitored from the stations located near the northeastern and northwestern boundary of Beijing was 21.8 µg/m³, 19.3% below the citywide average.

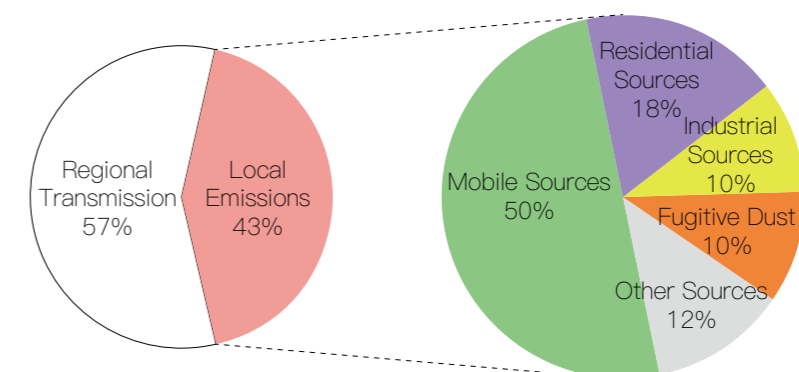
Results from traffic pollution monitoring stations showed that, for the roadside environment, the PM_{2.5} annual average concentration was 30.3 µg/m³, 12.2% above the citywide average; the NO₂ annual average concentration was 36 µg/m³, 63.6% above the citywide average.

For the urban background monitoring station at Dingling, Changping District, the PM_{2.5} annual average concentration was 23.3 µg/m³, 13.7% below the citywide average.

The 4th Round of Refined PM_{2.5} Source Apportionment

Special Column

In 2025, results of the 4th round of refined PM_{2.5} source apportionment were released. Of the city's ambient PM_{2.5}, regional emissions accounted for 57%, while local emissions contributed 43%. The share of regional transboundary pollution rose compared with the previous round and increased with pollution severity, reaching as high as 80% on moderate and heavy pollution days. Of local emissions, mobile sources accounted for 50%, residential sources 18%, industrial sources 10%, fugitive dust 10%, and other sources 12%. Further refined analysis of local sources showed that, mobile sources were dominated by emissions from diesel and gasoline vehicles; residential sources were dominated by emissions from service industries such as those involving solvent use, waste treatment, catering and auto repair; industrial sources were mainly from boilers, power generation, oil refinery and petrochemicals; fugitive dust were still dominated by construction and road sources. Compared with the previous round of PM_{2.5} source apportionment, the absolute contribution of local sources further decreased, while the relative contributions of mobile and residential sources increased.





Water Ecological Environment

The citywide water ecological environment continued to improve. Average concentrations of major surface water pollutants remained low; all water bodies inferior to Grade V were promptly identified and remediated. The water quality of centralized surface drinking water sources met national standards. The groundwater quality remained stable. The aquatic ecosystem condition was good.

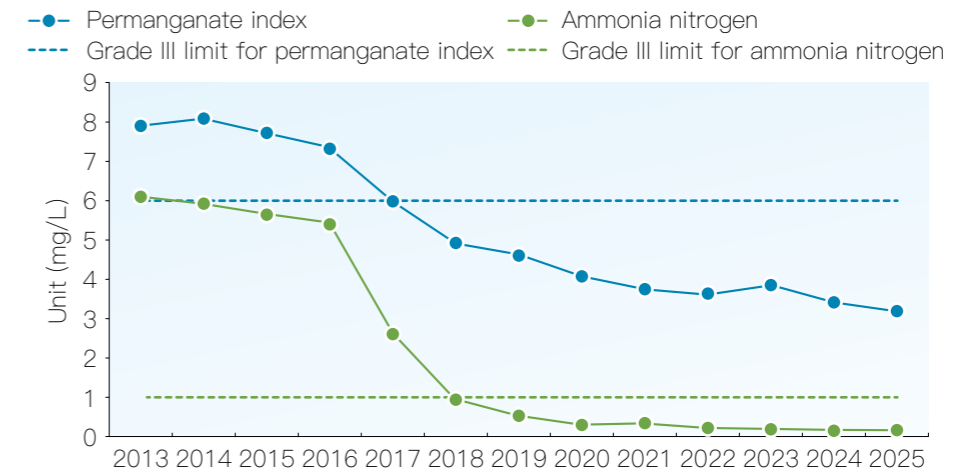
Surface Water Quality

The surface water quality remained stable. Generally, the upstream water quality was better than downstream.



Surface Water Quality Status in Beijing

Averaged from surface water monitoring sections in Beijing, the annual permanganate index was 3.19 mg/L, down by 6.2% year-on-year, and the annual ammonia nitrogen concentration was 0.14 mg/L, down by 17.6% year-on-year. Compared with 2020, the permanganate index and annual ammonia nitrogen concentration decreased by 21.8% and 58.8%, respectively. Among all types of surface water bodies in Beijing, the water quality of reservoirs and rivers was preferable, followed by lakes.

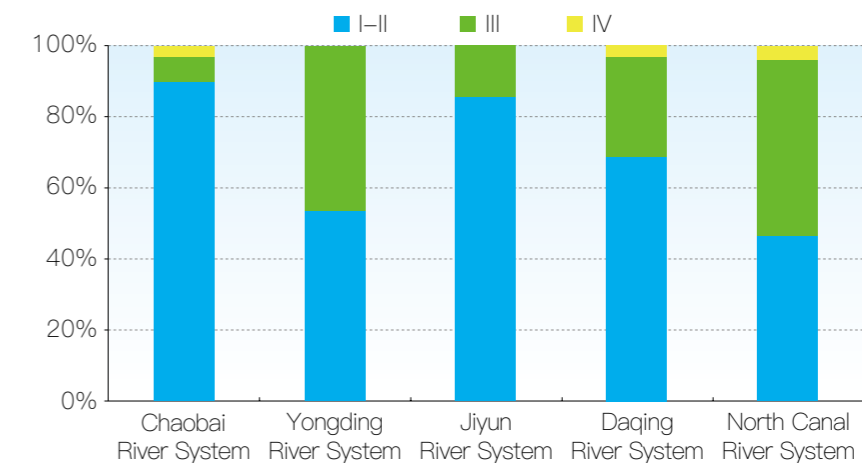


Trend of the Annual Average Concentrations of Major Pollution Indicators in Beijing's Surface Water, 2013-2025

Rivers

Throughout the year, a total of 105 rivers from the five major river systems were monitored, covering a length of 2,551.6 km. Within the total length, 95.2% met the Grade I-III standards for water quality, an increase of 8.0 percentage points year-on-year; no rivers inferior to Grade V were found. Compared with 2020, the proportion of Grade I-III river length rose by 31.4 percentage points, and the proportion of river length inferior to Grade V fell by 2.4 percentage points.

All the five major river systems maintained good water quality, with the Jiyun River System showing the largest improvement, where the proportion of Grade II water bodies increased by 21.0% year-on-year.



Water Quality of the Five Major River Systems in Beijing



Lakes

Throughout the year, a total of 22 lakes were monitored, covering a water surface area of 7.196 million m². Within the total monitored area, 65.4% met Grade I-III standards for water quality, an increase of 1.9 percentage points year-on-year; 34.6% were of Grade IV water quality, and no lakes of Grade V or inferior to Grade V standard were found. Compared with 2020, the proportion of Grade I-III lakes rose by 52.8 percentage points, and that of lakes inferior to Grade V fell by 2.8 percentage points.

Tuancheng Lake, Kunming Lake, Bayi Lake, Yuyuantan Lake, Zizhuyuan Lake, the Lihai Lakes, Rear Lake of Beijing Exhibition Hall, the Forbidden City moat, Qingnian Lake, and Honglingjin Lake were mesotrophic; all other lakes were slightly eutrophic.

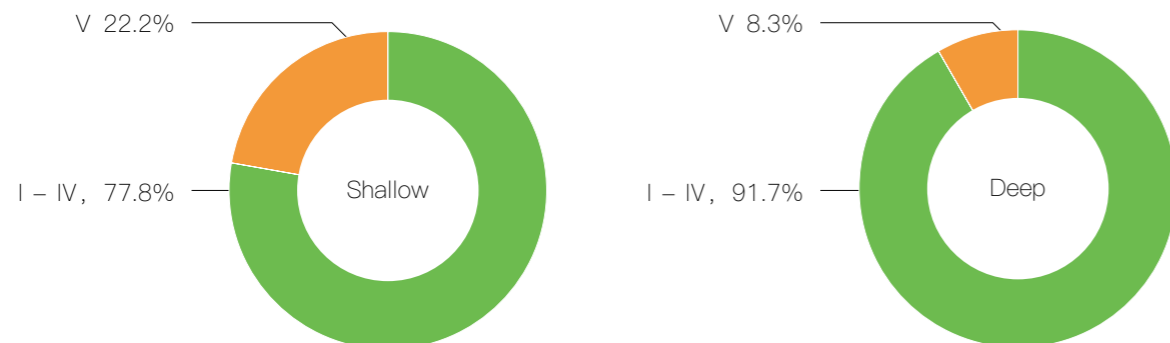
Reservoirs

Throughout the year, a total of 18 medium and large water-filled reservoirs were monitored, with an average total impoundage of 4.31 billion m³. Stable year-on-year, 100% of the total impoundage were of Grade I-III water quality. Compared with 2020, the proportion of Grade I-III reservoirs rose by 15.4 percentage points.

The water quality in Miyun Reservoir and Huairou Reservoir remained stable at Grade II, meeting the national standard for drinking water sources. The water quality of Guanting Reservoir was at Grade III.

Groundwater Quality

The overall quality of groundwater remained stable. In terms of horizontal distribution, the groundwater quality in northern piedmont areas was generally better than that in downstream areas. In terms of vertical distribution, the quality of deep groundwater was better than shallow groundwater. For shallow groundwater, Grade I-IV areas accounted for 77.8% of the assessed area, and Grade V areas 22.2%. For deep groundwater, Grade I-IV areas accounted for 91.7% of the assessed area, and Grade V areas 8.3%. The main Grade V indicators were iron, manganese, fluoride, and nitrate nitrogen.



Proportions of Shallow and Deep Groundwater Quality Grades

Aquatic Ecosystem Condition

Throughout the city, the aquatic ecosystem condition was sound, with the water bodies in mountainous areas under generally better ecological conditions than those in plain areas. Comprehensive evaluation shows that the aquatic ecosystem condition of rivers, lakes, and reservoirs were all rated "good". The length of rivers with good or excellent aquatic ecosystem condition accounted for 81.1% of the total monitored river length, an increase of 8.3 percentage points year-on-year. In terms of spatial distribution, most of the rivers in the mountainous areas were of "good" or "excellent" aquatic ecosystem condition, and those in the plain areas were mainly "good". In Beijing's five major river systems, the Chaobai River System had the best aquatic ecosystem condition.



Overview of Beijing's Aquatic Ecosystem Condition

Aquatic Organisms

The monitoring of aquatic organisms went forward in the mainstreams and tributaries of Beijing's five major river systems, key lakes, as well as large and medium-sized reservoirs. From 2020 to 2025, a total of 773 phytoplankton species, 284 zooplankton species, 549 periphytic algae species, 487 large benthic invertebrate species, 79 fish species, and 66 aquatic macrophyte species had been monitored. Among large benthic invertebrates, aquatic insects indicating clean water bodies, such as *Ephemeroptera*, *Plecoptera*, and *Trichoptera* were abundant in mountain rivers such as the upper reaches of the Chaohe River, the mountainous section of the Yongding River, the Huaisha River, and the Juma River, as well as in rivers of plain areas such as the Liangshui River and the Changhe River. Indigenous fish such as *Pseudorasbora parva*, *Rhodeus sinensis*, and *Carassius auratus* were the most common species. Fish species under second-class aquatic wildlife protection in Beijing, such as *Zacco platypus*, *Opsariichthys bidens*, and *Sarcocheilichthys nigripinnis*, were already widely distributed.

Habitat

There was a gap in habitat conditions between the rivers in mountainous areas and those in plain areas. The rivers in mountainous areas were overall evaluated as "excellent" for habitat conditions, and those in plain areas were evaluated as "medium". Among the five major river systems, the Chaobai River System had the best habitat conditions. Additionally, the lakes were overall evaluated as "medium" for habitat conditions, and the reservoirs were overall evaluated as "good" for habitat conditions.

Haizi Reservoir, an Excellent Case of the Fourth Batch of National Beautiful Rivers and Lakes

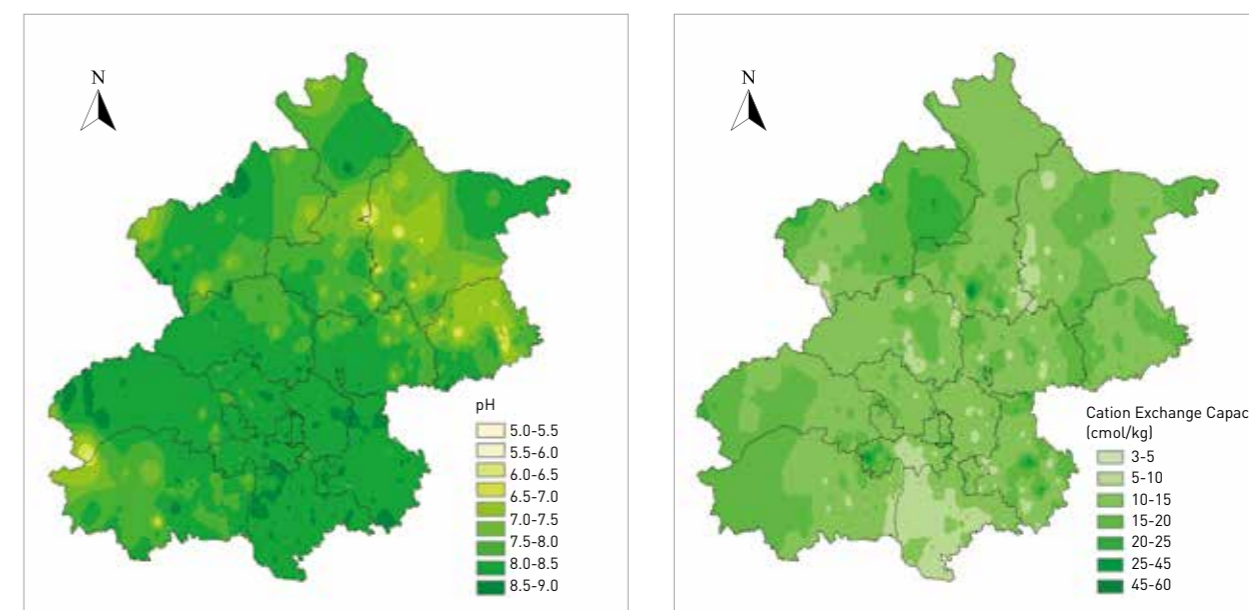
Special
Column

Adhering to the philosophy that "lucid waters and lush mountains are invaluable assets", Beijing prioritized ecological protection and launched comprehensive improvement of the water environment in the Haizi Reservoir Basin, delineated ecological conservation redlines, built multi-functional ecological corridors, and implemented a full set of ecological restoration measures. For Haizi Reservoir, the water quality was stable at Grade II for surface water, the forest coverage exceeded 90%, and more than 60 bird species were recorded in the monitoring, including over 10 national and municipal key protected species, and rare species such as the White-tailed Sea Eagle and Baer's Pochard were frequently sighted. The "scenic area + countryside" model boosted homestay and agricultural product sales, turning ecological benefits into public welfare.

Soil Ecological Environment

The quality of Beijing's soil ecological environment was good, and the environmental risks of soil were effectively controlled.

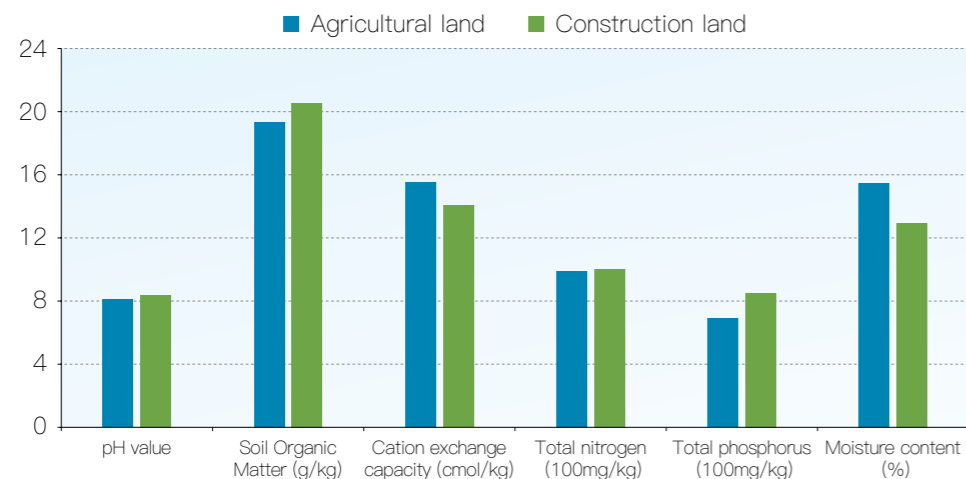
The soil across the city was mostly neutral or weakly alkaline, with pH values lower in the northeast and higher in the south. Soil nutrient retention and buffering capacity were mostly above medium level, with an average cation exchange capacity of 15.1 cmol(+)/kg, higher in mountain forest soil. The content of major heavy metals in the soil were stable compared with the 13th Five-Year Plan period.



Spatial Distribution of Soil pH Values and Cation Exchange Capacity in Beijing



No significant difference was found in soil pH values between agricultural land and construction land. Compared with construction land, agricultural land had higher cation exchange capacity and moisture content, with stronger buffering and water retention capacity.



Content of Physicochemical Indicators in Soil Sampling Spot of Different Land Use Types

The "Zero-Waste City" Program

Special Column

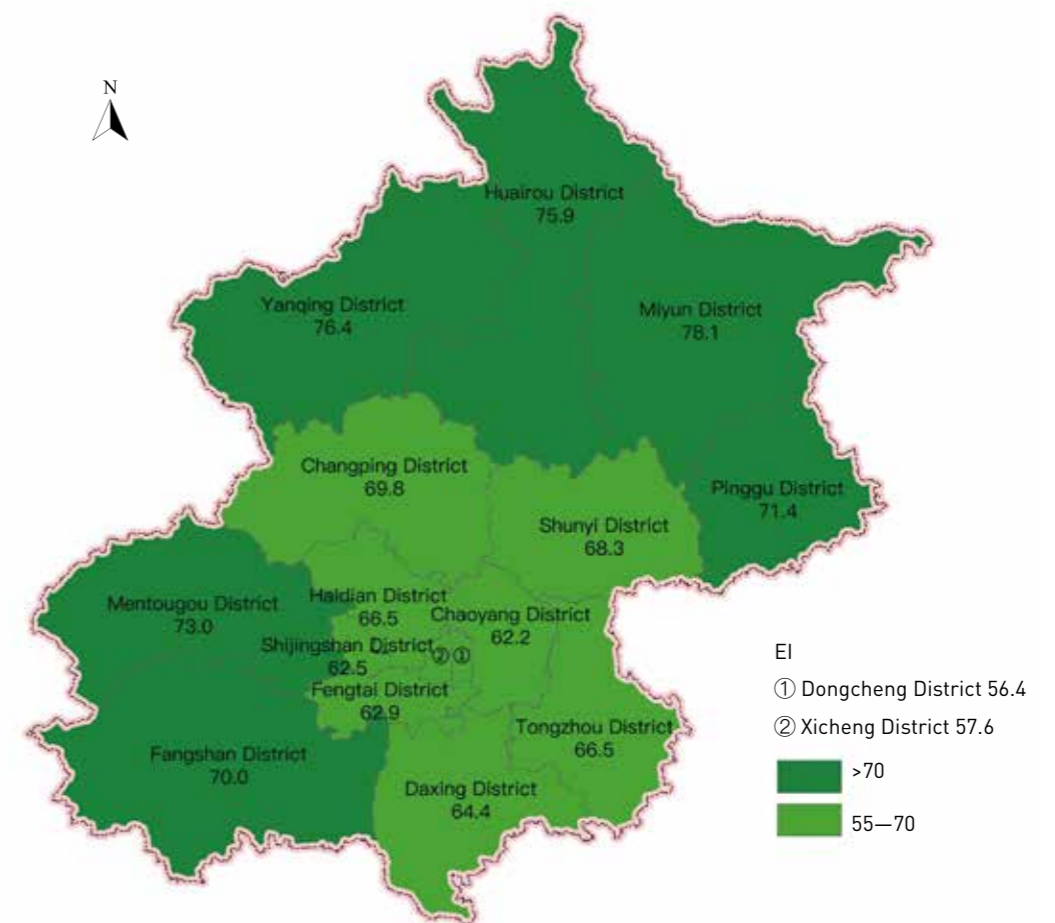
The "zero-waste city" program was advanced in a coordinated manner across the city. Following the principle of "reduction, recycling and safe disposal", we further promoted source reduction and recycling of solid waste to foster green development and lifestyles. Efforts were strengthened in the comprehensive utilization of general industrial solid waste, the management of domestic waste, the full-cycle treatment of construction and demolition waste, the environmental risk prevention of hazardous waste, as well as the efficient utilization of agricultural and forestry solid waste and sludge. Special campaigns cracked down on illegal dumping and disposal of solid waste and addressed pollution risks at domestic waste landfills. The construction of "zero-waste city" was promoted in Beijing Economic-Technological Development Area, Miyun District and Tongzhou District, and the development of "zero-waste units" was explored by Haidian District, Changping District and other districts.

Natural and Ecological Environment

The overall ecological and environmental status of Beijing steadily improved, and ecosystem stability was strengthened.

Ecological and Environmental Status

Evaluated according to the *Technical Specification of Ecological and Environmental Quality Evaluation (DB11/T 1877-2025)*, the ecological and environmental quality index (EI) of the city was 71.7, with a year-on-year increase of 0.42%, and an increase of 2.14% from 2020. The ecological environment was rated "excellent", with steady improvement in ecosystem quality. The EI rose by 0.48% in the core zone serving capital functions, 0.46% in the central urban districts, 0.12% in the plain areas, and 0.51% in the ecological conservation areas.



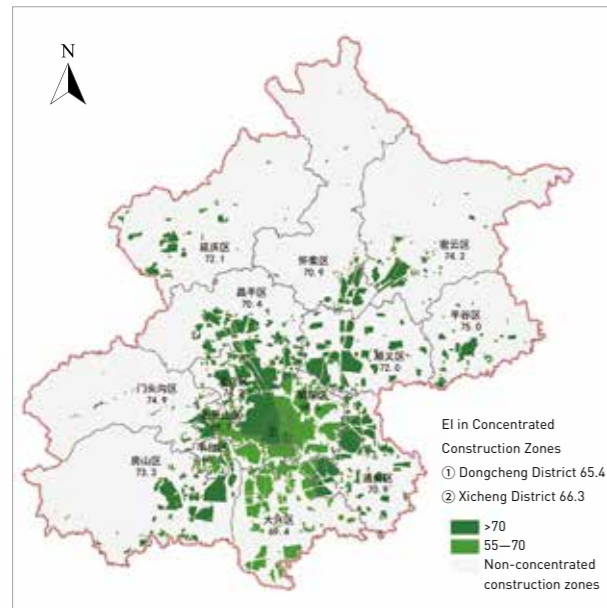
Spatial Distribution of EI by District in Beijing



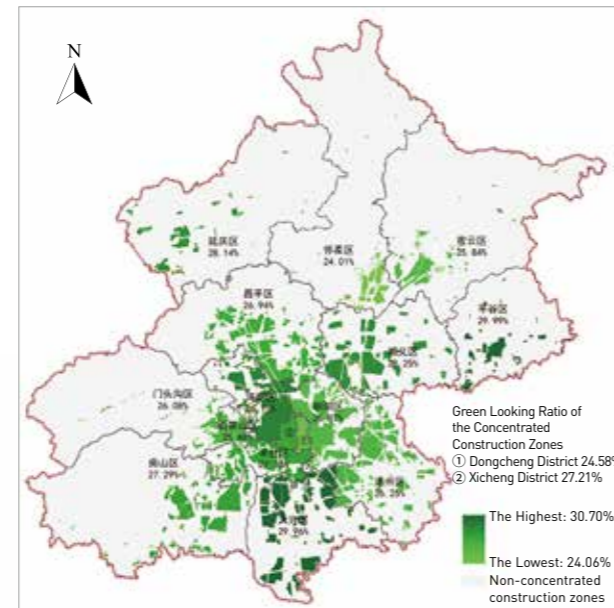
Concentrated Construction Zones

The EI of concentrated construction zones rose by 3.64% year-on-year and was rated “excellent”. The green space layout in the core zone serving capital functions continued to optimize with a notable EI increase, the proportion of forest land area and biomass density both grew in the central urban districts, and the EI rose slightly both in the plain areas and ecological conservation areas.

The green looking ratio of the city’s concentrated construction zones was 27.02%, up by 0.04 percentage points year-on-year, with Pinggu, Daxing, and Haidian ranking among the top three districts in Beijing. Shijingshan District had the largest increase in green looking ratio, up by 0.65 percentage points.



Spatial Distribution of EI in Concentrated Construction Zones of Beijing’s Districts



Spatial Distribution of Green Looking Ratio in Concentrated Construction Zones of Beijing’s Districts

Key Nature Reserves

The EI of key nature reserves rose by 0.66% year-on-year, and was rated “excellent”, with steady improvement of ecosystem quality and stable biodiversity. Among which, Baihuashan National Nature Reserve and Wulingshan Municipal Nature Reserve etc. have achieved “excellent” EI, showing significant improvement of ecosystem quality in forest nature reserves.

Ecological Conservation Redline

The EI within the ecological conservation redline rose by 0.80% year-on-year, and was rated “excellent”, indicating steady improvement of ecosystem quality. The area of ecological land (forests, shrubs, meadows, wetlands) rose by 0.11% year-on-year, with improving forest ecosystem quality. The EI values within the ecological conservation redline in the five ecological conservation districts, namely Miyun, Huairou, Yanqing, Mentougou and Pinggu, all reached the “excellent” level.

Greenbelt Areas

The EI of the greenbelt areas increased by 0.90% year-on-year, indicating steady improvement of ecosystem quality, with expanded water and forest areas and further optimized regional ecological pattern. The EI of the first greenbelt area increased by 1.77% year-on-year, of which the area of ecological land increased by 2.82%, the forest area increased by 2.49%, the water coverage area increased by 2.86%, while the area of construction land decreased by 3.87% year-on-year. The EI of the second greenbelt area increased by 0.61% year-on-year, of which the area of ecological land increased by 0.49%, the water coverage area increased by 10.09%, the cultivated land area increased by 1.46%, while the area of construction land decreased by 2.14% year-on-year.

Biodiversity

In 2025, a total of 839 species were observed, focusing on birds, insects and other typical indicator organisms, including 45 national key protected wild animal species and 87 municipal key protected wild animal species. During the 14th Five-Year Plan period, biodiversity surveys recorded a total of 7,121 species, including 1,056 macrofungi species, 540 algae species, 322 large benthic invertebrate species, 2,613 insect species, 2,166 higher plant species and 424 vertebrate species.

Assessment of Mine Restoration

Special Column

The coal mine remediation project in Lvjia Village, Wangping Town, Mentougou District is a component of the ecological restoration project in the western part of the capital, and has seen significant ecological improvement after systematic restoration. The treatment area is in the stage of ecological recovery. Evaluation results showed that forest and grass coverage increased by 82.39% compared with 2022 (before treatment), vegetation biomass rose by nearly 80 times, and restoration rate of degraded land reached 99.03%. Biodiversity gradually recovered with increasing numbers of bird and native plant species.



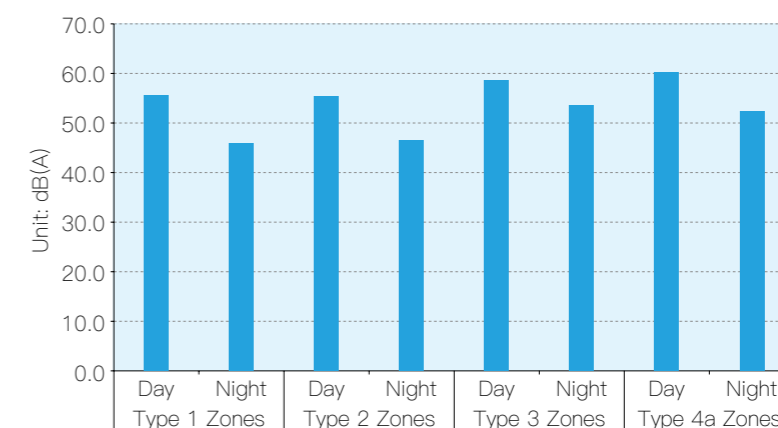
Coal Mine Remediation Project in Lvjia Village, Wangping Town, Mentougou District

Acoustic Environment

The acoustic environment in Beijing was generally stable.

Acoustic Environment of Functional Zones

The compliance rates of daytime and nighttime acoustic environment in urban functional zones were 86.7% and 87.2% respectively, up by 6.7 and 17.2 percentage points year-on-year. Among them, the annual average daytime and nighttime equivalent sound levels were 55.6 dB(A) and 46.0 dB(A) in Type 1 zones, 55.4 dB(A) and 46.4 dB(A) in Type 2 zones, 58.7 dB(A) and 53.6 dB(A) in Type 3 zones, and 60.3 dB(A) and 52.4 dB(A) in Type 4a zones.



Current Status of Acoustic Environment in Functional Zones of Beijing

Acoustic Environment of Traffic Noise

The annual average daytime road traffic noise in the built-up areas of Beijing was 68.0 dB(A), down by 0.5 dB(A) year-on-year. The annual average daytime road traffic noise in the built-up areas of all districts ranged from 66.9 to 69.8 dB(A), among which the average was 68.5 dB(A) in central urban districts and 66.3 dB(A) in other districts.

Radiation Environment

The environmental radiation level in Beijing stayed normal.

Ionizing Radiation

The environmental ionizing radiation level in Beijing remained within the fluctuation range of natural baseline level.

Real-time continuous air absorbed dose rates and accumulative doses were both within the fluctuation range of natural baseline value. The activity concentration of natural radionuclides in aerosols remained at the baseline level, while no abnormalities were observed in the activity concentrations of artificial radionuclides.

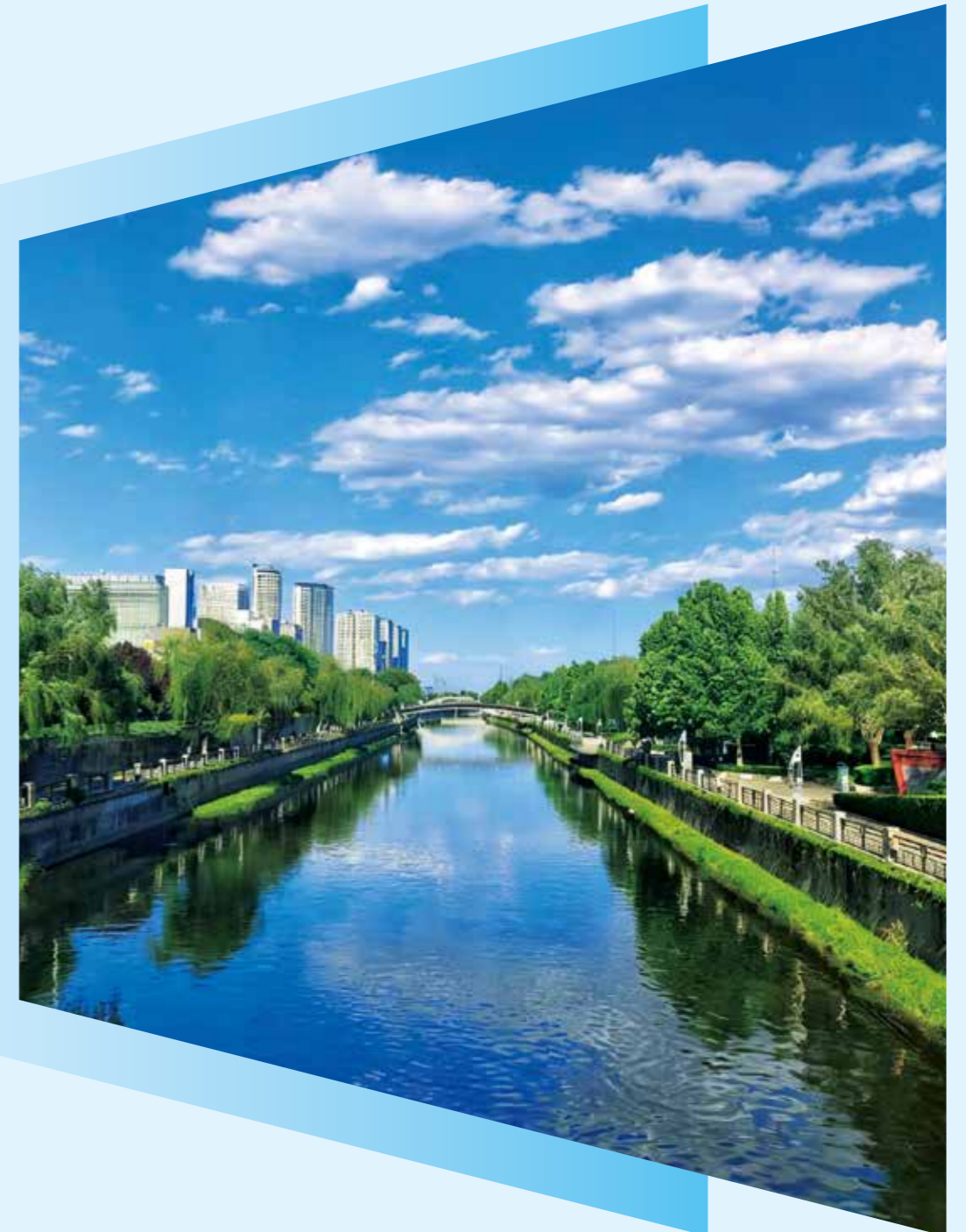
In water bodies, including rivers, lakes, reservoirs and groundwater, the activity concentration of gross α and gross β was within the fluctuation range of natural baseline value, and the activity concentration of natural radionuclides remained at the baseline level, and no abnormalities were observed on the activity concentration of artificial radionuclides.

In soil, the activity concentration of natural radionuclides remained at the baseline level, and no abnormalities were observed in the activity concentration of artificial radionuclides.

Electromagnetic Radiation

Electromagnetic radiation levels at environmental monitoring sites were below the public exposure limits specified in the *Controlling Limits for Electromagnetic Environment (GB 8702-2014)*.

Measures and Actions



Advancing Ecological Civilization

Ecological civilization has been steadily advanced. Fully leveraging the role of overall planning and coordination, the CPC Beijing Municipal Committee's Commission for Advancing Ecological Civilization organized the implementation of 60 tasks for advancing ecological civilization, delivering 98 policy outcomes covering waterfront space development and eco-environmental zoning-based regulation, etc. Research and supportive supervision were conducted to study key and difficult issues in fields such as the critical battle against pollution, green development in ecological conservation areas, green economy and turning Beijing into a garden city etc., so as to facilitate task delivery.

The structural reform in ecological civilization was deepened, and 26 reform plans were formulated, such as the fee-to-tax reform for water resources, the horticulturist system, etc. Reform Inspection was carried out to strive for solid progress in the reform on proprietary rights for natural resources and the reform on collective forest tenure.

The rectification work in response to the second round of inspections by the Central Environmental Protection Inspection Team was fully completed, and active cooperation was provided for their third round of inspections. Municipal-level environmental protection inspections were conducted in Mentougou District and Beijing Environmental Sanitation Group.

Science and technology were applied to support targeted law enforcement. Coordination among ecological and environmental management, monitoring and supervision was enhanced, and digital and intelligent empowerment was strengthened to improve the precision of law enforcement. A total of 3,261 cases of ecological and environmental violations were filed and investigated throughout the year, which effectively deterred such illegal acts.

Eco-Environmental Zoning-Based Regulation



To give full play to the fundamental role of eco-environmental zoning-based regulation in the environmental source prevention system, the *Implementation Opinions on Strengthening Eco-Environmental Zoning-Based Regulation* was issued, which clarified the timetable and roadmap for eco-environmental zoning-based regulation. By 2025, the system of eco-environmental zoning-based regulation will be basically established; by 2027, the system of eco-environmental zoning-based regulation will be fully established and operate efficiently; by 2035, a sound, smooth and efficient system of eco-environmental zoning-based regulation will be built.

Taking into consideration the redline of ecological conservation, the baseline for environmental quality and the ceiling on resource consumption, region-specific grids were delineated for the ecological environment. Three types of units, namely units designated for ecological conservation, units for limited development and units for efficient urban development, were determined in a differentiated manner, and a three-tier environmental access list was delicately formulated accordingly.

The front-end guiding and service role of zoning-based ecological and environmental control was strengthened to anchor development in green foundations, consolidate the ecological base and support high-quality development. Meanwhile, the source prevention and control of eco-environmental zoning-based regulation was deepened to continuously push forward the modernization of the system and capacity for governance of the ecological environment, and support the building of a Beautiful Beijing.

Continuing the Critical Battle Against Pollution

The Battle for Blue Skies

Taking the battle for blue skies as the top priority, we advanced the "Every 0.1 Microgram Counts" initiative, and strengthened green development and emission reduction through structural optimization, engineering control, and refined management.

For green restructuring, we have driven the new energy transition of vehicles and machinery. Policies offering subsidies and incentives were introduced to further promote the adoption of new energy passenger cars, phasing out of high-emission old freight vehicles, and replacement of medium and large passenger vehicles. Measures were optimized for priority access of new energy logistics vehicles within the Fifth Ring Road, zero-emission transport fleets were established, and low-emission zones for non-road mobile machinery were expanded, further raising the number of new energy vehicles in use citywide.

For green engineering, we have promoted the green development of industries. Special campaigns were launched to control volatile organic compounds (VOCs) in summer. Relying on mechanisms including clean production audit, individualized solutions for in-depth treatment and environmental performance evaluation, key enterprises were guided towards green transformation. The total number of green enterprises reached 1,803, lifting the proportion to 39.7%.

For green management, we have improved urban governance with meticulous efforts. Green construction was promoted across the city, and the application of foundation pit air dome technology in fully enclosed construction was scaled up to a total of 26 projects. Road dust load continued to improve. The average road dust load across the city stood at 0.35 grams per square meter, down by 16.7% year-on-year. Road dust load at the entrances and exits of various construction sites dropped significantly, falling below 1 gram per square meter for the first time.

The New Normal "Beijing Blue", a Solid Outcome of Xi Jinping Thought on Ecological Civilization



Following Xi Jinping Thought on Ecological Civilization and General Secretary Xi's directives on Beijing's development as the fundamental principles, Beijing has devoted unrelenting efforts to control air pollution. Since the 14th Five-Year Plan period, we have deepened the campaign from the "Every Microgram Counts" initiative to the "Every 0.1 Microgram Counts" initiative, tapping into the full potential of pollution reduction with meticulous efforts. Through persistent and unremitting endeavors, Beijing's annual average PM_{2.5} concentration has dropped below the 30-microgram benchmark for the first time, the best record since monitoring began. The city's air quality has met the national standards for five consecutive years, marking a milestone breakthrough in sustained air quality improvement.

On July 14, 2025, at the Central Urban Work Conference, General Secretary Xi Jinping pointed out that, "in recent years, Beijing has been blazing a path for pursuing growth with reduced input and addressing problems inherent in managing a megacity. What has won the most acclaim is the significant improvement of air quality. In 2024, Beijing's average PM_{2.5} concentration stood at 30.5 µg/m³, a decrease of 65.9% from 2013. Blue skies have become the new normal." Practice has proven that Beijing's new normal blue skies stand as a vivid example of translating Xi Jinping Thought on Ecological Civilization into concrete actions here in Beijing. It is also one of the achievements that deliver the most tangible sense of gain to residents of the capital, vividly illustrating the profound meaning that "the environment has a significant impact on quality of life, green mountains display beauty, and blue skies bring happiness".

The Battle for Clear Waters

With stronger integration of the “Three Waters” (water resource, water environment, and water ecology), we vigorously advanced water resource conservation, water environment management and water ecological restoration. Protection of drinking water sources was enhanced, and implementation of the *Regulation on Water Source Protection in Miyun Reservoir* and the *Comprehensive Plan for Ecological Conservation of the Chaohe River Basin (2019–2025)* was promoted. Water quality of the Miyun Reservoir has remained stable at Grade II. Total water consumption for production and domestic use in the whole city was controlled within 3 billion m³.

Water environment management was deepened with strengthened whole-process supervision of riverside sewage outfalls and reinforced construction of sewer pipelines. The city’s sewage treatment rate has reached 98%. Weak links in rural water environment management were addressed, with sewage collection and treatment facilities newly established for 97 villages. Treatment of black or malodorous water bodies in rural areas was promoted in an integrated manner of investigation, treatment and long-term management. Cleaning and maintenance of drainage facilities have been steadily advanced, and water bodies failing the Grade V standard, as well as black or malodorous water bodies were promptly identified and remediated.

Water ecological protection and restoration were promoted to facilitate ecological recovery of rivers and lakes. Haizi Reservoir in Pinggu District has been selected as an excellent case of the fourth batch of national beautiful rivers and lakes. Five districts including Shijingshan District and Fengtai District have jointly advanced the protection and construction of beautiful rivers and lakes in the Yongding River Basin.

The Battle for Clean Lands

Safe utilization of soil resources was secured by giving priority to prevention, and conducting categorized management and risk control. For the protection of agricultural land, we conducted coordinated monitoring of the soil and edible agricultural products, advanced the development of high-standard farmland, and made efforts to encourage more efficient use of cultivating additions and recycling of agricultural wastes. For the risk control of construction land, we established a directory system for construction lands under soil pollution risk control and remediation, enhanced inter-departmental coordination, and ensured the supply of clean lands with the mechanism of investigation and treatment first. For the conservation of unused land, with clear division of duties, patrols and inspections of them were carried out with the organization of relevant district governments.

Enhancing Natural Ecosystem Protection

To safeguard the stability of ecological spatial pattern, the management of ecological conservation redlines was further strengthened, including regular supervision and ecological conservation performance evaluation, to make sure that the redlines are not crossed. The integration and optimization of nature reserves was also promoted to improve the nature reserve system.

To advance progress in turning Beijing into a garden city, a ring-shaped green space network formed by parks in the First Greenbelt area is now completed, while the main framework of a second green ring, comprising suburban parks in the Second Greenbelt area, is largely in place. 10 garden neighborhoods and 20 landscape corridors have been built up.

To strengthen biodiversity conservation, Beijing Municipal Ecology and Environment Bureau, together with Beijing Municipal Commission of Planning and Natural Resources, Beijing Municipal Bureau of Agriculture and Rural Affairs, and Beijing Municipal Forestry and Parks Bureau, issued Beijing’s first white paper on biodiversity conservation, offering Beijing’s practices for biodiversity protection in megacities.

To promote ecological progress and sustainable development, we pioneered the first annual horizontal exchange compensation between Gross Ecosystem Product-Regulating Services (GEP-R) and Gross Domestic Product (GDP), so as to facilitate the transformation of ecological advantages into development strengths. The creation of ecological civilization demonstration zones was further advanced, and Haidian District and Cuigezhuang Township of Chaoyang District were accredited as the Innovation Base for translating into practice the philosophy that “lucid waters and lush mountains are invaluable assets”.

A Modernized Ecological and Environmental Monitoring System

Special
Column

To implement the guideline on fully building a Beautiful Beijing and give better play to the supporting role of ecological and environmental monitoring, Beijing has formulated an implementation plan for accelerating the establishment of a modernized ecological and environmental monitoring system. The plan clearly puts forward the following objectives: By 2030, a sound monitoring network integrating atmospheric, spatial, ground, mobile and intelligent monitoring will be established, the digital and intelligent transformation of monitoring technologies will be accelerated, and a high-level operational support system covering all environmental elements will take shape. Efforts will be made to further consolidate the foundation of high-quality monitoring data, give better play to the role of high-end and cutting-edge laboratories, and ensure more smooth and high-performance monitoring management. A modern ecological and environmental monitoring system in line with the building of a Beautiful Beijing will be basically established. Looking ahead to 2035, the modernized ecological and environmental monitoring system will fully match the requirements for building a Beautiful Beijing, and the overall strength of ecological environment monitoring will reach the international leading level.

Actively Addressing Climate Change

We have taken proactive and measured steps toward carbon peaking and carbon neutrality. Efforts have been made to improve the management system, establishing a framework for controlling the total amount and intensity of carbon emissions, and accelerate the green transition in all areas of economic and social development. Carbon dioxide emissions per 10,000 yuan of GRP have maintained a leading position nationwide. Market mechanisms have been further refined. Supervision and management of key emission units under the national carbon market have been strengthened, and the scheme for Beijing's local carbon market has been continuously improved, with a cumulative trading volume of 64.14 million tons and a turnover of 3.7 billion yuan. A work plan for carbon footprint management has been issued. Research on carbon footprint accounting methodologies for key products such as liquid crystal display panels has been carried out, and carbon labeling and certification have been promoted.

Innovation in low-carbon technologies has been enhanced. Solicitation and promotion of advanced low-carbon projects have been continued. A total of 21 advanced low-carbon technology projects, 6 low-carbon pacesetters and 8 typical cases of climate-friendly zones have been selected, 5 of which have been included in the 2025 Typical Cases of Green and Low-Carbon Development by the Ministry of Ecology and Environment. Control of non-CO₂ greenhouse gases has been strengthened. Actions to control methane emissions have been implemented, with a focus on key methane emission sectors including solid waste disposal and sewage treatment, to enhance source control and resource utilization. Construction of a climate-resilient society has been advanced, and the climate-resilient city project in Beijing Municipal Administrative Center won the 2025 Local Leaders Climate Award.

Inclusive Carbon Benefits

Special
Column

To further standardize the work related to inclusive carbon benefits and encourage the public to actively participate in green and low-carbon actions, we issued and implemented the *Measures for the Management of Inclusive Carbon Benefits in Beijing (for Trial Implementation)*. The document specifies that eligible carbon reduction behaviors in multiple fields such as low-carbon travel and the recycling of energy and resources will be recorded and converted into standardized carbon benefits and linked to tangible rewards through means such as carbon emissions trading.

The methodologies for inclusive carbon benefits have been improved. Three methodological documents on inclusive carbon benefits have been updated and released, covering low-carbon travel, "fuel-to-electricity" replacement of motor vehicle, and carbon emissions reduction from hydrogen fuel-cell vehicles. Certification and issuance of emission reductions have been completed for five projects, including the "Amap Beijing Low-Carbon Travel", "Baidu Beijing Low-Carbon Travel" and "Beijing Hydrogen Fuel-Cell Vehicle Carbon Emission Reduction", etc. By the end of 2025, Beijing's "Mobility-as-a-Service" travel program had attracted nearly 6 million users, facilitating over 100 million green trips each year.

Regional Coordination and Joint Efforts

Regional Coordination

The long-term mechanism for coordinated ecological conservation was improved. To fully implement the national plans to launch pilot zones for the Beautiful China Initiative, Beijing has accelerated the development of the Beijing-Tianjin-Hebei Region as a pilot zone under the Beautiful China Initiative. Efforts have been intensified to promote green and low-carbon transition, environmental quality improvement, ecological protection and restoration, ecological security, demonstration of exemplary practices, and the leading role of scientific and technological innovation, with the aim of building the Beijing-Tianjin-Hebei Region into a demonstration zone for coordinated reduction of pollution and carbon emissions and ecological restoration. Areas of coordination have been further expanded, including towards coordinated eco-environmental zoning-based regulation, data sharing on chemical substances and biodiversity, as well as joint publicity activities for World Environment Day on June 5.

Solid progress has been promoted for the coordination in key fields. Joint prevention and control of air pollution has been strengthened. Under the overall guidance of the Ministry of Ecology and Environment, regional pollution episodes have been jointly addressed to achieve peak reduction and slowdown of pollution accumulation. Comprehensive efforts to tackle air pollution in autumn and winter seasons have been carried out for eight consecutive years, driving continuous improvement of regional air quality. Joint protection and governance of the water environment have been enhanced, with comprehensive management of inter-provincial rivers including the Chaobai River and Yongding River. Horizontal ecological compensation agreements between Beijing and Hebei for the upstream basins of the Miyun Reservoir and Guanting Reservoir have been fully implemented. Joint development of the Beijing Municipal Administrative Area and the Xiong'an New Area has been promoted. The national trading center for China Certified Emissions Reductions (CCERs) has been put into high-level operation. Beijing and Xiong'an have jointly established the service agency supporting the trading of CCERs.

Citywide Mobilization

Eco-friendly lifestyles have been proactively adopted. Citizens took an active part in consumer goods trade-in programs, opting for energy-saving and eco-friendly products, followed green practices including the "Clean Your Plate" campaign, low-carbon travel and domestic waste sorting, and enthusiastically participated in publicity and public welfare brand activities such as the Ecological and Environmental Culture Week, the "V-Blue Beijing" campaign and national Low-Carbon Day, practicing environmental protection concepts with citywide mobilization. Young people actively joined environment-themed speeches, research and study tours, as well as the Environmental Culture Season for universities in the capital city, injecting youthful vitality into ecological conservation. The public's sense of engagement and sense of gain in ecological conservation kept improving, citywide environmental awareness has steadily grown, and embracing green lifestyles has gradually become a social ethos.

Consensus for ecological conservation was built across society. Focusing on two major themes, the 20th anniversary of the proposition that "lucid waters and lush mountains are invaluable assets" and the high-quality completion of the 14th Five-Year Plan, news media have extensively reported, and citizens have shared vivid stories of Beijing's achievements in ecological conservation, making the fruits of building a Beautiful Beijing deeply rooted in people's hearts. A total of 66 environmental facilities were opened to the public and offered both online virtual tours and site visits, advocating the vision of green and low-carbon development. We continued to develop high-quality eco-culture courses, and launched the series course *Ecological Wisdom of the Millennium-old Grand Canal*, exploring the ecological essence of fine traditional Chinese culture.



Eco-environmental Progress in the 14th Five-Year Plan Period

During the 14th Five-Year Plan period, Beijing vigorously advanced the green development strategy, coordinated initiatives for industrial restructuring, pollution control, ecological conservation and climate change response, achieved milestone breakthroughs in ecological and environmental quality, and took solid steps in building a Beautiful Beijing.

Ecological conservation was fully strengthened. The CPC Beijing Municipal Committee and Beijing Municipal Government held the Municipal Working Conference on Ecological and Environmental Protection, and rolled out in succession policy documents such as the guidelines on further fighting the battle against pollution and advancing the building of a Beautiful Beijing across the board. Annual key work tasks for ecological conservation and action plans for the battle against pollution were formulated to coordinate their implementation. The CPC Beijing Municipal Committee's monthly performance review meetings specially reviewed air pollution control, and Beijing Municipal Government's executive meetings conducted regular deployment plannings, ensuring continuous efforts and resolute actions on major issues. Rectification of problems identified by the Central Environmental Protection Inspection Team was advanced, and municipal-level environmental protection inspections were carried out in an orderly manner, to make sure that governments at all levels fulfill their duties for ecological and environmental protection.

The critical battle against pollution was continued. Measures had been upgraded to keep our skies blue, including adoption of the more stringent Beijing 6B fuel standards for motor vehicles, and the proportion of new energy non-road mobile machinery was further increased. Individualized solutions for technical retrofit and emission reduction had been provided to businesses, with remarkable improvement of environmental performance in the auto repair industry. Dust control was advanced with precision, and new construction technologies such as foundation pit air domes were promoted, significantly reducing dust and noise, which had realized the normal proceeding of enterprise construction without compromising the residents' quality of life. We continued to keep our waters clear, enhanced protection of drinking water sources, and groundwater table in plain areas kept rising for 10 consecutive years. We established a system for control of riverside sewage outfalls, and implemented the action plan on sewage treatment in both urban and rural areas, raising the city's sewage treatment rate to 98%. All the five major rivers resumed full flow into the sea, and Miyun Reservoir, Yanqi Lake, Qinghe River and Haizi Reservoir were selected as excellent cases of Beautiful Lakes and Rivers nationwide. Fresh headways had been made to keep our lands clean. The former Oriental Chemical Plant was transformed into an "Urban Green Lung", and the old industrial zone of Shougang was safely converted into an Olympic venue.

Green and low-carbon development was accelerated. Our energy mix became cleaner. Coal consumption was reduced to less than 320,000 tons, making Beijing the first large city in northern China to basically achieve coal-free in energy consumption. Imported green electricity exceeded 44 billion kWh, and renewable energy accounted for more than 19% of total energy consumption.

Our industries became greener. The number of national-level green factories reached 182, and the proportion of "green" enterprises accounted for 39.7%. Our buildings became low-carbon. The promotion of green buildings was advanced, with coordinated progress in urban renewal, the upgrade of old residential compounds, and the renovation to make existing public buildings energy-efficient and green. Our transportation became cleaner. New energy vehicles and those meeting China V Standard or above account for over 80% of all vehicles. Beijing maintains a leading position nationwide in energy consumption, water consumption and carbon emissions per 10,000 yuan of Gross Regional Product (GRP).

Ecosystem quality was steadily improved. Full efforts were made to protect important ecological space, and ensure that the redline of ecological conservation is not crossed. We accelerated efforts to build Beijing into a garden city, and built 1,136 parks of various types. Beijing has become a municipality-wide National Forest City, with forest coverage reaching 45%. To promote the realization of the value of ecosystem goods and services, Beijing took the lead in formulating technical specifications for Gross Ecosystem Product (GEP) accounting, made a plan for Gross Ecosystem Product-Regulating Services (GEP-R) accounting, and established vertical ecological compensation and horizontal exchange compensation mechanisms based on GEP-R accounting results, monetizing priceless ecosystem services. Biodiversity conservation was strengthened by improving coordinated working mechanisms, implementing biodiversity conservation plans, and enhancing ecosystem diversity, stability and sustainability.

The modern ecological and environmental governance system was gradually improved. Laws, regulations and policies were refined, including the formulation and revision of 3 local regulations and over 50 local standards such as the regulation on soil pollution prevention and control. Scientific and technological support was strengthened, with multiple rounds of PM_{2.5} source apportionment and the innovative development of an integrated system coordinating the management, monitoring and law enforcement departments, enabling hourly problem identification capabilities. By focusing on one key issue per month under the Swift Response to Public Complaints mechanism, we implemented the catering industry cooking fume control projects and 100-case noise control projects, so as to address environmental concerns directly affecting people's daily lives. Joint prevention and control of ecological and environmental issues were strengthened. A special working group on Beijing-Tianjin-Hebei ecological coordination was established, improving mechanisms such as regional consultation on environmental impact assessment and joint law enforcement. Joint campaigns for air pollution control in autumn and winter were carried out consecutively, inter-provincial horizontal ecological compensation mechanisms were implemented, the creation of a national demonstration zone for green development in the Beijing Municipal Administrative Center was promoted, and support was provided for ecological environment conservation in Xiong'an New Area, yielding fruitful results in building a beautiful and livable Beijing-Tianjin-Hebei Region.



OUTLOOK

The year 2026 is the first year for implementing the 15th Five-Year Plan, and a crucial year for achieving greater progress in building a Beautiful Beijing. Beijing will adhere to the directives of General Secretary Xi Jinping on Beijing's development, bear in mind and translate into practice the philosophy that "lucid waters and lush mountains are invaluable assets", and target the goal of building a Beautiful Beijing and a pilot zone for the Beautiful China Initiative. We will accelerate green and low-carbon development, continue the critical battle against pollution, and take the building of a Beautiful Beijing to new heights with unrelenting efforts and long-term strategic resolve, ensuring that the beautiful ecological environment benefits all residents.