

For more information

# Shanghai Ecological Environment Status Bulletin

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# 2024

Shanghai Municipal Bureau of Ecology and Environment

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In accordance with Article 54 of the Environmental Protection Law of the People's Republic of China: "The environmental protection departments of people's governments at or above the provincial level shall regularly publish bulletins on the environmental status" and Article 67 of the Shanghai Environmental Protection Regulations: "The municipal ecological environment department shall regularly publish bulletins on the environmental status," the 2024 Shanghai Municipal Ecological Environment Status Bulletin is hereby released.

Director of Shanghai Municipal Bureau of Ecology and Environment: Yan Bo  
June 2025



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## Overview



In 2024, Shanghai resolutely followed the guidance of the Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, implemented the guiding principles of the 20<sup>th</sup> National Congress of the Communist Party of China and its Second and Third Plenary Sessions, conducted in-depth study and implementation of Xi Jinping Thought on Ecological Civilization and the spirit of the important speeches by General Party Secretary Xi Jinping when he inspected Shanghai, fully acted on the requirements set forth at the National Ecological and Environmental Protection Conference and the Third, Fourth, and Fifth Plenary Sessions of the 12<sup>th</sup> Shanghai Municipal Party Committee, and coordinated efforts to advance high-level environmental protection and high-quality development. The city continued its in-depth battle against pollution, vigorously promoted the green transformation of economic and social development, and comprehensively advanced the construction of a "Beautiful Shanghai" through the co-creation of "Ten Beauties" spanning space, development, environment, habitat, ecology, resilience, culture, technology, harmony, and good governance. In the latest national evaluation of pollution prevention and control efforts across provinces and cities, Shanghai once again ranked among the top performers, maintaining its excellent standing.

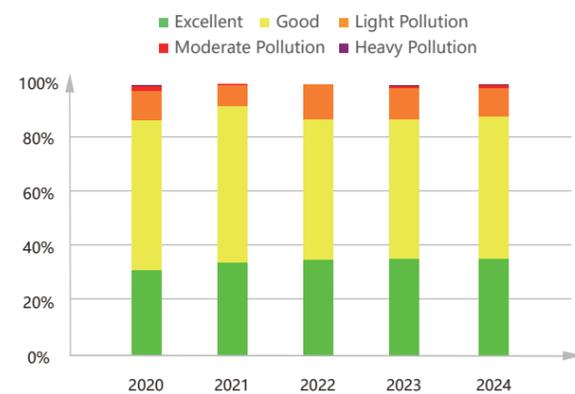
In 2024, Shanghai's ambient air quality index (AQI) registered an excellent/good rate of 88.5%, with the annual average concentration of fine particulate matter (PM<sub>2.5</sub>) at 28 micrograms per cubic meter. The proportion of major rivers and lakes meeting Grade III or better water quality standards reached 99.3%, with no sections classified as Grade V or worse. Groundwater environmental quality remained stable, while coastal water quality showed improvement. Soil conditions in agricultural and construction lands were generally stable, and acoustic environmental quality improved. Radiation levels stayed within normal ranges, and ecological quality remained stable. The city met or exceeded national targets for reducing key pollutants through major projects, made high-standard progress in building a comprehensive "Zero-Waste City," and reported no significant or above environmental emergencies throughout the year.



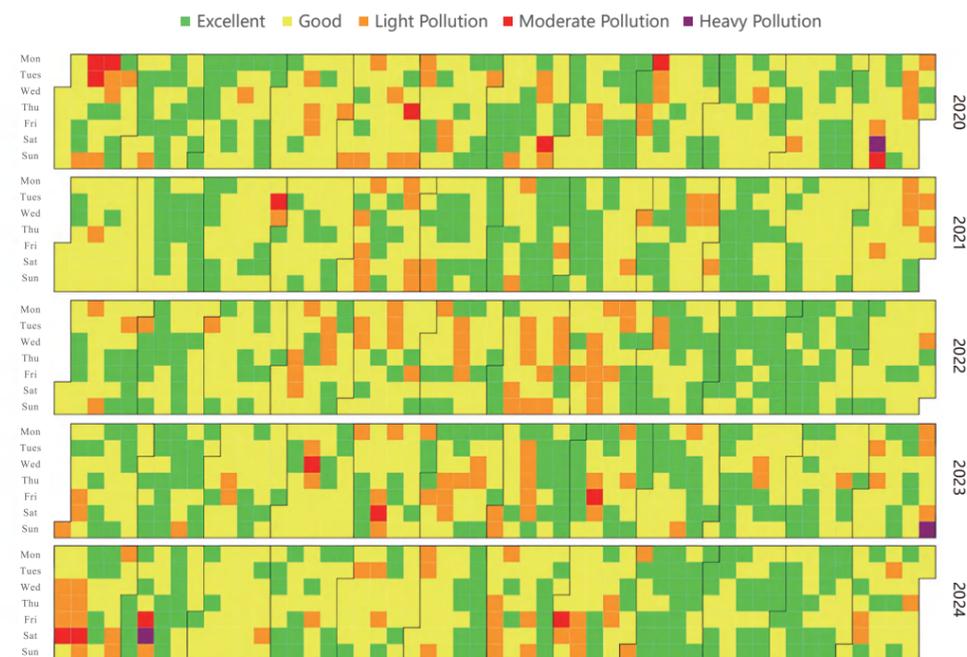
# ▶▶ Status of Ecological and Environmental Quality

## 01 Ambient Air Quality

Evaluated according to the Ambient Air Quality Standards (GB 3095—2012), Shanghai recorded 323 days with excellent/good air quality (AQI) in 2024,<sup>[1]</sup> an increase of 3 days compared to 2023. The AQI excellent/good rate reached 88.5%, up 0.8 percentage points year-on-year. Among these, there were 132 days with excellent air quality, 191 days with good air quality, 38 days with light pollution, 3 days with moderate pollution, 1 day with heavy pollution, and no days with severe pollution. Among the 42 polluted days, Ozone (O<sub>3</sub>) was the primary pollutant for 22 days (52.4%), PM<sub>2.5</sub> for 18 days (42.9%), PM<sub>10</sub> for 1 day (2.3%), Nitrogen dioxide (NO<sub>2</sub>) for 1 day (2.3%).



Distribution of Shanghai's Ambient Air Quality Levels (2020-2024)

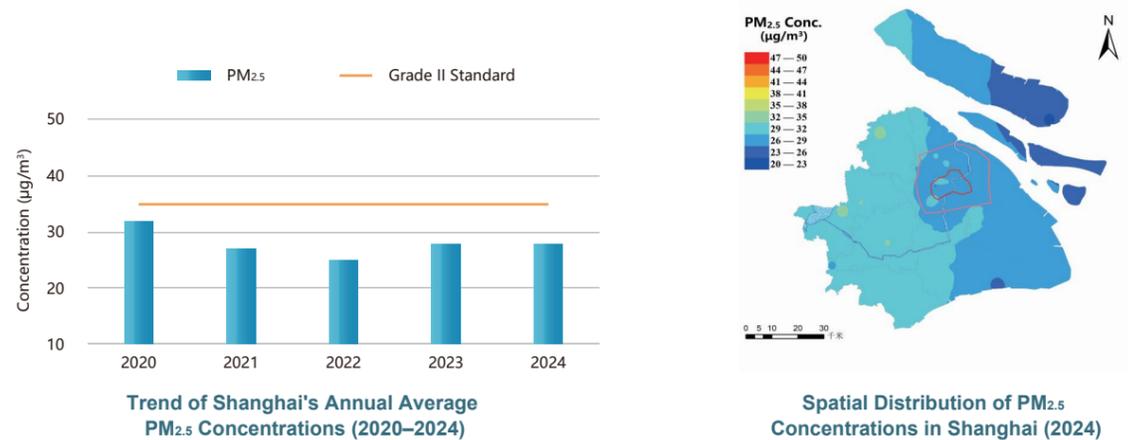


Shanghai Ambient Air Quality Level Calendar Chart (2020-2024)

[1] Since 2021, adjustments to national air quality monitoring stations mean 2024 AQI and six major pollutant metrics (PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub>, CO) are comparable to 2021-2023 data but only suitable for trend analysis (not absolute comparisons) with pre-2020 data.

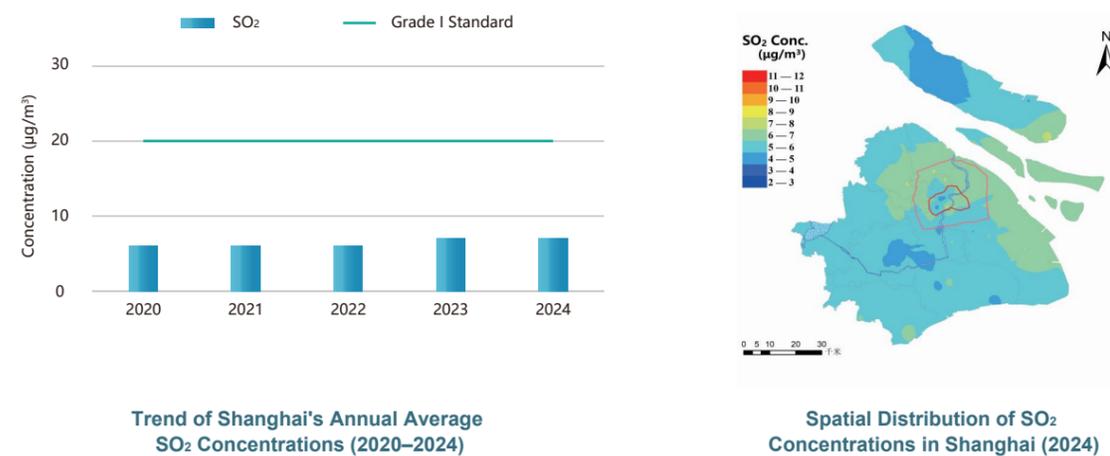
### 1. Fine Particulate Matter (PM<sub>2.5</sub>)

The annual average PM<sub>2.5</sub> concentration in Shanghai was 28 μg/m<sup>3</sup> in 2024, meeting China's National Ambient Air Quality Grade II Standard and remaining stable compared to 2023. Monitoring data from the past five years demonstrate that Shanghai's annual PM<sub>2.5</sub> levels have consistently outperformed the Grade II Standard.



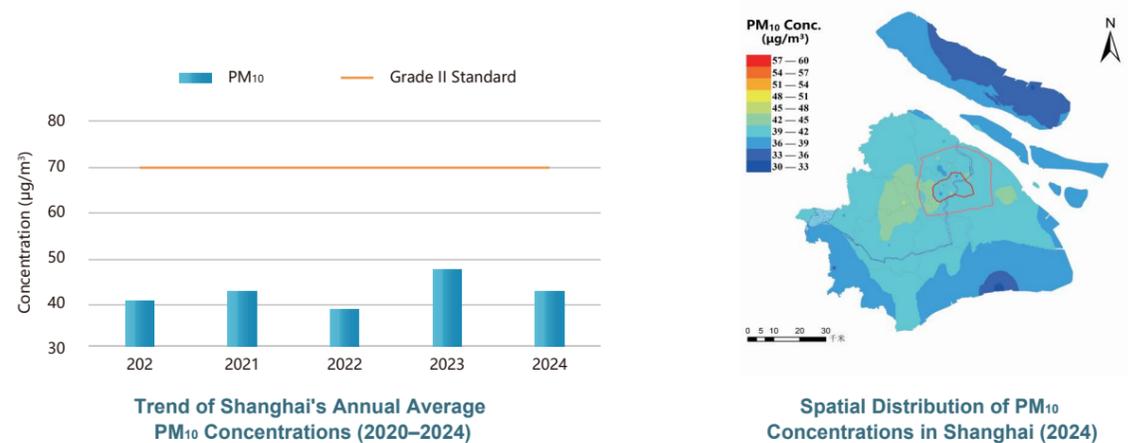
### 3. Sulfur Dioxide (SO<sub>2</sub>)

The annual average SO<sub>2</sub> concentration in Shanghai was 7 μg/m<sup>3</sup> in 2024, meeting China's National Ambient Air Quality Grade I Standard and remaining stable compared to 2023. Monitoring data from the past five years demonstrate that Shanghai's annual SO<sub>2</sub> levels have consistently and significantly exceeded the requirements of the Grade I Standard.



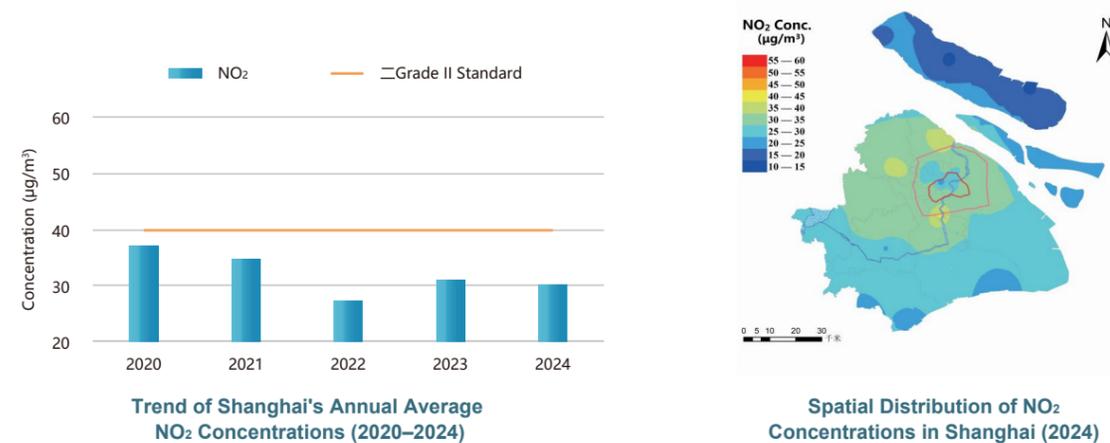
### 2. Inhalable Particulate Matter (PM<sub>10</sub>)

The annual average PM<sub>10</sub> concentration in Shanghai was 43 μg/m<sup>3</sup> in 2024, meeting China's National Ambient Air Quality Grade II Standard and representing a 10.4% decrease from 2023. Monitoring data from the past five years indicate that Shanghai's annual PM<sub>10</sub> levels have consistently and significantly outperformed the Grade II Standard.



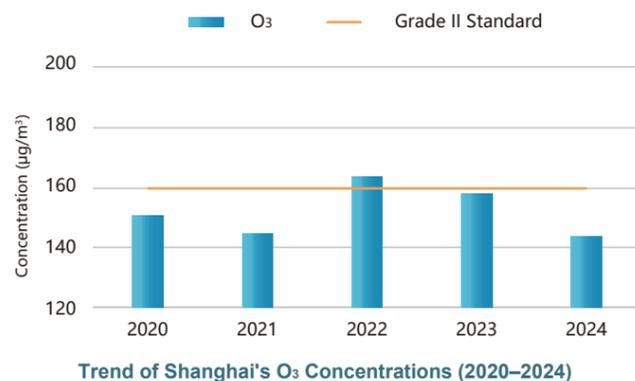
### 4. Nitrogen Dioxide (NO<sub>2</sub>)

The annual average NO<sub>2</sub> concentration in Shanghai was 30 μg/m<sup>3</sup> in 2024, meeting China's National Ambient Air Quality Grade II Standard and representing a 3.2% decrease from 2023. Monitoring data from the past five years show that Shanghai's annual NO<sub>2</sub> levels have consistently outperformed the Grade II Standard.



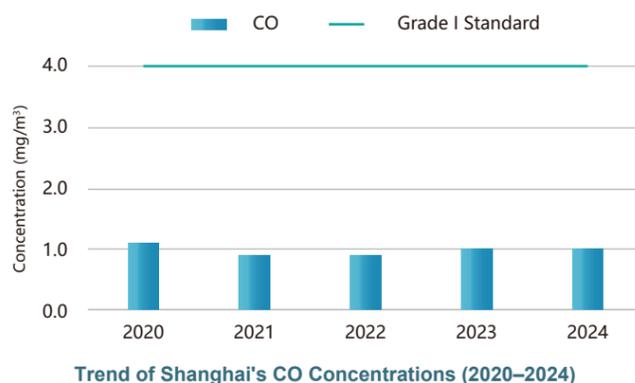
### 5. Ozone (O<sub>3</sub>)

The 90<sup>th</sup> percentile<sup>[2]</sup> of daily maximum 8-hour average O<sub>3</sub> concentration in Shanghai was 144 μg/m<sup>3</sup> in 2024, meeting China's National Ambient Air Quality Grade II Standard and showing an 8.9% decrease compared to 2023. Monitoring data from the past five years indicate fluctuating trends in the 90<sup>th</sup> percentile of daily maximum 8-hour average O<sub>3</sub> concentrations across the city.



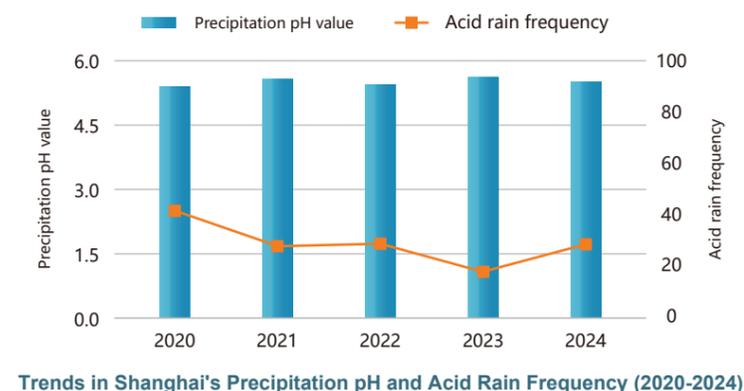
### 6. Carbon Monoxide (CO)

The 95<sup>th</sup> percentile<sup>[2]</sup> of daily average CO concentration in Shanghai was 1.0 mg/m<sup>3</sup> in 2024, meeting China's National Ambient Air Quality Grade I Standard and remaining stable compared to 2023. Monitoring data from the past five years demonstrate that Shanghai's 95<sup>th</sup> percentile daily CO levels have consistently and significantly outperformed the Grade I Standard.



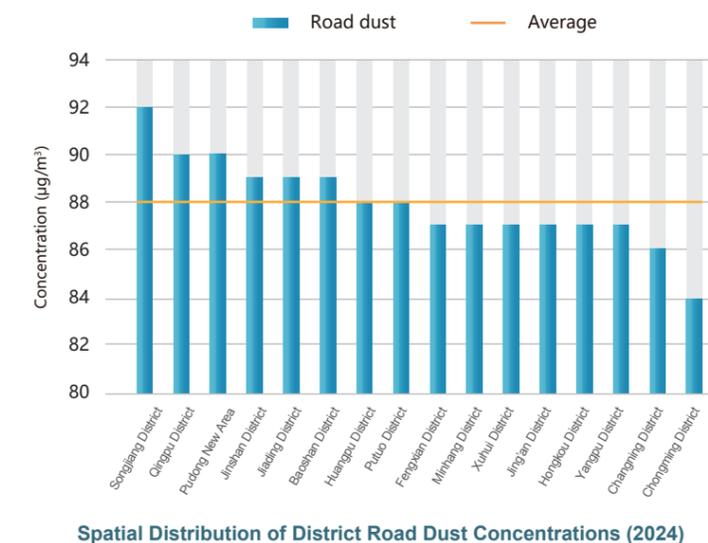
### 7. Acid Rain

The average pH value of precipitation in Shanghai was 5.46, with an acid rain frequency of 26.9%, representing an 8.1 percentage point increase from 2023. Monitoring data from the past five years indicate an overall improving trend in acid rain pollution across the city.



### 8. Road Dust

The average road dust concentration across Shanghai's districts ranged between 84-92 μg/m<sup>3</sup> in mobile monitoring surveys, with a citywide average of 88 μg/m<sup>3</sup>, a 6.4% decrease from 2023 levels.



[2] According to the Technical Specification for Ambient Air Quality Evaluation (Trial) (HJ 663-2013), the annual evaluation metrics for ozone (O<sub>3</sub>) and carbon monoxide (CO) are the 90<sup>th</sup> percentile of daily maximum 8-hour average concentrations and 95<sup>th</sup> percentile of 24-hour average concentrations, respectively.

## 02 Surface Water Environmental Quality

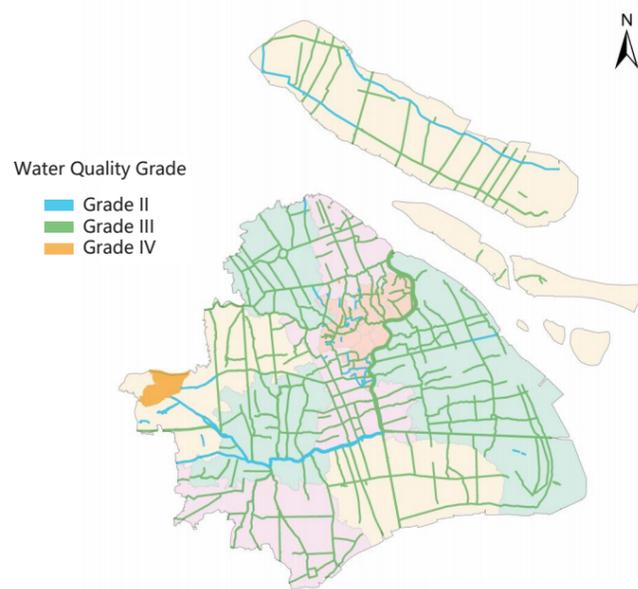
### 1. Water Quality of Centralized Drinking Water Sources

Evaluated in accordance with “the Environmental Quality Standards for Surface Water” (GB 3838—2002), the monthly water quality of Shanghai’s four major centralized drinking water sources—Yangtze River Qingcaosha, Dongfengxisha, Chenhang, and Jinze (Upper Huangpu River)—consistently met or exceeded Class III standards in 2024.

### 2. Water Quality of Major Rivers and Lakes

The water quality<sup>[3]</sup> of Shanghai’s major rivers and lakes was evaluated according to “the Environmental Quality Standards for Surface Water” (GB 3838—2002). In 2024, 99.3% of monitored sections met Class II-III standards, 0.7% met Class IV standards, with no sections rated Class V or below. Key indicator averages include ammonia nitrogen: 0.39 mg/L, 2.6% increase from 2023; total phosphorus: 0.128 mg/L, 2.3% decrease; Permanganate index: 3.5 mg/L, 2.8% decrease.

Dianshan Lake showed mild eutrophication, with a slight decrease in its comprehensive trophic state index.

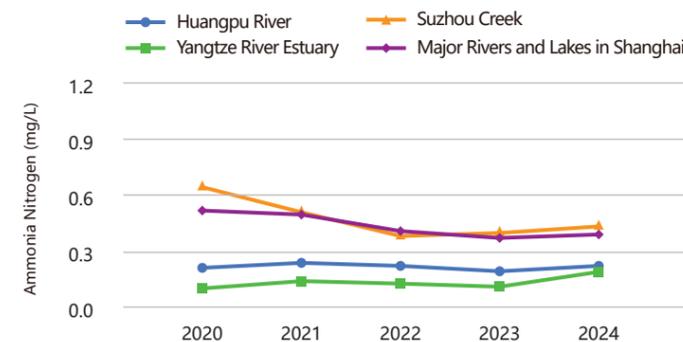


Water Quality of Shanghai’s Major Rivers and Lakes in 2024

[3] Since 2021, the total number of monitoring sections for Shanghai’s major rivers and lakes was adjusted to 273. Therefore, the 2024 data for key indicators (permanganate index, ammonia nitrogen, total phosphorus) are comparable to data from 2021 to 2023, while comparisons with 2020 and previously published data should only be used for general trend analysis, not absolute comparisons. According to “the Environmental Quality Standards for Surface Water” (GB 3838-2002), the standard limits for total phosphorus are stricter for lakes and reservoirs than for rivers.

### Huangpu River

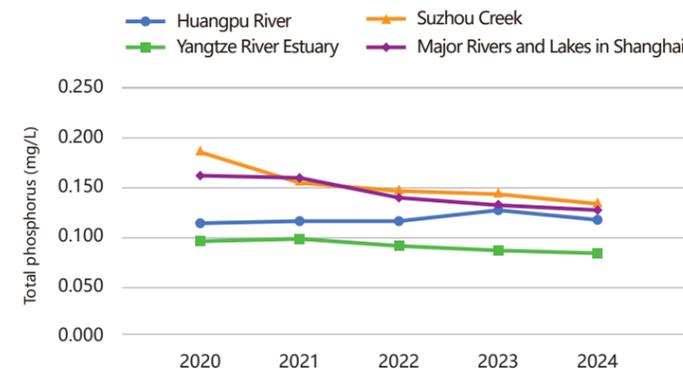
Among the 6 monitoring sections of the Huangpu River, the water quality of 1 section met Class II standards, while 5 sections met Class III standards. Compared with 2023, the average concentration of ammonia nitrogen increased by 15.0%, while the average concentrations of total phosphorus and permanganate index decreased by 6.5% and 2.7% respectively.



Trend Chart of Average Ammonia Nitrogen Concentrations in Shanghai’s Major Rivers and Lakes (2020-2024)

### Suzhou Creek

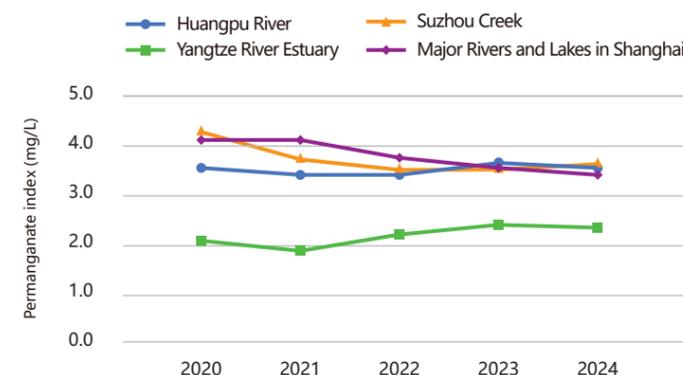
All 7 monitoring sections of Suzhou Creek met Class III water quality standards. Compared with 2023, the average concentration of ammonia nitrogen increased by 4.8%, while the average concentrations of total phosphorus decreased by 6.2% and the permanganate index increased by 2.8%.



Trend Chart of Average Total Phosphorus Concentrations in Shanghai’s Major Rivers and Lakes (2020-2024)

### Yangtze River Estuary

All 7 monitoring sections at the Yangtze River Estuary met Class II water quality standards. Compared with 2023, the average ammonia nitrogen concentration showed minor fluctuations at low levels, while the average total phosphorus concentration and permanganate index decreased by 2.3% and 4.2% respectively.



Trend Chart of Average Permanganate Index in Shanghai’s Major Rivers and Lakes (2020-2024)

### 03 Groundwater Environmental Quality

According to the "Quality Standard for Groundwater" (GB/T 14848—2017), among the 43 monitoring points included in the national groundwater environmental quality assessment in Shanghai in 2024, 26 points (60.5%) met Class I-IV water quality standards, while 17 points (39.5%) were classified as Class V.

### 04 Marine Environmental Quality

According to the "Sea Water Quality Standard" (GB 3097—1997), an evaluation was conducted on 47 water quality monitoring points in key national marine areas. In 2024, Shanghai's coastal water quality showed slight improvement, with areas meeting Class I, II, III, and IV seawater<sup>[4]</sup> quality standards accounting for 4.9%, 14.0%, 8.6%, and 6.2% respectively, while areas failing to meet Class IV standards accounted for 66.2%. Key indicator averages include chemical oxygen demand: 1.24 mg/L; inorganic nitrogen: 0.842 mg/L; active phosphate: 0.0294 mg/L. The primary pollution indicators were inorganic nitrogen and active phosphate.

### 05 Soil Environmental Quality

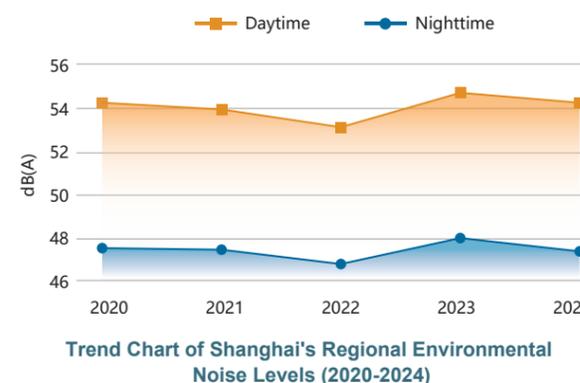
Evaluated according to the "Soil Environmental Quality - Risk Control Standard for Soil Contamination of Agricultural Land" (GB 15618—2018), Shanghai's soil conditions in both agricultural and construction land remained generally stable in 2024. The safe utilization rates of contaminated farmland and key construction land consistently maintained at 100%.

### 06 Acoustic Environmental Quality

According to the "Technical Specifications for Environmental Noise Monitoring Routine Monitoring of Urban Acoustic Environment" (HJ 640-2012) for evaluation, Shanghai's regional environmental noise and road traffic noise showed improvement in 2024.

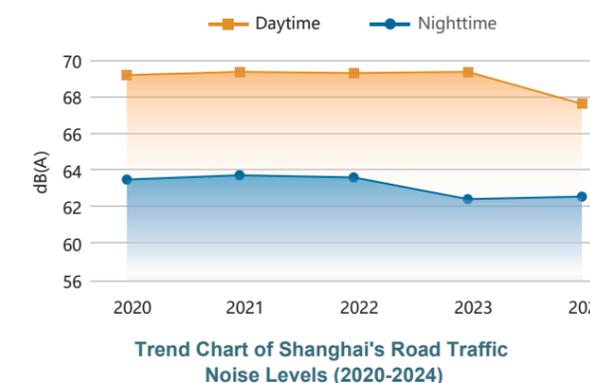
#### 1. Regional Environmental Noise

The average equivalent sound level during daytime periods across the city was 54.2 dB(A), a decrease of 0.3 dB(A) compared to 2023. The average equivalent sound level during nighttime periods was 47.4 dB(A), a decrease of 0.6 dB(A) from 2023. During daytime hours, 92.0% of monitoring points met good, relatively good, or acceptable noise levels. At night, 80.7% of monitoring points achieved these standards. Monitoring data from the past five years indicates fluctuating noise levels in Shanghai's regional environment during both daytime and nighttime periods.



#### 2. Road Traffic Noise

The average equivalent sound level of road traffic noise during daytime periods citywide was 67.8 dB(A), a decrease of 0.6 dB(A) compared to 2023. The nighttime average equivalent sound level was 62.4 dB(A), an increase of 0.1 dB(A) from 2023. During daytime hours, 90.5% of monitored road sections met good, relatively good, or acceptable noise standards. At night, 44.8% of monitored road sections achieved these standards. Monitoring data from the past five years indicates an overall improving trend in Shanghai's road traffic noise levels during both daytime and nighttime periods.



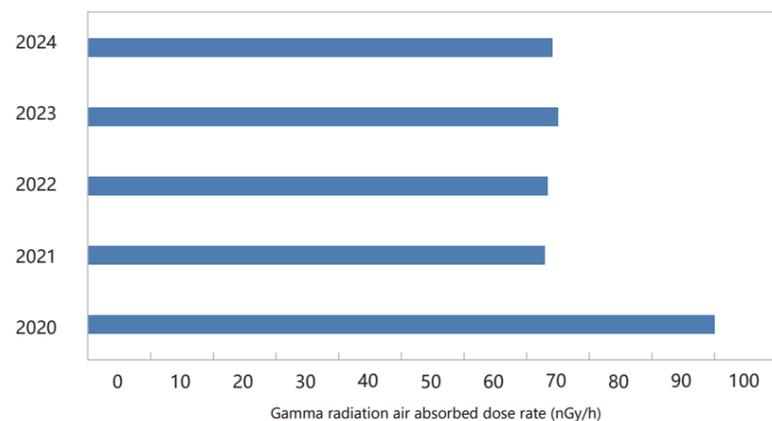
[4] Since 2021, the seawater quality assessment methodology has been adjusted. Therefore, the 2024 seawater quality category percentages in Shanghai's coastal waters are comparable with data from 2021 to 2023, while comparisons with 2020 and previously published annual data should only be used for general trend analysis, not for absolute comparisons.

## 07 Radiation Environmental Quality

In 2024, Shanghai's radiation environment quality remained generally good.

### 1. Ionizing Radiation

Evaluated according to the "Sanitary Standard for Drinking Water" (GB 5749—2022) and historical monitoring data, the activity concentrations of natural radioactive nuclides in Shanghai's water bodies, atmosphere, and soil media maintained normal levels in 2024. The gamma radiation air absorbed dose rate was consistent with historical monitoring results. The annual cumulative radiation dose around nuclear technology utilization sites complied with the limit requirements specified in the "Basic Standards for Protection Against Ionizing Radiation and for the Safety of Radiation Sources" (GB 18871—2002).



Annual Trend Chart of Gamma Radiation Air Absorbed Dose Rate (2020-2024)

### 2. Electromagnetic Radiation

According to the "Control Limits for Electromagnetic Environment" (GB 8702—2014), the 2024 monitoring results of electromagnetic radiation in Shanghai showed power frequency electric field intensity at background points was 0.15-0.46 V/m, power frequency magnetic flux density 0.01-0.12 μT, and composite electric field intensity <0.20-1.52 V/m. The electromagnetic radiation levels around electromagnetic facilities complied with the public exposure control limits specified in the "Control Limits for Electromagnetic Environment" (GB 8702—2014).

## 08 Ecological Quality Index

Evaluated according to the "Regional Ecological Quality Assessment Method (Trial)," Shanghai's Ecological Quality Index (EQI) in 2024 was 47.5, classified as Category III, the same as in 2023. The ecological quality remained generally stable across four dimensions: ecological pattern, ecological function, biodiversity, and ecological stress. In 2024, the EQI classification of Shanghai's 16 districts ranged from Category II to Category IV, with all districts maintaining the same classification as 2023. Specifically, Chongming District was classified as Category II, five districts (Jinshan, Fengxian, Pudong, Changning, and Baoshan) were classified as Category III and the remaining 10 districts were classified as Category IV.



Schematic Diagram of Shanghai's EQI Distribution in 2024





## ▶▶ Measures and Actions

### 01 Launching the Construction of a Beautiful Shanghai

#### 1. Establishing the "Four Pillars and Eight Beams" Framework for a Beautiful Shanghai

The "Implementation Opinions on Comprehensively Advancing the Construction of a Beautiful Shanghai to Create a Socialist Modern International Metropolis in Harmony with Nature" was issued and put into practice. A "1+1+N" framework for building a Beautiful Shanghai was established. This document systematically outlines a ten-dimensional approach ("Ten Beauties") encompassing space, development, environment, habitat, ecology, resilience, culture, technology, harmony, and governance. Leveraging the Municipal Ecological Civilization Construction Leadership Group, a dedicated promotion mechanism for Beautiful Shanghai initiatives was implemented. This mechanism strengthens coordinated planning, execution, and progress evaluation to ensure effective implementation.

#### 2. Implementing the Three-Year Action Plan for Building a Beautiful Shanghai

Issue and implement the "Three-Year Action Plan for Building a Beautiful Shanghai (2024-2026)." Aligned with rectifying issues identified in the central ecological and environmental protection inspections, the plan deploys targeted measures to address weaknesses while emphasizing sustained, long-term effectiveness. It outlines 253 key tasks across 33 categories. All districts have successively formulated and implemented localized action plans, actively advancing the creation of "Beautiful Cells" tailored to regional conditions.



## 02 Intensifying the Battle Against Pollution

### 1. Fighting for Blue Skies

We will comprehensively advance the campaign to tackle air pollution, implementing six major special actions including roadside inspections of high-pollution vehicles, rectification of motor vehicle inspection agencies, regulation of non-road mobile machinery, in-depth treatment of VOCs at key enterprises, dust control, and management of cooking fumes, to continuously improve ambient air quality. Roadside inspections of diesel vehicles were conducted 22,000 times at key provincial border crossings and vehicle gathering areas, severely cracking down on excessive emissions from diesel trucks and creating a strong deterrent effect where "dirty vehicles dare not hit the road." We strengthened full-chain supervision of motor vehicle emission inspection agencies, conducting comprehensive inspections of 145 motor vehicle emission inspection agencies and 149 maintenance agencies. We promoted 120 key enterprises in industries such as automobile and parts manufacturing to complete VOCs reduction at source, and evaluated the operational effectiveness of pollution control facilities at over 2,000 key VOCs-emitting enterprises while driving closed-loop rectification of identified issues. We intensified supervision of construction sites with high dust pollution, inspected over 3,000 dust-prone sites, filed nearly 200 cases for enforcement actions, and promoted comprehensive road remediation by publicly naming heavily polluted road sections in the media each month. We enhanced refined whole-process control of cooking fumes, delineated specific no-establishment zones for 67,000 catering businesses, established an information platform for the cleaning and maintenance of cooking fume purification facilities, and carried out comprehensive rectification of complaints related to cooking fumes.

#### Feature



#### "Restriction + Subsidy" Dual Approach Accelerates Phase-out and Renewal of Mobile Pollution Sources

Targeting high-emission National IV diesel vehicles, Shanghai has vigorously promoted their phase-out and replacement. The city implemented the "Notice on Traffic Restriction Policies for National IV Diesel Trucks in Shanghai," introducing 24/7 access bans within the Outer Ring Road for National IV diesel trucks, with 84,000 such vehicles now under "electronic police" surveillance. As a national pioneer, Shanghai rolled out subsidy policies to encourage replacing National IV diesel vehicles with new energy vehicles (NEVs). Through this dual approach of access restrictions and financial incentives, approximately 11,000 National IV diesel vehicles were phased out and 1,300 NEVs were adopted. This initiative significantly upgraded the city's vehicle emissions profile.

### 2. Protecting Clear Waters

Adhering to the integrated management of water resources, water environment, and water ecology ("Three Waters" coordination), we have continued to strengthen source control, process management, and end-of-pipe infrastructure development. We enhanced drinking water safety, improved the water source protection institutional framework, revised management measures for drinking water source protection buffer zones, completed a specialized inspection campaign covering all drinking water source protection areas in the city, and established a three-tier (municipal-district-subdistrict/town) routine inspection system. We strengthened systematic water environment governance, intensified investigation and remediation of river discharge outlets, completed tracing and mapping of discharge outlets along 30,600 km of shoreline, essentially finished remediation tasks for key rivers and lakes. We implemented "one-spot-one-solution" specialized treatment for sections prone to water quality fluctuations, completing 249.96 km of river remediation, upgraded sewage treatment facilities and promoted integrated operation and management of "plant-station-network" sewage systems, completed 5 projects including Phase II of Taihe Wastewater Treatment Plant, adding 485,000 m<sup>3</sup>/day of treatment capacity. We advanced water ecological restoration, established 20 demonstration sites for ecologically clean small watersheds, and developed guidelines for building beautiful and happy rivers and lakes. Suzhou Creek and Taipu River (including Watertown Living Room) were selected as excellent cases in the Ministry of Ecology and Environment's third batch of Beautiful Rivers and Lakes.



#### Feature



#### Three Decades of Restoration, 42km Transformed – Suzhou Creek Becomes Shanghai's New Landmark

To address the black-odor pollution in central Shanghai's Suzhou Creek, the city has adhered for over 30 years to a governance philosophy of "water treatment as the core, comprehensive planning, balancing short-and long-term needs, prioritizing key areas, and phased implementation." Focusing on pollution interception and treatment, Shanghai executed four phases of environmental remediation projects, achieving full restoration of water quality and aquatic ecosystems in Suzhou Creek, Class III water standards along the entire stretch, notable biodiversity recovery, seamless 42km waterfront access in central urban areas. The creek has metamorphosed from a polluted waterway to an ecological and scenic river.

### 3. Safeguarding Clean Land

Shanghai has improved soil supervision mechanisms, developed and revised supporting management measures, technical guidelines, and evaluation indicators for addressing fraudulent practices in soil pollution risk control and remediation activities. We strengthened source control for key enterprises, piloted "simultaneous production and pollution control" at Sinopec Shanghai Petrochemical, conducted follow-up inspections on hidden risks at key soil pollution-regulated facilities, carried out over 2,000 specialized enforcement inspections covering contaminated sites, construction sites, key regulated enterprises, and related businesses. We also enhanced coordinated oversight of construction land, completed preliminary soil pollution surveys in Wusong's 1-square-kilometer pilot area and Wujing Industrial Zone, remediated 20 contaminated plots, adding approximately 794,500 square meters of safely utilizable construction land, and maintained 100% safe utilization rate for key construction land.

### 4. Advancing the Construction of a "Zero-Waste City"

High-standard construction of a "Zero-Waste City" was implemented, with the promulgation and enforcement of China's first local regulation on zero-waste city development and the inaugural release of Shanghai's "Zero-Waste Index". A comprehensive plan for strengthening solid waste management was issued to promote near-zero landfill of solid waste. An upgraded version of household waste classification was implemented, maintaining a compliance rate of over 95% citywide. A "7+1+1" solid waste supervision platform framework was established, consisting of 7 regulatory modules, 1 intelligent coordination center and 1 key task component. Construction of a digital integrated supervision platform for solid waste was initiated, horizontally covering 7 major categories of solid waste and vertically enabling whole-process monitoring from generation to disposal. Shanghai's "Zero-Waste City" promotional logo and brand image were released, along with "Zero-Waste Expo" publicity activities and the "Zero-Waste Shanghai" innovation forum.



### 5. Promoting Noise Pollution Prevention and Control

Systematically advancing the "Shanghai Noise Pollution Prevention and Control Action Plan," we have diligently addressed the "key small matters" that affect people's daily lives by implementing seven major initiatives: enhancement of basic capabilities for sound environment management, noise source control, industrial noise pollution prevention and control, construction noise pollution prevention and control, transportation noise pollution prevention and control, social life noise pollution prevention and control, and public participation in social co-governance. We strengthened interdepartmental coordination and clarified primary responsibilities for handling noise complaints. The total number of noise complaints for the year decreased by 16% compared to the previous year, with all districts in the city showing varying degrees of reduction. To promote social co-governance, we collaborated with media outlets such as Shanghai Radio Station to host the "Beautiful Shanghai-I Have My Say" special interview series. These discussions focused on hot-button issues like square dance noise, ultimately reaching approximately 2.5 million audience members across various platforms.

### 6. Enhancing Comprehensive Marine Environment Management

We will coordinate and advance all tasks of the comprehensive remediation campaign for the Yangtze River Estuary-Hangzhou Bay area in Shanghai, with 65% of key work measures already completed. We will deepen the implementation of the "one river, one policy" plans for nationally monitored rivers entering the sea, dynamically adjust and refine total nitrogen control measures, and fully complete the investigation, tracing, and remediation of sea discharge outlets in Hangzhou Bay. Guidelines for promoting the construction of beautiful bays in Shanghai were issued, scientifically planning the construction timeline and determining the development type for each bay based on local conditions. Publicity activities for the "Marine Environmental Protection Law" were carried out through various forms such as knowledge quizzes on WeChat official accounts and online/offline training sessions. Special cleanup operations for marine debris continued, alongside the launch of a system for classified and graded utilization and disposal of marine debris, promoting standardized and systematic marine debris management.

**Feature**  **Establishing the "Zero-Waste Index" Evaluation System to Lead Refined Solid Waste Management**

The "Zero-Waste Index" evaluation system has been established to visually demonstrate the effectiveness of solid waste management through quantitative data. This index comprehensively represents the overall progress of "Zero-Waste City" development and quickly identifies both strengths and weaknesses in its construction, providing crucial guidance for advancing the initiative citywide. In 2024, Shanghai's "Zero-Waste Index" reached 85.73, showing steady year-on-year improvement. Key indicators such as household waste classification compliance, comprehensive utilization rate of hazardous waste, and agricultural waste recycling rate all demonstrated positive progress.

**Feature**  **Multi-departmental Coordination Promotes In-depth Control of Total Nitrogen in Rivers Flowing to the Sea**

The departments of ecology and environment, agriculture and rural affairs, and water affairs strengthened collaboration, establishing and improving a data sharing and joint analysis mechanism. Targeting key pollution prevention periods (January-March/winter and July-August/summer) and key areas with abnormally high monitoring values, they conducted traceability analysis and implemented the "one river, one policy" precise treatment model to systematically control total nitrogen in rivers flowing to the sea. In 2024, Fengxian District completed standardized remediation of 435 river discharge outlets, treated aquaculture tailwater across over 2,000 mu (133 hectares), and removed 270 mu (18 hectares) of aquaculture areas non-compliant with planning. It also reduced industrial land use by 112 hectares, completed structural adjustments for 150 industrial enterprises, and upgraded 66 rural domestic wastewater treatment facilities. Jinshan District remediated 389 river discharge outlets, completed structural adjustments for 28 industrial enterprises, upgraded 85 rural domestic wastewater treatment facilities, and facilitated clean production audits for 13 key enterprises. Through systematic governance, the total nitrogen concentrations at national monitoring sections where rivers (Longquan River-Shanyang Town, Nanzhu River-Zhelin, Jinhui River-Qianqiao, etc.) enter the sea all met the assessment targets of the national pollution prevention campaign, significantly improving ecological and environmental quality.



### 7. Strengthening Ecological and Environmental Protection in Rural Areas

Research was conducted on optimizing rural domestic sewage treatment approaches, proposing various technical methods including ecological facility upgrades, resource utilization, and ecological management controls to ensure Shanghai's rural domestic sewage treatment rate remains among the highest nationwide. The national "14th Five-Year Plan" rural environment improvement targets were exceeded ahead of schedule, with Shanghai's improvement rate leading nationally. A long-term supervision mechanism was established, conducting municipal-level spot checks on 104 administrative villages, 143 rural domestic sewage treatment facilities, and 490 rural waterways to consolidate and enhance rural environmental improvements. At least one agricultural non-point source pollution monitoring point was established in each agriculture-related district, forming a two-tier municipal and district "4+9" agricultural non-point source pollution monitoring system. The "Technical Guidelines for Agricultural Non-point Source Pollution Risk Assessment in Plain River Network Areas (Trial)" was issued, with pilot programs in 3 typical towns to identify key source areas and high-risk zones of agricultural non-point pollution, guiding targeted pollution control. The "Shanghai Livestock and Poultry Farming Pollution Prevention Plan (2024-2030)" was issued, and revisions to the "Pollutant Discharge Standards for Livestock and Poultry Farming" were initiated. The "Aquaculture Tailwater Discharge Standards" were fully implemented, with pilot monitoring conducted to establish a foundation for scientifically guiding aquaculture pollution prevention.

## 03 Strengthening Ecological Protection and Restoration Supervision

### 1. Reinforcing Ecological Space Management and Control

Multiple municipal departments jointly carried out the 2024 ecological supervision and inspection of ecological conservation redlines and the "Green Shield" special campaign to strengthen supervision of nature reserves. They improved the ecological environment supervision mechanism of "problem identification-verification and transfer-rectification oversight-closure reporting," ensuring all 30 suspected human activity problem sites completed rectification and were officially closed.

### 2. Enhancing Biodiversity Protection

The "Shanghai Biodiversity Conservation Strategy and Action Plan (2024-2035)" was issued and implemented, marking the comprehensive launch of the city's first biodiversity baseline survey. With innovative organizational methods, the survey mobilized over 4,000 participants from municipal and district ecological environment departments, universities, research institutions, and the general public, completing about 80% of field survey tasks. Preliminary statistics revealed 1 new species discovered (*Acylophorus shanghaiensis*), 149 new records including 10 species of macrofungi, 17 species of higher plants, and 122 insect species. The "Raccoon Dog Census" urban wild mammal survey project was recognized as one of China's top 10 public participation cases in the 2024 "Beautiful China, I'm a Participant" campaign by the Ministry of Ecology and Environment. Progress was made in establishing Shanghai Botanical Garden's biodiversity monitoring station, developing the "Shanghai Biodiversity Experience Center Construction Guidelines," launching pilot experience centers at Shanghai Botanical Garden, Xuhui Huajing Park, and Xinjing Town in Changning District to raise public awareness. Chongming District was guided to apply for the "UN Decade on Ecosystem Restoration" flagship project under the theme "Ecological Restoration of Large Estuarine Islands - Chongming Initiative." Chongming Dongtan Migratory Bird Sanctuary was inscribed on the World Natural Heritage List, becoming Shanghai's first World Natural Heritage site.

### 3. Promoting the Development of Ecological Civilization Demonstration

The "Management Measures for Shanghai's Creation of National Ecological Civilization Construction Demonstration Zones and 'Lucid Waters and Lush Mountains Are Invaluable Assets' Practice and Innovation Bases (Trial)" was issued. This promotes the development and release of ecological civilization construction demonstration zone plans in districts such as Songjiang and Chongming. Six areas—Pengpu Town in Jing'an District, Tinglin Town in Jinshan District, Langxia Town in Jinshan District, Shihudang Town in Songjiang District, Jinze Town in Qingpu District, and Haiwan Town in Fengxian District—have been included in Shanghai's selection reserve pool for "Lucid Waters and Lush Mountains Are Invaluable Assets" practice and innovation bases.



## 04 Effectively Safeguarding Ecological Security

### 1. Preventing and Mitigating Ecological and Environmental Risks

Shanghai Chemical Industry Park, as one of China's first pilot units, took the lead in establishing a three-tier prevention and control system of "one park, one policy, one map" for chemical industrial parks. The environmental emergency response plans of "one river, one policy, one map" were completed for key rivers including the Yangtze River, Huangpu River, and Taipu River (Shanghai section), effectively strengthening environmental emergency preparedness capabilities. In collaboration with Jiangsu Province, Zhejiang Province, and the Yangtze River Delta Integrated Demonstration Zone, Shanghai organized the "Taipu River Basin Emergency Drill for Sudden Water Pollution Incidents," comprehensively testing the effectiveness of the Taipu River information sharing agreement and emergency plans, significantly enhancing cross-provincial environmental emergency response capabilities. Throughout the year, 177 emergency incidents were reported, with 88 sudden accidents handled, and no major or above sudden environmental incidents occurred. The three-year action for fundamental improvement of work safety in Shanghai's ecological and environmental sector was launched, focusing on key industry enterprises, key river basins and regions, key industrial parks, and critical periods. In-depth investigations were conducted to identify risks and hidden dangers of sudden environmental incidents, uncovering 1,831 potential hazards. Rectification was advanced for 1,655 issues, with 176 problems scheduled for correction within a specified period.

### 2. Strengthening Radiation Safety Supervision and Management

Shanghai took the lead nationwide in implementing the administrative approval reform of the notification-commitment system for radiation safety licenses concerning the sale and medical use of Class III radiation devices. The approval timeline was reduced from the statutory 20 days to same-day processing, with 384 cases handled and a 100% satisfaction rate. In collaboration with relevant departments, pilot programs for "one industry, one permit" were conducted in sectors including dental clinics, veterinary hospitals, and medical cosmetology outpatient departments. A dynamic assessment system was established, categorizing by inherent radiation safety risks and classifying by radiation safety risk prevention capabilities. Trial classification and grading assessments of nuclear technology utilization were implemented in the city to further optimize the business environment. Electromagnetic environment surveys were completed in six typical areas of the city as pilot projects. A special campaign on radioactive material transportation safety supervision was concluded, with overall safety remaining under control citywide. An emergency response drill for handling radiation accidents was conducted.

### Feature Successful Conduct of "Hu'an-2024" Comprehensive Emergency Drill for Radiation Accident Response

In October 2024, Shanghai successfully organized the "Hu'an-2024" comprehensive emergency drill for radiation accident response. The exercise involved over ten relevant departments from Shanghai, Jiangsu Province, and Zhejiang Province, with more than 100 participants, marking the first cross-provincial joint support and response drill in East China. The drill focused on scenarios involving uncontrolled radioactive sources, simulating the simultaneous occurrence and handling of two accidents. Adhering to both tradition and innovation, it brought together government emergency teams and professional socialized teams, incorporating market-based resources as a valuable supplement to government emergency capabilities. This pioneering approach established a new "1+N" framework for radiation emergency support capacity building. The drill emphasized technological applications, utilizing advanced intelligent equipment such as drones, robotic dogs, and robots to search for and recover radioactive sources under complex accident conditions. For the first time, decontamination of contaminated sites was attempted. The exercise was recognized as an outstanding municipal-level emergency drill case for 2024.



### 3. Improving Hazardous and Medical Waste Disposal Capabilities

Shanghai enhances hazardous waste treatment and disposal capacity. As of the end of 2024, Shanghai had 37 licensed hazardous waste treatment and disposal operators. The city added 78,000 tons/year of hazardous waste utilization and disposal capacity, bringing the total capacity to over 1.6 million tons/year. Waste packaging container processing capacity exceeded 3.2 million units/year. The hazardous waste collection system pilot program was further optimized, with 2 new waste lead-acid battery collection pilot units added. Additionally, hazardous waste collection from auto repair operations at 5 enterprises was incorporated into hazardous waste operation license management. The medical waste supervision system was improved through establishment of a comprehensive regulatory database covering all medical institutions, full-process digital supervision of medical waste citywide and enhanced emergency collection, transportation, and disposal capabilities.





#### 4. Advancing the Management of Emerging Pollutants

The comprehensive advancement of Shanghai's new pollutant management initiative has been fully implemented. Investigation and monitoring efforts were strengthened, with the completion of the second round of chemical substance information statistical surveys and the annual tasks for the first batch of chemical substance intensive monitoring and environmental risk assessments in accordance with national arrangements. Collaborative governance was enhanced by incorporating 114 enterprises and institutions that produce, process, or use key controlled new pollutants into the key pollution source regulatory framework. Pilot demonstration projects were reinforced through cooperation with fire departments to achieve environmentally sound disposal of over 70 tons of PFOS (perfluorooctanesulfonic acid)-containing foam stockpiles in chemical industrial parks. Capacity building was intensified by conducting environmental health risk assessment research on typical new pollutants such as per- and polyfluoroalkyl compounds, continuously improving new pollutant detection capabilities, and initiating the development of a new pollutant management information system.

#### 5. Addressing Climate Change

Shanghai's pilot carbon market has achieved 100% compliance for eleven consecutive years, innovatively implementing quota incentives and a pre-allocation mechanism, launching carbon market repurchase trading services, and developing financial products based on the Shanghai Carbon Price Index. The coordinated innovation pilot program for pollution reduction and carbon mitigation has accelerated, with three industrial parks including Carbon Valley Green Bay Industrial Park initiating pilot projects. The city released its first batch of 30 outstanding cases demonstrating synergistic effects in pollution reduction and carbon mitigation. Climate change adaptation actions were implemented through the issuance of the "Shanghai Climate Change Adaptation Action Plan (2024-2035)," which specifies 37 concrete measures across ten key areas. The first batch of 94 key projects were successfully implemented, and Chongming District was selected for the national pilot list of climate-adaptive city development. On July 21, 2024, the Hubei Provincial People's Government, Shanghai Municipal People's Government, and the Ministry of Ecology and Environment jointly hosted the second China Carbon Market Conference.

### 05 Solidly Advancing Ecological and Environmental Protection Inspection

#### 1. Completing Rectifications for the First and Second Rounds of Central Ecological and Environmental Protection Inspections

Shanghai has completed four key rectification tasks from the first and second rounds of central ecological and environmental protection Inspectorate reviews, including: initial rainwater storage projects at 6 wastewater treatment plants in central urban areas, traffic noise pollution control, addressing insufficient municipal wastewater treatment capacity, and prevention of pump station overflows into rivers. As of the end of 2024, all rectification requirements from both inspection rounds have been fully accomplished.

#### 2. Implementing Rectifications for the Third Round of Central Ecological and Environmental Protection Inspections

In response to issues identified during inspections and those of strong public concern, immediate corrective actions were taken upon discovery. Comprehensive rectification plans were carefully formulated, with continuous efforts to draw broader lessons and establish robust, long-term regulatory mechanisms. By the end of 2024, all inspection-related rectification work had progressed effectively. All 3,076 public complaints submitted by the inspection teams had been either fully resolved or addressed with interim solutions.

#### 3. Conducting the Second Round, Third Batch of Shanghai Municipal Ecological and Environmental Protection Inspections

The second round and third batch of Shanghai's ecological and environmental protection inspections were conducted in Jing'an, Hongkou, Minhang, and Songjiang districts. The inspections handled and assigned nearly 800 complaints, conducted on-site checks at over 1,200 locations, and produced about 30 written records of interviews and inquiries.



## 06 Modernizing Environmental Governance Systems and Capabilities

### 1. Improving the Legal and Regulatory Framework

Shanghai has advanced local legislation for ecological and environmental protection, enacting China's first local regulation on zero-waste city development. The city has improved its local ecological and environmental standards system to support high-quality integrated development in the Yangtze River Delta region. The "Shanghai Environmental Monitoring Science Popularization and Legal Education Base" was established as a municipal-level legal culture brand, promoting achievements in ecological and environmental rule of law and serving public legal education. Reforms on ecological and environmental damage compensation have been deepened through the issuance of "Implementation Rules for Ecological and Environmental Damage Compensation Work in Shanghai," "Work Procedures for Ecological and Environmental Damage Compensation in Shanghai," and "Management Measures for Shanghai's Ecological and Environmental Damage Compensation Expert Database." A total of 67 cases were resolved through consultation, with compensation claims exceeding 43 million yuan. Notably, two cases were selected among the Yangtze River Delta region's second batch of ten exemplary ecological damage compensation cases - a Qingpu District company's illegal discharge of water pollutants and a Huangpu District company's destruction of residential green spaces.

Category	Laws, Regulations, and Standards Enacted or Revised in 2024
Local Regulations	Shanghai Zero-Waste City Construction Regulation Shanghai Regulations on Promoting High-Quality Development of the Yangtze River Delta Ecology and Greenery Integration Demonstration Zone Shanghai Regulations on Promoting Green Transformation of Development Modes
Government Rules	Shanghai Provisions on Radioactive Pollution Prevention and Control
Yangtze River Delta Integrated Standards	Data Evaluation Standards for Remote Monitoring of Heavy Diesel Vehicle Emissions
Local Standards	Soil and Groundwater: Determination of Aliphatic and Aromatic Fractions in Petroleum Hydrocarbons (C10-C40) by Gas Chromatography Emission Standards for Air Pollutants in the Printing Industry Emission Standards for Pollutants in the Semiconductor Industry Emission Standards for Air Pollutants in the Manufacture of Paints, Inks, and Similar Product

### 2. Refining the Credit Evaluation System

Shanghai has strengthened its ecological and environmental credit system to enhance polluting entities' compliance with environmental protection responsibilities and improve credit evaluation oversight. The "Shanghai Ecological and Environmental Credit Evaluation Management Measures" and scoring rules for various evaluation targets were issued, establishing a "1+X" environmental credit assessment framework. This system standardizes evaluation procedures, rating tiers, result applications, disclosure timelines, and publication methods, comprehensively covering polluting entities as well as third-party service providers such as environmental monitoring and soil pollution prevention agencies. Adhering to the principles of "law-based compliance, objectivity and fairness, transparency, and balanced incentives/disincentives," the 2024 environmental credit evaluation assessed 48,376 polluting entities, including 1,098 A-grade, 46,281 B-grade, 866 C-grade, and 131 D-grade; 217 environmental service providers including 44 A-grade, 92 B-grade, 77 C-grade, and 4 D-grade.

### 3. Strengthening Scientific and Technological Support

Shanghai has organized and implemented scientific research and technological development, leveraging its role as a source of innovation in ecological and environmental technology. To support national strategies including the campaign against pollution, climate change response, Yangtze River Delta integration, and new pollutant management and to meet the needs of synergistic pollution reduction and carbon mitigation, the city has adopted a problem-oriented, demand-driven approach. Thirty-seven research projects were launched, such as "Major Ecological and Environmental Protection Issues in Shanghai and Surrounding Regions During the 15<sup>th</sup> Five-Year Plan" and "Comprehensive Component Emission Characteristics of Motor Vehicles, Key Influencing Factors, and Control Strategies." Fifty-two ongoing research projects completed acceptance reviews and comprehensive performance evaluations. Their outcomes provided fundamental, systematic, and forward-looking technological support for the battle for blue skies, clear waters, and pollution-free land. The city promoted green technology innovation by successfully hosting the 2<sup>nd</sup> Shanghai Green Low-Carbon Technology Innovation Competition, with over 100 entries showcasing "Shanghai solutions" for high-quality green development, having the Shanghai Green Low-Carbon Innovation Service Base designated as a municipal-level technology business incubator, attracting 15 green tech startups, and establishing the Shanghai International Green Low-Carbon Concept Verification Center, facilitating 470 million yuan in industry-academia-research collaborations.



#### 4. Building a Modern Environmental Governance System

Shanghai has advanced digital governance platforms, accelerating the development of its "One Database, One Screen, One Center" ecological brain system, implementing digital solid waste supervision and establishing a management platform for investigating and remediating river discharge outlets. Over 52,000 enterprises were incorporated into the fixed pollution source management platform. The Shanghai Chemical Industry Park and Lingang Wanxiang Industrial Park passed national evaluations for their innovative clean production audit pilot programs. In 2024, 1,141 enterprises fully complied with mandatory environmental information disclosure requirements. The city expanded demonstration applications of green finance through innovative insurance mechanisms, launched a pilot environmental pollution liability insurance program in the Pudong New Area, with 161 participating entities and cumulative coverage exceeding 510 million yuan, activated the Shanghai Green Financial Services Platform, aggregating 212 green projects involving approximately 17.1 billion yuan in financing, advanced pilot programs in climate investment financing, biodiversity finance, and green low-carbon supply chains. Jointly with the Shanghai Municipal Development and Reform Commission, we released the first batch of ten exemplary cases for modern environmental governance systems, cultivating grassroots governance practices focusing on "smallest units" and multi-stakeholder co-governance models.

#### 5. Continuously Deepening Reforms in Environmental Impact Assessments and Pollution Discharge Permits

"Implementation Opinions on Deepening the Reform of Environmental Impact Assessment (EIA) and Pollutant Discharge Permit Systems were issued, proposing 20 reform measures across seven key areas. These include "EIA + Spatial Planning" reforms, "EIA + Industrial Policy" reforms, "EIA + Project Management" reforms, strengthening "one-license" regulatory foundations, and improving coordinated supervision and management mechanisms for fixed pollution sources. Shanghai expanded planning EIA and project EIA linkage to 67 industrial parks, released supporting documents like guidelines for incorporating EIA into regional assessments, procedures for bundled EIA approvals, and updated EIA notification and commitment industry catalog to accelerate project implementation. The city has achieved dynamic full coverage of

pollutant discharge permits with 4,946 licensed discharge units and about 41,000 registered discharge units as of the end of 2024, revised the "Three-Supervision Linkage" for fixed pollution sources, standardized dynamic updates to the pollution source database, and implemented QR code tagging for emission outlets, with about 26,000 tags installed.

#### Feature



#### Targeted Measures to Cultivate New Advantages in Pioneering Industries

Focusing on Shanghai's pioneering industries and key sectors, specialized environmental support policies have been introduced for three industries: integrated circuits, biomedicine, and new materials. The integrated circuit industry policy, tailored to the sector's emission characteristics, maximizes efficiency while reducing burdens through supporting the localization of specialized processes in industrial parks, exempting EIA requirements for certain R&D and pilot projects, and government-managed allocation of small-volume pollutant emission quotas. The biomedicine industry policy addresses niche sector needs for market entry by waiving EIA for some lab-to-production conversion projects, government coordination of minor pollutant emission quotas, and bundled approvals for similar projects. The new materials pilot project guidelines provide scientific guidance for site selection and daily environmental management and exempt EIA for qualifying pilot projects. Now over 20 projects have rapidly completed EIA approvals under these specialized policies.

#### 6. Promoting the Development of a Modern Monitoring System

To enhance monitoring network infrastructure, Shanghai has launched the construction of island-based air quality automatic stations and micro water quality stations for surface water environments, establishing a three-dimensional monitoring network for offshore area transmission pathways. The integration of standard surface water monitoring stations with micro-stations is being advanced. The city is accelerating digital-intelligent transformation, upgraded the "Shanghai Environmental Monitoring Socialized Service Supervision System," developed a multi-source data algorithm model to detect fraudulent monitoring activities using AI and big data analytics, enabling intelligent identification of anomalies and dynamic early warnings. Data Quality Management is elevated by pioneering nationwide implementation of electronic records for self-monitoring sampling by discharge units and automatic monitoring system maintenance, covering over 9,000 pollutant discharge units and about 200 automatic monitoring service agencies. The measure strengthened accountability for data production, management, and utilization by discharge enterprises and third-party monitors and achieved digital-intelligent management of self-monitoring sampling processes.



### 7. Enhancing Comprehensive Law Enforcement Capacity for Ecological and Environmental Protection

With the goal of intensifying the battle against pollution, Shanghai has solidly advanced its ecological and environmental law enforcement efforts, completing all enforcement tasks across key areas including air, water, ecology, soil, solid waste, and groundwater. Key achievements include conducting approximately 38,000 inspections of enterprises and institutions, identifying around 12,000 environmental issues, investigating 1,434 violations, and imposing penalties totaling 103.9 million yuan. Focused on critical environmental challenges, specialized campaigns were launched in VOCs emissions, mobile pollution sources, dust pollution, and community-based pollution sources. Crackdowns were continued on hazardous waste-related environmental crimes, falsified pollution monitoring data, and fraud by third-party environmental service providers, with 13 cases transferred to police for criminal investigation. Exposed landmark cases included China's first dust monitoring data fraud case, Shanghai's first ecological/environmental testing fraud case and vehicle inspection fraud case. The city intensifies training to promote team building by completing citywide standardization of enforcement agencies, establishing a "municipal supervision + district accountability" oversight mechanism, organizing monthly case reviews, field drills, and skills competitions. The city ranked 7<sup>th</sup> nationally in comprehensive enforcement performance, with 4 district teams (Jinshan, Songjiang, Pudong, Jiading) recognized as national "outstanding units" and 9 officers awarded national "outstanding individual" honors. Adhering to the principle of "transforming methods, optimizing enforcement, and enhancing efficiency," Shanghai implemented "one-permit" integrated enforcement for pollutant discharge, piloted smart enforcement using digital tools, and enhanced cross-agency and joint enforcement for industrial emissions, dust, wastewater, and vehicles to continuously improve the comprehensive law enforcement efficiency.

#### Feature



#### Strengthening Digital-Intelligent Integration to Enhance Smart Law Enforcement Capabilities



Shanghai has improved its off-site enforcement system by establishing corresponding regulations. Key advancements include enhancing enforcement equipment, deploying advanced tools like infrared leak detectors, implementing an integrated enforcement support system combining ground-based mobile monitoring, drone patrols, rapid pollutant detection and sampling assistance. The city expanded big data and AI-powered analytical capabilities, developed data models for analyzing abnormal automated monitoring data and pioneered innovative tech-driven enforcement scenarios. A total of 3,800 off-site inspection records were generated in 2024, accounting for 9% of all law enforcement inspections. The issue detection rate reached 30%, showing significant improvement compared to 2023.

### 07 Fostering New Prospects for Ecological and Environmental Collaboration

#### 1. Joint Protection and Coordinated Governance of the Ecological Environment in the Yangtze River Delta Region

The regional collaboration mechanism has been enhanced with the introduction of standards for discretionary ecological and environmental administrative penalties and measures for sharing ecological and environmental data. The regional standard "Evaluation Criteria for Remote Monitoring Data of Heavy Diesel Vehicle Emissions" was released, along with four innovative achievements in joint ecological conservation and coordinated governance, including the "Cross-Regional Unified Ecological Environment Access System." Efforts to jointly build a pioneering zone for a Beautiful China in the Yangtze River Delta include issuing an annual regional list of key tasks for air pollution prevention and control, revising regional emergency plans for heavily polluted weather, conducting a special "100-Day Campaign" for cross-provincial law enforcement against illegal solid waste transfers, piloting exempted management for cross-provincial utilization of hazardous waste, launching an emergency response platform for sudden water pollution incidents in the Taihu River, and completing the first batch of cross-regional volatile organic compounds (VOCs) emissions trading in the Yangtze River Delta.

#### 2. Cooperation and Exchange

Shanghai has carried out targeted cooperation in ecological and environmental protection with revolutionary base areas including Sanming in Fujian Province and Lu'an in Anhui Province, organizing two green and low-carbon industry project matchmaking sessions and providing training exchanges for over 100 participants. Memorandums of understanding were signed with the Department of Ecology and Environment of Yunnan Province and Qinghai Province, namely the "Shanghai-Yunnan Paired Assistance Ecological and Environmental Cooperation Work Memorandum (2024-2026)" and the "Strategic Cooperation Agreement on Ecological and Environmental Protection." Shanghai Science and Technology Museum coordinated with the Qinghai Department of Ecology and Environment to sign a strategic cooperation agreement and launch the "Qinghai Ecological Window" platform. Targeted support was provided for the coordinated control of fine particulate matter and ozone pollution in Shigatse, Tibet, with a focus on research into the causes of ozone pollution and emission inventory surveys. Additionally, cooperation memorandums were signed with the United Nations Environment Programme's Early Warning and Assessment Division, the Energy Foundation, and the Paulson Institute. International exchange activities were successfully held, including the "Belt and Road" Green Development Strategy Seminar, the China-Russia Expert Workshop on Solid Waste Management Cooperation, and the Shanghai parallel session of the China-Africa Roundtable on Ecology, Environment, and Climate Change.





## Public Participation and Supervision

### 01 Proactively Promoting Ecological and Environmental Awareness

Shanghai successfully hosted a series of thematic events including World Environment Day, National Low-Carbon Day, the Eco-Environmental Art Festival, International Nature Conservation Week, and Shanghai Drinking Water Source Protection activities, actively promoting the city's progress in ecological and environmental protection. Total participation exceeded 10 million person-times both online and offline. Collaboration with mainstream media was strengthened, with positive coverage on topics such as public livelihood interviews, the central ecological and environmental inspection in Shanghai, and zero-waste city construction, achieving significant social impact. Throughout the year, news about Shanghai environment was published and shared 224,000 times across mainstream and new media platforms, including 160 reports in China Environment News. The municipal and district-level official WeChat and Weibo accounts coordinated their messaging, with "Shanghai Environment" accounts posting 1,565 WeChat articles and 6,122 Weibo posts, generating 33.4 million total views. These accounts consistently ranked among the top 10 ecological and environmental government new media platforms nationwide. The Douyin account "Shanghai Ecology and Environment" was selected as a member of the first batch of the ecological environment Douyin 100-account matrix. Innovative events included the Yangtze River Delta Eco-Literature Seminar and joint initiatives with Jiangsu, Zhejiang, and Anhui provinces such as the "Yangtze River Delta Eco-Voice Recitation" and volunteer beach cleanups, promoting the region's outstanding ecological culture.



#### Feature



#### Multi-Channel Promotion of the "Beautiful Shanghai" Vision

Shanghai Municipal Bureau of Ecology and Environment collaborated with mainstream media outlets such as Shanghai Radio Station and Xinmin Evening News to launch special campaigns including "Beautiful Shanghai: I Have My Say" and "Beautiful Shanghai: Listening to the People's Voices." On Douyin (TikTok), initiatives like "Beautiful Shanghai Through Locals' Eyes" and "Beautiful Shanghai, Zero-Waste Shanghai: Let's Act Together" encouraged user-generated short videos. Through omnichannel promotion, these efforts reached over 10 million viewers, with total views exceeding 180 million. The promotional films "Co-Building the 'Ten Beauties' of Shanghai" and "Beautiful Shanghai, Collective Action" won the Excellence Award at the 19<sup>th</sup> Shanghai Silver Pigeon Awards and the Gold Prize at the 10<sup>th</sup> Shanghai Citizen Micro Video Competition, respectively.

## 02 Continuously Deepening Ecological and Environmental Education

In 2024, Shanghai's 39 municipal-level environmental education bases and 90 environmental protection facility open units received nearly 720,000 public visitors through activities like "Government Open Month," setting a historical record. Among these, five bases were selected as part of Shanghai's second batch of "Great Ideological and Political Course" practical education bases. In the 2024 "Beautiful China, I'm a Participant" awards, Shanghai earned top honors across three categories: Top 10 Ecological Environment Volunteers, Top 10 Public Participation Cases, and Top 10 Environmental Facility Open Units. In collaboration with the Shanghai Municipal Education Commission, the Shanghai Municipal Bureau of Ecology and Environment launched the "First Lecture on Ecological Civilization Education" online course, reaching nearly 100,000 primary, secondary, and university students. Efforts to establish international eco-schools were also intensified, with the number of recognized schools in Shanghai increasing to 88.

## 03 Effectively Safeguarding Citizens' Environmental Rights and Interests

We have continuously enhanced the legal framework for handling environmental complaints, establishing and improving a closed-loop management system that covers the entire process of "receiving complaints, transferring, handling, and follow-up." Throughout the year, we efficiently resolved 2,742 cases of public inquiries and complaints, 14,530 work orders from the "Municipal 12345 Hotline," and 5,198 online work orders via the "Ministry of Ecology and Environment Complaint and Reporting Platform" on WeChat, ensuring timely responses and effective solutions to citizens' environmental concerns. Focusing on key public grievances, we successfully addressed recurring complaints such as noise pollution, industrial exhaust emissions, and disputes over project locations, leading to a steady rise in public satisfaction.

## 04 Efficiently Handling Proposals and Motions

In 2024, the Shanghai Municipal Bureau of Ecology and Environment received a total of 111 bills and proposals from municipal People's Congress delegates and members of the Chinese People's Political Consultative Conference (CPPCC), including 58 bills from People's Congress delegates and 53 proposals from CPPCC members. These primarily focused on coordinated efforts to reduce carbon emissions, cut pollution, expand green initiatives, and promote economic growth, as well as deepening air pollution prevention and control, accelerating the development of a "zero-waste city," and advancing green finance. All bills and proposals were addressed within the stipulated timeframe, with relevant opinions and recommendations actively adopted.

