SUSTAINABLE DEVELOPMENT GOALS

Shanghai Voluntary Local Review 2024

Annual Report

Inclusiveness · Low-Carbon · Growth

Inclusiveness ·Low-Carbon ·and Growth

UN SDGs Shanghai Voluntary Local Review 2024

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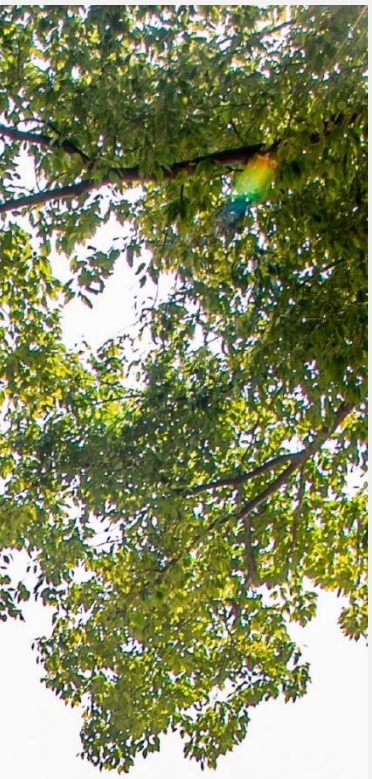

Shanghai - an international hub for economy, finance, trade, and shipping, as well as a globally influential center for technological innovation

In general, Shanghai has established itself as an international hub for economy, finance, trade, and shipping, and it has a framework that is globally influential in technological innovation. In recent years, Shanghai's GDP has consistently ranked among the top ten globally. There are 956 regional headquarters of multinational companies in Shanghai, along with 561 foreign-funded research and development centers. The proportion of Shanghai's total expenditure on R&D to GDP reaches about 4.4%, and the total value of port trade continues to appear at the top of global cities. Shanghai Port's container throughput has maintained its position as the world's first for 14 consecutive years. As one of the most internationalized cities in China, Shanghai has been recognized as the "most attractive Chinese city for foreign talents" for 13 consecutive years. In 2035, Shanghai will be built into a desirable city of innovation, humanities, and ecology, becoming a modern socialist international metropolis with a global influence.

Shanghai - an international cultural metropolis and a national historical and cultural city

Shanghai is an international cultural metropolis and a national historical and cultural city dating back to the Majiabang Culture over 6,000 years ago, the Songze Culture over 5,000 years ago, and the Liangzhu Culture over 4,000 years ago. Here, the Culture of our Party, Shanghai-style Culture, and Jiangnan Culture add radiance and beauty to each other, giving birth to great creativity and vitality. Currently, Shanghai is guided by the urban spirit of "embracing diversity, pursuing excellence, being open-minded and wise, and having a broad-minded and humble attitude" and the urban characteristics of "openness, innovation, and inclusiveness". Its spirit and values elevate Shanghai's soft power, leading nationwide development, radiating across the Asia-Pacific area, and expanding its influence worldwide as it strives to become a city model showcasing Chinese ideals, spirit, and path to the world.

Shanghai - a core city of the world-class urban agglomeration in the Yangtze River Delta

Located in eastern China at the mouth of the Yangtze River and facing the Pacific Ocean, Shanghai, together with the neighboring provinces of Jiangsu, Zhejiang, and Anhui, is part of the Yangtze River Delta, known as one of the most economically active, open, and innovative regions in China. As the core city of the world-class urban agglomeration in the Yangtze River Delta, Shanghai is leading in driving regional development and high-quality growth in the Yangtze River Delta. Additionally, Shanghai is making every effort to actively serve and integrate into the new development pattern, accelerating the construction of a central node of the domestic circulation and a strategic link of China's new "dual circulation" development paradigm.

Shanghai - a pioneer in implementing China's Reform and Opening Up and a leader in innovation-driven development

Since 1978, Shanghai has been at the forefront, leading a scientific path of development with the characteristics of a megacity. It is a pioneer in implementing China's Reform and Opening up and a leader in innovation-driven development. Shanghai has established a modern industrial system with the service industry as the mainstay, led by strategic emerging industries and supported by advanced manufacturing. Currently, Shanghai is accelerating the construction of a new, higher-level open economic system to upgrade its urban capacity and core competitiveness comprehensively. It aims to become a leading source of innovation and a global hub for the integration of wisdom, where the future will be made.

1. Introduction

Transforming our World: The 2030 Agenda for Sustainable Development (the 2030 Agenda) was signed by 193 countries at the United Nations Sustainable Development Summit on September 25, 2015, as the framework document following the *United Nations Millennium Declaration* published in 2000 on the global development process. The 2030 Agenda proposed 17 Sustainable Development Goals (SDGs), seeking to consolidate the development of the Millennium Development Goals, enabling all people to enjoy human rights, and considering the sustainable development of the economy, society, and environment. China attaches great importance to the 2030 Agenda and issued *China's National Plan on Implementation of the 2030 Agenda for Sustainable Development* in September 2016, which provides general guidance for local governments to implement the 2030 Agenda based on regional conditions.

Figure 1 17 SDGs of the 2030 Agenda

Shanghai is one of the most international cities in China. After opening up as a port for trade in 1843, Shanghai gradually developed into the Far East's financial, trade, and economic center in which Chinese and Western civilizations blended and became an important channel for China's communication with the world. After the founding of the People's Republic of China, Shanghai further strengthened its ties with other cities in the country and services for domestic economic and social development. Since the reform and opening up, Shanghai has actively promoted innovation and transformation as part of the national strategy and has continuously pushed up its urban capacity and core competitiveness. In 2023, Shanghai's per capita GDP exceeded RMB 180,000. Shanghai is now on par with developed or moderately developed countries.

In the future, Shanghai will still face many difficulties and challenges. In terms of

economic growth, Shanghai is facing multiple pressures from demand contraction, supply shocks, and weakening expectations. It needs to boost consumption and investment further, stabilize trade and exports, and effectively solve the difficulties of enterprise production and operation. At the same time, Shanghai needs to further strengthen its innovation and development momentum, shoulder heavy responsibilities for core technology breakthroughs in critical areas, and improve the stability and competitiveness of its industrial and supply chains. As the pioneer of China's Reform and Opening up, Shanghai still needs to comprehensively deepen the reform and overcome difficulties in the reform of key areas. As a megacity with a population of 24.7589 million, Shanghai still has many weak points in urban governance. The governance urgently needs to strengthen its operational security and emergency response system, continuously improve the city's safety and resilience, and further improve the efficiency of government services and management. To realize people's aspirations for a better life, Shanghai still needs to address many challenges in employment, education, healthcare, pensions, childcare, and housing and to continue improving the quality of the built and ecological environment.

Sustainable development is an effective solution to practical difficulties and challenges. Sustainable development is also Shanghai's all-time goal. In 2010, the World Expo, with the theme of "Better City, Better Life", was hosted in Shanghai and was dedicated to incorporating sustainable development into a "city for all". On the closing day of the World Expo 2010 Shanghai China on October 31, 2010, the Shanghai Declaration, which brought together essential thoughts of the World Expo, was officially released. The Chinese government, together with the participants' director generals of other countries, jointly proposed the Global Observance of "World Cities Day" on October 31 every year, which was passed at the 68th Session of the United Nations General Assembly as the first global observance promoted by China in the United Nations.

In 2018, Shanghai developed strategies for the mid-to-long-term development plan to be implemented in the 2035 - *Shanghai Master Plan 2017 - 2035*, which describes the overall goal and vision of building Shanghai into "a modern socialist international metropolis with a global influence". Under this overall goal and vision, Shanghai also set three targets - "a dynamic city of prosperity and innovation", "a charming city of happiness and humanity", and "a sustainable city that is green and resilient", in response to SDGs from different perspectives.

Under the goal framework of the 2030 Agenda, many cities worldwide have initiated voluntary local reviews ("VLR") to periodically examine their progress and achievements toward the SDGs. At the invitation of UN-Habitat, Shanghai released the *Shanghai Voluntary Local Review 2021 (Shanghai VLR 2021)* during the celebration of the 2021 China Observance of World Cities Day and the First SDG Cities Global Conference and, on this basis, announced participation in the United Nations' Flagship Project, considering participation in SDG projects as a regular task of Shanghai to push forward its sustainable development. In 2022, during the Global Observance of World Cities Day and the 2nd SDG Cities Global Conference held in Shanghai, the second annual report, *Shanghai VLR 2022*, was promoted, focusing on the theme of "Green, Shared and Cooperation". It is worth emphasizing that the Shanghai VLR has initiated a VLR system of municipal and district achievements since 2022, realizing "municipality-district coordination". In 2023, the third annual report, Shanghai VLR 2023 was specially promoted at the 3rd SDG Cities Global

Conference, which focused on the theme of "Vitality, Resilience and Openness" and continuously responded to the SDG logical framework.

Figure 2 The logical relationship between the SDGs and Shanghai's goals and vision

The year 2024 marks the fourth year of Shanghai's VLR. The report for this year will continue to focus on Shanghai's thematic practices in the field of urban sustainable development and construction in recent years, further highlight its key achievements, and conduct a thematic, continued, and coordinated evaluation. In terms of "themes", the 2024 annual report focuses on the general theme "Inclusiveness, Low Carbon, and Growth". "Inclusiveness" emphasizes respecting and accepting different cultures, ethnic groups, and lifestyles, and endowing them with corresponding development space and rights protection. Inclusiveness has become an important symbol of Shanghai's distinctive urban characteristics of "embracing all differences", representing Shanghai will continue to promote the harmonious and sustainable development of urban society. "Low carbon" expresses the process of reducing carbon emissions and even achieving a state of carbon reduction. This concept is directly conducive to reducing the adverse impact of human activities on climate change. Shanghai is targeting the new track of green and low-carbon industry development through the development of new energy and the establishment of a carbon emissions trading platform, striving to achieve carbon peaking and carbon neutrality. "Growth" is a generalized concept that includes both the progress in the total quantity and quality of development in the economic field and the increase in people's well-being and sense of gain in the social field. If Shanghai wants to continue to advance among global cities, it must continue to grow and improve the levels of its "Five Centers." In terms of "continued", several goals were selected to carry out a priority review based on the annual theme to continuously respond to the logical framework of SDGs. In terms of "coordinated", this year's report results are composed of a "1+1" system: a main report at the municipal level and a sub-report at the district level.

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2. Review Methods and Processes

The Shanghai Municipal government, along with professional research institutions, expert advisory committees, and relevant social organizations, collaborated to develop the Shanghai VLR 2024. The preparation of this report involved the participation of more than 20 government departments and social organizations, who contributed to specific assessments and provided case studies that showcased the latest practices and achievements. During the preparation of the report, experts from various fields were consulted, forming an expert advisory committee composed of authoritative experts from fields of this year's theme, responsible for the selection and discussion of priority review goals and related indicators; furthermore, emphasis was placed on the analysis of multisource data, leading to a comprehensive understanding of residents' satisfaction with urban development through various dimensions such as urban health check-ups. The Preparation Team of the Shanghai VLR 2024 at the Shanghai Academy of Social Sciences is responsible for preparing this report.

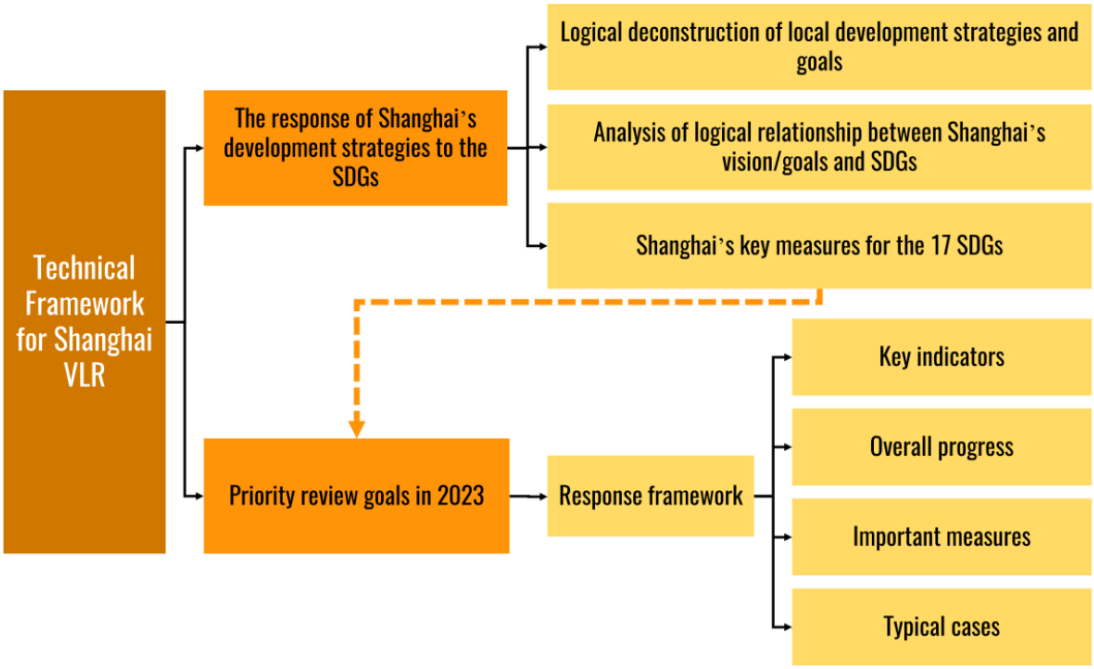

Figure 3 Technical framework for Shanghai VLR

The Shanghai VLR 2024 was prepared concerning the requirements in the *Handbook for the Preparation of Voluntary National Reviews* issued by the UN DESA's Division for Sustainable Development Goals and the *Guidelines for Voluntary Local Reviews* issued by UN-Habitat, as well as China's Voluntary National Review Report on Implementation of the 2030 Agenda for Sustainable Development issued by the Ministry of Foreign Affairs of the People's Republic of China in June 2021 and evaluation results of other foreign cities related to the SDGs at the district level provided on the UN websites related to SDGs.

Figure 4 China's Voluntary National Review Report on Implementation of the 2030 Agenda for Sustainable Development (2021)

To review the framework and contents, the Shanghai VLR 2024 working group established a localized framework for Shanghai VLR by referring to China's National Plan on Implementation of the 2030 Agenda for Sustainable Development, China's SDGs Indicator Establishment and Progress Report 2018, and suggestions from government departments and relevant experts. Meanwhile, the Shanghai VLR 2024 was prepared for research results, such as evaluations of the five-year plan for national economic and social development in Shanghai and the annual report of Shanghai's urban health check-up.

This report further reviews the logical relationship between the current development strategies and critical measures of Shanghai and the 17 SDGs. Based on this, combined with the overall theme of the Shanghai VLR 2024, "Inclusiveness, Low Carbon, and Growth", and considering the theme of World Cities Day 2024, "Youth Leading Climate and Local Action for Cities", and progress in the review of the Shanghai VLR SDGs, it was determined that the 2024 VLR should be conducted from the following eight perspectives: "SDG2 Zero Hunger", "SDG5 Gender Equality", "SDG6 Clean Water and Sanitation", "SDG9 Industry, Innovation and Infrastructure", "SDG11 Sustainable Cities and Communities", "SDG13 Climate Action", "SDG14 Life Below Water", and "SDG16 Peace, Justice, and Strong Institutions". Guided by the annual theme, these SDG targets were examined, and highly relevant targets were selected as the priorities for review. The relationships between the annual themes and the SDG targets are shown in Table 1.

Table 1 Relationships between the SDG targets and the annual report subjects

SDGs	Content	Subjects	Attention
2.1	By 2030, end hunger and ensure access by all people, in particular, the poor and people in vulnerable situations, including infants, to safe, nutritious, and sufficient food all year round.	Growth	★★
2.2	By 2030, end all forms of malnutrition, including achieving	Growth	★★

	targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons in 2025.	Inclusiveness	
2.3	By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists, and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.	Growth Inclusiveness	★★
2.4	By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding, and other disasters, and that progressively improve land and soil quality.	Growth	★★
2.5	By 2020, maintain the genetic diversity of seeds, cultivated plants, and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional, and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.	Growth	★★
2.a	Increase investment, in rural infrastructure, agricultural research, and extension services, technology development, and plant and livestock gene banks to enhance agricultural productive capacity in developing countries, especially the least developed countries.	Growth	★
2.b	Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Agenda.	Growth Inclusiveness	★
2.c	Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, to help limit extreme food price volatility.	Growth	★★
5.1	End all forms of discrimination against all women and girls everywhere.	Inclusiveness	★★
5.2	Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.	Inclusiveness	★★
5.3	Eliminate all harmful practices, such as child, early and forced marriage, and female genital mutilation.	Inclusiveness	★
5.4	Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies, and the promotion of shared responsibility within the household and the family as nationally appropriate.	Inclusiveness	★★
5.5	Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic, and public life.	Inclusiveness Growth	★★
5.6	Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences.	Inclusiveness Growth	★★

5.a	Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance, and natural resources, in accordance with national laws.	Inclusiveness Growth	★★
5.b	Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.	Inclusiveness	★
5.c	Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.	Inclusiveness	★★
6.1	By 2030, achieve universal and equitable access to safe and affordable drinking water for all.	Inclusiveness Growth	★★
6.2	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.	Inclusiveness	★
6.3	By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing the release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.	Low Carbon Inclusiveness	★★
6.4	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.	Low Carbon Growth	★★
6.5	By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.	Low Carbon Inclusiveness	★★
6.6	By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers, and lakes.	Low Carbon	★★
6.a	By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programs, including water harvesting, desalination, water efficiency, wastewater treatment, recycling, and reuse technologies.	Low Carbon Growth	★
6.b	Support and strengthen the participation of local communities in improving water and sanitation management.	Inclusiveness	★★
9.1	Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.	Growth Low Carbon	★★
9.2	Promote inclusive and sustainable industrialization and, by 2030, significantly raise the industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries.	Inclusiveness Growth	★★
9.3	Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.	Growth Inclusiveness	★★
9.4	By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in	Growth Low Carbon	★★

	accordance with their respective capabilities.		
9.5	Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending.	Growth Inclusiveness	★★
9.a	Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological, and technical support to African countries, least developed countries, landlocked developing countries, and small island developing States.	Growth Inclusiveness	★★
9.b	Support domestic technology development, research, and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities.	Growth	★★
9.c	Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020	Growth	★
11.1	By 2030, ensure access for all to adequate, safe, and affordable housing and basic services and upgrade slums.	Inclusiveness Growth	★
11.2	By 2030, provide access to safe, affordable, accessible, and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities, and older persons.	Inclusiveness Growth	★★
11.3	By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated, and sustainable human settlement planning and management in all countries.	Inclusiveness Growth	★★
11.4	Strengthen efforts to protect and safeguard the world's cultural and natural heritage.	Inclusiveness	★
11.5	By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to the global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.	Inclusiveness Low Carbon	★★
11.6	By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.	Inclusiveness	★★
11.7	By 2030, provide universal access to safe, inclusive, and accessible, green and public spaces, in particular for women and children, older persons, and persons with disabilities.	Inclusiveness Growth	★★
11.a	Support positive economic, social, and environmental links between urban, peri-urban, and rural areas by strengthening national and regional development planning.	Inclusiveness Growth Low Carbon	★★
11.b	By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels.	Low Carbon Inclusiveness	★★
11.c	Support least developed countries, including through financial	Inclusiveness	★★

	and technical assistance, in building sustainable and resilient buildings utilizing local materials.		
13.1	Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.	Low Carbon Inclusiveness	★★
13.2	Integrate climate change measures into national policies, strategies, and planning.	Low Carbon Inclusiveness	★★
13.3	Improve education, awareness-raising, and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning.	Inclusiveness Low Carbon	★★
13.a	Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible.	Low Carbon Inclusiveness Growth	★
13.b	Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth, and local and marginalized communities.	Low Carbon Inclusiveness	★
14.1	By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.	Low Carbon Inclusiveness	★★
14.2	By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and taking action for their restoration to achieve healthy and productive oceans.	Low Carbon Inclusiveness	★★
14.3	Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.	Low Carbon	★★
14.4	By 2020, effectively regulate harvesting and end overfishing, illegal, unreported, and unregulated fishing, and destructive fishing practices and implement science-based management plans, to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics	Low Carbon Growth	★★
14.5	By 2020, conserve at least 10 percent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.	Low Carbon Inclusiveness	★★
14.6	By 2020, prohibit certain forms of fisheries subsidies that contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported, and unregulated fishing, and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.	Low Carbon Growth	★★
14.7	By 2030, increase the economic benefits to small island developing states and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture, and tourism.	Low Carbon Growth	★
14.a	Increase scientific knowledge, develop research capacity, and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and	Low Carbon Inclusiveness	★

	Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular, small island developing states and least developed countries.		
14.b	Provide access for small-scale artisanal fishers to marine resources and markets.	Low Carbon Growth	★★
14.c	Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want.	Low Carbon Inclusiveness	★★
16.1	Significantly reduce all forms of violence and related death rates everywhere.	Inclusiveness	★★
16.2	End abuse, exploitation, trafficking, and all forms of violence against and torture of children.	Inclusiveness	★★
16.3	Promote the rule of law at the national and international levels and ensure equal access to justice for all.	Inclusiveness Growth	★★
16.4	By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets, and combat all forms of organized crime.	Inclusiveness	★★
16.5	Substantially reduce corruption and bribery in all their forms.	Inclusiveness	★★
16.6	Develop effective, accountable, and transparent institutions at all levels.	Inclusiveness	★★
16.7	Ensure responsive, inclusive, participatory, and representative decision-making at all levels.	Inclusiveness Growth	★★
16.8	Broaden and strengthen the participation of developing countries in the institutions of global governance.	Inclusiveness	★
16.9	By 2030, provide legal identity for all, including birth registration.	Inclusiveness	★
16.10	Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.	Inclusiveness Growth	★★
16.a	Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime.	Inclusiveness	★
16.b	Promote and enforce non-discriminatory laws and policies for sustainable development.	Inclusiveness Growth	★★

Note: The "degree of attention" is determined comprehensively based on the correlation between the targets and the annual theme, Shanghai's actual development stage, and the key areas of the annual review. ★ indicates that it should be paid attention to in this year's review, and ★★ indicates that it should be focused on when building the review response framework.

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3. Overview of Shanghai's Response to SDGs

Shanghai's Responses to SDGs

According to the Shanghai Master Plan 2017 - 2035, Shanghai aims to become "a dynamic city of prosperity and innovation", "a charming city of happiness and humanity", and "a sustainable city that is green and resilient" ("2035 Goals"). On the path to realizing its overarching goal of building "a modern socialist international metropolis with a global influence", Shanghai continues to further develop its economy, society, environment, culture, and governance. Within a logical framework, Shanghai focuses on the following development goals: "a dynamic city of prosperity and innovation" by emphasizing development in its economic, social, and cultural aspects; "a charming city of happiness and humanity" by highlighting its social, cultural development, and urban governance; and "a sustainable city that is green and resilient" by emphasizing its economic growth, environmental protection, and metropolitan governance.

The concept of sustainable development has always been integrated into Shanghai's efforts to advance its economy, urban governance, culture, society, and environment. In terms of economic development, Shanghai focuses on energy development, employment and economic growth, emerging industries, promoting common development, and responsible consumption and production; for urban governance, Shanghai focuses on reducing regional development disparities, promoting community governance, developing circular production, ensuring fairness and justice, and promoting regional coordinated governance; for cultural development, Shanghai focuses on the high-quality development of culture and education, creating a gender-equal cultural environment, technological innovation and cultural creativity, community building, and regional cooperation; for social development, it focuses on poverty alleviation, food security, improving health levels, and promoting educational equity and gender equality; and for protecting the environment, Shanghai focuses on ensuring water supply security, developing new energy resources, coping with climate change, protecting water environments and biodiversity, and protecting land environments and biodiversity.

This report establishes a logical correspondence between the Shanghai 2035 goals and the 17 SDGs. Based on this framework, VLR in 2024 will be carried out. The connection with the indicator system structure in the economy, governance, culture, society, environment, and other fields will also be considered regarding indicator assessment.

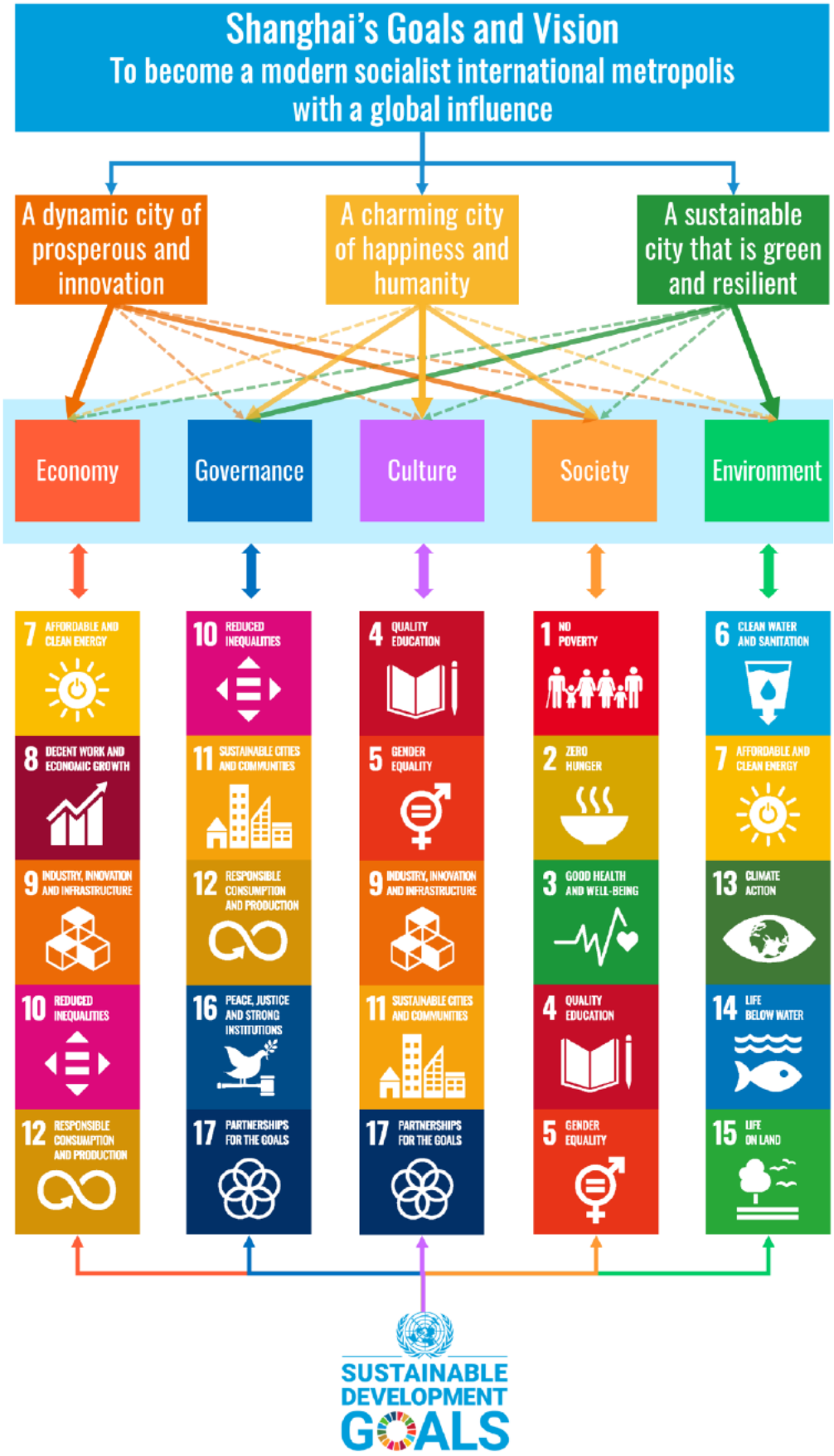


Figure 5 Logical correspondence between Shanghai's goals and the SDGs

- **A dynamic city of prosperity and innovation**

To become a dynamic city of prosperity and innovation, Shanghai has made the following efforts: enhancing its core functions as a global resource allocator, source of technological innovation, leader in high-end industries, and gateway to openness; considering technological innovation as the driving force to build a collaborative industrial system for coordinated development (SDG9, SDG12); seeking steady rise in status as a gateway city by enhancing Shanghai's international and domestic service radiating power and improving its capability in global resource allocation (SDG17); focusing on enhancing the strength of advanced manufacturing and stimulating the endogenous power of the urban economy (SDG8, SDG9); strengthening support through a comprehensive, convenient and efficient transportation and modern infrastructure system (SDG7, SDG9); creating a more attractive environment for both employment and entrepreneurship (SDG8); and enabling all residents to enjoy the fruits of development (SDG1, SDG2, SDG10).

- **A charming city of happiness and humanity**

To become a charming city of happiness and humanity, Shanghai aims to meet people's aspirations for a better life; become a more attractive city of happiness and humanity; perfect the essential public service system that is fair, shared, flexible, and inclusive (SDG3, SDG4); improve the housing supply system that is affordable and sustainable (SDG11); enhance citizens' sense of gain, happiness, and security; strive to achieve social fairness and justice (SDG5, SDG10, SDG16); stimulate the vitality of urban cultural innovation and creativity; enhance the city's cultural soft power and attraction (SDG4, SDG9, SDG17); protect historical and cultural heritage; continue the city's historical context; and retain the city's memory (SDG11, SDG12).

- **A sustainable city that is green and resilient**

To become a sustainable city that is green and resilient, Shanghai has made the following efforts: actively address global challenges such as climate change (SDG13); transform production and lifestyle patterns (SDG12); improve ecological quality from all respects and construct a multilevel, networked, and functionally integrated ecological space system (SDG6, SDG14, SDG15); create an environmental governance system where the government works as a leader, enterprises as implementers, and social organizations and the public as participants (SDG16, SDG17); improve urban security and optimize the basic, functional, and networked urban infrastructure system (SDG9); enhance the capacity and service quality of municipal infrastructure for urban operation; and improve the city's ability and resilience to combat disasters (SDG11, SDG12).

Shanghai's Important Measures to Drive SDGs

Vital strategic directions to promote SDGs

Since 2015, Shanghai has strived to promote sustainable development in terms of its economy, governance, culture, society, and environment. Through the practice of several key strategic directions, phased results have been achieved.

In the field of economy, Shanghai strives to establish a modern industrial system with the modern service industry as the main body, strategic emerging industries as the leader, and advanced manufacturing as the support, accelerating the promotion of high-quality economic development. The city's GDP has continuously crossed 3 trillion yuan and 4 trillion yuan, growing from 2.69 trillion yuan in 2015 to 4.72 trillion yuan in 2023, ranking among the world's top cities. The per capita GDP increased from 109,200 yuan to 189,800 yuan, reaching the level of upper-middle developed countries. Shanghai strives to improve the city's urban capacity and core competitiveness and make a new leap in its urban functions by strengthening its functions of allocating global resources, sourcing innovation in technology, leading high-end industries, and serving as a pivotal gateway for openness. In general, international economic, financial, trade, and shipping centers have been built, the total port cargo trade has remained the highest in the world, and the container throughput of Shanghai Port has ranked first in the world for 14 consecutive years. Shanghai is the pioneer of National Reform and Opening Up and the forerunner of innovative development, which promotes the socialist modernization construction of Pudong from a high starting point, accelerates the cultivation of special economic functions of the Lin-gang Special Area of China (Shanghai) Pilot Free Trade Zone, continuously amplifies the effects of the Science and Technology Innovation Board and the registration system, and fully promotes the Yangtze River Delta's Integrated Development profoundly and solidly. Shanghai has also successfully organized the China International Import Expo for consecutive years.

In the field of governance, Shanghai has benchmarked against the highest standards and the best level to achieve more efficient urban governance. Depending on the characteristics and laws of a megacity, Shanghai insists on comprehensive, whole-process, and all-weather governance, using measures such as laws, standardization, intelligence, and social management to combine the wisdom of technology with rule-based management and people's power and modernize urban governance. Shanghai is continuing to refine its urban governance and upgrading its refinement work platform based on an integrated management system for the urban grid. It has made solid progress in constructing "beautiful subdistricts, beautiful homes, and beautiful villages". Shanghai is steadily promoting the digital transformation of urban governance. Relying on the "unified online government service" platform for government services and "Integrated Online Management" for urban operations, it has created a number of "easy-to-handle" and "quick-handle" service projects for the people and formed a number of "practical" and "useful" digital application scenarios. By practicing the principal concept of whole-process people's democracy, Shanghai has made great efforts to consolidate mighty powers to create a gracious living and form an increasingly intense atmosphere with joint

establishment, shared governance and common sharing.

In the field of cultural development, Shanghai has made every effort to promote the "Shanghai Culture" brand. It speeds up the construction of a socialist international metropolis with world influence. Shanghai has been actively promoting the development of literary and artistic creation and production, gradually underpinning Shanghai as a vital creative hub with its first public performances, shows, and releases. By being committed to building a global film and television production center, an important international art trading center, the performing arts capital of Asia, and the capital of global electronic sports, Shanghai continues to consolidate its pillar position in creative cultural industries. For example, the Shanghai International Film Festival has become Asia-Pacific's most influential international film event. Moreover, the China International Digital Interactive Entertainment Exhibition has become one of the world's three largest digital interactive entertainment exhibitions and is in first place in Asia. Shanghai fully promotes the standardization and equalization of essential public services. The public cultural service circle constantly improved by 10 minutes in the central urban area and 15 minutes in the suburbs. Shanghai insists on optimizing the spatial layout of urban cultural facilities by constructing two major cultural core functional areas in the Puxi People's Square area and the Pudong Huamu area and striving to promote the establishment of several major cultural facilities projects such as the Shanghai Museum East Branch, Shanghai Library East Branch, and Shanghai Grand Opera House. This city is committed to creating a world-famous tourist city with international influence by constantly consolidating its sightseeing, leisure, and vacation functions and building a number of benchmark projects such as Shanghai Disneyland. In addition, Wusong Cruise Port has become the first port in Asia and the world's fourth-largest cruise home port.

In the field of social development, Shanghai practices the vital idea of a "people's cities built by people and serves for people" and pays attention to safeguarding and improving people's livelihoods and living standards. In Shanghai, residents' per capita disposable income increased to 84,800 yuan in 2023 from 49,900 yuan in 2015. Practical measures are taken to improve the functions of various public services in the community, make the communities suitable for living, business, tourism, education, and health, and promote the equalization of essential public services covering urban and rural areas. Shanghai is committed to creating an open and inclusive urban environment for all residents, promoting opening and quality improvements along the Huangpu River and Suzhou River, and completing the comprehensive renovation of second-grade or lower old houses in the central urban area. Shanghai attaches great importance to developing education, medical, and healthcare services that are closely related to the vital interests of the general public, meeting the people's good expectations of "good parenting for children, good education for students, and good medical care for patients". For example, the gross enrollment rate in the first three years of preschool, compulsory education, and high school education is close to 100%, the proportion of the significant working-age population with higher education is close to 50%, and all major health indicators of residents remain at the world's leading level.

In the field of environmental protection, Shanghai prioritizes eco-environmental conservation and green development and explores the deep integration and practice of the two important concepts of "lucid waters and lush mountains are invaluable assets" and

"people's cities". Shanghai has actively implemented a carbon-neutral strategy, continuously stepped up the adjustment of the "four major structures" (energy, industry, transportation, and agriculture), and fostered new green and low-carbon development momentum. Through the joint efforts of the whole society, Shanghai facilitated lifestyle changes, making garbage classification a new fashion in daily life. The focus of ecological and environmental protection work has gradually shifted from reducing pollutant emissions to improving environmental quality and enhancing ecological service functions. At present, the quality of the air and water has reached the best level ever. The aquatic biodiversity indices of crucial rivers and lakes, such as the Huangpu River, Suzhou River, and Dianshan Lake, are increasing. Shanghai is committed to providing citizens with a broader ecological space, with forest coverage reaching 18.8% by 2023.

Recent important measures for sustainable development practice

This report compares Shanghai's recent significant measures in sustainable development with the 17 SDGs (as shown in Table 2). The reports from 2021 to 2023 have selected several goals for priority review under the annual themes of that year. The Shanghai VLR 2024 report conducts a priority review of eight goals (SDG2; SDG5; SDG6; SDG9; SDG11; SDG13; SDG14; SDG16). After four years of review, the first round of review of this report covered the 17 goals.

Table 2 Shanghai's essential measures for the SDGs

SDGs	Shanghai's measures
1 NO POVERTY	• Improve the system of assistance for disadvantaged groups • Scientifically elevate the level of social assistance and security • Provide paired aid to other regions in China to help them eliminate poverty
2 ZERO HUNGER	• Scientifically enhance the ability to ensure the health and nutrition of citizens • Reduce food waste in various stages • Promote the development of urban agriculture • Strengthen agricultural anti-risk capabilities
3 GOOD HEALTH AND WELL-BEING	• Promote high-quality medical insurance coverage • Improve the public health emergency system • Control pregnancy risks for pregnant women • Implement a clean-air action plan • Strictly control tobacco use
4 QUALITY EDUCATION	• Promote equal allocation of compulsory education resources • Promote better childcare services • High-quality development of vocational education • Targeted coverage of special education • Build a network for community education
5 GENDER EQUALITY	• Promote healthy and harmonious development of families in all aspects • Focus on promoting women's employment and career development • Actively ensure women's participation in decision-making and management • Improve the support capacity of the fertility system

6 CLEAN WATER AND SANITATION	• Guarantee water supply capacity • Take multiple measures to improve water supply quality • Promote water environment and water ecological governance • Improve water efficiency
7 AFFORDABLE AND CLEAN ENERGY	• Develop renewable green energy • Develop clean energy-natural gas • Optimize the energy structure • Promote low-carbon and efficient use of energy
8 DECENT WORK AND ECONOMIC GROWTH	• Boost economic vitality and resilience • Precisely implement economic relief and revitalization • Promote employment with multiple initiatives • Stimulate and promote consumption
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	• Support the development of industrial parks and small and medium-sized enterprises • Actively develop leading and key industries • Proactively explore new tracks and future industrial development • Promote scientific and technological innovation • Develop new infrastructure
10 REDUCED INEQUALITIES	• Ensure that everyone enjoys a decent and dignified life • Provide high-quality public services for all • Create a wonderful rural life for all • Build a happy city friendly to all
11 SUSTAINABLE CITIES AND COMMUNITIES	• Promote sustainable community development • Promote urban space sharing for all • Implement sustainable urban renewal • Explore the deep integration of urban and rural development
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	• Make more efforts to become a "waste-free city" • Develop an eco-friendly circular economy • Boost economic restructuring and green production • Make more efforts to become a safe and resilient city
13 CLIMATE ACTION	• Strengthen climate change risk management • Strengthen the capacity to adapt to climate change • Promote energy conservation and carbon reduction • Encourage public participation in combating climate change
14 LIFE BELOW WATER	• Promote water ecosystem governance • Protect aquatic biodiversity • Promote sustainable development of fisheries
15 LIFE ON LAND	• Yangtze River estuary wetland protection and governance • Take actions for biodiversity protection • Coordinate the construction of country parks across the city • Risk management and remediation for soil pollution on construction land • Promote domestic garbage classification
16 PEACE, JUSTICE AND STRONG INSTITUTIONS	• Building a safe Shanghai • Promote the rule of law in Shanghai • Encourage public participation in governance
17 PARTNERSHIPS FOR THE GOALS	• Widen global network of "friends" • Promote business environment reform • Promote the integrated high-quality development of the Yangtze River Delta • Facilitate the all-round and high-standard opening up of the Lin-gang Special Area of China (Shanghai) Pilot Free Trade Zone • Improve the urban function level of Hongqiao International Open Hub

4. 2024 Priority Review Goals

SDG-2 Zero Hunger

SDG-5 Gender Equality

SDG-6 Clean Water and Sanitation

SDG-9 Industry, Innovation and Infrastructure

SDG-11 Sustainable Cities and Communities

SDG-13 Climate Action

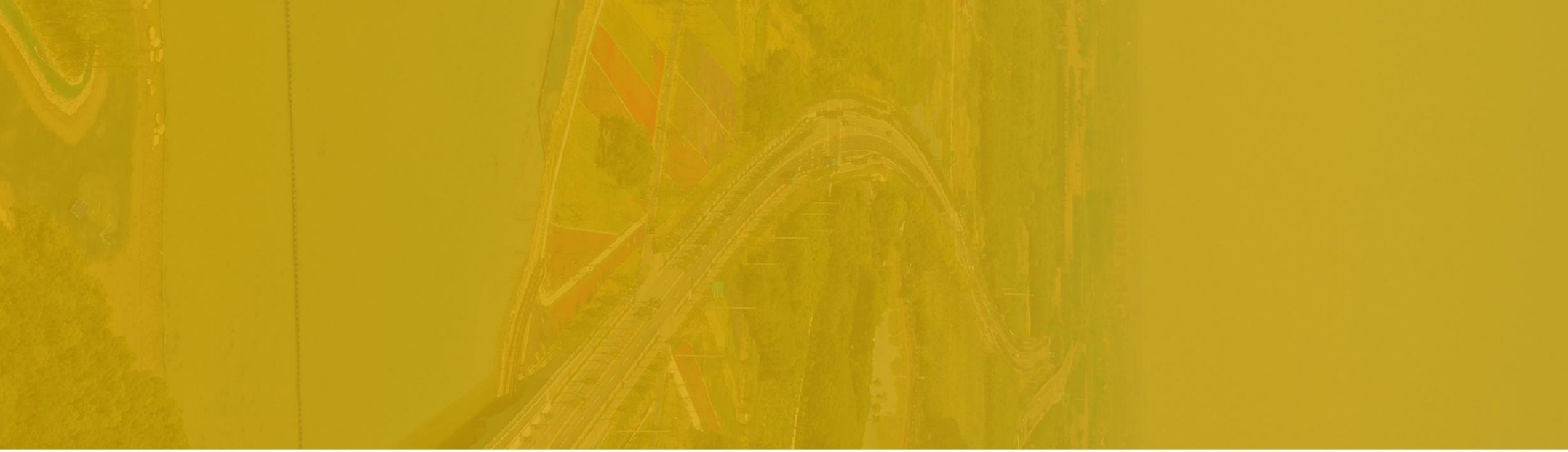
SDG-14 Life Below Water

SDG-16 Peace, Justice and Strong Institutions

SDG2: Zero Hunger

SDG2

- SDG2 - Zero Hunger. This goal is to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture. By implementing this goal, we can effectively ensure that everyone has access to enough safe and nutritious food, and establish a more inclusive and sustainable modern agricultural production and supply system.
- Currently, the people of Shanghai are sufficiently fed and clothed, and a sufficient and diversified food production and supply system has been established. However, when benchmarking higher-quality healthy living standards, the structural imbalance in residents' dietary nutrition is still prominent, health risks caused by excess nutrition continue to grow, and the comprehensive competitiveness and support capabilities of the urban modern agricultural system still need to be further improved.
- Driven by the SDG2, Shanghai has taken promoting health and well-being for the people as its primary goal in recent years. It has taken multiple measures to improve food supply levels to foster healthier dietary habits, construct healthy communities, reduce food waste at all levels, and actively promote modern seed industry technology innovation and industrial development to create a resilient modern urban agriculture system.



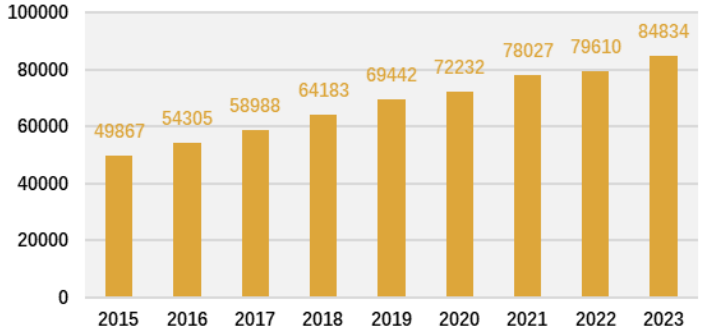
SDG2

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG2
Improve citizens' nutrition and health	Promote the construction of standardized healthy restaurants		►Per capita disposable income (yuan) ►Per capita consumption expenditure (yuan) ►Urban minimum subsistence guarantee (yuan/person · month) ►Number of registered unemployed persons in urban areas (10,000 people) ►Share of consumer expenditure spent on food, tobacco, and alcohol (%) ►Consumer price index	SDG2.1 SDG2.2
	Actively promote reasonable dietary and nutritional guidance			
	Continue to improve the standards to promote the construction of nutritional assessment systems			
	Construct nutritionally supportive communities	Jing'an Temple Street Community in Jing'an District Actively Promotes the National Pilot Construction of Nutritional and Healthy Communities		
Reduce food waste	Create an atmosphere for all people to stop food waste through various forms of publicity			
	Launch smart canteens to stop food waste on campuses			
	Innovate sample donation activities to promote the integration of anti-food waste actions and social welfare results			
	Strengthen policy guidance for takeaway platforms to promote anti-food waste throughout the chain			
Develop urban agriculture	Promote scientific and technological innovation in the seed industry and develop leading seed industry enterprise clusters		►Total crop sown area (10,000 hectares) ►Total power of agricultural machinery (10,000 kilowatts)	SDG2.5
	Promote the systematic development of ecological circular agriculture	Shanghai Songlin Builds a Green Crop-Livestock Circular Model for Efficient Agricultural Non-Point Source Pollution Control		
	Standardize land transfer and facilitate moderate-scale agricultural operations			
	Ensure and promote the healthy development of agricultural operators	Songjiang District Develops Rice Industrial Cooperative		
	Enhance the resilience of agricultural infrastructure to risks			

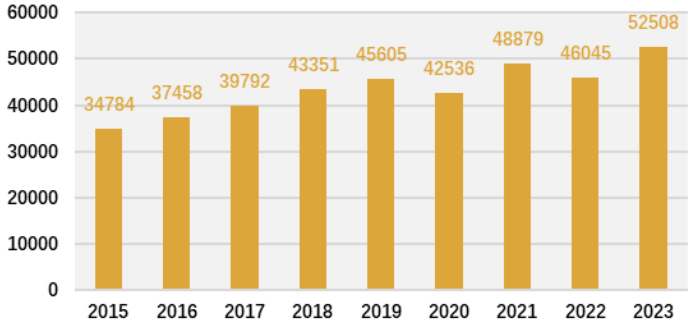
Key Indicators

Per capita disposable income (yuan)



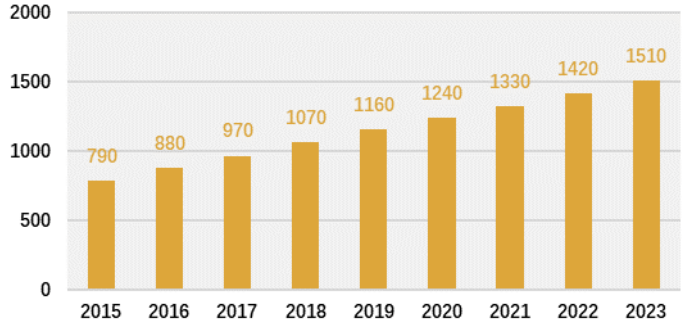
From 2015 to 2023, the per capita disposable income of residents increased by**70.1%**.

Per capita consumption expenditure (yuan)



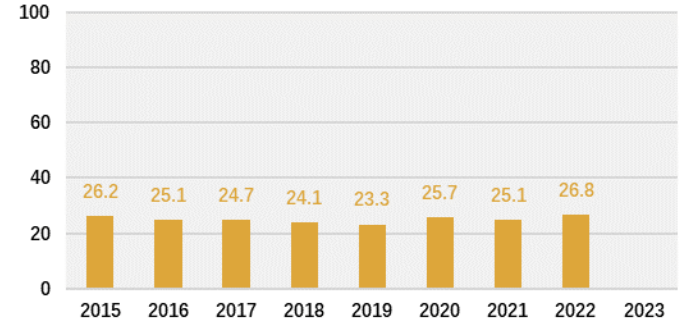
From 2015 to 2023, the per capita consumption expenditure of residents increased by**51.0%**.

Urban minimum subsistence guarantee (yuan/person ·month)



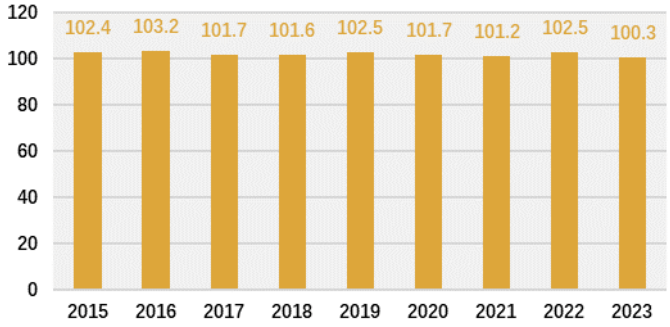
From 2015 to 2023, the urban minimum subsistence guarantee increased by **91.1%**.

Share of consumer expenditure spent on food, tobacco, and alcohol (%)



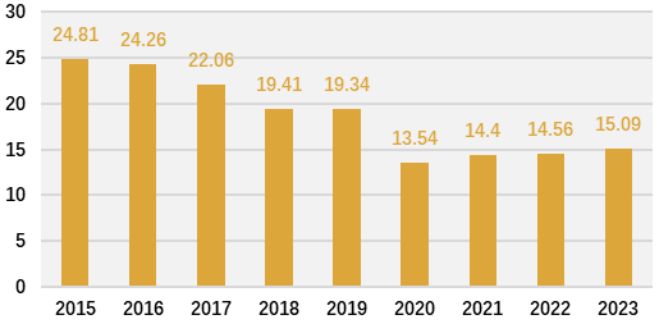
From 2015 to 2022, the share of consumer expenditure spent on food, tobacco, and alcohol remained at around **25%**.

Consumer price index



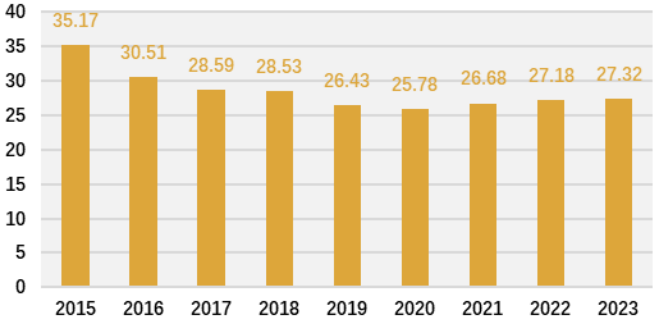
From 2015 to 2023, the average consumer price index was **101.9**.

Number of registered unemployed persons in urban areas (10,000 people)



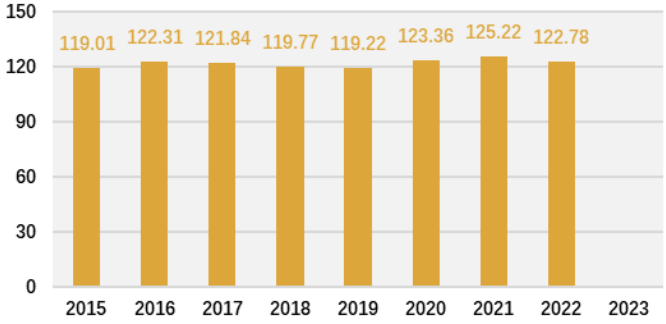
From 2015 to 2023, the number of registered urban unemployed persons decreased by **39.2%**, and the average urban registered unemployment rate remained at around **3.8%**.

Total crop sown area (10,000 hectares)



From 2015 to 2023, the total crop sown area remained above **250,000 hectares**.

Total power of agricultural machinery (10,000 kilowatts)



From 2015 to 2022, the total power of agricultural machinery reached an average of **1.217 million kilowatts**.

Major Progress

- **Citizens' health literacy has grown for 16 consecutive years and reached a record high [①]**

In 2023, Shanghai citizens' health literacy level reached 40.46%, 5.8 times higher than the level in 2008, when the monitoring was first conducted in the city [②]. It has grown for 16 consecutive years and reached a record high. The adult smoking rate has shown a downward trend for 13 consecutive years, falling to 19.2%, the lowest level among provincial regions in mainland China. Major health indicators remained at the leading level among developed countries and regions globally. In the Healthy China Action assessment, 16 indicators reached the Healthy China 2030 goals ahead of schedule.

- **The construction of healthy canteens was fully underway, and the pilot effect was beginning to show**

Shanghai has initially achieved network coverage of healthy canteens, showing a pilot effect. As of 2024, Shanghai has named 99 health system employee health canteens (restaurants), 87 elderly care service health canteens (restaurants), 109 Shanghai health canteens (restaurants), 69 healthy breakfast demonstration sites, and 22 other canteens, comprehensively promoting the construction of healthy canteens to continuously meet citizens' nutritional and health needs and improve citizens' nutritional and health levels [③].

- **Losses in all links of the entire grain industry chain were reduced, and green warehousing coverage significantly increased [④]**

Shanghai continues to strengthen training and education on loss reduction and efficiency improvement in production links. In 2023, 27 technical training courses were held, with more than 1,200 agricultural machinery operators participating. The mechanical harvest loss rates of wheat and rice monitoring points were in line with national quality standards, and the loss rate of rice caused by pests and diseases was controlled within 5%. The Three-Year Action Plan for Improving Grain Green Warehousing in Shanghai (2023-2025) was issued and the coverage rate of the city's green warehousing reserves reached about 75%. Research on the grain storage loss monitoring system was conducted for processing, storage, transportation, and sales of rice, flour, soybeans (oil and soy products), and other ration varieties.

① https://www.cnr.cn/shanghai/tt/20240829/t20240829_526878199.shtml

② https://dzb.whb.cn/imgPath/2021-03-02/20302.pdf

③ https://www.thepaper.cn/newsDetail_forward_27876192

④ https://fgw.sh.gov.cn/fgw_gsgg/20231221/5eed9a9681f3467bb0322a5a2d34c17b.html

- **The agricultural germplasm resources protection system continued to be improved and the agricultural germplasm resource census was completed**

As of 2023, Shanghai has built 2 national-level germplasm resource banks, 3 national core breeding farms, 4 national-level livestock and poultry breeding farms, and 6 municipal-level livestock and poultry breeding farms, and identified 16 municipal-level agricultural germplasm resource protection institutions, collected and preserved over 200,000 various crop and microbial germplasm resources (genetic materials), built 1 national-level aquatic breeding farm and 8 municipal-level aquatic breeding farms, and 30 original species of aquatic animals and important aquatic resources in the Yangtze River Estuary, such as the Yangtze River Coilianasus. The task of surveying and collecting agricultural germplasm resources was fully completed, with 834 crop germplasm resources, 34 livestock, poultry, and bee resource varieties, and 124 aquaculture germplasm resources collected. Shanghai buffalo breeding system was established, implementing "one buffalo, one card" file management.

- **The construction of high-level seed industry bases continued to be promoted, and the comprehensive strength of seed industry enterprises steadily increased**

From 2022 to 2024, Shanghai's seed industry won 1 national science and technology award and 16 provincial and ministerial science and technology awards. Its research and application achievement of water-saving and drought-resistant rice was awarded the first prize of the National Prize for Progress in Science and Technology, and 3 achievements were awarded the first prize of the Shanghai Science and Technology Progress Award. From 2020 to 2023, Shanghai has promoted 35 high-standard crop breeding base projects totaling 10,330 acres, and the construction of several seed industry bases such as the Shanghai buffalo breeding farm, the national dairy core breeding farm, the Pudong white pig breeding farm, and the edible fungus breed factory has been progressed orderly. As of 2024, there are 158 certified seed industry enterprises in Shanghai, including 5 enterprises and 3 specialized platforms selected for the national seed industry formation, 3 integrated breeding, propagation, and promotion enterprises, 6 national key leading enterprises, and 2 listed enterprises.

- **The ecological circular agriculture demonstration achieved initial results, and the level of green production was improved**

As of the end of 2022, Shanghai has fully completed the construction of 2 demonstration areas, 10 demonstration towns, and 100 demonstration bases. The ecological circular agriculture demonstration began to show results, initially forming an eco-agricultural recycling system of small cycles in bases, medium cycles in towns, and large areas throughout the region. Coordinated with the planning and layout of the "three zones" of agriculture, Jinshan District and Chongming District, as Shanghai's ecological recycling agriculture demonstration zones have been promoted together with projects such as model villages for rural revitalization, beautiful rural model villages, and

improvement of human settlement environment to achieve a regional ecological agriculture cycle. Ten demonstration towns, including Zhuangxing Town, Lvxiang Town, and Chonggu Town, have built an ecological circular agriculture system with town characteristics. This system focuses on resource recycling, cultivating business entities, and constructing industrial models, achieving a circular ecological agriculture system within the town. 100 demonstration bases, based on villages and cooperatives, have focused on characteristic industries, explored new concepts, technologies, and models of ecological circular agriculture, and promoted the development of ecological circular agriculture from point to area.

- **A new agricultural management system led by leading agricultural industrialization enterprises has initially been formed**

Since 2015, through developing large-scale operations, Shanghai has continuously improved the degree of agricultural organization, expanded and strengthened various agricultural operating entities, and formed a new agricultural operation system led by agricultural industrialization-leading enterprises, linked by farmers' cooperatives, and supported by family farms. In 2023, there were 3,673 family farms in the city, with an average operating scale of 156.75 acres per household. Family farms with an operating area of over 100 acres accounted for 92.13%. Most of them engaged in grain production, accounting for 98% of the total, and other operation types were supplementary. According to the statistics on 1785 farmers' cooperatives with a certain scale and standardized operation, the number of members was 37,400, driving 86,600 households, and the operating land area was about 731,800 acres, with an annual operating income of 8.122 billion yuan and a total value of 7.538 billion yuan for unified sales of agricultural products. There were 323 agricultural leading enterprises with annual sales revenue of 42.8 billion yuan, including 116 companies with sales revenue of more than 100 million yuan, driving 5.89 million farmers. There were 28 national-level agricultural leading enterprises, 130 municipal-level agricultural leading enterprises, 98 national-level demonstration cooperatives, 310 municipal-level demonstration cooperatives, and 115 municipal-level demonstration family farms.

- **The scope of agricultural socialization services continued to expand and service levels significantly improved**

Shanghai continued to strengthen the classification, grading, and grouping guidance on socialized agricultural machinery services, expanding the scope of services and significantly improving the comprehensive agricultural services. In 2023, the city's comprehensive mechanization level of rice production reached 98.53%, the promotion area of deep-side fertilization reached 264,200 acres, and the coverage area of drone flight reached 1.094 million acres (including the area of bases around). Five regional agricultural machinery maintenance service centers have been built, with services covering grain crop production, agricultural machinery operations, maintenance, livestock and aquaculture, horticulture and fruit and vegetable planting, and primary processing of agricultural

products. Agricultural machinery order-based, contracted, and "one-stop" operations have become the mainstream methods of production services.

- **Basic coverage of agricultural machinery for emergency disaster prevention, relief, and drying in major grain-producing areas has been achieved**

Relying on various agricultural machinery operation service organizations such as agricultural machinery cooperatives, Shanghai has established 32 normalized agricultural machinery emergency operation service teams with 256 team members in various agricultural areas and relevant municipal enterprises, with the main functions of emergency grain harvesting and drought and flood relief. There were 594 emergency disaster prevention and relief equipment, including 139 harvesters (with lodging rice harvesting function), 102 drainage pumps, 209 medium and large tractors, 106 high-performance planting machinery, and 38 agricultural unmanned plant protection aircraft. In addition, there were 1,399 grain dryers, with a drying processing capacity of 31,000 tons/batch. The full coverage of agricultural machinery emergency disaster prevention, disaster relief, and drying services in major grain-producing areas has basically been achieved.

- **A three-level agricultural machinery emergency response mechanism in urban and rural areas has been established to achieve an efficient response to agricultural emergency services**

Shanghai has established a three-level agricultural machinery emergency response mechanism in urban and rural areas to ensure smooth, powerful, and efficient emergency response and dispatch. Relevant municipal agricultural and rural departments were responsible for coordinating and promoting the construction of agricultural machinery emergency operation service teams, guiding and standardizing the operation of service teams, and carrying out emergency response and dispatch. The district-level liaison group was responsible for clarifying the qualifications of service teams within their jurisdiction, promoting the establishment of service teams, leading the organization of emergency operations, and ensuring the supply of emergency operation equipment. The town-level liaison officers were responsible for determining emergency operation needs and providing necessary logistical support. In seasons with frequent natural disasters, it is able to connect the supply and demand of emergency operations and efficiently allocate emergency workers and equipment, achieving accurate judgment, precise response, and effective dispatch of emergency operations.

Important Measures

(1) Improve citizens' nutrition and health

● Promote the construction of standardized healthy restaurants

In 2022, Shanghai formulated the Healthy Canteen (Restaurant) Construction Standards, setting up basic standards such as sound organization, complete licenses, standardized operation, a clean environment, and reaching Level A and above of the food safety quantitative grading management level. The Construction Standards emphasize the nutritional ratio of dishes, improved cooking methods, and the implementation of "three reductions" and other meal service standards. According to the Construction Standards, the variety of dishes and main foods should be rich, meals should be served with a combination of coarse and fine grains, nutrition labels and nutrition guidance labels should be set up for the daily dishes served, and the weekly usage of cooking oil, salt, and sugar should be recorded and the per capita meal usage should be calculated. The weekly total or per capita usage of cooking oil, salt, and sugar has decreased compared to the initial creation of the Construction Standards. In building healthy canteens, the nutritional ratio of dishes and cooking methods were actively improved. The canteen and restaurant usage of oil, salt, and sugar per meal decreased by 18.33%, 14.83%, and 13.66% respectively.

Figure 6 The smart small screen in the healthy canteen displays the nutritional content of each dish ①

● Actively promote reasonable dietary and nutritional guidance

Shanghai actively carried out publicity and promotion activities related to reasonable diet. As of 2024, Shanghai has held 10 consecutive Nutrition Weeks for Whole People ②and a nutrition guidance skills competition for two consecutive years, integrating scientific dietary concepts with residents' lives and health. Shanghai has launched a pilot program for nutrition and health guidance, which mainly includes three directions: health tips for

① https://www.thepaper.cn/newsDetail_forward_28098518

② https://wsjkw.sh.gov.cn/xwfb/20240514/e283dca3d1c9421ca064e381a8bdccad.html

sugary drinks and alcoholic beverages, nutritional meal guidance for primary and secondary school students, and food nutrition and health guidance. In 2024, Shanghai launched the first batch of 14 municipal-level nutrition and health guidance pilots, taking the lead in launching beverage "nutritional grading" nationwide [①]. As of 2024, 114 breakfast outlets in Shanghai have started the healthy breakfast demonstration construction, and 16 breakfast companies have submitted 68 sets of healthy breakfast packages with reasonable mix, balanced nutrition, and suitable taste, which can be promoted. After a comprehensive evaluation by experts in nutrition and health, food technology, cooking, and other related fields as well as community residents, 10 healthy breakfast packages from 8 companies were rated as "Top Ten Packages".

- **Continue to improve the standards to promote the construction of nutritional assessment systems**

Shanghai has formulated the Healthy Shanghai Action (2019-2030), which proposes to monitor the nutrition and health status of Shanghai residents, iodine nutritional status, and food ingredients, establish an information-based data collection and intelligent population nutrition assessment system, and analyze and provide early warning for healthy nutrition issues affecting populations and propose targeted intervention measures. Nutritional interventions for key groups such as pregnant women, infants, students, and the elderly were implemented [②]. Since 2022, the working mechanism of the Shanghai Food Safety Local Standards Review Committee has been improved. The connection between standard formulation and revision and food safety risk monitoring and evaluation has been strengthened, and the standards have been used effectively for tracking and evaluation results [③]. Special laboratories in food safety risk assessment and standard development have been continuously constructed to guide the preparation for the establishment of national laboratories [④].

- **Construct nutritionally supportive communities**

Since 2022, Shanghai has formulated the Shanghai Nutritionally Supportive Communities Establishment Guidelines and launched pilot construction and comprehensive promotion of nutritionally supportive communities in phases [⑤]. Shanghai has encouraged streets to apply for establishing municipal-level nutritionally supportive communities and national-level nutrition and health communities. Several national pilots for the establishment of nutrition and health communities have been completed in Pudong, Jing'an, Xuhui, Songjiang, and other regions. Special surveys [⑥] on nutrition and health

[①] https://new.qq.com/rain/a/20240326A06OQN00

[②] https://www.shanghai.gov.cn/nw12344/20200813/0001-12344_62691.html

[③] https://www.shanghai.gov.cn/gwk/search/content/af5a31b0f374415da4683567a4e041b1

[④] https://www.shanghai.gov.cn/gwk/search/content/8bfc958244dc4bceac1b1e51494f6fc0

[⑤] https://wsjkw.sh.gov.cn/spaqbzpg2/20221214/71a1080adecb4c87847faccebf2ada20.html

[⑥] https://m.thepaper.cn/newsDetail_forward_23445688

status, nutrition and health theme publicity [1], nutrition and health corners, and other publicity and promotion for residents within the jurisdiction have been carried out, improving the nutritional science of meals provided in kindergartens, schools, elderly care institutions, medical and health institutions, community canteens and other places within the jurisdiction.

Case 1 Jing'an Temple Street Community in Jing'an District Actively Promotes the National Pilot Construction of Nutritional and Healthy Communities [2]

In 2023, Jing'an Temple Street was officially included in the national pilot establishment of nutritional and healthy communities. Specific measures include: (1) Jing'an Temple Street has conducted a nutrition questionnaire survey on residents within its jurisdiction, formed a nutrition diagnosis report, and evaluated the dietary structure, nutritional literacy levels, malnutrition, and prevalence characteristics of nutrition-related chronic diseases of residents, determining the main nutrition problems of residents and key target groups, clarifying the main nutrition and health intervention strategies and action measures, and gradually promoting the establishment of nutritional communities through government leadership and departmental cooperation. (2) Jing'an Temple Street has established street health stations and smart health stations and delivered health lectures, traditional Chinese medicine rehabilitation physiotherapy, themed health activities, and other nutritional and health services to 11 neighborhood committees and business districts in the street. (3) To meet the growing health service needs of white-collar workers, the Jing'an Temple Street Community Health Service Center has set up the health service station in the Jing'an Zhonghua Building within its jurisdiction to provide targeted and accessible nutritional consultation, nutritional dietary guidance, and other services to corporate white-collar workers weekly. (4) To widely publicize nutrition knowledge, Jing'an Temple Street has set up the nutrition corner and related table stickers in the Tongxinhui Community Canteen within its jurisdiction and also placed promotional leaflets, posters, and other popular science materials available for residents in health stations and smart health stations, and mommy health houses. (5) In conjunction with the Nutrition Week for Whole People theme activities, the Street has promoted nutritional science knowledge through WeChat public accounts, websites, and other media platforms.

(2) Reduce food waste [3]

- **Create an atmosphere for all people to stop food waste through various forms of publicity**

In 2023, Shanghai issued a collection order for slogans to stop food waste through the @Shanghai let's meet, Shanghai Citizen Service Platform App, the official website of the

[1] https://new.qq.com/rain/a/20230523A0159J00

[2] https://www.jingan.gov.cn/rmtzx/003001/20230530/cecc00e3-82fd-4d0b-bc18-7134aa28efec.html

[3] https://www.cqn.com.cn/zj/content/2023-05/16/content_8939222.htm

Shanghai Municipal Administration for Market Regulation, the Municipal People's Suggestion Collection Platform, and takeaway platforms such as Meituan and Dingdong Maicai. The collection activity received positive responses from people from all walks of life in 15 provinces and municipalities directly under the Central Government, and 390 enthusiastic people submitted 484 slogans and 240 work suggestions. Through the expert review, one best slogan and 20 outstanding slogans were selected for publicity and promotion, to establish a new trend in the whole society where waste is shameful and thrift is proud. Shanghai took the second anniversary of the implementation of the Anti-Food Waste Law as an opportunity to carry out special publicity through online Q&A and the printing of two-color posters. By mobilizing food producers, operators, and citizens to participate in answering questions, Shanghai has encouraged them to practice the principles of "learning, knowing, understanding, and abiding by the law". So far, a total of 251,000 people have participated in answering questions. In 2023, Shanghai launched public service videos, carried out activities such as collecting the logo of the "Clear Your Plate" campaign and people's suggestion collection of "I will contribute to stopping food waste", and published the "Clear Your Plate" propaganda materials through more than 60,000 major public welfare publicity ports, with more than 20 million people publicity audience [①].

- **Launch smart canteens to stop food waste on campuses**

Shanghai has piloted the "Smart Canteen App" in some schools, using the model of "ordering meals online and preparing meals offline", allowing students to "control" three meals a day with one click. On weekends, students and parents can check next week's menu and reserve meals through the "Smart Canteen App". The canteen can prepare meals accurately according to reservations to avoid food waste caused by excessive meal preparation. After continuous optimization, the dishes on the "Smart Canteen App" have been upgraded from three fixed packages to more than ten dishes that can be selected independently, avoiding food waste caused by inconsistent tastes and allowing students to truly practice the initiative of the "Clear Your Plate" Campaign. According to statistics, after the "Smart Canteen App" was launched, the daily amount of swill produced in the canteen dropped from 300 kilograms to 150 kilograms, achieving solid results in curbing food waste.

- **Innovate sample donation activities to promote the integration of anti-food waste actions and social welfare results**

Government departments at all levels in Shanghai cooperated to organize the first food sampling and qualified backup sample donation activity. First, strictly control sample quality. The qualified backup samples of food with a shelf life of more than 3 months and good storage conditions were selected for donation to ensure the safety of donated food. Second, standardize the donation process. The donated variety, sample status, and donation quantity ledger were made, and "sample donation" labels were affixed to prevent

[①] https://fgw.sh.gov.cn/fgw_gsgg/20231221/5eed9a9681f3467bb0322a5a2d34c17b.html

donated food from flowing into the market. More than 50 batches of qualified backup samples of rice, edible oil, noodles, condiments, etc. were donated during this event.

- **Strengthen policy guidance for takeaway platforms to promote anti-food waste throughout the chain**

Some areas in Shanghai have implemented administrative guidance for takeaway platforms to promote the entire chain of platforms, merchants, and riders to implement anti-food waste responsibilities. First, strengthen training and guidance for settled merchants. The platforms have launched anti-food waste special courses and typical cases to "explain the law", and merchants have tapped to learn more than 4.56 million times. Second, create a venue with the theme of "eating well for one person" and "small portions of meals". Incentive measures such as "merchant traffic tilt" and "highlight exposure" have been introduced. As of now, there are more than 800,000 merchants offering "small portion meals" on the platforms, with more than 11 million "set meals for one person" and nearly 8 million "small portion dishes" online. Third, carry out cooperation between government and enterprises on development and governance. Together with the Ele.me platform, slogans such as "small portions, half portions, multiple choices, less waste" were made and posted on takeout delivery boxes, and takeout riders were appointed as "anti-food waste propagandists" to create a positive social atmosphere of stopping food waste.

- **Continuously improving the system for preventing catering food waste, ensuring strict and comprehensive law enforcement and supervision[①]**

Building on the working mechanism for preventing catering food waste, Shanghai established the "Clear Your Plate" campaign task force and issued the Work Plan for Launching the "Clear Your Plate" campaign in Social Catering Services, improving a series of management systems and standardized norms for the catering industry's "Clear Your Plate" campaign. In 2023, Shanghai continued its special action to prevent catering food waste, urging 102,242 catering service operators to conduct self-inspections and make necessary corrections. Efforts were made to integrate catering food waste prevention into the regular food safety practices of 62,004 catering enterprises, implementing a system of "daily control, weekly checks, and monthly scheduling". A total of 97,901 catering service operators were inspected, 508 cases were investigated and addressed, 129 typical cases were publicly announced, and 2,762 random restaurant inspections were carried out.

(3) Development of Urban Agriculture

- **Promote scientific and technological innovation in the seed industry and develop leading seed industry enterprise clusters**

From 2021 to 2024, Shanghai released six documents regarding modern seed industry

[①] https://fgw.sh.gov.cn/fgw_gsgg/20231221/5eed9a9681f3467bb0322a5a2d34c17b.html

development, including the Action Plan for Promoting High-Quality Development of Modern Seed Industry, to strategically plan the revitalization of the local seed industry. Leveraging the strengths of local research institutions, Shanghai has actively advanced the construction of major platforms such as the city's seed industry innovation center and the international germplasm sourcing center for water-saving and drought-resistant rice. The city has also facilitated deeper collaboration between Pujiang Laboratory and Yazhou Bay Laboratory in the field of intelligent breeding and supported Shanghai Jiao Tong University and Shanghai Ocean University in building the Yangtze River Delta Modern Seed Industry Collaborative Innovation Platform and the Center for Aquatic Organism Breeding Research. Since 2021, Shanghai has implemented 84 seed source innovation projects, focusing on breeding innovations of special seeds in water-saving and drought-resistant rice, high-quality japonica rice, sweet corn, heat-tolerant vegetables, shiitake mushrooms, white enoki mushrooms, golden peaches, flowers, and river crabs, and developed breakthrough varieties with independent intellectual property rights.

Figure 7 Bright Seedbase Modern Seed Industry Innovation Zone[①]

Using a city-district cooperation model, Shanghai has established leading agricultural innovation hubs such as the Zhangjiang Seed Valley in Pudong, the Agricultural Sci-tech Innovation Valley in Fengxian, and the Agricultural Silicon Valley in Chongming, attracting and nurturing key seed industry enterprises. Focusing on national seed industry leading enterprises, the city has established a "one-on-one" service mechanism to support joint breeding efforts of seed industry enterprises in areas such as white enoki mushrooms, Chinese indigenous pig breeds, dairy cows, leeks, and beets. Since 2021, Shanghai has supported the development of 10 seed industry enterprise projects. In collaboration with the Shanghai Municipal Human Resources and Social Security Bureau and other relevant departments, the city has designated several seed industry enterprises as key players and provided policy support for the settlement of talent in the seed industry.

① Image Source: https://export.shobserver.com/baijiahao/html/393304.html

Promote the systematic development of ecological circular agriculture

In July 2019, the Shanghai Municipal Agricultural and Rural Committee issued the Notice on Creation of Ecological Circular Agriculture Demonstration Projects. This was followed by the formulation of the Pilot Plan for Creation of Ecological Circular Agriculture Demonstration Projects in Shanghai, clarifying the creation goals. By 2022, the city aimed to establish 2 fully developed ecological circular agriculture demonstration zones, 10 ecological circular agriculture demonstration towns, and 100 ecological circular agriculture demonstration bases, creating a batch of replicable and promotable ecological circular agriculture production models. The plan seeks to explore new agricultural business concepts of mutual benefit, cooperation, and win-win partnerships among agricultural producers, and to establish a long-term mechanism for the sustainable growth and stable development of ecological circular agriculture. To further strengthen and consolidate the results of the initiative, the Shanghai Municipal Agricultural and Rural Committee has provided supporting technology-driven agricultural projects for the ten demonstration towns. In addition, the Implementation Measures for Ecological Circular Agriculture Demonstration Project Creation Rewards and Subsidies was issued. Municipal-level funding of 500,000 yuan per demonstration base, once approved through municipal-level assessments, has been allocated to provide policy guidance, project support, and financial assistance, encouraging and advancing the creation of ecological circular agriculture demonstration projects in Shanghai.

Based on the experience from these demonstration projects, Shanghai has summarized typical cases and developed four ecological circular agriculture models suitable for the green development of modern agriculture in a megacity: the integrated crop-livestock model, the resource recycling model, the green and efficient model, and the precision-smart model. The city has also published a monograph titled Major Ecological Agricultural Models and Case Studies in Shanghai and produced a promotional video about the creation of ecological circular agriculture demonstration projects to expand the impact of these projects.

Case 2 Shanghai Songlin Builds a Green Crop-Livestock Circular Model for Efficient Agricultural Non-Point Source Pollution Control

Shanghai Songlin Agricultural Development Co., Ltd. has pioneered the innovative "building-based pig farming" model, establishing a "Pig-Biogas-Vegetables" green crop-livestock circular system. By utilizing anaerobic fermentation technology, the company has achieved a 100% resource utilization rate for manure, creating a replicable and promotable model for preventing agricultural non-point source pollution in livestock farming.

Specific measures: (1) The internal structure of the building was improved by incorporating tree planting, vegetable gardening, and green space, and installing temperature sensors, fans, underfloor heating, and water curtains in pigpens, along with an advanced feeding system, to achieve intelligent management of the pig farm. (2) Anaerobic fermentation technology was used to convert pig manure into biogas and biogas slurry, improving the farm's self-sufficiency in pig production. The biogas produced is not only used to power the farm but can also be used for electricity generation and natural gas production. (3) The biogas slurry, processed through two levels of anaerobic digesters, meets soil return standards. The slurry is applied to nearby farmland

with the help of a dedicated return network, and key technologies for integrating the slurry into a water-fertilizer system were developed. These innovations solved issues related to the clogging of sprinkler systems due to slurry residues.

Figure 8 Daily Management by Staff at Shanghai Songlin Agricultural Development Co., Ltd.

Outcomes: (1) Enhanced production efficiency: The pig farm has demonstrated the advantages of building-based pig farming intensive production in terms of land, water, and energy conservation, while also achieving leading labor productivity within the industry. (2) Crop-livestock model: The pig farm has implemented the principle of combining crop and livestock production to turn waste into valuable resources. All biogas slurry produced by the farm is returned to the farmland, which enhances crop resistance to diseases and pests, reduces the need for chemical fertilizers, and combats soil organic matter depletion, thereby contributing to increased agricultural income. (3) Innovative circular utilization: The farm generates up to 3 million kWh of electricity annually from biogas, saving around 2 million yuan in electricity costs. The electricity generation from biogas also leads to an annual reduction of 8,019.86 tons of CO2 emissions. Songlin invested 13 million yuan to build Shanghai's first large-scale biogas purification project at a livestock farm. The project is expected to produce 1.75 million cubic meters of Class 1 biogas annually, which will be integrated into Shanghai's natural gas network and distributed to Langxia Town and nearby villages. The by-product CO2, approximately 1.25 million cubic meters, will be used for greenhouse vegetable cultivation.

- **Standardize land transfer and facilitate moderate-scale agricultural operations**

Shanghai adheres to the principles of "lawful, voluntary, and compensated" land transfer, encouraging and guiding farmers to entrust land to collective organizations for unified transfer. These collective organizations centralize and consolidate scattered farmland holdings, directing contracted land towards new agricultural operators such as family farms and farmer cooperatives. This process further optimizes the allocation of rural land resources, promotes large-scale, concentrated land transfer, and fosters intensive operations. These efforts support the transition from fragmented arable land management to large-scale operations, enabling operators to bring scale operations into

play and improve labor productivity, contributing to food security. By the end of 2022, the total area of family-contracted arable land in Shanghai was 1.6647 million mu, and the total area of transferred rural contracted land was 1.5157 million mu, with a transfer rate of 91.05%. Of the transferred land, 90% was absorbed by new agricultural operators, including farmer cooperatives, family farms, and agricultural enterprises.

- **Ensure and promote the healthy development of agricultural operators**

Shanghai has successively issued two local regulations: the Regulations on the Implementation of the Law of the People's Republic of China on Specialized Farmers Cooperatives in Shanghai and the Regulations on Promoting the Development of Family Farms in Shanghai, to ensure that agricultural operators such as farmer cooperatives and family farms can legally enjoy policy support. The city actively encourages the formation of industrial cooperatives by various agricultural operators, including family farms, specialized farmers' cooperatives, and agricultural leading enterprises, to enhance market competitiveness. For example, in Songjiang District, an industrial cooperative for rice production was developed to foster the "Songjiang Rice" brand and geographical indication. Standardized production was implemented through unified seed supply, services, and processing. Leading enterprises and cooperatives with strong sales capabilities helped ordinary family farms group together to break into the market, enhancing the added value of agricultural products and increasing farm income.

Case 3 Songjiang District Develops Rice Industrial Cooperative

The Shen Wanying Family Farm in Jinsheng Village, Shihudang, Songjiang District, Shanghai, was established in 2010. It is jointly operated by five family members on 207 mu of land. The farm primarily engages in rice production, agricultural machinery services, year-round harvesting, farm experience activities, and the creation of handmade rice-related crafts. The farm's annual output value reaches RMB 3.5 million.

Outcomes: (1) Adherence to scientific standards in farming: The farm has been a pioneer in achieving full mechanization of rice production. Since 2012, the farm's rice yield per mu has exceeded the district average, and it has won the Songjiang District Rice High-Yield Competition Award for several years. (2) Diversified operations combined with ecological planting: The farm implements a "rice-duck farming" model, scientifically arranges crop rotations, and develops livestock farming under the forest canopy. (3) Branding and boutique operations: The farm has explored a "family farm + farmer" cooperative development model. Eight surrounding farmers work under the norms of the farm: unified production management, technical standards, branding, packaging, and pricing. The rice produced is marketed under the registered "Shen Wanying" brand, with an average selling price of about 50% higher than ordinary rice. Annual sales reach 220 tons. (4) Development of leisure agriculture and rural tourism: The farm has expanded its business to include farming experiences, such as traditional rice cake-making and year-round harvesting, enhancing the farm's popularity and economic returns from rural tourism. (5) Enhancing rural consumption and farm visibility: Through online stores and live-streaming sales on platforms such as Douyin (Chinese TikTok), the farm has increased its visibility and promoted rural consumption, strengthening the reputation of the family farm.

Figure 9 Farmers at Shen Wanying Family Farm Harvesting Rice

- **Enhance the resilience of agricultural infrastructure to risks**

Shanghai has actively implemented a "municipal-level guidance, district-level management, and town-level implementation" approach for the maintenance and management of farmland infrastructure. This includes timely daily operations, maintenance, and repairs of farmland infrastructure. Third-party agencies are entrusted with conducting annual performance assessments of farmland infrastructure management and maintenance for agricultural districts and cities related enterprises, which are then evaluated through field inspections and review of records, culminating in the preparation of assessment reports. Through high-standard farmland construction, Shanghai has effectively optimized the city's farmland structure and layout, continuously improving irrigation and drainage systems, and strengthening the overall infrastructure supporting agricultural production. These improvements have ensured that farmland is well-graded, soil is fertile, drought can be mitigated through irrigation, excess water can be drained in flood conditions, and road access is maintained. These efforts have significantly improved the conditions for agricultural production operations, increased the efficiency of land use and output, and effectively enhanced the ability of farmland to resist and reduce disaster risks. As a result, Shanghai has successfully ensured stable, high-yield, high-quality, and efficient agricultural production.

SDG5: Gender Equality

SDG5

- SDG5 - Gender Equality: Committed to eliminating gender-based discrimination and enhancing the empowerment of all women and girls. Through the implementation of this goal, Shanghai aims to remove unconscious biases and implicit associations that create unintended and invisible barriers, eliminate systemic obstacles to gender equality, and end all forms of violence against women and girls, ensuring that every woman and girl enjoys full gender equality.
- Current Challenges: Compared with leading regions both domestically and internationally, Shanghai still has room for improvement in areas such as female employment, scientific and cultural literacy, and talent acquisition. Women face role conflicts between career development and motherhood, with issues like work-life balance, invisible discrimination, and limited career advancement. Additionally, the urban social environment still lacks adequate responses that are gender- and childbirth-friendly. Opportunities for women to participate in decision-making and management remain relatively limited, and channels for involvement are not sufficiently open.
- Progress under SDG5: In recent years, Shanghai has actively addressed these challenges by advancing family development and construction, promoting female employment and career development, encouraging women's participation in decision-making and management, and improving maternity and childbearing protection systems, all to build a gender-equal, inclusive, and sustainable city.

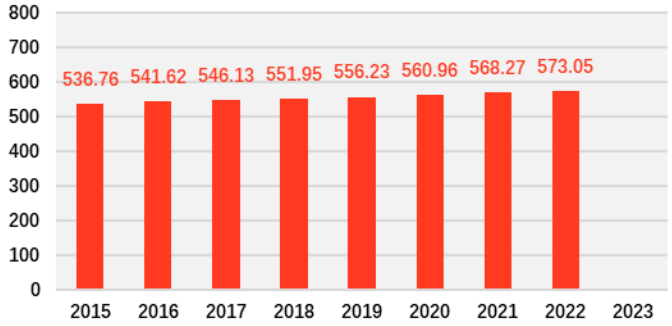
SDG5

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG5
Promote family development and construction	Conduct various family civilization-building activities	Fengxian District Launches a Marriage Custom Reform Pilot Project	►Total number of families (10,000 households) ►Number of registered marriages (10,000 couples)	SDG5.4
	Improve the long-term mechanism for marriage and family education guidance			
	Advance the construction of comprehensive elderly care centers in communities, improving home-based elderly care			
	Continuously strengthen the implementation of anti-domestic violence laws to ensure women's physical security			
Female employment and career development	Improve laws and policies related to women's rights and interests		►Female employment rate (%)	SDG5.1 SDG5.c
	Ensure smooth channels for women's employment rights protection			
	Continuously improve the living and employment security of women with difficulties			
	Advance social campaigns to respect and protect women			
	Strengthen support for female innovation and entrepreneurship	Shanghai has hosted the Female College Students' Innovation and Entrepreneurship Competition for four consecutive years		
Women's participation in decision-making and management	Establish a tracking and training mechanism to strengthen the building of female leadership teams		►Proportion of women in political participation (%)	SDG5.5
	Strengthen the selection and fostering of female cadres at the grassroots			
	Improve the system for women's democratic participation and expand channels for women's involvement in urban construction and management			
	Foster and strengthen women's social and self-governing organizations			
Improve the maternity security system	Continuously improve the maternity and medical security system for women		►Number of births among permanent residents (10,000 persons) ►Female life expectancy (years) ►Maternal mortality rate (per 100,000 persons) ►Infant mortality rate (‰)	SDG5.6
	Increase financial investment in women's health and improve the birth defect prevention and care system			
	Enrich birth-friendly work-life environments	Fengxian District's "Loving Mommy Rooms"		
	Enhance child safety protection levels			
	Support disadvantaged children and families and improve child welfare protection levels			

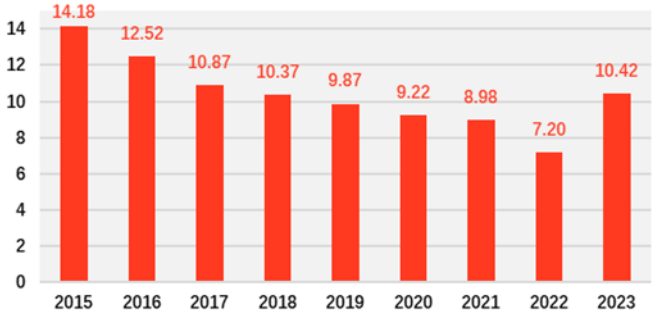
Key Indicators

Total number of families (10,000 households)



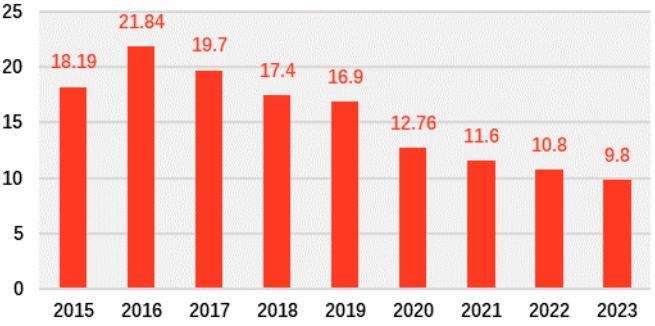
From 2015 to 2022, the total number of families increased by **6.8%**.

Number of registered marriages (10,000 couples)



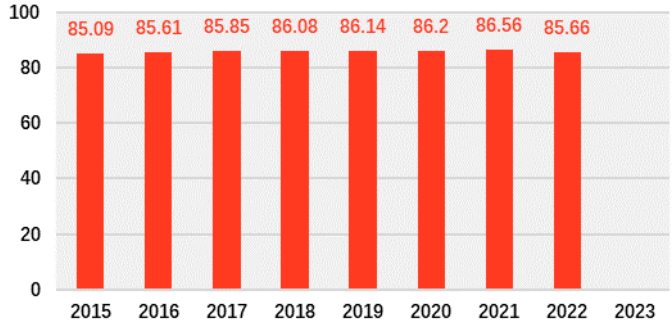
From 2015 to 2023, the cumulative number of registered marriages reached **936,000** couples.

Number of births among permanent residents (10,000 persons)



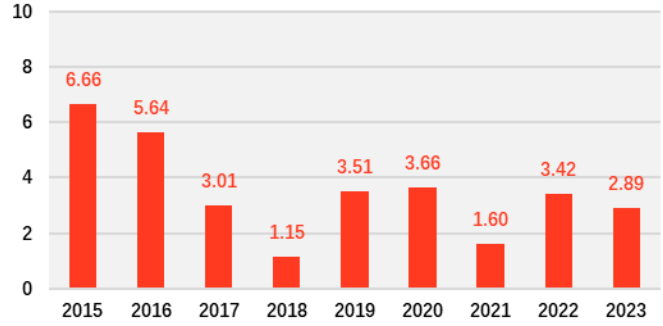
From 2015 to 2023, the cumulative number of births among permanent residents was approximately **1.39 million**.

Female life expectancy (years)



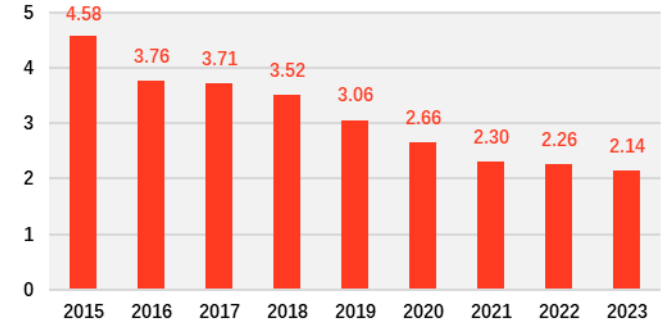
From 2015 to 2022, the life expectancy of female residents increased from 85.09 years old to **85.66 years** old. In 2022, the life expectancy of women was **4.82 years** higher than that of men.

Maternal mortality rate (per 100,000 persons)



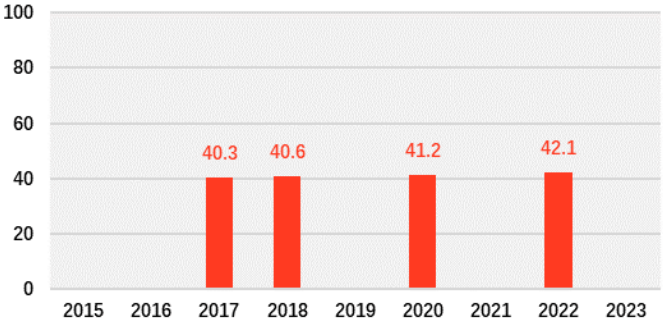
From 2015 to 2023, the maternal mortality rate decreased from 6.66 per 100,000 persons to **2.89 per 100,000 persons**.

Infant mortality rate (‰)



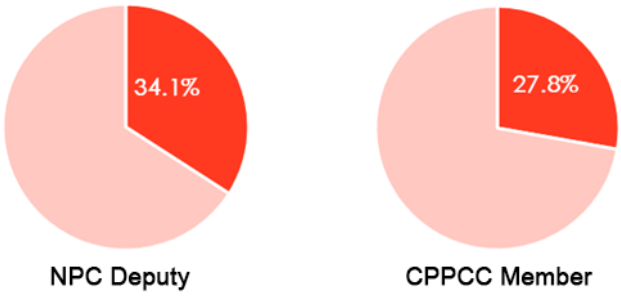
From 2015 to 2023, the infant mortality rate decreased from 4.58‰ to **2.14‰**.

Female employment rate (%)



From 2017 to 2022, the proportion of female workers in urban areas increased from 40.3% to **42.1%**.

Proportion of women in political participation (%)



In 2023, the proportion of female representatives in the new Shanghai Municipal People's Congress and the Chinese People's Political Consultative Conference (CPPCC) Shanghai Committee were **34.1%** and **27.8%** respectively, both increasing by 1.1 and 1.9 percentage points compared to the previous term.

Major Progress

- **Continuous improvement of family civilization service platforms in communities and significant achievements in family civilization construction**

Shanghai has consistently advanced the management of guidance centers for community family civilization construction. By 2023, 42 outstanding guidance centers for community family civilization construction have been established. Five venues, including the Genealogy Library at the Shanghai Library East Branch, were selected as the first batch of "Heralding Family Traditions Across Shanghai" demonstration sites, creating a service platform for the inheritance of family genealogy and rules. These venues have collectively attracted over 60,000 visitors. A total of 72 families were recognized as the 13th National "Five Virtues Family" and "Most Beautiful Families", while 397 families were honored as "Most Beautiful Families in Shanghai".

- **Full coverage of marriage and family counseling rooms in marriage registration bodies and ongoing optimization of marriage and family education guidance**

As of 2023, marriage and family counseling rooms have been fully implemented in all marriage registration bodies, achieving a 100% coverage rate for family education guidance. The city has launched the "Five Educations" empowerment action and the "Five Advances" initiative, delivering 1,396 family education services. Shanghai continues to host Family Education Awareness Week and Summit Forums, publishing the Shanghai Parent-Child "Five Educations" guidance manuals, training 280 family education instructors, and establishing 100 family education and parent-child reading demonstration sites.

- **Full coverage of mechanisms for preventing and addressing domestic violence in communities**

By 2022, Shanghai has established a multi-department mechanism for preventing and addressing domestic violence, covering 100% of sub-district and town-level jurisdictions. Public places and workplaces required maternal and infant facilities have fully implemented. The production and broadcast of public service advertisements protecting women's rights and interests and promoting women's development have increased annually, with 97 such advertisements produced in 2022, up three from 2021.

- **Full coverage of maternal and infant facilities in key public places**

By 2022, Shanghai has established 1,634 maternal and infant facilities in public places and 7,997 maternal and infant facilities in workplaces, achieving full coverage in all eligible public places (with a building area exceeding 10,000 square meters or a daily visitor flow of over 10,000 people). Eight city- and district-level public sports venues have set up

dedicated nursing rooms. The city has promoted the necessary establishment of "Loving Mommy Rooms", with over 8,000 such rooms in operation by 2024, supporting female employees during pre-pregnancy, pregnancy, and breastfeeding periods. In 2024, additional 84 five-star "Loving Mommy Rooms" and 186 four-star "Loving Mommy Rooms" have been built.[①] Legislation now requires the installation of third gender-neutral restrooms by newly building and renovating public toilets.

- **Promoting full coverage of female entrepreneurship service stations in colleges and universities and continuously expanding showcase platforms for women's innovation and entrepreneurship**

Shanghai has implemented the Women's Employment and Entrepreneurship Initiative, organized the Women's Innovation and Entrepreneurship Competition, and advanced the "Seagull Plan" for female college students, forming a series of brand projects. As a result, 58 colleges and universities in the city have established "Seagull Bay" service stations. The city actively fosters female leaders in agriculture, with 73% of award-winning women in the 6th Rural Innovation and Entrepreneurship Creative Competition. Female role models, craftswomen, skilled women, and women leaders in science and technology are encouraged to establish innovation studios or teams. In 2022, 49 innovation studios led by female role models were established at the municipal level.

- **Increasing female participation in decision-making and management**

In 2022, female representatives in the Shanghai Municipal People's Congress led 19 proposals, all of which were adopted, accounting for 38.8% of all accepted proposals. They also led 553 recommendations, 46.2% of which were accepted. Female members of the CPPCC Shanghai Committee proposed 495 motions, with 466 adopted, achieving a 94.1% adoption rate, and accounting for 48.6% of all accepted motions. These numbers reflect the ongoing increase in women's participation in political decision-making and management.

- **Wider involvement of women in democratic management in enterprises and grassroots governance, with full coverage of Women's Federations at community and village levels**

By 2022, women accounted for 40% of the worker representatives in democratic management within enterprises. Many outstanding female employees have been recommended for leadership roles in various levels of corporate governance, including boards of directors and supervisory boards. This has broadened the avenues for women's democratic participation. Women's involvement in grassroots governance is also more widespread. Following the 2021 community and village elections, Women's Federations at community and village levels across the city achieved full coverage of the two 100% targets. Women accounted for over 70% and 40% of the members of the residents and villagers

[①] https://wap.51ldb.com/shsldb/ghnx/content/01914e59fe05c0010000b9ff6f110fdc.html

committees, respectively. Additionally, the proportion of women in leadership positions in grassroots village committees has steadily increased. Shanghai has continuously advanced the construction of grassroots Women's Federation service stations. By the end of 2022, 574 Women's Federations have been established within emerging economic organizations, social organizations, and employment groups, involving 3,386 social organizations. Over 6,000 executive committee members of grassroots Women's Federations are serving in cross-assigned roles within owners' committees. Among the city's social organizations, women represent 68.8% of leaders and 44.3% of legal representatives.

- **Continuous improvement in maternity insurance benefits and the realization of "zero in-person visits" for claiming maternity insurance benefits**

The Notice on Supporting Maternity Insurance for the Three-Child Policy was issued, increasing the maternity medical subsidy standard from RMB 3,600 to RMB 4,200 to support the policy's implementation. This ensures that women covered by maternity insurance receive their maternity benefits during maternity and parental leave. The process for applying for maternity insurance benefits has been optimized to offer full online processing and achieve "zero in-person visits", with approximately 97.3% of applications being submitted online.

- **Dedicated security positions and "student protection posts" are fully set for citywide schools**

The school bus safety management system has been optimized to ensure that the inspection rate of school buses and the examination rate of school bus drivers reach 100%. Campus security patrol regulations have been refined, with professional security companies deployed to ensure safety during peak hours of school drop-offs and pick-ups. The set-up rate of dedicated security positions and "student protection posts" has reached 100%. The city has also deepened collaboration among the cyber information, cultural tourism, and minor protection sectors, with a special legal supervision action on online protection for minors selected as one of Shanghai's "Most Anticipated Legal Services for the Public".

- **Full coverage of minor protection workstations across all sub-districts and towns, building a comprehensive minor protection network**

Shanghai has established 221 minor protection workstations throughout the city, achieving full coverage across all sub-districts and towns. The city has promoted the involvement of prosecutors as deputy legal directors of the workstations, strengthening the service platforms for minor protection close to their homes. Experts, lawyers, foundations, and caring businesses have been widely mobilized to participate in minor protection efforts. A comprehensive minor protection network has been built, encompassing family, individual, school, social, Internet, government, judicial, and special

protections. The "Shanghai Minor Protection" WeChat official account has also been launched to further enhance these efforts.

Important Measures

(1) Promote family development and construction

- **Conduct various family civilization-building activities**

Shanghai has developed the 14th Five-Year Guideline for Family Civilization Construction in Shanghai and issued the Implementation Opinions on Deepening the Civilian Morality Action to Shape the New Image of Citizens in the New Era. Relevant content related to women's work has been incorporated into the standards for promoting spiritual civilization. The city is exploring the establishment of the "Most Beautiful Family Alliance", encouraging outstanding families to engage in social governance and public services. The Shanghai Family Culture Festival is held annually, fostering a platform for family-centered cultural activities. The city also conducts publicity and learning campaigns around exemplary figures, with Cao Peng and Wang Pinxian receiving the Eighth National Moral Model Award. In Fengxian District, the construction of a national marriage custom reform pilot zone has been successfully carried out, with its outcomes now being promoted nationwide.

Case 4 Fengxian District Launches a Marriage Custom Reform Pilot Project [1]

In September 2021, Fengxian District was selected as one of the second batch of national marriage custom reform pilot zones. As the first district in Shanghai to be included in the national marriage custom reform pilot districts, Fengxian has attached great importance to marriage custom reform. The district released the implementation plan for the marriage custom reform pilot, along with a civilized marriage custom initiative, and strengthened the "three-level linkage" mechanism at the district, township (subdistrict), and village (community) levels. Efforts were made in areas such as marriage and family counseling, wedding customs and etiquette, marriage culture, and family traditions and rules, striving to take marriage custom reform to new heights.

Outcomes: (1) Fengxian has widely established platforms such as the "Destined for Fengxian" youth alliance and "Four Seasons Love Song" matchmaking events. These platforms have hosted online matchmaking, public volunteer services, and pre-marriage counseling activities. By 2022, over 10 youth networking events were organized; more than 20 marriage and family education seminars were held, helping over 1,000 individuals resolve emotional and family issues. Additionally, over 10 marriage and relationship surveys and educational campaigns promoting positive views on marriage and relationships were conducted, providing counseling to more than 800 individuals. (2) The district has established collaborative mechanisms for multi-department cooperation, setting up a marriage and family mediation center, women's aid service points, domestic violence complaint reception points, and "Women's Home" service centers at the village and community levels, forming a three-tier system for preventing and resolving marriage and family disputes. By 2022, more than 1,500 marriage and family counseling sessions were conducted,

[1] https://mzj.sh.gov.cn/2022bsmz/20221009/955afb2e273a4f148fde1f83efe3cbd9.html

with 105 households receiving in-home conflict resolution, and 200 individual cases successfully mediated. (3) The district has introduced the "Happy Classroom, Harmonious Family" online course, integrating marriage and family counseling education across both online and offline platforms, thus expanding the reach of marriage and family counseling services. (4) The district has established service brands and set up a special marriage certificate issuance service with appointed officiants regularly stationed at marriage registration offices to issue certificates to newlyweds, achieving a certificate issuance rate of over 90%. In addition, the district organizes no fewer than 10 collective weddings annually, each reflecting the themes and values of the new era. (5) In alignment with the 14th Five-Year Guideline for Family Civilization Construction in Shanghai, the district has strengthened the construction of family service stations, with the guidance centers for community family civilization construction as the core. The district promotes the construction of model "Family Centers" in various townships (subdistricts) and creates "Family Traditions Museums" and "Family Rules and Traditions Exhibits" to foster a positive family culture. (6) The district has made efforts to promote the service platform for the inheritance of family genealogy and rules in Shanghai, offering customized commemorative cards of family traditions and rules. It has also launched the "Virtuous Spouse, Good Children, True Family" Integrity Culture Month, making good family traditions a natural and regular part of daily life.

Figure 10 A Collective Wedding in Fengxian District

- **Improve the long-term mechanism for marriage and family education guidance**

Shanghai has formulated several key policies, including the Implementation Opinions on Strengthening Marriage and Family Counseling and Education in the New Era and Implementation Opinions on Promoting "Safe Families" Construction in the City. Additionally, the city has improved the Shanghai Family Education Guidance Framework to establish a long-term mechanism for marriage and family education guidance. Efforts continue to strengthen the city's family education volunteer teams, with a focus on deepening and solidifying the "Neighbor Mom" volunteer service project. The city has also launched training programs to enhance the skills of domestic workers and organized the Yangtze River Delta G60 Domestic Skills Competition. Between 2021 and 2022, the

government purchased 207 family service projects, providing diverse, professional services to more families.

- **Advance the construction of comprehensive elderly care centers in communities, improving home-based elderly care**

Shanghai has vigorously promoted embedded community elderly care services, constructing "hub-style" comprehensive community elderly service centers that integrate daycare, full-time care, meal assistance, medical care, assistive devices promotion, nursing consultation, and other functions. The city has also explored the introduction of "family care beds", with over 2,000 family care beds now in operation. The ongoing "Caring for the Elderly" initiative has provided skill training for family caregivers of elderly individuals with disabilities, benefiting 46,000 people. Moreover, the city has continually improved the long-term care insurance system to better supply nursing services, catering to nearly 200,000 elderly women with disabilities.

- **Continuously strengthen the implementation of anti-domestic violence laws to ensure women's physical security**

Preventing and combating domestic violence has been incorporated into regular business training and statistical work. A new category for "Family Violence Mediation" has been added to the people's mediation monthly report. The functionality and procedures for issuing warning letters have been integrated into the Shanghai Public Security Bureau's digital law enforcement management system. The multi-departmental system for preventing and combating domestic violence has achieved 100% coverage. In 2022, local mediation organizations at all levels of the city resolved 3,508 domestic violence-related disputes, accounting for 4.1% of the total number of marriage and family disputes.

(2) Female employment and career development

- **Improve laws and policies related to women's rights and interests**

Shanghai has issued the Regulations of Shanghai on Safeguarding the Rights and Interests of Women, further improving the protection of women's rights and interests in areas such as institutional innovation, safety nets, relief measures, and legal responsibilities. The Regulations of Shanghai Municipality on Employment Promotion have been revised to strengthen gender equality in employment, ensure women's equal labor rights, and establish a maternity-friendly employment environment at the legal level. The city has also issued the Opinions on Stabilizing Employment in the Current and Future Periods, outlining requirements to address women's special rights and interests and provide more targeted guidance and services for women affected by employment issues during the "three periods" (pregnancy, maternity, and breastfeeding periods). Additionally, policies such as the Notice on Supporting Maternity Insurance for the Three-

Child Policy, Regulations of Shanghai on Family Planning Rewards and Subsidies, Regulations of Shanghai on Applying for the Birth of a Second Child, the Measures of Shanghai on the Lease Management of Affordable Rental Housing (Trial), the Notice on Promoting Family Health Initiatives in the City, and the Operational Guidelines for Advancing the Creation of Harmonious Labor Relations in the New Era have been issued to implement positive maternity support policies and reduce family burdens related to childbirth.

- **Ensure smooth channels for women's employment rights protection**

Shanghai has increased efforts to enforce special collective contracts protecting the rights and interests of female employees, with a 99% signing rate for such contracts. The city has expanded its female lawyer volunteer service team to provide legal assistance to female employees in the "three periods". Legal aid has become a regular service, with union-affiliated legal aid stations at all levels handling 19,369 cases involving female employees' rights and interests, including document writing, mediation, and arbitration. The city's law enforcement divisions under the municipal human resources and social security bureau at all levels continue to promote their "24-hour report reception, 365-day continuous supervision" service model. Reports are accepted around the clock through multiple channels, including the "12333" human resources and social security consultation hotline, the "12345" citizen service hotline, and the human resources and social security website. Efforts also focus on regulating corporate recruitment practices, prohibiting gender discrimination, enforcing laws and policies related to special protections for female employees, work hours, and other aspects, and protecting special rights and interests (such as maternity leave) of female employees, with increased joint law enforcement efforts.

- **Continuously improve the living and employment security of women with difficulties**

Efforts to provide social assistance to disadvantaged women have been strengthened, with the basic living security for low-income families steadily increasing from RMB 1,240 per person per month in 2020 to RMB 1,420 per person per month in 2022. Services and protections for women in emerging employment sectors and disadvantaged female employees were also expanded. In 2022, 6,600 female workers in emerging employment sectors participated in mutual aid protection programs. The "Light Up a Small Wish" initiative helped 3,847 disadvantaged female employees fulfill their wishes, while 318 households of disadvantaged female employees and 15,444 female migrant workers received subsidies. The awareness and participation of rural women in collective property rights system reforms were increased, effectively safeguarding their legal rights and interests regarding membership confirmation, income distribution, and other related areas.

- **Advance social campaigns to respect and protect women**

Shanghai has incorporated laws and regulations closely related to women's lives, work, and education into the city's annual legal education and publicity programs. A new

online law popularization column, Magnolia Fragrance: Interpreting the Legal Code, was launched, and 240,000 employees participated in the national online legal knowledge competition, "Caring for Female Employees, the Law is by Your Side". Regular law popularization and services continue to be provided. The production and broadcast of public service advertisements protecting women's rights and interests and promoting women's development have increased annually.

- **Strengthen support for female innovation and entrepreneurship**

Shanghai continues to host the Women's Innovation and Entrepreneurship Competition and deepen the implementation of the "Seagull Plan" for career development. The city also organizes special recruitment events, such as the "Thousand Enterprises, Ten Thousand Positions" job fair, with a focus on developing entrepreneurial service platforms in areas like industrial parks and college campuses. These initiatives aim to facilitate comprehensive collaboration between college innovation and entrepreneurship programs, local human resources and social security departments, and various incubation parks. Further efforts include conducting research on the status of women in emerging industries and new employment sectors, as well as promoting the "Women Entrepreneurs Finance Initiative". The city has also enhanced employment guidance and training services to alleviate difficulties faced by women in the early stages of entrepreneurship, particularly for small and micro enterprises. Additionally, support for female tech entrepreneurs is being strengthened, with the goal of nurturing more women in technology leadership roles. The city also encourages women's associations, such as the Women Entrepreneurs Association, the Women's Chamber of Commerce in the Federation of Industry and Commerce, the Women Doctors' Association, and the Women Lawyers' Network, to play a key role in guiding women to engage in cross-sector learning, leverage complementary strengths, and expand their innovative thinking.

Case 5 Shanghai Has Hosted the Female College Students' Innovation and Entrepreneurship Competition for Four Consecutive Years[①]

Since 2021, Shanghai has hosted the Female College Students' Innovation and Entrepreneurship Competition annually. The competition aims to inspire innovation and entrepreneurship among female college students, cultivate female entrepreneurship pioneers for the new era, and inject fresh momentum into economic and social development. With the theme "Women Manifest New Strength, Smart Innovation Shapes a Brighter Future", the competition features Entrepreneurship and Creativity tracks. It is open to all full-time female college students from regular higher education institutions in the city and female graduates within 10 years of graduation.

Specific measures: (1) The competition organizing committee offered innovation and entrepreneurship training camps that highlighted the "female entrepreneurship" practical feature. These camps combined online and offline methods to provide intensive training and one-on-one

① Wenhui Daily, Women Manifest New Strength, Smart Innovation Shapes a Brighter Future! 2024 Shanghai Female College Students Innovation and Entrepreneurship Competition Launches. Xinmin Evening News, Results Announced for the 2023 Shanghai Female College Students Innovation and Entrepreneurship Competition.

guidance to the projects that advance to the final after the preliminary rounds. (2) For winning projects, angel fund grants and post-grant entrepreneurial services were provided, along with connections to various extended services such as investment and financing platforms, helping female college students with their innovation and entrepreneurship endeavors.

Outcomes: From 2021 to 2023, the competition received a total of 2,651 project applications. In 2023 alone, 1,261 teams participated, representing 81 colleges and universities nationwide, with over 5,000 individuals registering. Representatives of past award-winning participants, Chen Yuexin and Jiang Xiaoyu, shared how the competition platform helped transform their careers. Chen Yuexin, originally a business student, became the designer and manager of an original women's clothing store and later expanded her career as a food blogger sharing her lifestyle on social media. Jiang Xiaoyu, on the other hand, developed her entrepreneurial project from version 1.0, which focused on a single agricultural product, into version 3.0, which is now centered on agricultural product brand marketing and regional brand culture development. Additionally, after the competition, she became a volunteer for the "Seagull Plan", a public welfare initiative supporting the career development of female college students.

Figure 11 Entrepreneur Mentors Signing Contracts and Pairing with Female College Students for Support

(3) Women's participation in decision-making and management

- **Establish a tracking and training mechanism to strengthen the building of female leadership teams**

Shanghai has strengthened the tracking and training of female cadres by conducting special research on outstanding young cadres. The focus is on a group of exceptional young female cadres at the department and division levels. This approach involves regular analysis and evaluation, establishing a continuous tracking and training mechanism. For those suited to specialized departments, exchanges for appointments are facilitated within city and district professional sectors; for those suited to broader roles, exchanges are conducted between party and government organs and enterprises or public service units. Exceptional female cadres are assigned to frontline positions or key tasks and major projects that are critical for reform and innovation or where significant challenges exist,

adhering to the philosophy that "practical experience is the best form of training". This also includes a necessary, progressive training model, with step-by-step recommendations for further development and career direction, aimed at enhancing their overall competence. For female deputy cadres with substantial experience in lower-level leadership positions, timely exchanges and promotions are arranged to key roles or chief positions for further development and deployment. This aims to optimize the leadership structure of city-managed departments, ensuring that the proportion of female cadres in local government bodies and city-managed public service units meets the required targets.

- **Strengthen the selection and fostering of female cadres at the grassroots**

Shanghai continues to organize model training sessions for directors of residents (villagers) committees, gradually increasing the proportion of female participants in these sessions. Through systematic and professional training courses, the city enhances the business capabilities and leadership skills of these directors, especially female directors. Relevant city and district departments guide sub-districts and towns to strengthen the training of female reserve cadres at community and village levels, offering more opportunities for them to gain experience and develop their leadership abilities. This effort creates favorable conditions for more women to become key contributors to grassroots governance.

- **Improve the system for women's democratic participation and expand channels for women's involvement in urban construction and management**

Shanghai continues to improve the "in-depth, multi-faceted, and wide-reaching" system for women's democratic participation. This includes enhancing legal and policy mechanisms for gender equality consultations and assessments, and ensuring that gender equality awareness is fully reflected in local regulations, government rules, and normative documents. The city leverages platforms such as the People's Congress Representatives' Offices, CPPCC Shanghai Committee Member Offices, and grassroots legislative contact points to improve mechanisms for closer connections between female representatives or committee members and the public. This helps women play a vital role in areas such as dispute resolution, conflict mediation, community governance, rural development, and urban management. Through approaches like organizational embedding, work integration, and the addition of female strength, the city promotes initiatives like the "Good Suggestions Collection" to turn women's "golden ideas" into the "golden keys" for urban development.

- **Foster and strengthen women's social and self-governing organizations**

Shanghai actively supports and cultivates service-oriented, public welfare, and mutual aid women's social and self-governing organizations, promoting these organizations' involvement in overseeing judicial fairness. The city focuses on increasing female representation among people's jurors, supervisors, and mediators. Additionally, Shanghai encourages broad, interdisciplinary, and cross-sector theoretical research to

provide a solid foundation for women's participation in the whole-process people's democracy. The goal is to support and empower women in decision-making, management, and political participation, thereby increasing their capabilities and influence in public affairs and policy-making.

(4) Improve the maternity security system

- **Continuously improve the maternity and medical security system for women**

Shanghai has issued a series of policies, including the Notice on Supporting the Maternity Insurance for the Three-Child Policy, Regulations of Shanghai on Family Planning Rewards and Subsidies, and Regulations of Shanghai on the Applying for the Birth of a Second Child, to reasonably reduce the family burden of childbirth. The city continues to improve the overall basic medical security system, easing the financial burden of medical expenses for insured individuals, including a large number of women. Efforts are underway to expand maternity insurance coverage, increase benefits for unemployed women during childbirth, and conduct feasibility studies on including qualified treatments, such as therapeutic assisted reproductive technologies, in the scope of medical insurance fund payments. Shanghai is proactively researching key clinical diagnosis and treatment technologies and methods for important and common female health issues while accelerating the development of innovative drugs and medical devices. As of 2022, more than 20 major national innovation projects related to "reproductive health and women and children's health protection" have been undertaken by the city's leading research forces. The city's success rate for the emergency treatment of critically ill pregnant women reached 99.1% in 2022. Additionally, efforts have been made to enhance the capacity of maternal and child health institutions, optimize the obstetric and pediatric resources in five new districts and suburban areas, and open the International Peace Maternity and Child Health Hospital's Fengxian branch.

- **Increase financial investment in women's health and improve the birth defect prevention and care system**

Shanghai has developed and implemented the Implementation Opinions on Optimizing Maternity Policies to Promote Long-Term Balanced Population Development. This policy prioritizes financial support for programs included in the Shanghai Basic Public Service Project List, such as pre-pregnancy health checks, maternal and prenatal care, fertility guidance or consulting, and public awareness services. The Shanghai Birth Defects Prevention and Healthcare Center has been established to launch a birth defects prevention and healthcare management program. The center continuously enhances intervention and assistance for birth defects and expands the number of intervention and assistance implementation units. Efforts also focus on strengthening prenatal screening and diagnosis, including the development of construction standards for prenatal diagnostic centers. Additionally, newborn disease screening has been further enhanced, with the revision of management and technical plans for congenital heart disease screening. A network of 15 medical institutions has been established for the diagnosis of congenital

heart disease in newborns in Shanghai. Research is underway to expand the range of diseases covered by screening programs. As a result, the screening rates for newborn genetic metabolic diseases, hearing impairments, and congenital heart disease have all exceeded 99%.

- **Enrich birth-friendly work-life environments**

Shanghai continues to improve maternal and childcare facilities, strengthen the construction of "Loving Mommy Rooms" and advance the development of "star-rated" and "shared" rooms, aiming to create maternity-friendly workplaces. Efforts have been made to further enhance maternal and infant facilities in public spaces and optimize the design standards for maternal and infant facilities in parks. This includes increasing the number of seating areas, pedestrian walkways, and leisure and fitness facilities in parks, while also improving services such as third-gender restrooms and nursing rooms. The city is also integrating a gender perspective into the public service system for sports and fitness, encouraging widespread participation in community sports events. This aims to engage women of all ages in these events, helping to meet the growing demand for fitness and wellness among women.

Case 6 Fengxian District's "Loving Mommy Rooms"[①]

In Fengxian District, 354 "Loving Mommy Rooms" have been set up across enterprises, public service units, industrial zones, office buildings, shopping malls, parks, hospitals, and administrative service counters, providing "a warm harbor for new mothers and a spiritual home for female employees".

Figure 12 On-site of the Honey Loving Mommy Room Event at Jianghai Kindergarten, Fengxian District, Shanghai[②]

① https://wap.51ldb.com/shsldb/ghnx/content/01914e59fe05c0010000b9ff6f110fdc.html

②Image source: Shanghai Observer, What do the 11 five-star "Loving Mommy Rooms" in Fengxian look like? Follow me for an on-site visit~

Specific measures: (1) During the establishment of the "Loving Mommy Rooms", trade unions at all levels in the district adhered to a model of "site-based follow-up, service follow-up, and activity follow-up", ensuring that the coverage and services of the rooms continued to improve. (2) Following the principle of "build a Loving Mommy Room for every school", a total of 131 rooms have been established, achieving near-full coverage across the district. (3) For new types of employment with mobile work locations, such as food delivery riders, couriers, and truck drivers, "mobile" Loving Mommy Rooms have been created, ensuring that these rooms are always available where they are most needed. (4) Enterprises are encouraged to upgrade their Loving Mommy Rooms. One example is the upgrade by EXEDY (EXEDY DYNAX Shanghai Co., Ltd.), which built an employee fitness station alongside its Loving Mommy Room. The new facilities include smart treadmills, rowing machines, elliptical trainers, and integrated exercise equipment, along with postpartum recovery and body-shaping courses to meet the diverse needs of female employees.

- **Enhance child safety protection levels**

Shanghai has adopted a combination of online and offline approaches, using multimedia teaching and on-site demonstrations, to strengthen traffic safety awareness among children across the city. The city has completed the construction of public safety experience spaces in schools at the compulsory education stage and has coordinated with local fire and rescue stations to make their facilities available to schools, ensuring that students have convenient access to hands-on safety training. In addition, Shanghai has conducted anti-trafficking awareness campaigns to effectively increase public attention and participation in anti-trafficking efforts, and improve self-protection capabilities. The city has also strengthened coordination among various departments, including public security, education, civil affairs, health, and cyber information, to establish rapid reporting and special reporting systems for incidents involving the safety and protection of minors outside of school. A sound emergency response mechanism for such incidents has been put in place. The city continues to improve campus safety infrastructure, actively promoting the installation of window limiters in high-rise buildings across schools of all levels and types, and conducting thorough safety checks of the height of building windows, external corridors, indoor hallways, balconies, outdoor stairs, and other areas with protective railings to ensure they meet safety standards. Shanghai has implemented a campus food safety protection initiative, strictly enforcing regulations such as the principal (preschool principal) accountability for school food safety, the accompaniment of meals by school leaders, and other related provisions. Additionally, the city is exploring an online monitoring and early-warning system for food safety in cafeterias of primary and secondary schools, using the "transparent kitchen and visible stove + Internet" model. Shanghai has also rolled out tiered and categorized pilot programs for protecting minors in schools and preventing campus bullying in primary and secondary schools. This includes revising the Guidelines for Preventing and Controlling Campus Bullying in Primary and Secondary Schools and enhancing the construction of safe and law-abiding campuses. The city has revised and issued the Regulations of Shanghai Municipality on the Protection of Minors. Under these regulations, people's mediation organizations at all levels in the city are required to promptly report to the police if incidents of domestic

violence against children constitute criminal offenses. Efforts to prevent and punish crimes that harm children have been increasingly intensified, and the effectiveness of comprehensive judicial protection and governance for minors has been improved.

- **Support disadvantaged children and families and improve child welfare protection levels**

Shanghai has achieved full coverage of minor rescue and protection agencies across all districts, providing family guardianship support services for children in compulsory education who lack proper guardianship or face neglect, through initiatives such as the "Love Accompanies Children" and "Neighborhood Moms" programs. The city supports urban and rural communities, as well as social organizations, in providing specialized social work services for children in difficult circumstances and children from disadvantaged families within the community. In addition, Shanghai has implemented the "Sunshine Baby Card" policy, expanding the subsidy coverage from local residents aged 0 to 16 years to those under 18 years old. The range of rehabilitation service institutions eligible for rehabilitation training subsidies has also been further expanded. The policy for cochlear implant surgery assistance has been revised, increasing the subsidy from a one-time amount of RMB 60,000- 130,000 to a uniform RMB 150,000. Children under 18 with Shanghai residency can apply for updated speech processors, with a 90% subsidy based on the assistive device catalog prices, with the actual maximum subsidy not exceeding RMB 54,000.

Shanghai has developed documents such as the Operational Guidelines for the Adoption and Placement of Minors Raised by Shanghai Children's Home, further standardizing the adoption registration process. The city's children's services and social work teams continue to expand. Each district has strengthened the development of the social work workforce in its area by implementing incentive policies and organizing pre-examination training. By the end of 2022, the total number of certified social workers in the city reached 37,335. Support is provided to welfare institutions, rescue stations, and minor protection stations to establish social work departments or assign full-time social workers to deliver professional services for children and homeless children. Furthermore, social work service organizations have been developed to enhance service delivery capacity. By the end of 2022, the city had 676 social work service organizations. The Exceptional Children Social Service Institutions Setup and Service Standards has been issued to define standardized norms for care services, rehabilitation training, and public welfare support for children in need.

SDG6: Clean Water and Sanitation

SDG6

- SDG6 - Clean Water and Sanitation: Committed to ensuring universal access to clean water and sanitation while managing these resources sustainably. The implementation of this goal aims to mitigate the risks associated with water availability due to challenges like climate change. It also focuses on enhancing the R&D and production capabilities of water resource utilization technologies, thereby strengthening the sustainability and integrity of both human and ecological systems.
- Currently, Shanghai faces significant challenges related to water scarcity, particularly in terms of water quality. Additionally, the immense scale of daily water supply requirements for the functioning and governance of this megacity puts substantial pressure on the water supply system. The resilience and emergency response capacity of the city's water supply infrastructure still requires significant improvements. Furthermore, the quality of water supplied to users still lags behind the advanced standards set by leading global cities.
- In line with SDG6, Shanghai is actively overcoming various challenges. The city has enhanced its water supply security through the construction of regionalized water supply systems and the development of water source and raw water systems. It has improved water quality by advancing water purification technologies, upgrading water supply pipelines, and piloting direct drinking water systems. Moreover, Shanghai is continuously improving its water ecological environment through projects such as the construction of eco-clean watersheds and comprehensive river and lake environmental management.

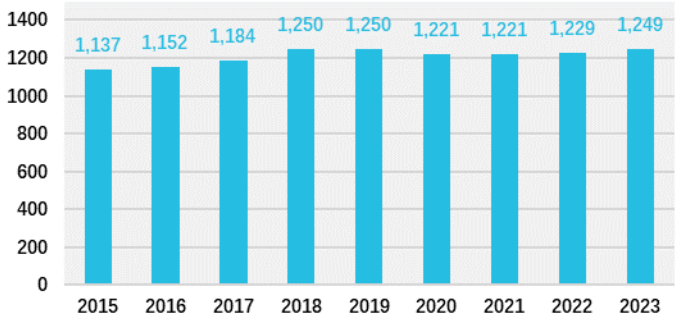
SDG6

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG6
Guarantee water supply capacity	Construction of regionalized water supply systems		►Tap water supply capacity (10,000 cubic meters/day) ►Per capita daily total domestic water consumption (liters) ►Per capita daily residents' domestic water consumption (liters) ►Industrial water consumption (100 million cubic meters)	SDG6.1
	Major water source construction	Jinze Reservoir Raw Water Project		
	Emergency water supply assurance			
Improve water quality	Purification technology upgrades of water supply plants		►Length of water supply pipelines (km) ►Tap water coverage rate (%)	SDG6.3
	Water supply pipeline renovation	Trenchless repair of DN1200 water pipeline on Fuxin Road, Yangpu District		
	Direct drinking water system pilot construction	Construction of the High-Quality Drinking Water Demonstration Zone and Innovative Practices of Technical Procedures in the Lingang Special Area		
	Desalination engineering and technology development			
Water environment and water ecological governance	Construction of eco-clean watersheds	Construction of eco-clean watersheds in Zhangjiang Town	►Sewage treatment volume (100 million tons) ►Investment in wastewater treatment (100 million yuan)	SDG6.6
	Comprehensive governance of river and lake environment			
	Water ecosystem protection			
	Rural domestic sewage treatment			

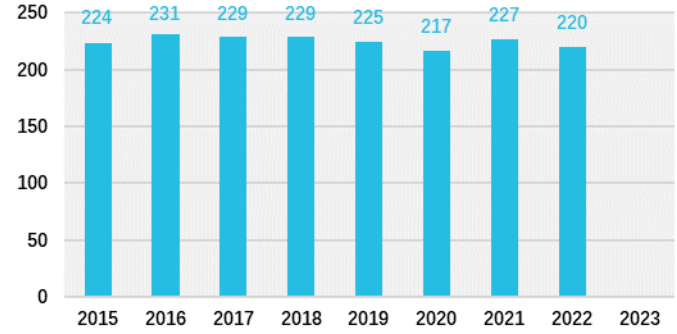
Key Indicators

Tap water supply capacity (10,000 cubic meters/day)



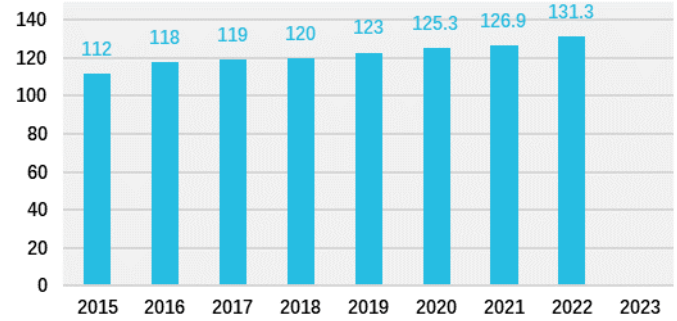
From 2015 to 2023, the tap water supply capacity increased by **9.8%**.

Per capita daily total domestic water consumption (liters)



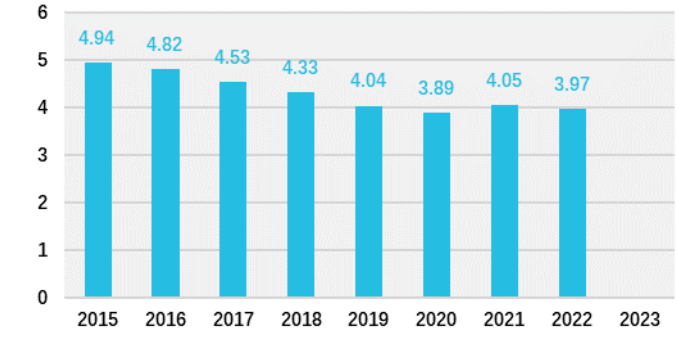
From 2015 to 2022, the per capita daily total domestic water consumption remained stable at around **225 liters**.

Per capita daily residents' domestic water consumption (liters)



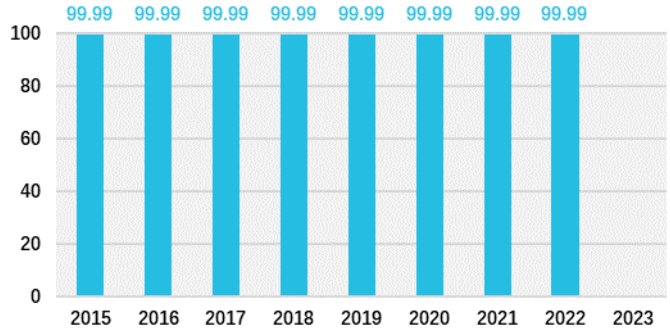
From 2015 to 2022, the per capita daily residents' domestic water consumption increased by **17.2%**.

Industrial water consumption (100 million cubic meters)



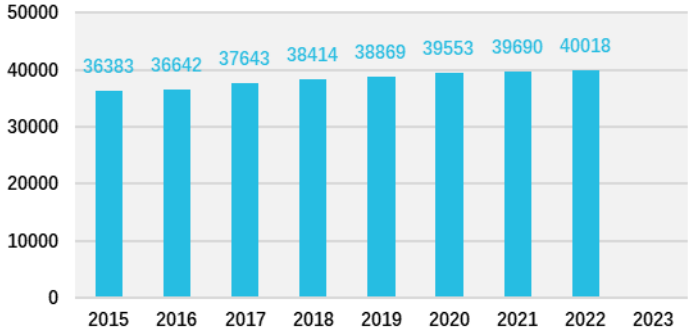
From 2015 to 2022, the industrial water consumption decreased by **19.6%**.

Tap water coverage rate (%)



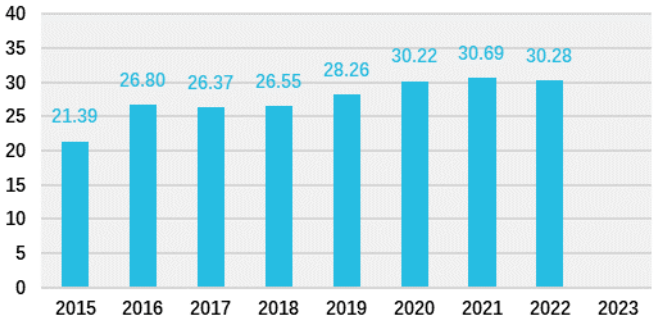
Since 2015, the tap water coverage rate has consistently reached **99.99%**.

Length of water supply pipelines (km)



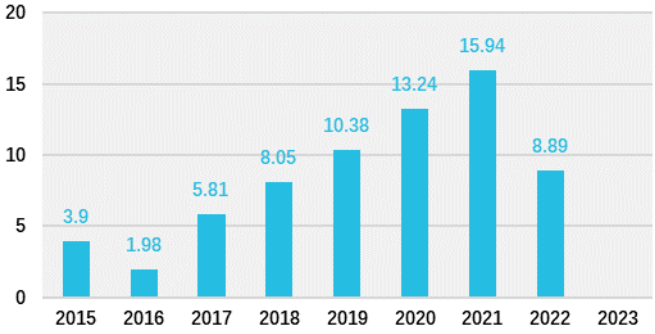
From 2015 to 2022, the length of water supply pipelines increased by **10.0%**.

Sewage treatment volume (100 million tons)



From 2015 to 2022, the sewage treatment volume increased by **41.6%.**

Investment in wastewater treatment (100 million yuan)



From 2015 to 2022, cumulative investment in wastewater treatment exceeded **6.8 billion yuan**.

Major Progress

Accelerated implementation of scaled water supply projects

Shanghai has conducted strategic research on the development and utilization of the Yangtze River estuary water source, including studies on changes in the flow conditions of the Yangtze River and the impact of saline intrusion on water sources. Research has also been carried out on frameworks to protect the northern branch while preserving the southern branch's water sources, ensuring water supply safety and improved water quality. The city has strengthened the development of water conservancy scenic areas to beautify river and lake landscapes, protect tidal flat resources, and control soil erosion, maintaining the water quality and ecological balance of water sources. The feasibility study report for the Qingcaosha-Chenxing Reservoir interconnection project has been approved. This project will enhance the city's water supply security, connecting three major raw water systems: the Qingcaosha Reservoir, Chenxing Reservoir, and the upstream raw water system of the Huangpu River. Shanghai has achieved integrated urban and rural water supply, closing down small and medium-sized water plants and deep wells to improve water quality and service levels.

Continuous improvement in water supply security

Shanghai has further strengthened its water supply security mechanism, improved water supply infrastructure, and enhanced water conservation efforts. The city has developed an implementation plan for water supply security and improved the "1+2+X" contingency plan system, further enhancing coordination and cooperation between departments. The city has improved the regular assessment mechanism for saline intrusion in the Yangtze River estuary and established dynamic optimization mechanisms for the water levels of the four major reservoirs and the Baogang Reservoir, further refining the operational scheduling of the reservoir group. The city is advancing deep treatment projects at seven water plants, with the Yingbin, Zhabei, and Jujiaqiao plants already under construction, increasing the deep treatment rate to 79%. Shanghai has completed the renovation of 403 kilometers of aging water supply pipelines and achieved near-complete coverage of large-diameter smart water meters in non-residential areas. The city has finished the installation of high-quality drinking water systems in new residential communities totaling 465,000 square meters and promoted the issuance of guidelines for high-quality water supply in demonstration zones. In line with national and local water conservation initiatives, Shanghai has built 520 water-saving carriers and completed the establishment of water-saving societies in the central urban districts and county-level areas. A reclaimed water utilization project database has been established, and the reclaimed water project in the chemical industry zone has passed the mid-term assessment by the Ministry of Water Resources. The city's water rights trading system has been launched, with the first batch of water rights transactions completed as part of pilot programs.

- **Roll-out renovation of old water supply pipelines and construction of direct drinking water systems**

Shanghai is rolling out the renovation of old water supply pipelines, enhancing the regulatory capacity for secondary water supply, and continuously improving water quality, with a goal to meet direct drinking water standards for household water supply across the city by 2035. The water supply industry has adopted new pipeline inspection technologies, such as Sahara, to conduct comprehensive "health checks" on pipelines, and has employed trenchless repair techniques to minimize the impact of construction on surrounding residents and roadways. The first high-quality drinking water demonstration zone has been completed. The Minhang Water Plant now features advanced ozone + activated carbon + ultrafiltration membrane treatment, with a capacity of 20,000 tons per day, and conventional + nanofiltration membrane treatment, with a capacity of 10,000 tons per day, improving both water quality and taste, benefiting 100,000 people. Public direct drinking water points have been established along the "One River, One Creek" waterfront areas, offering safe and clean direct drinking water to citizens free of charge.

- **Ongoing improvement of water pollution control capacity**

Shanghai is making significant strides in water pollution control and water ecological development. The city continues to focus on the end-of-pipe discharges from sewage treatment plants and accelerate the multi-point implementation of the "Three Plants, Three Lines" program. Projects such as Phase IV of the Zhuyuan Sewage Treatment Plant and the Zhuyuan Bailonggang sewage interconnection pipeline are nearly completed. A total of 52 stormwater retention ponds are under construction in an orderly manner. The Bailonggang and other sewage treatment plants have achieved 1.3 times the efficiency of standard operations. A new sewage treatment capacity of 1.2575 million cubic meters per day and a retention capacity of 724,600 cubic meters have been added. In response to stormwater pump station discharges, the city's General River Chief issued the No. 1 General River Chief's Order, launching a comprehensive survey and remediation of rainwater and wastewater misconnections, and establishing an emergency cleaning mechanism for pump stations and riverways.

- **Significant achievements in the construction of eco-clean watersheds**

Shanghai has closely monitored fluctuations in river and lake water quality, organizing investigations and remediation efforts for water bodies prone to such fluctuations, and conducting traceability analysis of water quality changes at key monitoring points designated by the state and the city. The city has established a "Red-Yellow-Blue" water quality management and early warning system for rivers and lakes and implemented a reward program for reporting water quality issues. The city has successfully established 20 demonstration sites for eco-clean watersheds. Qingpu District and Zhangjiang Town in Pudong have been recognized as national soil and water conservation demonstration areas. Four eco-clean watersheds - at Yingdong Village in Chongming, Xiezhi Village in Minhang, Zhuangxing Country Park in Fengxian, and the

Yangtze River Estuary Ecological Conservation Forest in Baoshan - have been designated as national soil and water conservation demonstration projects. The city has completed comprehensive remediation of 220 kilometers of riverways, developed 50 kilometers of New City Green Belt, and upgraded the efficiency of 465 rural sewage treatment facilities. Additionally, 35.2 kilometers of river and lake waterfront space have been opened for public use.

- **Continuous improvement in water disaster defense capability**

Shanghai has further meticulously strengthened flood prevention efforts and continuously enhanced resilience against flood risks. The city has implemented the "Four Pre-measures" and improved eight mechanisms, including the "Direct Communication" system for consultations between flood prevention meteorological departments, the "Six Stops" under extreme weather conditions, and the "Three Linkages" for underpasses, among others. These measures have identified and rectified 12,000 potential hazards. The city has advanced the standardized construction of flood prevention systems in 220 sub-districts, towns, and industrial parks, meeting the "Six Essentials" criteria for flood protection. Additionally, 24 residential complexes prone to waterlogging have been upgraded, 12 roads have undergone waterlogging improvement works, and 7.5 kilometers of seawalls have been constructed to meet standard flood protection requirements, ensuring a smooth flood season across the city. To enhance the urban rainwater drainage system, the city has upgraded its drainage capacity to handle storms with a recurrence interval of 3 to 5 years. As a result, 20% of the areas citywide and 21.5% of the central urban areas now meet this drainage capacity standard. In line with these efforts, Shanghai has completed the inspection of 4,600 kilometers of main drainage pipes and the repair of 600 kilometers, achieving full coverage of inspection and repair for drainage pipelines over 10 years old ahead of schedule. The city has also developed measures to address gaps in responding to extreme weather, organizing special actions such as drainage pipe cleaning and low-water-level operation of drainage pipelines. In addition, the city is actively advancing the construction of mobile pump trucks and emergency water retention facilities.

Important Measures

(1) Guarantee water supply capacity

- **Construction of regionalized water supply systems[①]**

Shanghai has implemented a series of significant measures for the construction of regionalized water supply systems to ensure water supply security, improve water quality, and achieve efficient utilization of water resources. The city has successively issued key strategic documents, including the Shanghai Water Supply Plan (2019-2035) and the 14th

① https://www.thepaper.cn/newsDetail_forward_7208313

Five-Year Plan for Water System Governance in Shanghai, outlining objectives to enhance the resilience of the water system against disasters, improve water quality, ensure water resource supply, and raise industry management standards. Corresponding major tasks have also been planned. Firstly, by promoting integrated urban-rural water supply development, Shanghai has established planning goals of "urban-rural integration, a network divided into sections, and intensive water supply", optimizing the water supply layout. Secondly, to improve water quality, the city has closed village-level water plants and is working to reduce the leakage rate of water supply pipelines through the renovation of existing infrastructure and the improvement of leakage detection systems. Additionally, Shanghai has developed a plan for an emergency water supply system, which includes the construction of deep wells for emergency water supply and enhanced protection for backup and emergency water intake points. In terms of industry management, Shanghai has strengthened policies and regulations, improved standards, and promoted legal and regulatory oversight. The city has accelerated the development of smart water supply systems, enabling round-the-clock, full-process, and comprehensive monitoring of the water supply network. The formulation of a water-saving action plan has further reduced the leakage rate of water supply pipelines, promoted water conservation in the public sector, imposed strict controls on water consumption in high-water-use service industries, and fostered innovation in water-saving technologies and processes. These combined measures provide a solid foundation for the construction of regionalized water supply systems in Shanghai, aiming to create a safe, efficient, and sustainable water supply framework.

- **Raw water system construction and management at water sources**

Guided by the prominent challenges faced by Shanghai's current water supply system, the city has prioritized ensuring the interconnection and security of raw water sources, focusing on addressing gaps, enhancing capabilities, and improving quality. Drawing on the best practices of international metropolises in raw water system construction and management at water sources, Shanghai has developed plans for the Yangtze River raw water connectivity project to further strengthen the security of water sources at the Yangtze River Estuary. Key initiatives include the research of the Qingcaosha-Chenxing Reservoir interconnection project, the interconnection project of raw water from Wuhaogou Pump Station to Taihe Water Plant, and the interconnection project of raw water from Qingcaosha Reservoir to Wusong. These projects will be initiated in due course. Shanghai is also deepening strategic cooperation with Jiangsu and Zhejiang provinces in water resource allocation and water source protection within the Yangtze River and Taihu Lake basins. This cooperation focuses on safeguarding the ecological security of key drinking water sources at the Taipu River and the Yangtze River Estuary. Additionally, the city is improving its watershed water source protection early warning mechanisms and promoting the joint protection, construction, and sharing of water source areas and supply facilities in demonstration zones. In line with the development of a "smart city", Shanghai has established a foundational framework for smart water supply systems. The city has fully integrated all administrative approval processes in the water supply industry into the municipal online government service platform. Moreover, a water supply security

monitoring system has been established and enhanced, with the initial phase of raw water security monitoring completed. This includes the management of saline tide control, pollution monitoring of water sources, emergency response to raw water plant capacity reductions, and pipeline loss management, all of which contribute to the improvement of raw water security supervision. Furthermore, the city has nearly completed a unified water resource management system for the entire municipality.

Case 7 Jinze Reservoir Raw Water Project

For a long time, districts such as Qingpu, Songjiang, Jinshan, Minhang, and Fengxian adopted a "one district, one point, decentralized water intake" approach, which made it challenging to respond quickly and effectively to sudden water pollution incidents. The Jinze Reservoir, located in the western part of Jinze Town in Qingpu District, on the north bank of the Taipu River, has a daily water supply capacity of 3.51 million cubic meters. Spanning an area of approximately 2.7 square kilometers, with a water surface area of 1.92 square kilometers, the reservoir has a total capacity of about 9.1 million cubic meters, including an emergency reserve capacity of around 5.25 million cubic meters, which is sufficient to meet emergency water needs for 2 to 3 days.

Shanghai has placed significant emphasis on developing the city's water source infrastructure. In October 2013, the government approved the Upstream Huangpu River Water Source Planning, which consolidated existing intake points from Qingpu, Songjiang, Jinshan, Minhang, and Fengxian into the Jinze Reservoir and Songpu intake points along the Taipu River. This created a connected system consisting of "one main conveyance line, two intake points, and three booster pump stations", with the capability for both forward and reverse interconnected water flow to ensure a reliable water supply. After nearly a decade of planning, one year of preparatory work, and two years of construction, the Jinze Reservoir Raw Water Project was officially completed and put into operation. As a result, the city's raw water intake is now centralized at the reservoir, replacing the previous decentralized intake model. The interconnection and complementary functions between different water sources are now fully operational, marking the beginning of a new phase of centralized raw water supply management. This shift has significantly enhanced the security of the drinking water supply.

Figure 13 Jinze Reservoir

- **Upgraded emergency water source security capability**

To ensure water supply safety and enhance emergency response capabilities, Shanghai has implemented a series of measures, including upgrading water source infrastructure, modernizing and renovating water supply pipelines, constructing deep wells for emergency water supply, reinforcing industry management, improving water supply system control, advancing smart water supply solutions, increasing emergency material reserves, and promoting innovations in emergency response. Under the Shanghai Water Supply Plan (2019-2035), the city has mapped out a "1, 2, 4, X" layout for water sources and raw water systems, with "X" representing the retention of 30 backup and emergency intake points across the city. The plan also includes the development of a deep-well security system for emergency groundwater supply to further enhance the city's water supply security capabilities. Through the completion of the Upstream Huangpu River Drinking Water Source Project, the renovation of approximately 2,000 kilometers of water supply pipelines, the planning of deep wells for emergency water supply, the development of water resource management regulations, optimization of water plant layouts, acceleration of the smart water supply system, establishment of an all-weather scheduling platform, and a focus on emergency technology research and development, Shanghai has significantly enhanced the safety of its water supply system and its ability to respond to sudden water-related emergencies. These initiatives ensure the efficient use of water resources and maintain the safety of water quality.

(2) Improve water quality

- **Purification technology upgrades of water supply plants**

To improve water quality and increase citizens' sense of well-being and satisfaction, while also meeting the new national water quality standards, the Shanghai Municipal Development and Reform Commission, in collaboration with the Shanghai Water Authority, the Shanghai Municipal Finance Bureau, and other departments, developed the Implementation Plan on Granting Municipal Subsidies for Deep Treatment Projects at Suburban Water Plants along the Upstream Huangpu River in 2012. This initiative accelerated the deep treatment upgrades at water plants sourcing from the Huangpu River. As a result, new, renovated, and expanded deep treatment projects have been implemented across water plants citywide, with the deep treatment rate steadily increasing year by year. On the other hand, to benchmark against the best international practices, Shanghai has initiated the construction of high-quality drinking water systems across the city and expanded the coverage of deep treatment processes citywide. The city is accelerating the implementation of deep treatment upgrades at waterworks. In 2017, the Shanghai Municipal Development and Reform Commission, in collaboration with the Shanghai Water Authority, the Shanghai Municipal Finance Bureau, and other departments, issued the Subsidy Implementation Plan for the Deep Treatment Project Construction at Waterworks in Shanghai. Following the principle of "enterprise-led with appropriate municipal financial support", the plan provided subsidies for 25 waterworks undergoing deep treatment upgrades starting in 2019, further accelerating the city's

renovation of its waterworks to meet higher water quality standards.

- **Water supply pipeline renovation**

The water supply sector in Shanghai has actively pursued the renovation and optimization of aging water supply pipelines, implementing trenchless technology in pipeline upgrades and continuously improving the level of intelligent management and water supply security. In line with the principles of "target-based tasks, task-driven lists, itemized management, and wall-chart planning", the city has effectively utilized GIS geographic information data to create water pipeline renovation maps, advancing the renovation of outdated water supply networks with precision. During major events, construction safety and adherence to civilized construction standards are prioritized, with particular emphasis on ensuring worker safety during high-temperature periods in summer. Construction schedules are adjusted as needed based on actual conditions to ensure on-site safety. The water supply sector fully considers the supply conditions, pipeline characteristics, operational status, and leakage status in each district, and develops reasonable and feasible pipeline renovation objectives. This ensures the effective implementation of efforts to reduce pipeline leakage rates. During the 13th Five-Year Plan period, a total of 1,240 kilometers of outdated water supply pipelines were renovated and optimized. According to the 14th Five-Year Plan, the goal is to renovate 2,000 kilometers of outdated water supply pipelines, with 1,571 kilometers completed by the end of 2023. In 2023, the public water supply pipeline leakage rate was reduced to 8.4%, successfully meeting the target for leakage rate control.

Case 8 Trenchless repair of DN1200 water pipeline on Fuxin Road, Yangpu District

Fuxin Road is located in the Yangpu District of Shanghai, with its primary section surrounded by key landmarks such as the College of Design and Innovation at Tongji University, Shanghai Tieling Junior High School, and Anshan Sicun residential complex. This section connects major thoroughfares like Zhangwu Road and Dahushan Road. The underground pipeline is a DN1200 cement concrete pipe, completed in 1988, and is now over 40 years old, making it outdated. The pipeline to be repaired is approximately 820 meters long and is located beneath the west-side non-motorized vehicle lane. It features four ingot-shaped bends and multiple inner-lined steel rings. The Fuxin Road project involves a large-diameter cement pipeline, which is quite old. It has a tight construction timeline. Once the pipe breaks, immediate repairs must be made. The location is in the city center, with nearby communities, universities, and residential areas, meaning the construction could significantly impact local residents and traffic. The construction space is limited, with the material inlet pit only about 1.7 to 1.8 meters wide, and the operating distance at the receiving pit only about 1.3 meters. In the face of numerous challenges, the water supply sector held multiple project meetings, addressing each issue step by step. Experts were invited for on-site guidance to ensure that non-trenchless repairs could be immediately carried out after the pipe break. The project was carefully planned, and the construction schedule was organized to ensure timely completion. The trenchless repair approach fully aligns with the spirit of the 20th National Congress of the Communist Party of China, implements the 14th Five-Year Plan, rationally utilizes underground space resources, and ensures the orderly construction and safe operation of urban underground pipelines.

Figure 14 Fuxin Road Project Construction Site

- **Direct drinking water system pilot construction**

Shanghai is committed to enhancing the safety and water quality of its water supply system through a series of specific measures to ensure residents have access to higher-quality drinking water. Firstly, the city has improved the ecological regulation system and the water quality monitoring and early-warning platform at water sources to enhance their ability to respond to sudden pollution incidents. Additionally, the interconnection project for raw water systems has been advanced, linking the Yangtze River and Upstream Huangpu River water sources, thus enhancing the security of the raw water supply system. Secondly, Shanghai has fully implemented deep treatment upgrades at water plants to improve the quality and taste of treated water. Efforts to optimize process operation and management are also underway, exploring the application of combined deep treatment technologies. Moreover, the construction of smart water plants is being promoted to enable intelligent operation and maintenance. Regarding water supply pipelines, the city plans to renovate approximately 2,000 kilometers of outdated pipelines and improve the safety operation and monitoring mechanisms. These measures aim to reduce leakage and pipeline burst incidents while improving water quality stability. Furthermore, the supervision capacity of secondary water supply facilities is being enhanced, with efforts to optimize operational modes and meet the demand for high-quality water supply. The renovation of secondary water supply facilities in public places and buildings is also being guided. The development and application of smart water supply systems is another key focus. By leveraging the Internet of Things (IoT), blockchain, cloud computing, and big data analytics, Shanghai aims to implement intelligent operation and maintenance management for the water supply system, improving management standards. Finally, the Shanghai Water Authority has formulated the Technical Procedures for High-Quality Drinking Water Supply Projects in New Residential Buildings of Shanghai to improve the standards of drinking water systems in newly built residential complexes and meet the demand for direct drinking water. The Lingang Demonstration Zone in Nanhui New Town has also released related technical guidelines to achieve high-quality drinking water supply and developed operation and maintenance management procedures to strengthen the management of water supply facilities and comprehensive water quality management.

Together, these initiatives are driving the modernization and intelligent development of Shanghai's water supply system, ensuring improvements in both water safety and quality.

Case 9 Construction of the High-Quality Drinking Water Demonstration Zone and Innovative Practices of Technical Procedures in the Lingang Special Area

With the economic and social development of Shanghai and the continuous improvement in its residents' living standards, the public's awareness of health implications of drinking water and their satisfaction with its taste have gradually increased. The Shanghai Master Plan (2017-2035) explicitly sets a long-term goal of "improving household water quality to meet the demand for direct drinking water". To support the development of key areas, further optimize the business environment of the Lingang Special Area, align with international standards, and build a livable and business-friendly new town, the establishment of a high-quality drinking water demonstration zone in Lingang is one of the key objectives in the 14th Five-Year Plan for water system governance.

To further expand the effectiveness of the demonstration zone and make its experience replicable, promotable, and referable, the Lingang Demonstration Zone pioneered the research and release of the Technical Procedures for High-Quality Drinking Water Supply Projects in the Lingang Special Area of China (Shanghai) Pilot Free Trade Zone. This document standardizes the design, construction, installation, commissioning, and acceptance processes for high-quality drinking water supply projects within the zone, facilitating their smooth implementation and ensuring construction quality. Additionally, it lays the foundation for the issuance and implementation of the Technical Procedures for High-Quality Drinking Water Supply Projects in New Residential Buildings in Shanghai, further advancing the development of a citywide high-quality drinking water standard system. This effort continually enriches and improves related technical standards and operation and maintenance management systems from the source to the faucet, from construction to operation and maintenance, and from regulation to evaluation.

In 2022, the Lingang Demonstration Zone continued to refine its standards and strengthen its exploration of new models. By effectively integrating technical standards with practical construction efforts through on-site investigations, timely monthly reports, and other measures, the zone overcame challenges such as the COVID-19 pandemic and typhoons, making strong progress in construction. Throughout the year, four new residential complexes, covering approximately 518,000 square meters, completed the construction of high-quality drinking water supply projects, exceeding the annual target set in the 14th Five-Year Plan for water system governance.

Figure 15 Direct drinking water supply equipment

- **Desalination Engineering and Technology Development[①]**

Shanghai is committed to making core technology breakthroughs in key areas and taking the initiative in the innovative development of seawater desalination. According to the policy interpretation of the Action Plan for Seawater Desalination Utilization and Development (2021-2025), Shanghai will carry out scientific and technological innovations in ultra-large membrane and thermal desalination, and make core technology and equipment breakthroughs in key areas such as reverse osmosis membrane components, high-pressure pumps, and energy recovery devices, to reach the international advanced level. Shanghai is also actively exploring the use of renewable energy for seawater desalination. For example, Shanghai enterprises and scientific research institutes conducted collaborative innovation to develop a "zero energy consumption" seawater desalination device, which solely uses solar and wind energy for seawater desalination without grid energy. This ecological- and environmental-friendly device is suitable for areas rich in renewable energy such as solar energy. Shanghai actively participates in international cooperation and promotes the "going global" strategy of seawater desalination technology. Relying on the bilateral cooperation mechanism between China and Southeast Asian, South Asian, and Middle Eastern countries, Shanghai has carried out multi-level talent exchange and fostering, guided seawater desalination enterprises to carry out practical cooperation, promoted the application and promotion of technical equipment standards in the countries jointly building the "Belt and Road", creating new advantages in international cooperation and competition. Shanghai is steadily advancing seawater desalination projects, aiming to alleviate water resource bottlenecks, ensure sustainable economic and social development, and provide effective water resources solutions for coastal water-scarce areas and offshore islands.

(3) Water environment and water ecological governance

- **Construction of eco-clean watersheds**

Shanghai has taken a series of important measures to build eco-clean watersheds to achieve full-area coverage and improve the quality of the water ecological environment. First, by strengthening top-level designs and based on town administrative divisions, the city has planned the construction of 151 watersheds in total and divided 1,574 governance units to ensure unified planning across the city. It is planned to build more than 50 eco-clean watersheds by 2025 and achieve citywide coverage by 2035. In this process, Shanghai has developed an indicator system for the construction of eco-clean watersheds that includes 11 indicators, which not only meets universal requirements but also encourages each watershed to add personalized indicators based on its own characteristics. Secondly, Shanghai has strengthened overall coordination and territorial responsibilities, making it clear that the River Chief Office shall take the lead in coordination, and multiple departments jointly promote governance tasks, including river and lake water system governance, non-point source pollution prevention and control, etc., to achieve an organic

[①] https://www.shanghai.gov.cn/nw42653/20200823/0001-42653_1273890.html

combination of water and soil erosion, water environment and water ecological governance. At the same time, it has included watershed construction in the assessment system to ensure the implementation of governance tasks. In terms of improving the management level, Shanghai has implemented "three-full" characteristic management, which is full financial investment, full intelligent management, and full professional management and care. Local finance at all levels will fully bear the construction funds to ensure the smooth progress of the projects. With the river chief information management system and intelligent management and control platform, online water quality monitoring and full-process online management are realized to improve management efficiency. In addition, the government purchases services, and professional companies are responsible for operation and maintenance to ensure the continued and effective operation and maintenance of watersheds and provide high-quality ecological products and excellent services to society. These measures jointly promote the construction of eco-clean watersheds in Shanghai and help create happy rivers and lakes featuring smooth, clean, and beautiful rivers and lakes, healthy ecology, and harmony between man and water.

Case 10 Construction of eco-clean watersheds in Zhangjiang Town, Pudong

Zhangjiang Town, located in the hinterland of Pudong New Area, is one of the three municipal centers on the "Golden Middle Ring Development Belt" in the pioneer area for socialist modernization in Pudong New Area. As the first batch of piloting towns of eco-clean watershed construction in Pudong New Area, it is positioned as a green development-oriented eco-clean watershed. From 2021 to 2023, a total of 724 million yuan was invested. Guided by national strategic needs, supported by scientific and technological innovation practices, and based on ecological resource endowments, Zhangjiang Town has promoted town-wide governance, built a town-wide ecosystem, promoted harmony between man and water, striving to build a green, dynamic, and innovative Zhangjiang with the integration of industry and city.

The first is to make overall arrangements and advance in an integrated manner. Zhangjiang Town has established a leading group for soil and water conservation to implement governance responsibilities and consolidate the foundation of governance, forming an integrated and multi-party work structure. It has jointly built four-level Party branches with the Taihu Basin Authority of the Ministry of Water Resources, the Shanghai Water Authority, and the Pudong New Area Water Authority, set up young Party member commando teams and strengthened the team of non-governmental river chiefs and volunteers. At the same time, it has included the construction of eco-clean watersheds in the elements of the river and lake chief system and the list of key tasks for rural revitalization and simultaneously included in the work assessment of the river and lake chief system to promote the implementation of water and soil conservation responsibilities and systems. In conjunction with "World Water Day" and "China Water Week", with "Legal Six-in (bringing the law into government agencies, rural areas, communities, schools, enterprises, and organizations)" as the carrier, it carried out science popularization education activities on soil and water conservation and promoted soil and water conservation achievements through online platforms with the theme of "Seeking Beauty in Zhangjiang", forming a good social atmosphere for soil and water conservation.

The second is high technological empowerment and intelligent management. Zhangjiang Town has established the first intelligent management and control platform for eco-clean watersheds in China, built an intelligent forestry comprehensive management and protection platform, set up "Internet +" information-based river chief bulletins, and built a refined information management system for the whole life cycle of eco-clean watersheds. At the same time, it took the

lead in establishing a three-dimensional water environment comprehensive supervision system of "full-time underwater survey + full-basin ground patrol + all-round aerial photography". Through full-area grid management, it has achieved a long-term management mechanism that involves online and offline linkage and participation from all sectors of society. On this basis, Shanghai artificial intelligence waters are created to provide application scenarios for unmanned cleaning ships, gradually shifting from "automatic inspection" to "automatic rectification", highlighting the unique advantages of technology-empowered governance.

Figure 16 Zhangjiang Town "Mouli Forest"

The third is green benefiting people's livelihood with diversified benefits. Based on completing the construction of 48 happy rivers and lakes, Zhangjiang Town has built three major loops of "motorized, cycling, and non-motorized transportation", connecting the Zhangjiabang wedge-shaped green space, the intelligent water platform, the AI future block, and other natural and humanistic landmarks, as well as Internet celebrity check-in spots such as Style Garden, Elite Garden, and Flora Island. Combined with the concept of sponge city, interactive spaces such as Baiye Garden, Huandong Ecological Park, and Traditional Chinese Medicine Herb Garden are created to promote the integration of city and water, the affinity between man and green spaces, and the sense of happiness and belonging. Taking the opportunity of Xinfeng Village's successful creation of Beautiful Rural Demonstration Village in Shanghai, Zhangjiang Town encourages village collective economic cooperatives and private enterprises to jointly start businesses, make efforts to create ecological industries integrating talent apartments, farm gardens, and water sports, transforms ecological advantages into economic value for coordinated development of industry and ecology.

With eco-clean watersheds as the starting point, Zhangjiang Town has comprehensively implemented a new water and soil conservation management model featuring watershed

management, ecological restoration, water system regulation, and improvement of human settlements. In 2023, Zhangjiang Town was rated as a national demonstration county for soil and water conservation. Next, Zhangjiang Town will achieve new breakthroughs in soil and water conservation with higher standards, achieve a high starting point and high-level improvement in ecological environment quality, and help achieve high-quality economic and social development, carbon peaking and carbon neutrality goals.

- **Comprehensive governance of river and lake environment**

Shanghai has taken several important measures in the comprehensive management of river and lake environments to achieve the "three-water coordinated" management of water resources, water environment, and water ecology. In terms of water resources, Shanghai has built four major centralized drinking water sources, forming a water supply pattern with multiple complementary water sources. It has also strengthened the monitoring and early warning capabilities of water sources to ensure the safety of drinking water. In terms of water environment treatment, Shanghai has improved its urban sewage treatment capacity, completed the investigation and rectification of sewage outfalls into rivers, promoted comprehensive river improvement, and built eco-clean watershed demonstration sites. In terms of water ecological protection and restoration, Shanghai has optimized its water ecological monitoring network, carried out monitoring, protection, and restoration measures for aquatic biological resources, and promoted the construction of beautiful rivers and lakes. At the same time, Shanghai has deepened the green development of agriculture and rural pollution control, implemented a ten-year fishing ban in the Yangtze River, strengthened the protection of aquatic biological resources, promoted the standardization of livestock and poultry breeding and the treatment of aquaculture effluent, and improved the efficiency of fertilizer and pesticide use, significantly increasing the treatment rate of rural domestic sewage. In terms of pollution prevention and control on ships and at port terminals, Shanghai has completed the renovation of power receiving facilities on ships, achieved full coverage of shore power facilities, strengthened supervision of port and ship sewage disposal, and severely cracked down on illegal discharges. In addition, Shanghai has promoted regional collaboration and joint protection and governance, brought into play the role of the Yangtze River Delta Regional Ecological Environmental Protection Collaboration Group, established a mechanism to make coordinated efforts to protect and restore cross-border water bodies, and signed a cooperation agreement for joint prevention and control of sudden water pollution incidents across provinces, jointly ensuring the safety of drinking water. Through these comprehensive management measures, Shanghai is striving to achieve continuous improvement of the river and lake environment, build a healthy, clean, and beautiful water ecological environment, and provide citizens with high-quality ecological products and life services.

- **Water ecosystem protection**

Shanghai has begun monitoring biological communities in major water bodies since the 1980s. In recent years, it has strengthened the construction of a water ecological

monitoring network, covering important water bodies such as the Yangtze River Estuary, Huangpu River, and Suzhou River, and the monitoring content includes aquatic biodiversity and habitat surveys. In addition, Shanghai has also promoted water ecological protection and restoration projects, including the construction of eco-clean watersheds, waterfront space creation, shoreline connection, and ecological management projects, as well as river and lake water system connection and restoration projects, which have effectively improved the self-purification capacity and biodiversity of water bodies. At the same time, Shanghai has also implemented a waterfront co-governance strategy, released a large number of aquatic species, including rare and endangered species, and promoted ecological restoration through the construction of marine ranch projects. In terms of scientific and technological support, the Shanghai Municipal Bureau of Ecology and Environment has carried out water ecological evaluation and assessment research work since 2021, formed a water ecological zoning classification method, and established an evaluation and assessment index system, covering water environmental protection, ecosystem health, aquatic environment protection and many other aspects. These research results will help guide various districts to actively promote water ecological protection and restoration work for further improvement of Shanghai's water ecological environment. Through these comprehensive measures, Shanghai's water ecosystem has been effectively protected and restored, making important contributions to the restoration of biodiversity and the improvement of the ecological environment.

- **Rural domestic sewage treatment**

Shanghai has implemented a series of key measures for rural domestic sewage treatment. First of all, according to the Action Plan for Upgrading Standards and Increasing Efficiency of Rural Domestic Sewage Treatment in Shanghai (2021-2025), the city is promoting the renovation and upgrading of outdated rural sewage treatment facilities to improve treatment efficiency and quality. Secondly, Shanghai strengthens municipal industry supervision through regular inspections, quarterly reports, and annual assessments to ensure the stable operation of sewage treatment facilities and the compliance of water quality standards. In addition, Shanghai is also committed to the construction of standardized institutional systems, promoting the online monitoring system for rural sewage treatment facilities, technical guidelines for facility coding and signage setting, and the preparation of institutional documents such as operation and maintenance quotas to improve the standardization of sewage treatment and intelligent management level. Finally, Shanghai has carried out in-depth research and evaluation of rural domestic sewage treatment paths, aiming to explore and determine the most suitable treatment methods for Shanghai's actual conditions to further improve treatment efficiency. Together, these measures constitute Shanghai's comprehensive strategy for rural domestic sewage treatment, which aims to achieve efficient, standardized, and sustainable development of rural sewage treatment through facility renovation, supervision strengthening, system construction, and treatment path research.

SDG9: Industry, Innovation and Infrastructure

SDG9

- SDG9 Industry, Innovation and Infrastructure are designed to build disaster-resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation. The practice of this goal would effectively unleash economic dynamism, improve economic competitiveness, introduce and promote new technologies, and increase resource efficiency.
- Currently, Shanghai needs to bolster its innovation drive, tackle the significant challenge of core technology breakthroughs in key scientific and technological areas, and urgently enhance the stability and competitiveness of its industrial and supply chains.
- Under SDG9, Shanghai places particular emphasis on empowering the development of a modern industrial system through sci-tech innovation and technological transformation. It highly prioritizes enhancing service support capabilities for small and medium-sized enterprises (SMEs) and fostering related industrial clusters. Shanghai is proactive in seizing opportunities and focuses on driving the high-quality development of three leading industries—integrated circuits, biomedicine, and artificial intelligence—as well as six key industries, including electronics and information, life and health, automotive, high-end equipment, advanced materials, and fashion consumer goods. Shanghai is actively positioning itself in four emerging industrial sectors: digital economy, green and low-carbon energy, metaverse, and intelligent terminals, as well as five future industries: future health, future intelligence, future energy, future space, and future materials.

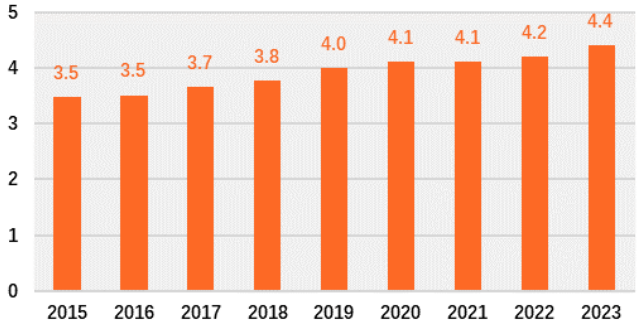
SDG9

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG9
Development of Industrial Parks and SMEs	Financial Service Support for SMEs		►Number of New Sci-tech "Little Giant" Enterprises and "Little Giant" Cultivating Enterprises	SDG9.3
	Gradient Cultivation and Development of SMEs	The iRIC Incubator supports the clustering of the intelligent manufacturing industry in Nanxiang, Jiading		
	Brand Development of SMEs			
	Excellence Service Program for SMEs			
Development of Leading and Key Industries	Development of Three Leading Industries	Shanghai Automotive Chip Industry Innovation Development Project	►Proportion of Research and Development (R&D) Expenditure in GDP (%) ►Number of Newly Recognized High-Tech Enterprises Annually ►Added value of strategic emerging industries (100 million yuan) ►Proportion of added value of strategic emerging industries in GDP (%)	SDG9.4
	Development of Six Key Industries			
Development of New and Future Industries	Development of Four Emerging Industrial Sectors	Shanghai Yangpu Riverside Investment and Development (Group) Co., Ltd. - Waterfront Revival ·Tech Metaverse		SDG9.b
	Development of Five Future Industries	Ruijin Hospital—core medical application scenario for medical digital humans		
Sci-tech Innovation and Technological Transformation	Digital Transformation of Traditional Industries		►Energy consumption per unit of GDP (tons of standard coal/10,000 yuan) ►Number of PCT international patent applications (applications/year) ►International internet outbound bandwidth (Gbps)	SDG9.5
	Resource Recycling Capacity Building in Industrial Production			
	Development of Clean and Environmentally Friendly Technologies			
	New Digital Infrastructure (Networks, Computing Power, Data)			

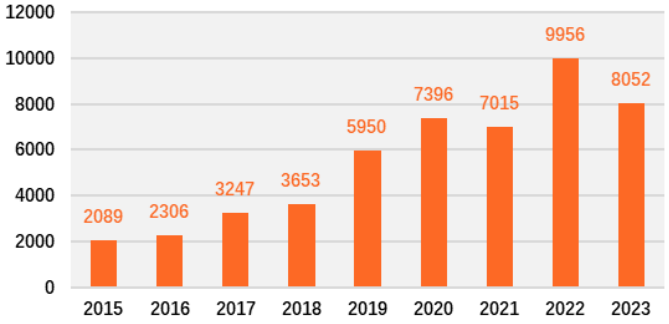
Key Indicators

Proportion of Research and Development (R&D) Expenditure in GDP (%)



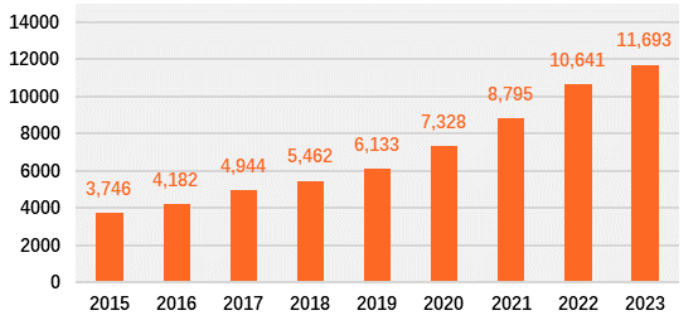
From 2015 to 2023, the proportion of Research and Development (R&D) expenditure in GDP increased from 3.5% to **4.4%**.

Number of Newly Recognized High-Tech Enterprises Annually



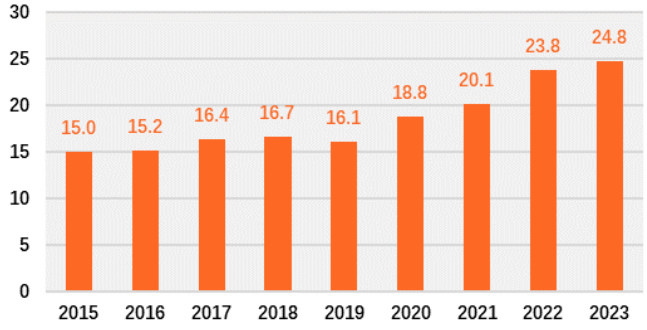
In 2023, the number of high-tech enterprises within the validity period surpassed **24,000**.

Added Value of Strategic Emerging Industries (100 million yuan)



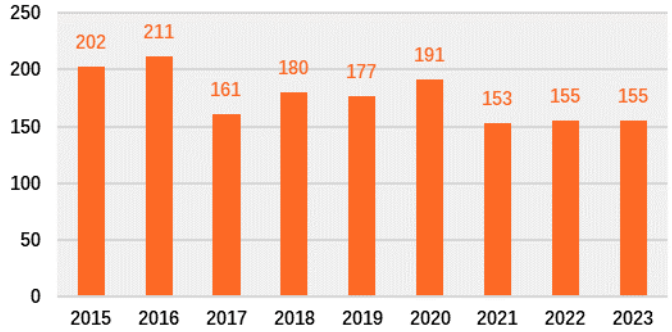
From 2015 to 2023, the added value of strategic emerging industries grew by **2.39 times**.

Proportion of Added Value of Strategic Emerging Industries in GDP (%)



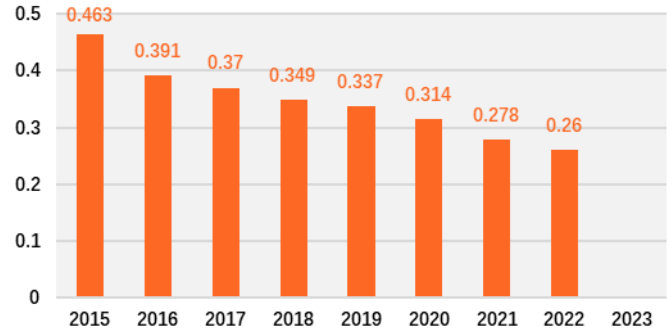
From 2015 to 2023, the proportion of the added value of strategic emerging industries in GDP increased from 15.0% to **24.8%**.

Number of New Sci-tech "Little Giant" Enterprises and "Little Giant" Cultivating Enterprises



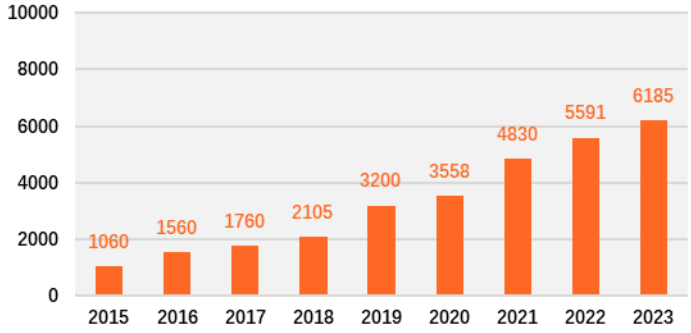
In 2023, the total number of new sci-tech "Little Giant" firms and "Little Giant" cultivating firms in the city exceeded **2,800**.

Energy Consumption per Unit of GDP (tons of standard coal/10,000 yuan)



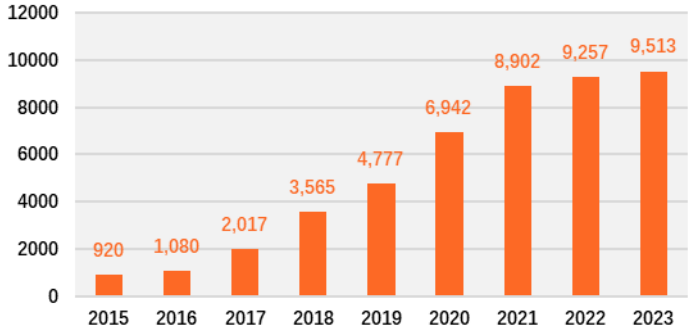
From 2015 to 2022, energy consumption per unit of GDP decreased by **43.8%**.

Number of PCT International Patent Applications (applications/year)



From 2015 to 2023, the number of PCT international patent applications increased by **4.8 times**.

International Internet Outbound Bandwidth (Gbps)



From 2015 to 2023, international internet outbound bandwidth grew **9.3 times**.

Major Progress

High-Quality and Vigorous Development of the Private Economy

Shanghai is accelerating the implementation of national policies and measures to promote the development of the private economy, supporting the healthy growth of private investment. The city has enacted the "28 Measures" to assist micro, small, and medium enterprises (MSMEs), deepened pilot programs for innovative credit financing services for such enterprises, added 97 new private enterprise headquarters, and elevated the "government-association-bank-enterprise" four-party collaboration to new levels. The city continues to advance the "One-stop online transaction" reform of public resources, with a unified system of policies, market mechanisms, and management frameworks largely established. The Shanghai Outline for Great Power of Quality is being steadily implemented, with 10 new "Shanghai Standards" and 37 new "Shanghai Brands" introduced.

Significant Results in Cultivating Specialized and Sophisticated SMEs

Shanghai actively promotes the cultivation of high-quality SMEs, accumulating 20,470 innovative SMEs, 10,458 municipal-level specialized and sophisticated SMEs, and 685 nationally recognized specialized and sophisticated "Little Giant". These enterprises are concentrated in key sectors such as manufacturing, software information services, and technology services, demonstrating strong specialization capabilities. On average, these enterprises have a revenue of 150 million yuan, an average growth rate of 13.5% over the past two years, a net profit margin of 4.49%, with R&D personnel accounting for 37.32%, an R&D intensity of 9.93%, and an average of 43 intellectual property rights per company. The financing capabilities of these companies are prominent, with over 200 companies having equity financing exceeding 100 million yuan, and 131 specialized and sophisticated enterprises listed on the A-share market.

Key Breakthroughs in Integrated Circuit Industry Technology

In the integrated circuit sector, Shanghai has successfully produced the first 300 mm RF SOI wafer domestically, breaking through the 300 mm SOI wafer fabrication technology. The city also released two internationally advanced technological achievements: the MEMS standard process module and the 90 nm silicon photonics integration process. Additionally, Shanghai achieved real-time quantum key distribution at a rate of 100 megabits per second and supported the breakthrough in manipulating 255 photons in the "Jiuzhang 3.0" quantum computing prototype.

Increasing Innovation Capability in the Biopharmaceutical Sector

Shanghai has developed and implemented several targeted action plans in key areas, including the Shanghai Action Plan for Promoting Technological Innovation and

Industrial Development in Gene Therapy (2023–2025), the Shanghai Action Plan for Accelerating Synthetic Biology Innovation and Creating High-End Biomanufacturing Industry Clusters (2023–2025), and the Shanghai Action Plan for Innovative Development in Computational Biology (2023–2025). The city continues to promote the construction of Shanghai Clinical Research Centers, with two new centers established in the fields of cell and gene therapy, bringing the total to 27. Throughout the year, four Category 1 innovative drugs and nine Category 3 innovative medical devices were newly approved for market launch. Additionally, Junshi Biosciences' Treprizumab and Hutchison MediPharma's Fruquintinib received approval for market launch overseas.

- **Initial Progress in AI Research Industrialization**

Shanghai has released the Measures to Promote Innovation and Development of Large AI Models (2023–2025), aiming to establish itself as the "Model Capital" for AI. Key initiatives include establishing the Shanghai Model-Speed Space innovation ecosystem community, Shanghai's first quality inspection and testing center for generative AI, a large model testing and validation center, a collaborative innovation center, a general robotics industry research institute, the Lingang Robotics Industrial Base, and a large model corpus data alliance. Additionally, the city successfully hosted the 2023 Pujiang Innovation Forum "AI for Science" Special Forum, the AI Framework Ecosystem Summit, and the 2023 World Artificial Intelligence Conference. Three large AI model products from SenseTime, MiniMax, and the Shanghai AI Laboratory received the first round of national large model registrations. Fourier Intelligence launched the first general-purpose humanoid robot, GR-1; Intuitive Fosun's domestically developed Da Vinci Xi surgical robot entered the market; and the Shanghai Academy of Intelligent Science introduced the Fuxi sub-seasonal climate model.

- **Deep Integration of the Industrial Chain in Strategic Emerging Industries**

Shanghai has focused on strategic emerging industries such as new energy vehicles, high-end equipment, aerospace, information and communication, new materials, and emerging digital industries. The city has overcome a series of key generic technologies, gathered innovative resources, and promoted deep integration between innovation and industrial chains. Initiatives included the release of the Shanghai High-Quality Incubator Development Implementation Plan, Shanghai Science and Technology Achievements Transformation Innovation Reform Pilot Implementation Plan, and Shanghai University Science Park Reform and Development Action Plan. Notable achievements included the successful development of the Nezha F amphibious air-sea vehicle; the commercial operation of the domestically produced C919 large passenger aircraft; the launch of the world's first 300MW-level series of large-capacity motors for compressed air energy storage; the delivery and naming of China's first domestically built large cruise ship, Adora Magic City; the shipment of the world's first fully high-temperature superconducting tokamak device, HH-70; the delivery of the world's first EXL-50U compact fusion device vacuum chamber; the launch of the initial batch of satellite internet technology demonstration satellites; the release of the world's first and largest 24,000-TEU nuclear-

powered container ship, KUN-24AP; the delivery of the world's first 13,000-TEU LNG dual-fuel powered large container vessel; and the establishment of the National Pipeline Storage Technology Company in Shanghai.

- **Comprehensive Advancement of Urban Digital Transformation**

Shanghai is advancing the construction of digital infrastructure, with the "Urban Space-Time Map" and the municipal-level City Information Modeling (CIM) platform nearly complete. The city is focusing on establishing benchmark projects for digital transformation in manufacturing and accelerating the digitalization of everyday life scenarios, enhancing digital capabilities across economic, living, and governance sectors. Over 77,000 outdoor 5G base stations, 350,000 indoor 5G stations, and 358 digital phone booths have been installed. The public project "Residential Community Underground Garage Mobile Communication Network Coverage" now covers 2,003 communities. Shanghai has announced 15 "Industrial Chain Leaders" for digitalization, promoting initiatives in intelligent factory networks, trusted data spaces, and supply chain finance within digital supply chains. It has established three nationally benchmarked intelligent factories, 19 demonstrative intelligent factories, and 111 exemplary intelligent manufacturing scenarios. The city has completed 35 key digital living transformation scenarios and is rapidly building 74 demonstrative scenarios through an "open competition mechanism to select the best candidates", upgrading convenient healthcare, transportation MaaS, and educational digital infrastructure, and establishing 478 digital partner micro-sites. The Urban Digital Transformation Experience Hall has opened, and the "Digital Shanghai" Innovation Ecosystem HUB is under construction. Meanwhile, the integration of the "unified online government service" and "Integrated Online Management" platforms has achieved phased progress in digital empowerment and efficiency improvement at the grassroots level.

Important Measures

(1) Development of Industrial Parks and SMEs

- **Financial Service Support for SMEs[①]**

The Shanghai Municipal Government has implemented a series of measures to support financial services for SMEs, including credit support, innovative financial services,

[①]Notice on the Municipal Government Office's Circulation of Opinions on Strengthening Financial Services and Support for Technology-Based SMEs in the City; Notice from the Shanghai Regulatory Bureau of the National Financial Supervision and Administration on Implementing the "Smooth Financing Project", Optimizing the Business Environment, and Further Supporting the High-Quality Development of Shanghai's Economy and Finance; and a municipal government press conference presenting details on the recently issued Measures to Support the Stable Growth, Structural Adjustment, and Capacity Enhancement of MSMEs in Shanghai.

policy initiatives, relief measures, cost reduction in financing, optimization of financing methods, industry-finance integration, the development of technology finance demonstration zones, green finance, insurance advancement, bank-guarantee cooperation, and targeted relief and support services. These initiatives aim to reduce financing costs for SMEs, improve accessibility to financing, optimize the financing environment, and promote innovation and high-quality economic development through financial empowerment. Specifically, the Shanghai government encourages banks to increase credit allocation to technology-based SMEs, implement differentiated regulation, and reduce financing costs through loan interest subsidies and project grants within science and technology programs. Additionally, the government promotes the establishment of financing service connection mechanisms, optimizes loan renewal mechanisms, builds digital financial platforms, deepens industry-finance integration, develops supply chain finance demonstration zones, implements a gradient cultivation system for technology branches, encourages the use of intellectual property by technology-based enterprises, advances green finance, innovates insurance products for micro and small enterprises, and strengthens bank-guarantee cooperation to enhance the efficiency of guaranteed loans. Furthermore, the government has launched a special action to assist MSMEs, consolidating financial assistance policies, advancing the "Smooth Financing" project, and seamless loan renewal initiatives to save costs for businesses and promote stable economic growth.

- **Gradient Cultivation and Development of SMEs[①]**

Shanghai has implemented the "100 Parks, 10,000 Enterprises" initiative and a gradient cultivation plan for SMEs, adopting various measures to promote high-quality development among SMEs. These measures include building a tiered system to nurture high-quality enterprises, enhancing innovation capabilities and specialization levels, strengthening industry chain synergy, driving the digital transformation of SMEs, and providing targeted services to address financing and rights protection issues Additionally, Shanghai has launched the "100 Parks, 10,000 Enterprises" innovation collaboration initiative to foster deep integration of education, science, and industry, as well as the transfer and transformation of scientific and technological achievements, aiming to establish a unified, open, functional, and well-regulated technology market system. Moreover, financial institutions like the Shanghai Rural Commercial Bank have introduced the "100 Parks, 10,000 Enterprises" Park Direct Access initiative, offering precise financial services to meet the funding needs of enterprises at various development stages, thereby jointly advancing enterprise innovation and industrial upgrading.

Case 11 The iRIC Incubator supports the clustering of the intelligent manufacturing

①Notification from the Shanghai Municipal Commission of Economy and Informatization on Issuing the Detailed Implementation Guidelines for Gradient Cultivation and Management of High-Quality SMEs in Shanghai; Shanghai Rural Commercial Bank's "100 Parks, 10,000 Enterprises" Park Direct Access Initiative Enters Fengxian and Chongming Industrial Parks.

industry in Nanxiang, Jiading ①

The "Shanghai iRIC Incubator" is located in the International Innovation Center for Intelligent Manufacturing and Robotics at the Xiaomei Science Park in Nanxiang, Jiading District (hereinafter referred to as the Innovation Center). As a crucial platform for nurturing technology-based SMEs and promoting the transformation of scientific and technological achievements, the incubator provides physical space and a suite of innovative entrepreneurial services for newly established technology-based SMEs.

Figure 17 Xiaomei Science Park in Nanxiang

The Innovation Center offers integrated professional services, including technology development, industrial investment promotion, technological services, industrial investment, and trade platforms, to support the growth and clustering of the robotics industry. In February 2024, the iRIC Incubator was officially established, attracting over 10 incubation projects, including Shanghai Keqite Intelligent Equipment Co., Ltd. and Shanghai Lanruiwei Technology Development Co., Ltd. These projects not only enable mutual empowerment but also foster the integration and synergy of the industrial chain.

The intelligent manufacturing and robotics industry has become one of the leading sectors in Nanxiang Town, where the incubator is located. Building on this foundation, Nanxiang leverages resources such as the Innovation Center, the National Robotics Evaluation Center Office, and platforms like Robot Online, along with industrial spaces such as the North Hongqiao Intelligent Manufacturing Industrial Park, Qixing Technology Park, and Xiaomei Science Park. Centered on comprehensive intelligent manufacturing projects and industrial facilities, Nanxiang is establishing the "North Hongqiao Future Intelligent Manufacturing Base" brand. Currently, Nanxiang Town has attracted a range of industry leaders and unicorn companies, including Inovance, Bonded Intelligent, Yika Smart Car, Bremen Becker, and Mech-Mind Robotics.

①Shanghai iRIC Incubator Officially Unveiled, Accelerating Industrial Clustering – Promising Future for the "North Hongqiao Intelligent Manufacturing Base", published by Shanghai Observer, June 18, 2024.

- **Brand Development of SMEs[①]**

The Shanghai Municipal Government has implemented a series of measures to support the development of SMEs' brands, including reducing tax and fee burdens, lowering labor and energy costs, reducing financing costs, and conducting brand value evaluations. These policies aim to lower operating costs, enhance brand-building efforts, and strengthen core competitiveness. Additionally, Shanghai has established a tiered cultivation system based on the Detailed Implementation Guidelines for Gradient Cultivation and Management of High-Quality SMEs in Shanghai, which promotes specialization and high-quality development of SMEs through evaluation, recognition, and dynamic management. Furthermore, enterprises that make the list receive honorary certificates, brand showcasing, promotional opportunities, professional guidance, opportunities for integration with small, medium, and large enterprises, and digital empowerment packages, all of which support brand development and digital transformation.

- **Excellence Service Program for SMEs[②]**

The Shanghai SMEs Excellence Service Program is committed to promoting the high-quality development of SMEs through a series of comprehensive measures. These measures include supporting SMEs in achieving innovative growth through the application of technological advancements and the cultivation of high-level talent; issuing AI computational power vouchers and intelligence assessment vouchers to facilitate digital transformation; building an ecosystem for the integrated development of small, medium, and large enterprises; and strengthening financial empowerment services through the Smooth Financing Project and Seamless Loan Renewal Project. Additionally, the program undertakes special actions to relieve business difficulties by reducing tax and fee burdens; enhances targeted services and optimizes platforms like the Enterprise Service Cloud; establishes a team of enterprise service specialists to provide on-site visits and policy guidance; increases support through special funds and financing services to promote the implementation of the National SMEs Development Fund; and improves the business environment for SMEs by enforcing the Shanghai SMEs Development Promotion Regulations, establishing a tolerance mechanism, and addressing issues of delayed payments. Together, these initiatives create an environment conducive to the growth and innovation of SMEs, supporting their breakthroughs and growth across various fields.

[①]Notice from the General Office of the Shanghai Municipal People's Government on Issuing the Several Policy Measures to Alleviate Enterprise Burdens and Support the Development of SMEs in Shanghai; Notice on Conducting the 2024 "Shanghai SMEs Brand Value" Evaluation Application Work.

[②]Shanghai Launches 28 Measures to Support MSMEs, published in Jiefang Daily; A municipal government press conference presented details on the recently issued Several Measures to Support Stable Growth, Structural Adjustment, and Capacity Enhancement for MSMEs in Shanghai.

(2) Development of Leading and Key Industries

Development of Three Leading Industries[①]

Shanghai has implemented a series of key measures to promote the development of its three leading industries: integrated circuits, biopharmaceuticals, and artificial intelligence. For the integrated circuit industry, Shanghai plans to double the industry's scale by 2025 and establish an industrial system defined by "one core, three bases, four pioneers, and five ends" along with a spatial layout of "one body with two wings", centered around Zhangjiang Science City and the Lingang Special Area. In the biopharmaceutical industry, Shanghai has introduced policies to establish itself as a global hub for biopharmaceutical R&D and industrialization, leveraging artificial intelligence to empower drug development. In the artificial intelligence industry, the city aims to become a globally influential innovation hub by 2025 through advancements in intelligent chips, software, autonomous driving, and robotics. Additionally, Shanghai is focused on strengthening original innovation capabilities, optimizing the spatial layout of industries, and providing financial and tax policy support. This includes increasing the Integrated Circuit Industry Investment Fund to 14.5 billion yuan and establishing a 45 billion yuan industry master fund, primarily to invest in critical areas. These comprehensive measures aim to drive technological innovation, facilitate industrial upgrading, and accelerate the construction of a modern industrial system.

Case 12 Shanghai Automotive Chip Industry Innovation Development Project

On December 6, 2023, the Shanghai Automotive Chip Industry Innovation Development Promotion Conference was held. The Shanghai Automotive Chip Engineering Center and the Shanghai Automotive Chip Testing and Certification Public Laboratory were officially unveiled.

The Shanghai Automotive Chip Engineering Center, as a third-party platform for generic technology research, is dedicated to providing upstream and downstream automotive chip industry enterprises with services such as design and development, process optimization, pilot testing, and small-scale production, thereby assisting in the creation of high-reliability automotive chip products. The Shanghai Automotive Chip Testing and Certification Public Laboratory, built by the Shanghai Motor Vehicle Testing and Certification Technology Research Center Co., Ltd., offers automotive chip testing services, including AEC-Q series, functional safety, and information security testing.

[①]Notice from the General Office of the Shanghai Municipal People's Government on Issuing Several Policy Measures to Accelerate the Development of Shanghai as a Global Hub for Biopharmaceutical R&D and Industrialization; Opinions on Supporting Full-Chain Innovation and Development of the Biopharmaceutical Industry from the General Office of the Shanghai Municipal People's Government; Notice from the General Office of the Shanghai Municipal People's Government on Issuing the 14th Five-Year Plan for the Development of Strategic Emerging Industries and Leading Industries in Shanghai.

Figure 18 Shanghai Automotive Chip Engineering Center Testing Laboratory[①]

- **Development of Six Key Industries[②]**

Shanghai has implemented a series of strategic measures to promote the high-quality development of six key industries—electronic information, life and health, automotive, high-end equipment, advanced materials, and fashion consumer goods. These measures include the development of core technologies and industrial clusters in the electronic information sector, advancing cutting-edge fields and building innovation platforms in the biopharmaceutical industry, applying innovative artificial intelligence technologies and developing algorithms, as well as enhancing quality, efficiency, and digital transformation across the electronic information, automotive, high-end equipment, advanced materials, and fashion consumer goods industries. In addition, Shanghai is focusing on constructing innovation platforms, developing manufacturing and technology innovation centers, and promoting quality brand building to strengthen the resilience and security of supply and industry chains. Through these comprehensive measures, Shanghai aims to build a modern industrial system, enhance core industrial competitiveness, and achieve innovation-driven and high-quality economic development.

①The Paper, https://m.thepaper.cn/newsDetail_forward_27359479

②Notice from the Shanghai Municipal People's Government on Issuing the Several Policies to Promote High-Quality Development of Shanghai's Integrated Circuit and Software Industries in the New Era; How is "Shanghai Manufacturing" Digitally Transforming? How to Build the "3+6" Industrial System?… Today's Press Conference Provides a Detailed Explanation of the New Plan; Notice from the General Office of the Shanghai Municipal People's Government on Issuing the Three-Year Action Plan (2023–2025) for Promoting High-Quality Development of Shanghai's Manufacturing Industry.

(3) Development of New and Future Industries

Development of Four Emerging Industrial Sectors[①]

Shanghai has implemented a series of key measures to advance the development of four emerging sectors: digital economy, green low-carbon, metaverse, and intelligent terminals. In the digital economy, Shanghai aims to promote the construction of a compliant system for data transactions and circulation by enhancing data exchange capabilities, establishing a National Engineering Research Center for the Data Element Market, and other ways. In the green and low-carbon sector, Shanghai emphasizes alignment with the goals of the 14th Five-Year Plan, advancing comprehensive carbon peak and carbon neutrality management, accelerating energy transition, and promoting energy conservation and carbon reduction. For the metaverse as an emerging sector, the municipal government has formulated the Shanghai Action Plan for Cultivating the "Metaverse" as a New Track (2022–2025), which specifies development principles, quantitative targets, and key actions.

Case 13 Metaverse Experience Center of "Waterfront Revival ·Tech Metaverse"

The Shanghai Yangpu Riverside Investment and Development (Group) Co., Ltd. is leveraging metaverse technology along with existing resources at 130 Gongqing Road, Fuxing Island, to create the "Waterfront Revival ·Tech Metaverse" Experience Center.

First, they are developing an immersive and interactive "Digital Metaverse Experience Hall" that uses the groundbreaking metaverse to illustrate a century of industrial transformation and digital innovation on Fuxing Island in Yangpu Riverside. Through virtual scene creation within real-world spaces, the center will showcase a new vision of urban space where reality and virtual interact. It will feature the latest domestic achievements in metaverse digital humans, metaverse e-sports content, digital content from tech enterprises in Yangpu District, and cutting-edge interactive content products.

Second, an online virtual world will be created, offering a scalable and upgradable "Metaverse E-sports Product". This includes digital human operators and professional "digital human players", allowing users with terminal or motion capture devices to join digital characters on metaverse adventures. By integrating R&D, digital human operations, "cloud interaction" technology, and linked experiences, the project combines visitor interaction, commercial operation, and daily office functions. It aims to support the "virtual world" R&D, gather a new digital creative demographic, drive the digital creative industry, and promote Fuxing Island's technological transformation, creating a vibrant riverside environment. Future integrations with venues like the Orange Lion Stadium and Woxue Ski Arena are expected to attract thousands of visitors weekly. The Experience Center, scheduled to be fully operational by October 2025, is projected to generate diversified revenue streams, with an estimated annual income exceeding 100 million yuan.

[①]Notice from the Municipal Science and Technology Commission on Issuing the Shanghai "Metaverse" Key Technology Breakthrough Action Plan (2023–2025); Policy Interpretation of the Shanghai Action Plan for Cultivating the "Metaverse" as a New Track (2022–2025); Notice on Issuing the Key Work Arrangements for Carbon Peak, Carbon Neutrality, and Energy Conservation and Emission Reduction in Shanghai for 2024.

- **Development of Five Future Industries[①]**

The Shanghai Municipal Government has formulated a comprehensive plan with specific measures to drive the development of five future industries: future health, future intelligence, future energy, future space, and future materials. By 2030, Shanghai aims to achieve a future industry output value of approximately 500 billion yuan and cultivate globally influential innovations and enterprises. In the future health industry, Shanghai will strengthen the "Zhangjiang R&D + Shanghai Manufacturing" model in regions like Pudong, focusing on cutting-edge technologies such as brain-computer interfaces, biosecurity, synthetic biology, and gene and cell therapy. The future intelligence industry will promote the development of intelligent computing and general AI technologies, facilitating their application across various fields. In the future energy industry, emphasis will be placed on advanced nuclear energy and new energy storage technologies, with explorations into solutions like small modular thorium-based molten salt reactors and controlled nuclear fusion. The future space industry will develop deep-sea exploration and mining and airspace utilization technologies, including polar equipment and electric vertical take-off and landing (eVTOL) vehicles. The future materials industry will focus on the R&D and application of high-quality membrane materials, high-performance composite materials, and nonsilicon based core materials.

Figure 19 Key Project "Life Meta Mountain" at the "Greater Hongqiao Life Science Innovation Center"[②]

To support these industries, Shanghai has implemented six major initiatives: the "Foundation Plan", "Lead Plan", "Collaborative Plan", "Open Source Plan", "Flying Geese Plan", and "Rainforest Plan". These initiatives cover essential areas such as talent development, industrial ecosystem building, international cooperation, and intellectual

[①]Notice from the Shanghai Municipal People's Government on Issuing the Action Plan for Developing Shanghai into an Innovation Hub for Future Industries and Expanding Future Industry Clusters.

[②]Image Source: The Paper, https://www.thepaper.cn/newsDetail_forward_24417907

property protection. These measures underscore Shanghai's strategic commitment and forward-thinking approach to constructing a modern industrial system and driving high-quality economic growth.

Case 14 Ruijin Hospital—core medical application scenario for medical digital humans

Ruijin Hospital, affiliated with Shanghai Jiao Tong University School of Medicine, is developing medical digital human application scenarios by utilizing advanced medical imaging and interactive simulation technology, high-precision 3D human reconstruction technology, fiber optic pressure sensors, and cutting-edge MEMS sensor technology.

Figure 20 Cross-Campus Multimodal AI Diagnosis and Treatment Integrated Intelligent Medical Care[①]

Firstly, the metaverse-based visual-audio-tactile interactive feedback virtual surgery scenario establishes a mathematical model of core human systems, enabling real-time and precise imaging of both external and internal anatomical structures. This results in high-precision rendering and high-quality dynamic presentations of a personalized medical digital twins. The system enables high-precision, real-time identification, localization, and perceptual control of the patient's bodily structures and pathological tissues during surgery, enhancing surgical success rates and improving patient quality of life.

Secondly, the metaverse-based intelligent clinical research ward scenario establishes the nation's first full-cycle, fully accessible clinical research virtual interaction platform based on digital twins technology. This platform enables "appearance twinning, mechanism twinning, dynamic simulation, and virtual-real symbiosis" in clinical research, supporting process supervision, behavior analysis, and intelligent early warning. It accelerates the standardization of clinical research management and empowers hospitals, biopharmaceutical research institutions, and manufacturing enterprises.

Thirdly, the metaverse-based multimodal fusion intelligent consultation room scenario integrates digital rapid diagnostic equipment to support all medical stages—prevention, diagnosis, treatment, and recovery. By rapidly merging multimodal data, it creates a medical virtual digital

[①]Image Source: Guangming Net, https://health.gmw.cn/2023-07/14/content_36696026.htm

human for comprehensive, multi-dimensional analysis of health indicators throughout the patient's medical cycle. This enables efficient doctor-patient communication and personalized precision diagnostics based on the digital twins of the human body, providing remote, full-cycle diagnostic and treatment services before, during, and after consultations, thereby optimizing the overall patient experience.

(4) Sci-tech Innovation and Technological Transformation

● Digital Transformation of Traditional Industries[①]

Shanghai is implementing a series of measures to accelerate the digital transformation of traditional industries, with the goal of promoting high-quality economic development. These measures include accelerating the application of digital technologies in areas such as industrial robotics and fault monitoring and maintenance, expanding digital infrastructure like 5G base stations and the national top-level node for industrial internet identification and resolution, and building a comprehensive ecosystem by setting digital transformation standards and establishing public service platforms for the industrial internet. Shanghai is also launching a special initiative for new manufacturing models, aiming to enhance digital efficiency at the enterprise level, embed intelligence into the supply chain, and empower the platform ecosystem digitally to achieve a comprehensive transformation of industries. Furthermore, the Shanghai Municipal Government has issued the Shanghai Action Plan for Promoting the Coordinated Digital and Green Transformation of the Manufacturing Industry (2024–2027), with a focus on intelligent, green, and integrated development to elevate manufacturing standards, achieve energy conservation and emission reduction, and create benchmark models that drive the digital transformation of supply chains. In terms of digital transformation in everyday life, Shanghai will use digital means to enhance the service experience for residents by focusing on eight key areas: healthcare, education, housing, mobility, culture and tourism, consumption, assistance, and accessibility, creating a high-quality living environment. Governance digital transformation will leverage advantages from platforms like "unified online government service" and "Integrated Online Management" to innovate governance methods, models, and concepts. The release of the Action Plan for Driving Innovation and Development in the Data Element Industry in the Digital Economy New Track (2023–2025) further defines goals for expanding data element application scenarios, boosting new digital business formats, stimulating data innovation and usage among enterprises, and

[①]How is "Shanghai Manufacturing" Digitally Transforming? How to Build the "3+6" Industrial System?… Today's Press Conference Provides a Detailed Explanation of the New Plan; Notice from the Shanghai Municipal Commission of Economy and Informatization and the Shanghai Municipal Development and Reform Commission on Issuing the Shanghai Action Plan for Promoting the Coordinated Digital and Green Transformation of the Manufacturing Industry (2024–2027); Notice from the General Office of the Shanghai Municipal People's Government on Issuing the 14th Five-Year Plan for Comprehensive Advancement of Urban Digital Transformation in Shanghai; Notice from the General Office of the Shanghai Municipal People's Government on Issuing the Action Plan for Driving Innovation and Development in the Data Element Industry in the Digital Economy New Track (2023–2025).

standardizing corporate data management capabilities, all to promote industry innovation through data elements.

Resource Recycling Capacity Building in Industrial Production[①]

Shanghai is implementing a series of measures to strengthen resource recycling capabilities in industrial production, fostering the development of a green, low-carbon, and circular economic system. These measures include promoting the green upgrade of industries, restricting high-energy consumption and high-emission projects, and accelerating the low-carbon transition of manufacturing. Resource recycling bases are being established in locations such as Laogang, Baoshan, and the northern coast of Hangzhou Bay to enhance urban solid waste processing capacity. The city supports waste resource recovery and product remanufacturing projects through the Shanghai Special Support Measures for Circular Economy Development and Comprehensive Resource Utilization. Additionally, a green supply chain is being built, encouraging enterprises to adopt green design and procurement practices. Green logistics is also being developed to optimize transportation structures and increase the level of intelligence. Shanghai is strengthening the recycling of renewable resources, advancing garbage classification, and promoting the integration of recycling networks. The city is establishing a green trade system to optimize trade structures and increase imports of green products. Green product consumption is being promoted, with government projects prioritizing green product procurement. Furthermore, Shanghai advocates for a green, low-carbon lifestyle, encouraging citizens and businesses to engage in green initiatives. These strategies aim to improve resource productivity and recycling rates, achieve near-zero waste landfills, and support the achievement of carbon peak and carbon neutrality goals.

Development of Clean and Environmentally Friendly Technologies[②]

Shanghai is advancing clean and environmentally friendly technology development through a range of measures, including fostering green technology innovation entities, enhancing the core role of enterprises in technological innovation, invigorating universities and research institutions, and promoting innovation through the integration

[①]Notice from the Shanghai Municipal People's Government on Issuing the Implementation Plan for Accelerating the Establishment and Improvement of a Green, Low-Carbon, and Circular Development Economic System in Shanghai; Notice from the General Office of the Shanghai Municipal People's Government on Issuing the 14th Five-Year Plan for Resource Conservation and Circular Economy Development in Shanghai; Notice from the Shanghai Municipal Development and Reform Commission on Organizing Applications for the 2024 Special Support Projects for Circular Economy Development and Comprehensive Resource Utilization.

[②]Notice on Issuing the Implementation Plan for Building a Market-Oriented Green Technology Innovation System in Shanghai; Notice from the General Office of the Shanghai Municipal People's Government on Issuing Action Plans for Promoting the Development of Green and Low-Carbon Industries, Cultivating the "Metaverse" as a New Track, and Promoting High-Quality Development of the Intelligent Terminal Industry; CCE2024 Grand Opening: A March Appointment in Shanghai to Usher in a New Chapter of Intelligence in the Cleaning Industry.

of industry, academia, research, finance, and intermediary services. Shanghai is committed to establishing and enforcing green technology standards, promoting green procurement and evaluation certification, accelerating the commercialization of green technology, and optimizing the innovation environment with strengthened intellectual property protection and financial support. Additionally, Shanghai actively participates in international cooperation, integrating into the global green technology innovation system, with a specific focus on the growth of the green and low-carbon industries. This includes promoting clean energy, low-carbon materials, functional materials, efficient processes, electrified endpoints, and resource recycling. The city's cleaning industry also shows trends of diversification and specialization, with a rapidly growing market for smart cleaning equipment, particularly in the Asia-Pacific region, which demonstrates robust development potential. Through industry events such as the CCE Shanghai International Clean Technology and Equipment Expo, Shanghai further promotes clean technology innovation and application, showcasing cutting-edge technologies and smart cleaning solutions, and contributing to the sustainable and healthy growth of the industry.

- **Development of New Digital Infrastructure** [①]

Shanghai is strengthening its new digital infrastructure (encompassing networks, computing power, and data resources) through a series of strategic measures. The city is building a "dual gigabit" network with 5G-A and 10-gigabit optical networks, aiming to become one of the fastest, most extensive, and lowest-latency cities globally. Shanghai also plans to establish high-performance computing infrastructure to support large AI models and blockchain innovation applications, creating an urban high-performance computing network system. In terms of data infrastructure, Shanghai will enhance data resource utilization, establish a regulatory platform for data centers, and promote the aggregation, openness, and sharing of public data. In the transportation sector, Shanghai is advancing the digital upgrade of transportation infrastructure, building a digital perception network and intelligent management system. Additionally, Shanghai has issued guiding opinions on the unified scheduling of computing power resources to improve the efficiency of computing resource usage. The city will upgrade urban infrastructure by deploying intelligent sensing terminals, developing high-speed information networks, building low-carbon computing clusters, and enhancing the intelligence of traditional facilities. These measures aim to create a globally competitive digital industry cluster, foster deep integration between the digital and real economies, and accelerate the urban digital transformation.

[①]Notice from the Shanghai Municipal Commission of Economy and Informatization on Issuing the Guiding Opinions on Unified Scheduling of Computing Power Resources in Shanghai; Notice from the General Office of the Shanghai Municipal People's Government on Issuing the 14th Five-Year Plan for Comprehensive Advancement of Urban Digital Transformation in Shanghai; Shanghai Urban Blockchain Digital Infrastructure System Implementation Plan (2023–2025); Notice from the Shanghai Municipal People's Government on Issuing the Action Plan for Further Promoting New Infrastructure Development in Shanghai (2023–2026).

SDG11: Sustainable Cities and Communities

SDG11

- SDG11 Sustainable Cities and Communities focuses on building inclusive, safe, disaster-resilient, and sustainable cities and human settlements. By pursuing this goal, it ensures that everyone has access to adequate, safe, and affordable housing and that cities and communities are green, safe, inclusive, and resilient.
- Like other megacities worldwide, Shanghai faces the challenges of "urban diseases" and urgently needs to optimize the rational allocation of spatial resources, enhance the balance of resource distribution across different areas, address shortcomings in urban and community spatial governance, and improve urban safety and resilience.
- Under the SDG11 objective, Shanghai has steadily addressed the objective constraints of limited land and other resources, promoting sustainable development in cities and communities through optimized spatial resource allocation. In recent years, Shanghai has worked to build low-carbon (zero-carbon) communities, create 15-minute community living circles, and develop high-quality public spaces to foster sustainable communities for all. Sustainable urban renewal mechanisms are being established through the adaptive reuse of historical buildings, enhancing land use efficiency in older districts, and encouraging multi-stakeholder participation. Additionally, rural-urban integration is being promoted through upgraded rural infrastructure and comprehensive land improvement across the entire region.

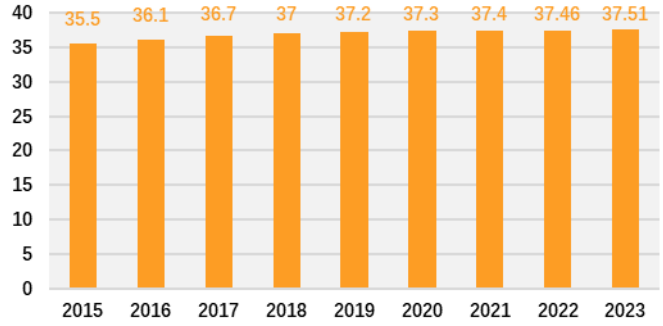
SDG11

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG11
Development of Sustainable Shared Community	Actively Building Low-Carbon (Zero-Carbon) Communities	Construction of low-carbon demonstration community in Meilong Third Village	►Per Capita Park Green Space Area ►Operational length of rail transit lines (km) ►Annual passenger volume of rail transit (hundred million trips) Number of Bus Routes	SDG11.7 SDG11.2
	Steadily Advance the "15-Minute Community Living Circle" Initiative	Block 228, Changbai Xincun Street, Yangpu District		
	High-Quality Development of Shanghai's "One River, One Creek" Public Spaces	Yangpu Riverside Public Space		
Sustainable Urban Renewal	Protect Historical Buildings and Revitalize Neighborhoods	Urban Renewal Practice of Columbia Circle	►Per Capita Housing Area of Urban Residents (square meters) ►Completion of elevator installations in existing multistory residential buildings (units) ►Number of Heritage Institutions	SDG11.1 SDG11.3 SDG11.4
	Actively Promote Area and Scattered Renewal Actions			
	Establish a Sustainable Urban Renewal Mechanism	The "Three Specialists" collaborative mechanism promotes sustainable urban renewal		
Deep Integration of Urban and Rural Development	Upgrading Rural Infrastructure		►Ratio of per capita disposable income of urban to rural permanent residents	SDG11.a
	Actively Promote Comprehensive Land Rehabilitation Across Shanghai	Integrated Development of Primary, Secondary, and Tertiary Industries in Langxia Town, Jinshan District		

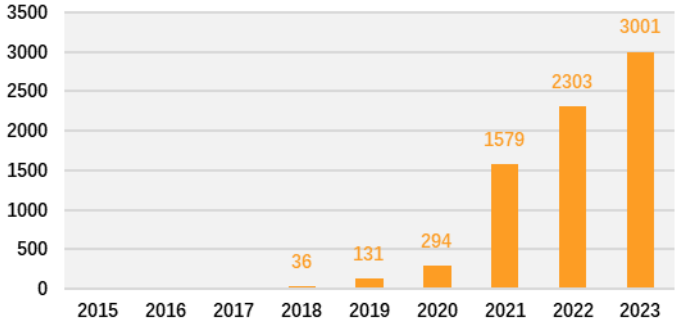
Key Indicators

Per Capita Housing Area of Urban Residents (square meters)



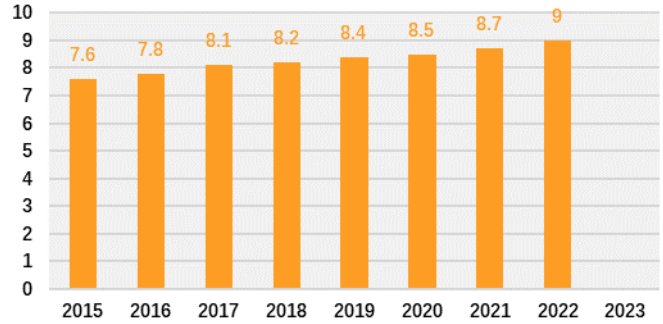
From 2015 to 2023, the per capita housing area of urban residents increased from 35.5 square meters to **37.51 square meters**.

Completion of Elevator Installations in Existing Multistory Residential Buildings (units)



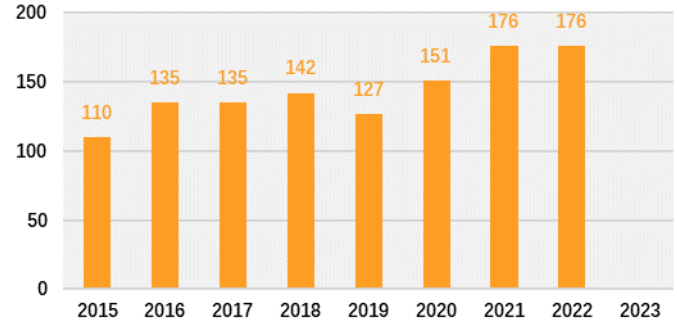
From 2015 to 2023, the completion of elevator installations in existing multistory residential buildings exceeded **7,000 units**.

Per Capita Park Green Space Area



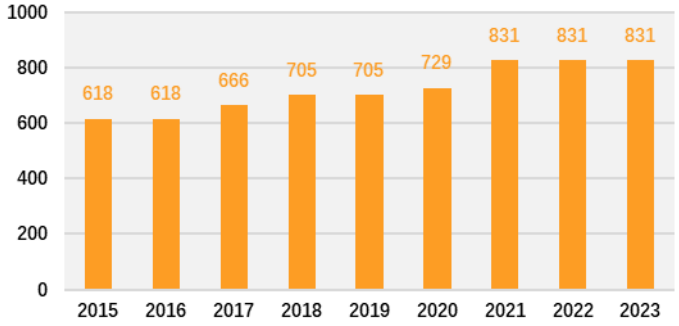
From 2015 to 2022, the per capita park green space area increased from 7.6 square meters to **9 square meters**.

Number of Heritage Institutions



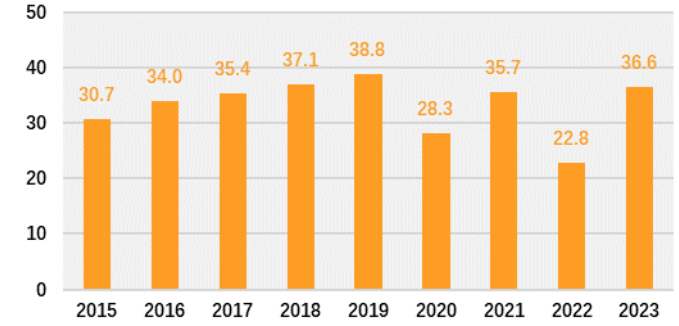
From 2015 to 2022, the number of heritage institutions increased to **176**.

Operational Length of Rail Transit Lines (km)



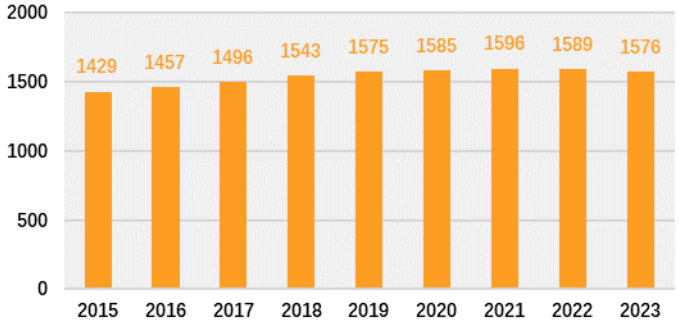
From 2015 to 2023, the operational length of rail transit lines increased from 618 km to **831 km**.

Annual Passenger Volume of Rail Transit (hundred million trips)



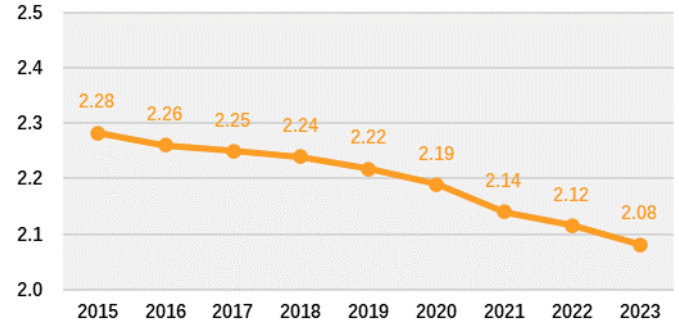
From 2015 to 2023, the annual passenger volume of rail transit increased from 3.07 billion trips to **3.66 billion trips**.

Number of Bus Routes



From 2015 to 2023, the number of bus routes remained **above 1,400**.

Ratio of per Capita Disposable Income of Urban to Rural Permanent Residents



From 2015 to 2023, the ratio of per capita disposable income of urban to rural permanent residents decreased from 2.28 to **2.08**, narrowing the gap in living standards between urban and rural areas.

Major Progress

- **Steady Progress in Building the 15-Minute Community Living Circle**

Shanghai is continuously optimizing its urban development model through the implementation of the "15-Minute Community Living Circle" concept, improving community public service accessibility, strengthening functional integration, and meeting residents' needs throughout their entire lifecycle. Through guided planning, Shanghai has established 1,600 basic community living circle units, providing one-stop comprehensive service centers and diverse small-scale public facilities to meet daily needs. Additionally, Shanghai emphasizes promoting a green and healthy lifestyle by creating numerous pocket parks, greenways, and other shared green spaces, along with fitness facilities to enhance the city's cultural space. Furthermore, Shanghai is committed to improving community living quality by advancing affordable rental housing construction, renovating old neighborhoods, expanding flexible entrepreneurial spaces, and building vibrant, livable, and work-friendly communities, thus continually improving residents' satisfaction and sense of well-being.

- **Progress in Building Low-Carbon (Zero-Carbon) Communities**

Shanghai's low-carbon (zero-carbon) community construction work started in 2014, aiming to establish a community low-carbon development mechanism based on "government guidance, social collaboration, and public participation". By encouraging and guiding communities to undertake low-carbon pilot projects, the initiative promotes residents' adoption of low-carbon concepts and lifestyle changes, fostering collective participation in low-carbon development. As of June 2024, 20 low-carbon communities in Shanghai have passed inspections, with 35 more under construction. The low-carbon community mechanism is functioning effectively, energy-saving and low-carbon technologies are widely applied, the demonstration effect of key projects is evident, and the energy-saving and low-carbon atmosphere among residents has been significantly enhanced.

- **"One River, One Creek" Transformed from "Industrial Rust Belt" to "Lifestyle Show Belt"**

After years of comprehensive environmental restoration and waterfront area planning, Shanghai's Huangpu River and Suzhou River have transformed from industrial rust belts into vibrant "lifestyle show belts," becoming world-class waterfront areas with global influence. Key districts such as "Bund-Lujiazui-North Bund" and "Expo-Qiantan-Xuhui Riverside" have seen rapid development, with emerging economic and ecological parks and functional hubs gradually taking shape. The optimization of public spaces and living environments has enhanced citizens' sense of well-being and satisfaction, while the expansion of waterfront spaces and environmental improvement projects have provided more high-quality leisure areas. Continuous improvements in green spaces and water

quality have optimized the waterfront environment, with both the Huangpu River and Suzhou River meeting high water quality standards. The development of cultural heritage through the revitalization of historical sites and new cultural facilities has effectively increased cultural influence. Additionally, large-scale cultural and sports events have been successfully held along the "One River, One Creek" waterfront, enriching the city's cultural life and enhancing its image.

- **Ongoing Revitalization and Utilization of Historical Buildings**

By extracting and interpreting the historical, cultural, and environmental features of the region, design guidelines have been developed to update the functions and restore the outstanding historical buildings in areas such as Nanchang Road in Huangpu District and Shanyin Road in Hongkou District, recreating their historical appearance. Additionally, the protection and restoration technical regulations and digital mapping standards have been revised and improved, establishing a comprehensive standard system for the entire process, with supplementary revisions to the technical documents to strengthen technical support. Since 2022, pilot projects for 3D digital mapping of historical buildings have been launched, creating digital archives and enhancing the level of information management in preservation. Lastly, through award-winning demonstrations and the construction of "craftsmanship workshops" as a cradle for artisans, the spirit of craftsmanship is promoted, facilitating the improvement of historical building preservation management and project quality. This approach enables the accumulation and transmission of restoration techniques and the inheritance and development of the artisan spirit and culture.

- **Active Urban Renewal Strategies Inject New Vitality into the City**

Shanghai has implemented a series of urban renewal strategies by innovating planning resource pathways and strengthening policy mechanisms to enhance urban functions and optimize population distribution. Through the "Four Ones" innovative measures—unified planning mainline, a single update planning map, resource allocation as one strategic plan, and high-quality full-cycle management—resources and assets for urban renewal projects have been integrated. Additionally, in key areas such as "Two Olds and One Village", 10 pilot renewal units have been selected. By adopting new models and policies, and gathering expertise from multiple fields through the establishment of the Urban Renewal Pioneers Alliance, which includes 106 member organizations, Shanghai has pooled collective wisdom and strength to promote urban renewal. These efforts ensure the effective implementation of plans and contribute to the city's high-quality development.

- **Progress Achieved in the Construction of "Four Good Rural Roads"**

Shanghai is vigorously promoting the high-quality development of rural roads, continuously advancing urban-rural integration and the "Four Good Rural Roads" initiative. From the urban-rural integration pilot in 2015 to the special actions in 2018, and the implementation of high-quality development guidelines in 2023, the Shanghai

Municipal Government has integrated "Four Good Rural Roads" into the city's rural revitalization strategy and people's projects. Through efforts in law, planning, construction, reform, services, and industrial integration, significant improvements have been made in the governance system, construction quality, and service levels of rural roads, effectively supporting rural revitalization and the improvement of rural living environments.

- **Comprehensive Land Rehabilitation Promotes Rural Revitalization and Urban-Rural Integration in Shanghai**

Guided by the Ministry of Natural Resources and based on local conditions, Shanghai has implemented a pilot for comprehensive land rehabilitation across the region. This approach involves linking suburban unit planning with implementation plans, and through government leadership and departmental coordination, it integrates funding, targets, and projects to effectively address issues such as fragmented arable land, ecological space conflicts, and difficulties in selecting sites for residential and industrial projects. These efforts contribute to comprehensive rural revitalization. The pilot integrates 356 rural construction projects across multiple departments, with an expected municipal investment of 1.44 billion yuan in land rehabilitation, leveraging a total of 25.953 billion yuan in various funds. This initiative optimizes the layout of arable land and permanent basic farmland, enhances land aggregation, eliminates small-scale land patches, builds high-standard farmland, and promotes modern agricultural development. Additionally, through various land use methods, it achieves spatial savings and productivity improvement, providing opportunities for industrial development, the growth of collective economies, and increased farmers' incomes.

Important Measures

(1) Development of Sustainable Shared Community

- **Actively Building Low-Carbon (Zero-Carbon) Communities**

Shanghai has effectively advanced its low-carbon management system by establishing organizational management mechanisms for low-carbon communities, implementing carbon emission statistics and accounting systems, and involving social organizations or enterprises. Within communities, energy-saving and low-carbon technologies are widely applied, including building energy efficiency retrofits, the development of electrified transportation infrastructure, the use of renewable energy, recycling of water resources and household waste, as well as community greening and biodiversity optimization. At the same time, Shanghai has significantly enhanced residents' awareness and participation in energy-saving and low-carbon practices by forming volunteer teams, setting up publicity facilities and channels, conducting low-carbon education and outreach activities, and publishing materials like the Low Carbon Living Guide. These efforts have contributed to the creation of a collective low-carbon living environment.

Case 15 Construction of low-carbon demonstration community in Meilong Third Village

Meilong Third Village, as a low-carbon demonstration community in Shanghai, is committed to promoting low-carbon development through various measures and innovative practices. The community has established an organizational management mechanism for low-carbon initiatives, ensuring the smooth implementation of low-carbon projects, and securing the sustainability of these projects through diverse funding sources, including government funding, corporate sponsorship, and resident investments.

Figure 21 Low-Carbon Demonstration Community in Meilong Third Village[①]

In terms of building energy efficiency retrofits, existing buildings have undergone energy-saving improvements such as upgrading doors and windows, installing exterior shading, and enhancing the building envelope. The community has also promoted the use of energy-efficient lighting and household energy-saving products. Regarding transportation, the community encourages low-carbon travel by installing electric vehicle charging stations and shared bicycle parking areas. In energy production, photovoltaic power generation systems and other renewable energy installations have been set up to optimize energy efficiency. In community greening, local plants have been added, permeable concrete has been laid, a rainwater collection system has been established, and a community greenway has been planned. For carbon emissions management, a greenhouse gas monitoring system has been deployed, with energy consumption data analysis conducted via mobile applications. In advocating for low-carbon lifestyles, the community organizes a variety of low-carbon activities and educational campaigns, encouraging residents to participate in sustainable living. In building a supportive low-carbon environment, the community has formed work groups, developed actionable development plans, and refined regulations and evaluation mechanisms to achieve near-zero emissions. The introduction of grassroots environmental advocates, the "Green Housewives", and a team of resident volunteers have further

[①]Image Source: https://sghexport.shobserver.com/html/baijiahao/2023/06/12/1049836.html

supported environmental activities. In strengthening physical low-carbon infrastructure, Meilong Third Village actively promotes the built environment in residential areas, integrating renewable energy into building design, optimizing public space lighting, and encouraging eco-friendly travel. Garbage classification and recycling rate has reached 100%, with measures like the eco-enzyme station effectively reducing wet waste. The community also boasts rich plant diversity, with green paths and landscape designs enhancing residents' leisure experience and the aesthetic appeal of the urban landscape.

- **Steadily Advance the "15-Minute Community Living Circle" Initiative**

In advancing the "15-Minute Community Living Circle" initiative, Shanghai has adopted a bidirectional, interactive framework involving city-district coordination and the active role of grassroots subdistricts and towns. This framework includes a city-level joint meeting system for unified coordination and a district-level liaison meeting mechanism to implement tasks. At the community level, subdistricts and towns creatively establish specialized work mechanisms based on community input. In planning, emphasis is placed on public participation and dynamic adjustments throughout implementation, forming a "One Blueprint, Three Meetings" planning path: a "Community Living Circle Blueprint" along with pre-consultation, mid-coordination, and post-evaluation processes. For implementation, digital and smart technologies are used to create a "Digital Community Life Circle," enhancing the convenience and quality of residents' daily lives. In social governance, there is a comprehensive push for social mobilization to foster a pattern of joint establishment, shared governance and common sharing. This includes gathering citizen feedback, empowering communities with expert support, and involving diverse stakeholders. Citizens' opinions are actively sought, community planners are introduced to provide professional design solutions, and government departments, businesses, and social organizations are guided to promote sustainable community development together. Currently, the initiative is focused on older residential neighborhoods, aiming to integrate spatial resources, address gaps in public services, and improve the quality of public spaces. The same standards for public services and spatial allocations are also applied to planning and construction in new urban areas and developments, ensuring the synchronized development and effective operation of public spaces and facilities.

Case 16 Block 228, Changbai Xincun Street, Yangpu District

Block 228 in Changbai Xincun Street was originally one of Yangpu District's first "20,000 Household" workers' villages—12 collective residential buildings constructed in the 1950s to alleviate housing difficulties for industrial workers in Shanghai. Over time, the "20,000 Household" housing in Block 228 faced numerous issues, including poor infrastructure, lack of supporting facilities, and incomplete functionality. In 2015, Shanghai launched an urban renewal project for Block 228, and by 2023, the transformed neighborhood emerged as a benchmark example of urban renewal integrated with a "15-Minute Community Living Circle".

During the renewal process, Block 228 was reimagined with the highest priority placed on enhancing residents' sense of well-being. Considering the needs of nearby communities and the unique characteristics of the 12 buildings, the "15-Minute Community Living Circle" was designed to offer an array of amenities addressing the essentials of daily life—housing, food, leisure, and

mobility. Alongside the construction of 450 rental apartments, a street-style party and community service complex was established, integrating a party and community service center, a community fitness center, the city's only comprehensive workers' village exhibition hall, and a community cafeteria. This development also spurred the built environment in residential areas and neighborhood projects in the surrounding area, significantly enhancing the quality of Block 228 and nearby neighborhoods. The original "20,000 Household" central lawn was preserved, providing a space for outdoor movies, temporary markets, children's sports, and other cultural and recreational activities, creating a lively public space.

Today, Block 228 has become a public service center radiating into neighboring areas and a popular gathering spot for high-quality community life, offering diverse "Five Comforts" functionalities and a premium "15-Minute Community Living Circle" experience for residents.

Figure 22 Community Cafeteria - Neighborly Kitchen

- **High-Quality Development of Shanghai's "One River, One Creek" Public Spaces**

Shanghai is implementing a series of comprehensive measures to make the "One River, One Creek" (Huangpu River and Suzhou River) the main artery and iconic area of urban development. These efforts include functional transformation and upgrading, reshaping the waterfront's role and appearance through urban renewal; connecting and opening riverbanks by eliminating spatial barriers and establishing pathways for pedestrian activities to link green spaces along the river; restoring the water and green ecology through waterfront green space development and pollution control of water and soil to expand and improve ecological quality. Further efforts involve preserving historical memory by protecting and revitalizing cultural heritage to sustain the city's legacy; enhancing infrastructure by building an integrated transportation and municipal facilities system to improve the human-centered environment; and establishing a cultural brand by hosting arts, sports, and festival events, positioning "One River, One Creek" as a cultural and tourism emblem for Shanghai. Together, these measures drive economic growth, cultural heritage preservation, ecological protection, and the optimization of public spaces

along the riverbanks of One River, One Creek, enhancing the city's overall image and residents' quality of life.

Case 17 Yangpu Riverside Public Space

Yangpu Riverside, a significant symbol of Shanghai's industrial heritage, has been carefully planned and transformed into a public space that combines historical character, ecological balance, livability, and smart technology. The 15.5-kilometer shoreline is divided into south, central, and north sections, with the 5.5-kilometer southern segment already developed, stretching from Qinhuangdao Road in the west to Dinghai Road in the east. Once Shanghai's—and even China's—largest industrial hub, this area has now been designed as the "Corridor of Modern Chinese Industrial Civilization." It emphasizes industrial heritage while also providing spaces for leisure, fitness, and tourism to meet the needs of the community.

Figure23 Yangpu Riverside Public Space Phase II - Tiered Benches and Open-Air Theater

The planning strategy employs a limited intervention and low-impact development approach to preserve the historical landscape of the area, creating unique features like Fisherman's Wharf, Shanghai Shipyard, and Yangshupu Waterworks, while facilitating the transformation of the riverside area into a hub for technology innovation and a demonstration base for mass entrepreneurship and innovation. In the design, an innovative concept of "seating and stage" is introduced to address the challenge posed by the floodwall. It reimagines the floodwall as a two-tiered system that meets flood prevention requirements while providing a recreational space, transforming the industrial waterfront into a vibrant urban shoreline accessible to residents.

The renovation of Shanghai Shipyard Puxi Branch focuses on the inheritance of history and industrial culture. Through innovative design, it integrates history with modernity and technology to create a popular urban waterfront space. Designers have preserved the original layout of the shipyard, highlighted industrial heritage features, and established an intrinsic connection between historical context and contemporary activities, making the project an integral part of the city's open space network.

The shift from an industrial waterfront to a cultural waterfront underscores a "people-centered" concept. The industrial layout has been transformed into a welcoming living space, resulting in a public area that combines art, recreation, education, and exhibition. Popular spots like the Sports Station, Slipway Square Café, Dock Gate Promenade, Welding Square, and Hundred Herbs Garden

have become favored by citizens and attracted modern performances and gatherings. This transformation marks the evolution from an industrial waterfront to a cultural waterfront, enhancing the conversation between the cultures of the Puxi and Pudong riverbanks.

(2) Sustainable Urban Renewal

- **Protect Historical Buildings and Revitalize Neighborhoods**

Through systematic preservation and organic renewal, Shanghai has not only conserved a significant number of outstanding historical buildings and cultural relic protection units but also integrated ancient streets and alleys with modern life in the guidance of micro-renovations and the functions and business forms. These efforts have collectively contributed to creating an urban community that respects history while embracing the future, enhancing both the quality of life for residents and the cultural appeal of the city.

Case 18 Urban Renewal Practice of Columbia Circle

Columbia Circle, located at No. 1262 West Yan'an Road, Shanghai, is an urban renewal project blending creative office spaces with commercial culture. This open block lies at the intersection of the Hengfu, Yuyuan Road, and Xinhua Road historical and cultural preservation areas. With a total area of approximately 48,000 square meters, it includes three century-old historic buildings and several repurposed industrial structures. Formerly the office and research & production campus of the Shanghai Institute of Biological Products, the site was transformed over a two-year period following its relocation. Today, it reopens to the public as an all-weather, open public space, becoming a flagship project for Shanghai's organic urban renewal. In the urban renewal process, special attention was paid to "architectural archaeology" as a foundation for preservation, respecting, and retaining the original style of historic buildings such as the Columbia Country Club. Additionally, thoughtful design was employed to revitalize these historic buildings and imbue them with new functions. For example, the Columbia Country Club became home to Shanghai's first Tsutaya Books. While preserving historic structures, emphasis was also placed on enhancing building safety and comfort to better integrate the buildings into modern life. The historical background of the Sun Ke Villa was thoroughly researched, with original design plans and materials confirming that the villa was indeed designed by Sun Ke. In terms of functionality, office spaces are primarily located on the middle and upper floors of the buildings, while the ground floor features distinctive dining options and creative commercial spaces. The former gymnasium was transformed into an indoor venue for commercial activities. The project, through commercial research and positioning planning, incorporated the planning concept of a "15-minute community living circle", creating an open public space that combines offices, commerce, exhibitions, and leisure. Personalized operations, maintenance, and management, such as special exhibitions and outdoor music performances, injected interactivity and a sense of fashion into the block, making it a catalyst for vibrant energy.

The successful transformation of Columbia Circle not only preserved the historic fabric and human scale of the block but also stimulated its vitality through functional transformation, operations, maintenance, and management. It has become an open, multi-purpose "urban living room" combining business, culture, and office functions. This case offers valuable experience and

insights for the transformation and renewal of old industrial, research, and office parks in central urban areas.

Figure 24 Columbia Country Club Before and After Renovation

- **Actively Promote Area and Scattered Renewal Actions**

Urban renewal in Shanghai is centered around creating a unified city-wide renewal blueprint and implementation plan. The focus is on defining priority areas and tasks for short- to medium-term urban renewal, covering key functional zones such as residential, commercial, industrial, public centers, and open spaces. Through delineating urban renewal units and project advancement, Shanghai has launched exemplary renewal cases that serve as models for others. At the same time, the performance evaluation and classification of industrial land are being actively promoted to facilitate the redevelopment of underutilized land. The formulation and implementation of an enhancement action plan for business building renewal aims to promote the high-quality development of office buildings in the city.

- **Establish a Sustainable Urban Renewal Mechanism**

Shanghai has built a diversified and integrated platform for urban renewal implementation, promoting cooperation between city districts, inter-departmental coordination, and market participation to ensure the orderly advancement of renewal projects. The Shanghai Urban Renewal Pioneers Alliance further integrates resources and forces from various sectors, forming a model of urban renewal guided by government leadership, market-driven operations, and public participation. Furthermore, Shanghai strengthens policy training, publicity, and enforcement, conducts timely evaluations, and promotes policy integration and innovation to ensure effective implementation and continuous optimization.

Case 19 The "Three Specialists" collaborative mechanism promotes sustainable urban renewal

Shanghai has pioneered the establishment of a collaborative mechanism integrating Responsible Planners, Responsible Architects, and Responsible Evaluators (hereinafter referred to as the "Three Specialists" assuming responsibilities system), which combines international standards with local insights. This system serves as a cohesive framework and fundamental institutional innovation to drive sustainable urban renewal in Shanghai, reinforcing the city's role as a leading example in advancing the modernization of China. Since 2023, the "Three Specialists" assuming responsibilities system has been piloted in several key renewal areas, such as the Second Façade of the Bund, with pilot plans developed, policy documents issued and implementation actions initiated.

1. Responsible Planners coordinate the overall vision and enhance spatial design. Generally, they align with overarching plans, conduct a comprehensive analysis, and clarify the strategic direction, providing Responsible Architects and Responsible Evaluators with clear functional positioning, spatial support, and design guidance. For instance, the block in Bund's Huqiu Road, Huangpu District is envisioned as an iconic world-class financial and cultural hub. The design preserves the Bund's spatial DNA and core functionality, plans for vibrant neighborhoods, and enhances spatial connectivity, aiming to make it "The Crown of the Bund at the River's Convergence". Specifically, Responsible Planners oversee renewal projects, guide implementation, and define boundaries, with a particular focus on supporting and coordinating the creative work of Responsible Architects. In Hongkou District's Ruikangli residential complex, the waterway pattern featured "one bay, two islands, intertwined blue and green, and the coexistence of the real and the virtual" is leveraged to highlight the historical lineage of 36 century-old theaters like Hongkew Cinema and Jiaxing Grand Theatre, elevating the cultural and creative potential of "1933 Old Millfun". Collaborating with Responsible Architects, Responsible Planners explore design guidelines for urban waterfronts, flood protection walls, water-accessible platforms, and pedestrian bridges, with an overall vision of creating "Peninsula Music Valley - Waterfront City".

2. Responsible Architects exhibit design empowerment and create exceptional projects. Enhancing design to inspire dreams and enrich lives, these architects reshape spatial layouts, revitalize spaces, and create value through top-tier architectural designs. They address the mismatch between building codes and urban renewal demands by removing crucial obstacles and proposing comprehensive solutions. For example, on East Nanjing Road in Huangpu District, the architect-led plan centers around Peace Hotel, integrating surrounding historic buildings like the Whiteaway Laidlaw Commercial Building, refining the functions of business formats, activating courtyards and alleyways, and preserving the Bund's unique feature of "dense layout, human scale, street enclosure, continuous façade, and cohesive character", with the vision of creating a "Boat of Peace, Heart of Exquisite Charm". Additionally, the architects make overall arrangements for firefighting ring-shaped assess routes and elevated platforms, enhance fire protection measures, and address the challenge of insufficient spacing for fire safety in historic buildings.

3. Responsible Evaluators emphasize comprehensive assessments, focusing on economic estimation and value enhancement. They plan functional business formats, balance economic estimations, control costs, and explore confirmation of ownership, valuation, and notation & circulation of digital off-the-plan properties, using virtual representations to reduce actual investments and preliminary costs. They also provide optimization suggestions for planning studies and architectural design proposals, assisting the government and project implementers in assessing economic feasibility and achieving dynamic financial balance throughout the project lifecycle. In the pilot project for the Second Façade of the Bund in Huangpu District, Responsible Evaluators

explored alternatives to government-led land acquisition and renewal, such as self-renewal and preservation-based renewal. This approach reduced the estimated acquisition cost for neighborhoods like 166# from RMB 31.4 billion to RMB 20 billion. Besides, by extending the property retention period and utilizing various supporting policies, they ensured that the net cash flow from daily operations could cover current interest costs, achieving long-term financial balance throughout the project lifecycle.

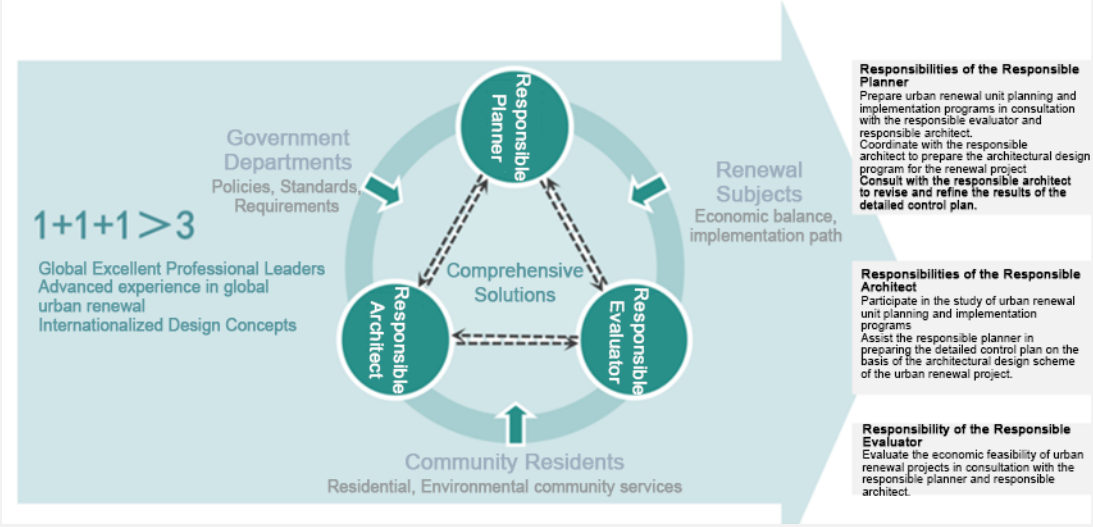


Figure 25 Schematic Diagram of the "Three Specialists" Collaborative Mechanism

(3) Deep Integration of Urban and Rural Development

● Upgrading Rural Infrastructure

1. Uphold the principle of "One Blueprint to the End" and advance the standardized construction. Shanghai has implemented two phases of a 10-year rural road construction plan through top-level designs and standardized management. This approach has strengthened the construction of safety and supporting facilities and established mechanisms for quality and safety supervision as well as credit evaluation to enhance the construction and management of rural roads. 2. Insist on the approach of "Quickly Fixing Two Key Loopholes", and facilitate long-term management. Shanghai has deepened the reform of the rural road management and maintenance system, achieving full implementation of the "Road Chief System". The city has advanced the use of information technology in management and introduced innovative maintenance models. Notably, significant progress has been made in digital governance and the informationization construction of the "One Road, One Archive" initiative. Exemplary cases include Jinshan District's "Smart Road Chief" and Qingpu District's automated testing system, both of which have been recognized as model examples by the Ministry of Transport.

Figure 26 Lianhu Road, Lianmin Village, Chuansha New Town

3. Adhere to the strategy of "Three Improvements for Upgrading and Renovation" and focus on promoting scientific maintenance. By introducing funding subsidy policies and the Technical Guidance for Upgrading and Renovation of Rural Roads, Shanghai has completed the upgrading and renovation of 2,400 kilometers of rural roads. This has enhanced the precise management of road safety and traffic order, strengthened bridge safety and professional staffing, and encouraged the use of green and energy-saving technologies, thereby improving the quality, management, and maintenance standards of rural roads. 4. Follow the proposal of "Four-in-One Quality Service", and emphasize the advancement of high-quality operations. Shanghai has achieved full coverage of real-time bus information services, optimized the public transport network, constructed highway rest stations, installed charging infrastructure, and developed the "Rural Roads +" model. These efforts have improved public transport services, enhanced the service functions and added value of rural roads, promoted the integration of urban and rural transportation systems, and driven economic development along the routes, maintaining the AAAAA-level standard of urban and rural transportation integration.

- **Actively Promote Comprehensive Land Rehabilitation Across Shanghai**

In terms of policy and regulations, relevant departments in Shanghai have formulated and issued supporting implementation documents, such as the Administrative Measures for Comprehensive Land Rehabilitation in Shanghai (Trial) and the Guidelines for Comprehensive Land Rehabilitation in Shanghai (Trial). These documents further refine management requirements and work procedures, strengthen organizational coordination, and enhance policy support and guarantees. Additionally, the city has released the

Guiding Opinions on Simultaneously Optimizing and Implementing Blue Line Adjustments for Small and Medium-sized Waterways in the Context of Comprehensive Land Rehabilitation and the Notice on Promoting Pilot Projects for Forest-Water Complex Construction in Shanghai and has explored the use of a portion of land transfer fees at the municipal level to specifically support pilot projects for comprehensive land rehabilitation. In terms of implementation mechanisms, the General Office of the Shanghai Municipal People's Government issued the Notice on Establishing the Joint Conference for Comprehensive Land Rehabilitation in Shanghai, with a senior municipal leader serving as the convener. Twelve departments, including the Shanghai Municipal Commission of Agriculture and Rural Affairs, Shanghai Municipal Development and Reform Commission, Shanghai Municipal Finance Bureau, Shanghai Municipal Bureau of Water Resources, and Shanghai Landscaping and City Appearance Administrative Bureau, are members of the conference. This has established a city-level coordination and promotion mechanism with clearly defined rules for the operation of joint meetings. In addition, the city has built a service platform for social capital participation in comprehensive land rehabilitation. Agricultural districts and pilot towns have also set up relevant coordination and implementation bodies as needed.

Case 20 Integrated Development of Primary, Secondary, and Tertiary Industries in Langxia Town, Jinshan District

Langxia Town in Jinshan District is an eco-agricultural town on the outskirts of Shanghai, serving as the core area of Shanghai's first national-level modern agricultural industrial park. It is also one of the two pilot projects for comprehensive land rehabilitation at the ministerial level in Shanghai. The specific practices are as follows:

1. Implement the "Building-Based Pig Farming" practice to save and intensify land use. Through strategic planning and the coordination of spatial and land resources in the surrounding areas, Langxia Town conducted thorough research and identified underutilized, scattered, and inefficient agricultural land that could be reclaimed. The town replaced such land with a centralized pig farm (Songlin Pig Farm), covering 102 mu (approximately 16.8 acres) of facility agricultural land. The farm produces 80,000 high-quality pigs annually, meeting the district's total pig farming quota. In contrast, traditional flat-roofed pig farming would require 640 mu to achieve the same output. This practice embodies the concept of "raising the most pigs with the least land", significantly saving and intensifying land resources, improving land-use efficiency, and promoting the concentration, quality improvement, and scale expansion of arable land. Moreover, the modern, intelligent, and eco-friendly farming model not only has strong disease prevention capabilities and a reliable supply but also ensures zero environmental pollution.

2. Innovate the land use with the "Standard Land Module" to ensure the implementation of integrated planting and farming facilities. In the process of planning unit-based villages in the outskirts, Langxia innovatively proposed the "Standard Land Module", developing a land supply model that combines five types of land: facility agricultural land, construction land, permanent basic farmland, forest land, and general arable land. This model better accommodates the spatial layout and practical implementation needs of modern agricultural projects. The plan integrates the livestock farming facilities at Songlin Ecological Building-Based Pig Farm with the surrounding vegetable production bases, such as Haofeng and Bohai, reasonably balancing the scales of planting and livestock farming. Additionally, it coordinates the necessary infrastructure and ecological

protection measures. In total, 120 mu of facility agricultural land was designated (including 102 mu for pig farming and 18 mu for a proposed glass greenhouse), 5.4 mu for construction land (for the R&D center), 8,877.69 mu for permanent basic farmland (existing vegetable fields for biogas slurry absorption), and 123 mu for fruit or forest land. The project maximizes the use of pig manure as both fertilizer and energy, creating a green, circular agricultural model that integrates planting and livestock farming. The collected manure undergoes anaerobic fermentation to produce biogas, which is used for electricity generation to meet the power needs of the pig farm staff. The biogas slurry is piped to agricultural fields and vegetable bases as organic fertilizer. Additionally, the manure treatment system utilizes solid-liquid separation equipment to process the solid manure, which is then provided free of charge to vegetable bases as organic fertilizer. The pig farm generates 100,000 tons of biogas slurry annually, produces 3,000 tons of organic fertilizer, and generates 3.6 million kWh of electricity per year, serving nearly 9,000 mu of farmland within a 2-kilometer radius. This has reduced fertilizer usage by about 50%, achieving environmentally low pollution, high resource utilization, and an eco-friendly green development model.

SDG13: Climate Action

SDG13

- SDG13 - Climate Action: Committed to taking urgent action to combat climate change and its impacts. Through the implementation of this goal, Shanghai effectively drives the transformation of systems in energy, industry, transportation, food, agriculture, and forestry, reducing the risks brought by the uncertainties of climate change to manageable levels.
- Like other cities around the world, Shanghai faces disaster risks from climate change, including high temperatures, cold waves, heavy rainfall, floods, droughts, and storms. These risks pose significant threats to urban operations and governance and may jeopardize the safety and property of residents.
- In recent years, Shanghai has taken proactive measures in the meteorological sector to help the city address the challenges of climate change. These measures include building climate monitoring infrastructure, conducting foundational research on climate change and adaptation strategies, and enhancing meteorological disaster risk prevention services, aiming to promote climate change risk management. In addition, efforts have been made in ecological restoration, the development of sponge city initiatives, and agricultural land protection to improve the adaptation capabilities of sectors like transportation, energy, and health to climate change. Moreover, initiatives like integrating meteorology into school curricula, public outreach through meteorological science education, and organizing meteorological festivals have increased public engagement in combating climate change.

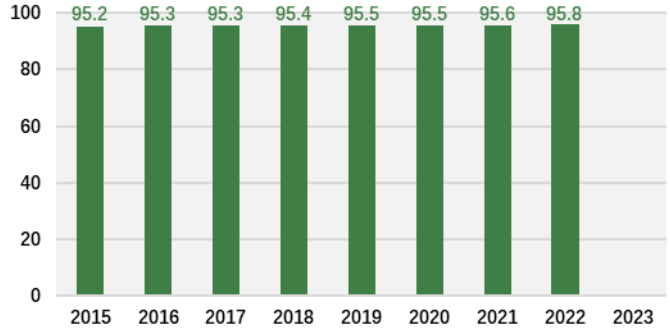
SDG13

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG13
Climate Change Risk Management	Promote the construction of climate monitoring infrastructure	Chongming Dongtan Greenhouse Gas Observatory	►Comprehensive climate change observation network (score) ►Acid rain frequency (%) ►Precipitation pH ►Total sulfur dioxide emissions (in ten thousand tons) ►Air quality index (%)	SDG13.1
	Continue to carry out basic research on climate change			
	Actively carry out research on climate change adaptation strategies			
	Improve the meteorological disaster risk prevention service system	Typhoon "Doksuri" monitoring and early warning linkage		
Capacity building for climate change adaptation	Delineate an ecological red line and strengthen ecological restoration	Deepen the ecological "green" foundation and highlight the "dual brand" of Chongming climate	►Climate change monitoring and impact assessment capacity (score) ►Carbon market quota transaction volume (in 100 million yuan)	SDG13.1 SDG13.2
	Improve urban flood control and drainage systems			
	Promote the construction of the sponge city and urban green spaces	Meteorological services empower the construction of ecological civilization in Fengxian		
	Carry out farmland protection and ecological environment maintenance			
	Strengthen capacity building in different sectors to adapt to climate change			
Public participation in combating climate change	Launch a series of innovative competitions for popularizing meteorological science on campus in Shanghai		►Number of new energy vehicles promoted (in ten thousand vehicles)	SDG13.3
	Create diverse platforms for "Last Mile" meteorological science popularization			
	Organize key activities for "Science Literacy Day", "Meteorological Day", and "Science and Technology Festival"	Support "Double Reduction" by Hosting the Shanghai Campus Meteorological Science Popularization and Innovation Competition		
	Build an alliance of schools for meteorological science popularization and education			

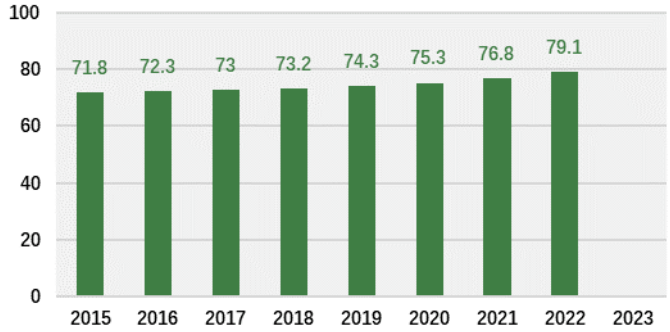
Key Indicators

Comprehensive climate change observation network (score)



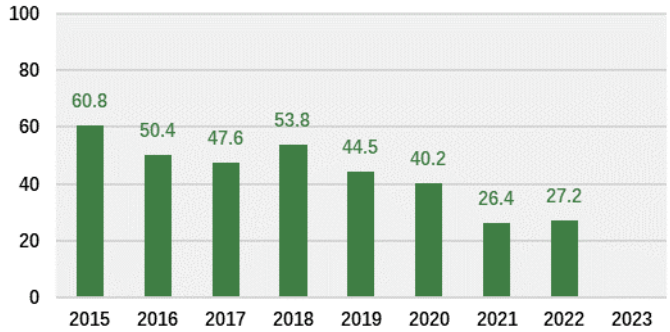
From 2015 to 2022, the comprehensive climate change observation network maintained a score above **95**.

Climate change monitoring and impact assessment capacity (score)



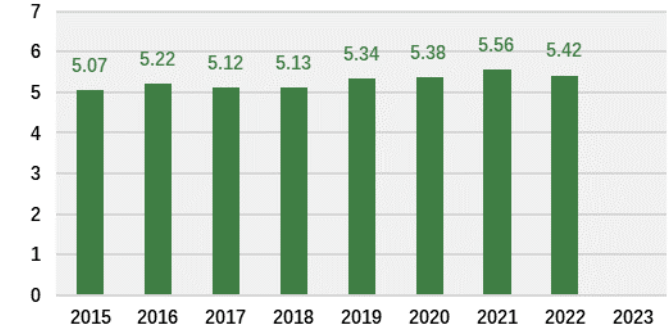
From 2015 to 2022, the climate change monitoring and impact assessment capacity increased from **71.8** to **79.1** points.

Acid rain frequency (%)



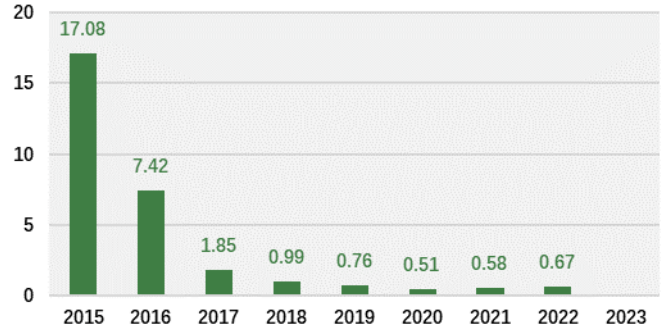
From 2015 to 2022, the frequency of acid rain decreased from 60.8% to **27.2%**.

Precipitation pH



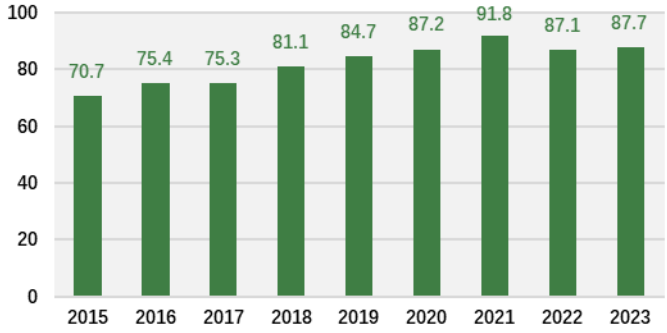
From 2015 to 2022, the precipitation pH increased from 5.07 to **5.42**.

Total sulfur dioxide emissions (in ten thousand tons)



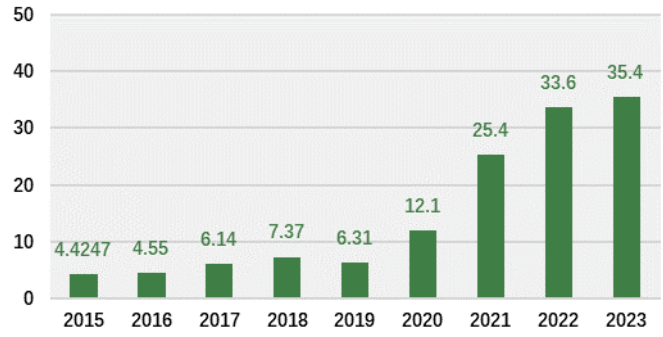
From 2015 to 2022, total sulfur dioxide emissions decreased from **170,800 tons** to **6,700 tons**.

Air quality index (%)



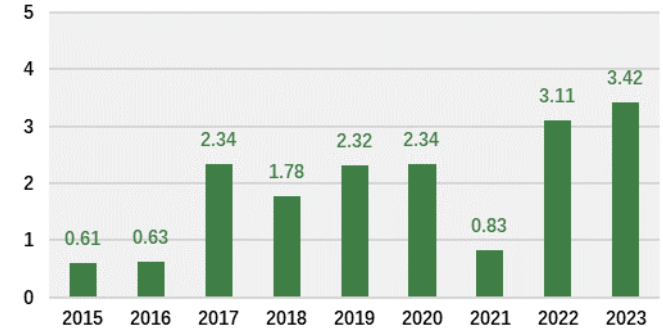
From 2015 to 2023, the air quality index improved from 70.7% to **87.7%**.

Number of new energy vehicles promoted (in ten thousand vehicles)



From 2015 to 2023, the number of new energy vehicles promoted increased **7 times**.

Carbon market quota transaction volume (in 100 million yuan)



From 2015 to 2023, the transaction volume of Shanghai's carbon market quota increased **4.61 times**.

Major Progress

- **Effective enhancement of climate change monitoring capacity**

Shanghai has long had a relatively dense network of surface meteorological observation stations. However, these stations have mainly focused on single factors such as rainfall, with a predominant use of tipping-bucket rain gauges, and there were relatively few stations monitoring climate change factors such as temperature, humidity, air pressure, wind, and greenhouse gases. To address issues such as the limited range of monitoring factors and insufficient scientific methods, Shanghai meteorological departments have focused on increasing station density and upgrading equipment. Efforts have included the gradual upgrading and renovation of rainfall-only stations and outdated sites, expanding the range of monitored factors. Rainfall monitoring methods have been optimized by transitioning from tipping-bucket rain gauges for liquid precipitation to multi-phase precipitation weighing observations. Additionally, new greenhouse gas and atmospheric baseline observation stations have been established. Through years of effort, Shanghai's climate change monitoring capacity has significantly improved. The proportion of multi-factor stations continues to rise. By the end of 2023, stations monitoring four or more factors accounted for 91.4% of the total. The city has built 12 multi-phase precipitation monitoring stations, and 12 automatic weather phenomenon monitoring stations, and developed a video recognition algorithm for precipitation levels. One national climate observatory has been approved, while two greenhouse gas stations and one national atmospheric baseline station are under construction.

- **Continuous updates of climate change data**

Since 2014, Shanghai has been publishing the Shanghai Climate Change Monitoring Bulletin, which analyzes the patterns of hazardous weather changes based on long-term climate monitoring data. The bulletin comprehensively reveals climate change trends since 1961 and is updated annually. Meanwhile, the city has continuously improved its climate change scenario prediction datasets, increasing the resolution from 25 km to 4 km. This provides technological support for Shanghai's efforts to address climate change in fields such as urban planning, energy, water supply, and flood control. These measures ensure that climate change response strategies are both scientifically sound and effective, offering accurate scientific data and high-quality service products for national and regional climate change responses.

- **Enhanced climate change impact and risk assessment capacities**

Shanghai has made significant progress in climate change impact assessment and decision-making services. The city has developed a series of meteorological condition prediction models and risk assessment tools targeting key areas such as energy, flood control, transportation, infrastructure, and public health. Additionally, a disaster early warning system and forecasting platform have been established. Notably, multiple climate

change assessment reports have been published for the Yangtze River Delta region in East China, providing scientific evidence to support the safe operation of the city. Moreover, the city's meteorological disaster and climate risk management capacity has been significantly enhanced. A government-led meteorological disaster defense system has been established, enabling rapid response through the early warning release system. Cooperation between the insurance and meteorological sectors has been deepened, and meteorological disaster risk surveys have been conducted, alongside the implementation of defense measures. These efforts have effectively enhanced the city's comprehensive ability to respond to climate change and meteorological disasters.

- **Continuous enhancement of climate disaster risk early warning and emergency response capabilities**

The Shanghai municipal government has addressed the issues in the existing meteorological disaster risk early warning system by integrating information dissemination channels and leveraging digital transformation initiatives. A system for emergency early warning information release and the "Meteorological Prophet System" have been deployed. After several years of implementation, the coverage of meteorological disaster early warning information has significantly increased to 98.94%. In the meteorological service benefit assessment, the satisfaction rate among relevant industry management departments has reached 93.8, showing a steady annual improvement. This has effectively enhanced the precision governance of the megacity and the level of intelligent applications in key areas. Shanghai has strengthened its disaster prevention mechanism through digital transformation, cooperated with relevant departments to improve the emergency linkage mechanism, established a "Meteorological Prophet System", revised the Shanghai Meteorological Disaster Emergency Plan, achieved extensive coverage, and refined management of meteorological disaster early warning information. At the same time, it established a "six-stop" mechanism for major meteorological disasters, effectively improving the response capabilities of the government and the public. After several years of implementation, the meteorological service benefit assessment shows that the satisfaction level for industry management departments has reached 93.8 points, and has improved year by year, showing that Shanghai has achieved remarkable results in enhancing its capacities to respond to meteorological disasters.

- **Continue to strengthen ecosystem protection and restoration**

By delineating an ecological red line, Shanghai has established a "one area with multiple points" spatial pattern, strengthened the protection of nature reserves, wetlands, and water source reserves, and completed surveys of terrestrial wildlife and key protected wild plant resources. At the same time, it implemented programs for biodiversity monitoring and wetland protection and restoration. Ecological supervision has been strengthened, and the rectification of reserves' issues and the inspection of reserves have been promoted through the "Green Shield" Action Plan and the satellite remote sensing technology. By 2023, Shanghai has achieved remarkable results in ecological construction.

Forest coverage rate, river, and lake water surface rate, the number of parks, the green coverage ratio of built-up areas, and the per capita park green space area have all increased significantly, reflecting the continued progress in the construction of urban ecological civilization.

- **The flood control engineering system and the reservoir-type water source pattern initially formed**

Shanghai has built a four-line flood control engineering system including seawalls, river embankments, regional waterlogging control, and urban drainage, which has significantly improved regional flood control and waterlogging addressing capabilities, successfully withstood multiple extreme weather events, and protected the safety of people's lives and property, as well as the order of urban operation. In terms of water supply, through the construction of water sources in reservoirs, a "water supply that centers on two rivers (Yangtze River and Huangpu River) with multiple supplementing sources" has been formed, which has effectively solved quality-induced water shortage and ensured water supply safety and water quality standards. The total water supply scale has reached 13.345 million cubic meters per day, significantly improving urban water resource security capabilities.

- **Further strengthen capacity building for climate change adaptation in the health sector**

Shanghai has achieved remarkable results in coping with the impact of high-temperature weather and air pollution on health: by monitoring high-temperature heat stroke cases and health education work, it has successfully reduced the mortality rate of high-temperature heat stroke; at the same time, it has established a monitoring network for city-wide air pollution and population health, providing a large amount of continuous multi-year data for studying the relationship between meteorology, ambient air quality and health, showing that Shanghai's attention to and response to extreme climate events and environmental problems in the field of public health have been effective.

- **Continue to strengthen climate change science popularization and public participation**

In the new era of high-quality development of national education, science and technology, and talents, the Shanghai Municipal Government actively responds to the challenges of global climate change. Through the joint system of science popularization work, it uses important science popularization festivals and activities to integrate resources, implements opening up and cooperation, serves people's livelihood, and organizes climate change-themed scientific popularization and meteorological science popularization competitions on campus, promotes the popularization of scientific research achievements, builds a meteorological museum IP system, carries out science popularization on climate change and carbon peaking and carbon neutrality, raises public

awareness, and encourages public participation. At the same time, Shanghai launches a youth meteorological brand competition, creates a diversified science popularization position with Shanghai Meteorological Museum as the core; explores the 24 solar terms promotion under climate change, and organizes climate change communication brand activities in conjunction with "World Meteorological Day", "Shanghai Science and Technology Week", etc. Also, builds an expert database for popularizing meteorological science, broadens the channels for the public to obtain knowledge, improves scientific literacy, promotes media cooperation, and improves communication effects.

Important Measures

(1) Climate Change Risk Management

- **Promote the construction of climate monitoring infrastructure**

In the evaluation of promoting meteorological modernization and high-quality development, the Shanghai Meteorological Service takes the density and monitoring capabilities of surface meteorological observation stations as key indicators, and ensures financial support through engineering projects and self-raised funds, achieving the full coverage of meteorological observation stations throughout the city except for the central urban area. It has also established a multi-site, multi-functional national climate observatory centered on the Baoshan Basic Station. At the same time, the Dongtan Greenhouse Gas Station has been actively upgraded and background observation tests have been carried out to strengthen the impact of meteorological services on the sustainable development of Shanghai.

Shanghai has also promoted the construction of the Shanghai National Climate Observatory. By integrating the century-old observation data of the Xujiahui Observatory and the Shanghai Comprehensive Meteorological Observation System, a comprehensive three-dimensional observation system has been built, focusing on sea and land meteorological observations, aiming to reveal the evolution laws of sea and land weather and climate and its impacts on coastal cities and provide basic data for meteorological disaster research and early warning. The observation content covers many aspects, and the research directions include greenhouse gas monitoring, sea-land-air interaction, and its impact on climate, as well as the impact of climate on the governance of megacities. Since its establishment in 2022, the observatory has initially formed a comprehensive platform for scientific research, serving platforms, opening up and cooperation and international talent training, established a comprehensive monitoring system and climate monitoring data set, effectively supporting Shanghai's carbon peaking and carbon neutrality goals and sustainable development strategy.

Case 21 Chongming Dongtan Greenhouse Gas Observatory

The Dongtan Atmospheric Comprehensive Observation Station in Chongming, Shanghai (referred to as Dongtan Station) is located in the core area of the Dongtan Birds National Nature Reserve in the easternmost part of Chongming County, Shanghai. In January 2019, it started greenhouse gases (CO2, CH4, and N2O) observation. According to the evaluation of the China Meteorological Administration, the observation data of this station represent the background concentration of greenhouse gases in an area of about 100,000 square kilometers in Shanghai and the surrounding Suzhou-Wuxi-Changzhou and Hangzhou-Jiaxing-Huzhou city circles. It complies with international observation standards and can represent Shanghai in participating in domestic and international comparative assessments of greenhouse gases. The greenhouse gas observation data of each station will subsequently provide the basis for statistical accounting of CO2 emissions, carbon sink survey and reserve assessment, ecological environment protection and restoration carbon sink effectiveness monitoring and evaluation, etc., and provide evaluation basis and basic data for regional greenhouse gas research and application.

Figure 27 Shanghai Chongming Dongtan Atmospheric Comprehensive Observation Station [1]

[1] Image source: Xinmin.com, https://wap.xinmin.cn/content/31532970.html

- **Continue to carry out basic research on climate change**

Shanghai has compiled and released the Shanghai Climate Change Monitoring Bulletin for 11 consecutive years. Based on long-sequence city-wide climate monitoring station network data, Shanghai analyzes the frequency and intensity changes of heavy precipitation events, the number of typhoons, high temperatures, and other disastrous weather, comprehensively reveals the latest scientific facts about climate change in Shanghai since 1961 from the perspectives of the atmosphere, ocean, vegetation phenology, seasonal changes, and climate change influencing factors, and publish the Shanghai Climate Change Monitoring Bulletin year by year to provide the public with the latest monitoring and analysis results of climate change status.

Shanghai continues to optimize the quality of its estimated data sets. It has completed the research and development of the temperature and precipitation scenario prediction data set in the 25 km China region. Based on the simulation performance evaluation of basic meteorological elements and extreme weather and climate events, the data set focused on evaluating the simulation capacities of extreme climate events that affect human health such as high temperature and heatwaves, and the data set has been promoted and applied to the SWEDRI and relevant provincial and municipal meteorological services in the region, achieving good service results. Based on observation grid data and CMIP6 multiple model scenario data sets, it has completed the error correction of the CMIP6 scenario prediction data set and established a multi-model East China regional grid prediction data set that can be directly used for impact assessment models and climate predictions.

- **Actively carry out research on climate change adaptation strategies**

The Shanghai Municipal Bureau of Ecology and Environment, together with more than ten committees and bureaus including the Shanghai Meteorological Service, jointly compiled and issued the Shanghai Action Plan for Adapting to Climate Change (2024-2035). It promotes the reform and innovation of the Key Laboratory of Cities' Mitigation and Adaptation to Climate Change of the China Meteorological Administration in Shanghai, and strengthens system construction and open fund management; strengthens communication among urban teams in the East China region to adapt to climate change, and officially publish the Assessment Report on Climate Change in East China: 2020; strengthens national and provincial cooperation in response to climate change, and participates in and establishes a youth innovation team on climate change of the China Meteorological Administration. Shanghai actively carries out research on the impact of climate change on various areas of megacities and adaptation strategies; carries out research on urban waterlogging risk assessment and early warning demonstration for underground power transmission and transformation in Shanghai, and completes the framework construction of the early warning system and the construction of typical precipitation case modules; carries out a study on the impact of climate change on the design load of air conditioning in Shanghai, and evaluates the impact of changes in temperature and humidity conditions in Shanghai on the design temperature and relative humidity of air conditioning in winter; explores and carries out experimental research on

the impact of weather and climate on influenza viruses; carries out the analysis of the characteristics of extreme climate changes in Shanghai during "extreme hot" and "extreme cold" days in the past 30 years, studies its impact on agriculture, and conducts research on the impact of climate change on agricultural climate resources such as sunlight; carries out spatial and temporal dynamic monitoring and analysis of the urban impermeable layer and thermal environment in Shanghai in the past ten years, and analyzes the spatial and temporal dynamic characteristics and evolution trends of the thermal environment in large cities.

- **Improve the meteorological disaster risk prevention service system**

Shanghai, based on risk census results, carries out meteorological disaster risk zoning down to the streets and towns; provides short-term risk assessment services for meteorological disasters and carries out risk assessment services down to the streets and towns in central urban areas; provides refined decision-making services for high-impact areas in central urban areas in response to major disastrous weather. It promotes the district-level meteorological prophet system to provide meteorological disaster risk warning services to streets and towns, and carries out the construction of safe demonstration communities for disaster prevention and mitigation; carries out meteorological risk and climate carrying capacity assessment services to provide a guarantee for territorial spatial planning and major project construction. Combined with data from the automatic meteorological observation stations in Shanghai, lightning monitoring data, refined numerical forecast products, and construction site data, an automatic early warning model of meteorological impacts for construction sites is developed, and the visualization and application of model prediction results in the urban refined management meteorological forecasting system is realized. Before and during disastrous weather, intelligent analysis and judgment of potential construction risks, personnel safety risks, and project quality risks at the construction site can be carried out, so as to provide data support for construction production decision-making, enhance the energy level of engineering intelligent construction and management, and ensure construction safety.

Case 22 Typhoon "Doksuri" monitoring and early warning linkage

On July 27, 2023, affected by Typhoon Doksuri, Shanghai encountered thundershowers, and heavy rainfall and strong winds occurred in some areas. The Shanghai Meteorological Departments responded quickly, as directed by the Municipal Party Committee, Municipal Government, and China Meteorological Administration, entered anti-typhoon work status in advance, initiated and upgraded emergency response, and issued notices to strengthen service work. The leaders of the Department took command at the front, and all employees stayed at their posts and closely monitored weather changes, providing timely notification of information to ensure the meteorological service and guarantee the safe operation of Shanghai.

Facing the impact of Typhoon Doksuri, the Shanghai Meteorological Departments adopted a series of efficient and targeted response measures: planned work in advance, clarified the service rhythm, gave full play to the role of the Asia-Pacific Typhoon Collaborative Research Center, and submitted monitoring and analysis reports to the municipal government in a timely manner; built an "active interactive linkage" mechanism between departments to strengthen information

integration and consultation and analysis, achieving "no time difference" meteorological services; used the smart meteorological system to improve service sophistication and support "Integrated Online Management" of the city; relied on the scientific research strength of Asia-Pacific Typhoon Collaborative Research Center and Shanghai Typhoon Institute to provide scientific and technological support and optimized the typhoon monitoring and forecasting information platform; widely disseminated meteorological information through multiple channels, expanded public services and science coverage, ensuring the safe operation of Shanghai and effective flood prevention and typhoon prevention deployment.

During Typhoon Doksuri, the Shanghai Meteorological Departments successfully implemented monitoring, forecasting, and early warning work, ensuring the timely release of information and the rapid implementation of flood prevention instructions. The implementation of the Shanghai Meteorological Disaster Prevention Measures has established the role of meteorological disaster early warning as the primary line of defense in disaster prevention and mitigation. Education and other departments have taken corresponding measures to suspend work and classes based on the early warning. At the same time, the meteorological "Prophet" system and related plug-ins provided digital support for the city's "Integrated Online Management", providing key decision-making support information for the municipal Party committee, municipal government, urban transportation centers at all levels and flood control headquarters, effectively improving the digitalization and precision level of flood and typhoon prevention work.

(2) Capacity building for climate change adaptation

- **Delineate an ecological red line and strengthen ecological restoration**

Under the influence of global climate change and violent human activities, to ensure Shanghai's urban ecological security, improve the urban ecological environment, and maintain biodiversity. In August 2018, the Shanghai Municipal Government issued the Ecological Red Lines in Shanghai, which covers a total area of 2082.69 square kilometers, including 89.11 square kilometers of land area and 1993.58 square kilometers of the Yangtze River estuary and sea area. The ecological red lines present a spatial pattern of "one area with multiple points". "One area" refers to nature reserves, important wetlands, and drinking water source protection areas distributed in patches along rivers and coasts; "multiple points" refers to forest parks, biological habitats, and other areas distributed in points on land. According to the leading ecological functions of the region, Shanghai's ecological red lines are divided into six categories, namely: red lines for biodiversity maintenance, red lines for water source conservation, red lines for specially protected islands, red lines for important coastal wetland, red lines for important fishery resources and red lines for natural coastlines. By delineating ecological red lines through hierarchical classification, a multi-level, networked, functionally complex ecological space system is established, which further promotes the optimization of urban spatial patterns, strictly adheres to the bottom line of ecological security, and makes contributions to building a national ecological security pattern and fulfilling global biodiversity protection responsibilities.

Shanghai formulated the Implementation Plan for the Shanghai Wetland Protection and Restoration System and promoted wetland ecological restoration projects such as

Pujiang in Minhang, Xisha in Chongming, Wusong River in Minhang, and Langxia in Jinshan. The Spartina alterniflora control and bird habitat optimization project in Chongming Dongtan has been fully completed. The Suggested List of Important Wetlands in Shanghai (First Batch) was released, the Shanghai Wetland List Management Measures were formulated, a wetland ecological compensation system was established, and the city-wide wetland hierarchical management mechanism was initially established. The Wusong Paotaiwan Wetland Forest Park was built.

Case 23 Deepen the ecological "green" foundation and highlight the "dual brand" of Chongming climate

On January 23, 2024, the China Meteorological Administration announced Chongming District as the winner of two national honors, namely: "China's Natural Oxygen Bar" and "China's Climate Livable City", becoming the first area in Shanghai to win this honor. Chongming District is composed of three main islands and is an ecological barrier and strategic development zone in Shanghai. Since the launch of the ecological island construction in 2001, it has adhered to ecological priority and green development, becoming the area with the best ecological environment in Shanghai, and has been praised by the United Nations Environment Programme. These two national honors are not only an authoritative recognition of Chongming's high-quality climate and ecological resources, but also the recognition of its long-term ecological development concept and climate change response capabilities, providing strong support for Chongming to build its first carbon-neutral demonstration zone and climate adaptive city, and promote the green and high-quality development of a world-class ecological island.

Chongming District has made remarkable achievements in ecological protection and green development: it has established a comprehensive ecological monitoring network by upgrading the national meteorological observation stations and adding advanced observation equipment; comprehensively strengthened wetland and biodiversity protection, implemented hunting bans and rare species protection; taken the lead in the construction of carbon-neutral demonstration zones, developed clean energy and green transportation, and promoted green buildings and life; continuously improved tourism service facilities, optimized transportation networks, and improved the quality of scenic spots; promoted gross ecological product (GEP) accounting, developed green modern agriculture, and created regional public brands; actively promoted the integrated development of culture, sports and tourism, cultivated diversified tourism formats, created characteristic festival activities and sports brands, and successfully built itself into a nationally renowned eco-tourism destination.

Chongming District has achieved remarkable results in environmental protection and ecological construction: in terms of environmental pollution prevention and control, it has achieved a 100% compliance rate for surface water environmental quality assessment sections. The prevention and control of soil pollution and risk management have been consolidated, and the comprehensive prevention and control of air pollution has achieved significant results. The rate of excellent quality continues to exceed the planned target; in terms of ecological protection and restoration, the forest coverage rate has increased significantly, and progress has been made in wetland ecological restoration and the creation of international wetland cities; in terms of green and low-carbon transformation, the proportion of renewable energy installed capacity and power generation has increased, breakthroughs have been made in the construction of carbon-neutral demonstration zones, and active participation in international climate change activities; in terms of climate and

ecological environment, pleasant climate, fresh air, and lush vegetation form the largest artificial plain forest in East China, actively created a national forest city, demonstrating the fruitful achievements of ecological civilization construction in Chongming District.

Figure 28 Chongming world-class ecological island [1]

- **Improve urban flood control and drainage systems**

Shanghai has built an urban flood control and drainage system through the construction of urban flood control and drainage projects, such as the Suzhou River Deep Tunnel Project and the Wusong River Flood Diversion Project, which have significantly improved its flood control and drainage capabilities. The Suzhou River Deep Tunnel Project has particularly enhanced the drainage capacity of the area, raising it from a once-in-a-year to a once-in-five-year standard. In future planning, Shanghai will implement a series of measures, including river embankment repairs, seawall reconstruction, and river network restoration, to form a city-wide flood prevention, tidal barrage, and waterlogging control system to comprehensively improve the city's ability to cope with extreme weather. At the same time, Shanghai also conducted a benefit assessment of adaptive measures to verify the disaster reduction effects of measures such as improving underground drainage

[1] Image source: Wenhui, https://wenhui.whb.cn/zhuzhan/cs/20200302/329861.html

capacity, increasing public green spaces, and building deep underground tunnels under different precipitation scenarios. These measures provide a scientific basis for urban waterlogging control, in line with the concept of sponge city construction.

- **Promote the construction of the sponge city and urban green spaces**

Since 2016, Shanghai, as a national pilot city for sponge city construction, has actively promoted sponge city planning and construction. In 2018, it issued relevant management measures to integrate sponge city control indicators and construction requirements into urban planning and construction standards. Shanghai's sponge city construction covers many aspects, including the regional system, building and community system, green space system, road and square system, and water system. At the macro-, meso- and micro-levels, Shanghai ensures the systematic and comprehensive nature of sponge city construction through multi-departmental cooperation, district-level planning, and specific project implementation. Since 2015, Shanghai has vigorously promoted the construction of suburban woodlands and public green spaces in central urban areas, effectively increasing the urban green space area and forest coverage rate, and enhancing the city's natural storage, permeation, and purification capabilities. Shanghai has also established a joint meeting mechanism to promote sponge city construction and coordination and carried out pilot work throughout the city through cooperation between urban and rural institutions. Currently, 33% of the built-up areas have met the requirements for sponge city construction, and the successful pilot of the Lin-gang Special Area provides valuable experience for other regions to learn from.

Case 24 Meteorological services empower the construction of ecological civilization in Fengxian

Fengxian District, keeping in mind the people-centered development concept, strengthened the government-led meteorological disaster prevention system, formed a linkage mechanism involving the whole society, formulated sound emergency schemes, and achieved comprehensive monitoring of climate change through the construction of a reasonably laid out monitoring network. At the same time, the urban transportation system promotes the full life cycle closed-loop management of meteorological disaster prevention, improving the level of urban refined management. In addition, it also actively carried out climate change science popularization activities through multiple channels to enhance the public's awareness and ability of meteorological disaster prevention and mitigation, ensuring the safety of people's lives and property and social stability.

Through the scientific utilization of climatic and ecological conditions, Fengxian District has successfully built an urban landscape featuring "tens of thousands of hectares of woodland, thousands of miles of green corridors, and hundreds of parks", which significantly enhanced ecosystem functions and forest coverage rate, effectively improved the climate environment, reduced extreme weather events and improved climate comfort, becoming a model of "China's Climate Livable City". At the same time, Fengxian District has won several national honors under its ecological competitiveness advantages, thus injecting new vitality into urban development, creating a new business card of green ecology and smart meteorological services, and promoting the construction of new areas in megacity and the development of green industries. It has ensured a better life for the people and made a positive contribution to climate change adaptation.

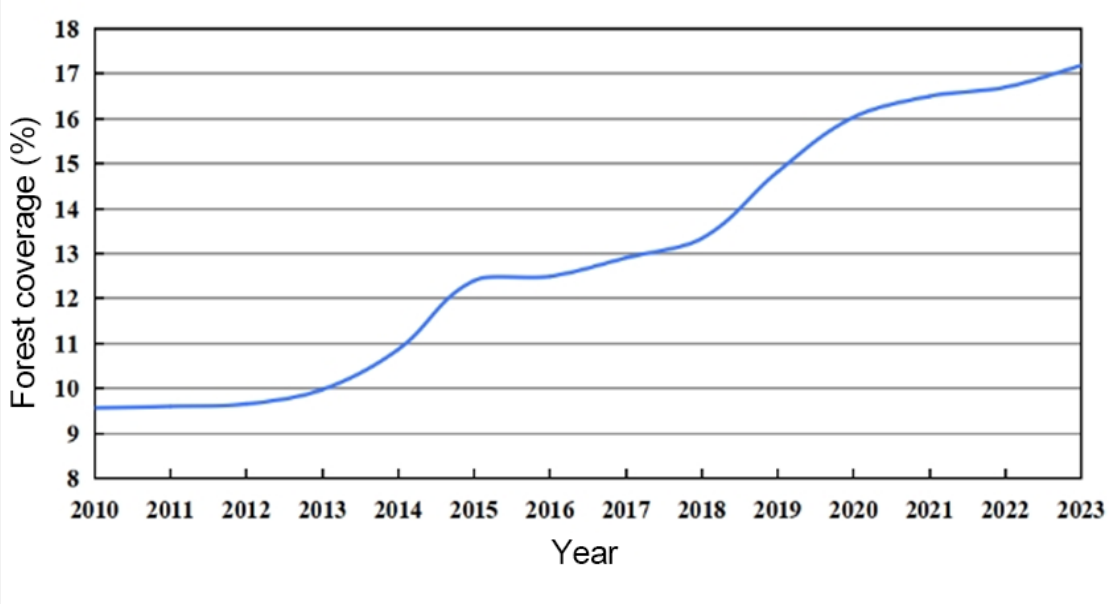


Figure 29 Changes in forest coverage rate in Fengxian District from 2010 to 2023

- **Carry out farmland protection and ecological environment maintenance**

In the high-standard farmland construction, after overall consideration of the carrying capacity of water and soil resources and ecological capacity, Shanghai optimized the farmland construction space, and rationally divided fields according to terrain, crops, operating efficiency, etc., and improved the quality of the cultivated layer of farmland and the suitability of irrigation and drainage through land leveling and soil improvement measures. At the same time, engineering, biological, agronomic, and other methods are used to carry out targeted soil fertilization and improvement, strengthen the protection of cultivated land quality, promote crop rotation, intercropping or fallow models, and implement soil testing and formulated fertilization to ensure soil nutrient balance. In addition, combined with the characteristics of the terrain and water sources, Shanghai has strengthened the effective linkage between field irrigation and drainage projects and river regulation, rationally constructed and renovated irrigation and drainage facilities, and promoted water-saving irrigation technology; as a result, the irrigation guarantee rate and water use efficiency have been improved, and the soil quality of high-standard farmland and the efficient operation of irrigation systems have been ensured.

- **Strengthen capacity building in different sectors to adapt to climate change**

In the field of health, since Shanghai launched the monitoring of cases of high-temperature and heatstroke in summer in 2007, it has regularly organized experts in relevant fields to assess the risks of high-temperature and heatstroke events, assess target population and important control links, and proposed key prevention and control measures. Although Shanghai experienced extreme hot weather in 2013 and 2022, the fatality rate of heat stroke dropped from 9.38% to 4.14%.

In the field of transportation, it has prepared emergency plans for severe weather,

typhoon and flood prevention, geological disasters, maritime search, and rescue, major accidents, etc., and organized relevant emergency response drills on a regular basis. At the same time, the transportation, public security, and meteorological departments have initially established the working mechanisms for data sharing, joint consultation, information release, and coordinated emergency response, playing an important role in improving the ability of the transportation sector to adapt to climate change.

In the energy sector, a joint supply system supported by urban trunk pipeline networks has been built. Based on the key oil and gas projects completed, such as the Yangshan LNG storage tank expansion project and the Lingang-Shanghai Chemical Industry Zone natural gas pipelines, Shanghai has established a joint supply system featuring "6+1" multiple gas sources and a C-shaped urban trunk pipeline network, significantly improving its oil and gas emergency reserve capacity and establishing a leading domestic natural gas production, supply, storage, and marketing system. Despite surges in power demand and difficulties in obtaining external resources in 2021, the city's coal-fired units have guaranteed to meet basic needs and ensured stable operation of coal-fired power units.

(3) Public participation in combating climate change

- **Launch a series of innovative competitions for popularizing meteorological science on campus in Shanghai**

Shanghai has effectively promoted comprehensive quality education under the "double reduction" policy by holding a series of science literacy activities such as the campus meteorological literacy and innovation competition, the collection of creative projects for "carbon" research and environmental protection among the young people, and the collection of painting works on meteorological science. These efforts have raised meteorological literacy among students by making the most of educational resources, enhanced their environmental awareness and scientific innovation capabilities, broadened their hands-on experience, and increased their awareness of social responsibility for the environment. Moreover, through online activities and micro-video collection, efforts have been made to further disseminate the knowledge on climate change and disaster prevention and mitigation, which have attracted wide attention from the public and the media, helped increase public awareness of ecological civilization, and encouraged them to proactively respond to climate change, and pursue green and low-carbon development.

- **Create diverse platforms for "Last Mile" meteorological science popularization**

The Shanghai Meteorological Museum has launched the "Centennial Observatory for Science Literacy on Meteorological Phenomena" series of scientific and cultural lectures, literacy activities integrating climate change and arts, and meteorological exploration courses, and promoted the meteorological culture behind the 24 solar terms. In so doing, the Museum has provided high-quality meteorological science education to the public, promoted the spirit of meteorological science, and consolidated Shanghai's advantages in century-old science, technology, history, and culture of meteorology. Meanwhile, through

online and offline interplay, digital display, and community promotions, Shanghai has disseminated knowledge on climate change, promoted meteorological culture, and empowered schools under the "double reduction" policy, so as to raise environmental awareness and scientific literacy among the public, guide them to pursue green and low-carbon production and lifestyles, and actively respond to the challenges of climate change. These efforts have delivered positive outcomes, and broad impacts.

- **Organize key activities for "Science Literacy Day", "Meteorological Day", and "Science and Technology Festival"**

Shanghai has carried out a variety of meteorological literacy and promotion activities on important days such as World Meteorological Day, Meteorological Science and Technology Week, Shanghai Science and Technology Festival, and Science Literacy Day. Such activities include "Meteorological Literacy for Neighborhoods", "Meteorological Literacy Carnival" and "Navigating through 150 Years' History of Meteorology". On Science Literacy Day in 2022, the carnival on the cloud attracted 195,000 online experiences, especially through the live streaming of "Drone 'Warriors' Who Are Not Fearful of Typhoons", which received 100,000 clicks, effectively arousing young people's interest in technological inventions, and improving their science literacy. On World Meteorological Day in 2023, more than 10 meteorological literacy activities were launched for young people, such as the meteorological literacy camp, science literacy art exhibition, and professional experiences. The "Meteorological Literacy for Neighborhoods" activity, carried out together with a number of governing units, helped disseminate meteorological knowledge to residents in the nearby neighborhoods, diversifying the "last mile" activities for science literacy. During the Shanghai Science and Technology Festival, the "Smart Meteorology Special" event was held to integrate resources and launch three special exhibitions, displaying high-tech smart meteorological equipment, campus meteorological literacy results, and paintings for science literacy, and explaining how high-quality meteorological literacy empowers "double reduction". In addition, a joint development agreement was signed to release a "menu" of the meteorological literacy courses for primary and secondary schools and build an open and integrated education and innovation system for meteorological science and technology, so as to support the growth and success of the young people by raising their meteorological literacy, and preparing them for meteorological science and technology innovation. These activities have not only disseminated meteorological knowledge but also raised science literacy among young people, laying a foundation for developing meteorological science and technology talent.

Case 25 Support "Double Reduction" by Hosting the Shanghai Campus Meteorological Science Popularization and Innovation Competition

In order to promote comprehensive quality education in schools under the "double reduction" policy, the first campus meteorological literacy competition was held in Shanghai, under the theme of "Studying Intelligent Meteorology to Inspire Science Dreams". This competition achieved the expected goals of disseminating meteorological knowledge and improving the communication capacity for meteorological science, thus laying a solid foundation for building an important platform to raise the science literacy of students under the "double reduction" policy.

In the process, we developed a cross-agency and cross-department collaboration model by mobilizing resources from governing units and member units and strengthening organization and leadership. We designed a variety of events for the competition, such as online meteorological knowledge competitions, anchor shows for meteorological literacy, and meteorological observation diaries, based on extensive surveys and full consideration of the cognitive levels of students of different ages, so as to meet different needs of the students. We focused on publicity work and cooperated with a number of media, thus increasing the awareness and influence of the competition, and maximizing its impact. We also showcased outstanding works through WeChat official accounts and radio stations to further expand the social impact of the event.

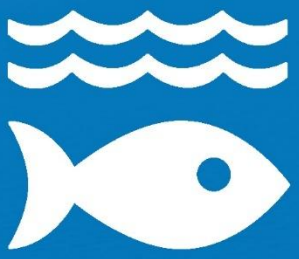
A meteorological education and literacy platform was established to improve the scientific literacy of primary and secondary school students in Shanghai, with the support of the meteorological, education, and science and technology administrative authorities at the municipal and district levels. More than 44,000 students from nearly 300 schools in the city participated in the events on the platform. The events included online meteorological knowledge competitions, observation and recording of meteorological data, writing of meteorological observation diaries, and filming of anchor shows for meteorological literacy. These events not only enriched students' extracurricular life, improved their scientific literacy and comprehensive qualities but also helped those who were at home during the epidemic to continue studying. A large number of excellent works were submitted for the competition, which effectively stimulated the young people's enthusiasm for learning meteorology. The works submitted by primary school students for the "Anchor Shows for Meteorological Literacy" were diverse in content and vivid in format, while the "Meteorological Observation Diaries" from secondary school students were rich in content, demonstrating their insight and commitment to scientific inquiry. Last but not least, the competition also explored the leading role of scientific and technological innovations in increasing meteorological literacy, encouraging students to boldly innovate in their works, and comprehensively improving their scientific literacy and innovation capacity.

- **Build an alliance of schools for meteorological science popularization and education**

Shanghai has made significant progress in meteorological literacy and education and established the country's first core school community for meteorological literacy and innovation. The Shanghai Meteorological Society, together with the Department of Atmospheric and Oceanic Sciences of Fudan University and other institutions, cooperate with 18 schools including Qibao Middle School to explore the integrated talent development model for primary and secondary schools and universities as a fine example for the whole country. The school community has achieved full coverage from kindergarten to high school and enables group-based development of meteorological literacy and education. In addition, a national meteorological literacy base, a comprehensive national meteorological literacy and education base, a campus weather demonstration station, and a meteorological education specialist school have been established to build a bridge between meteorological departments, educational departments, social forces, teachers, and teenage students. There are now more than 100 campus weather stations in Shanghai, which serve as important platforms for hands-on scientific education for primary and secondary school students. They monitor various

meteorological elements on campus, effectively improving the meteorological literacy and hands-on capabilities of young people.

SDG14: Life below Water



SDG14

- SDG14 is about conserving and sustainably using the oceans, seas, and marine resources to promote sustainable development. In pursuing this goal, we can effectively promote the protection of fragile aquatic habitats, advance the establishment of a complete, effective, and fairly managed water environment ecosystem, protect the diversity of life below water, and ensure the sustainable development of fisheries.
- Shanghai is located at the estuary of the Yangtze River, which abounds with freshwater ecosystems of inland lakes and vast marine ecosystems. Therefore, Shanghai faces huge pressure on underwater life protection and ecosystem restoration, and its success is crucial to the overall protection of regional ecosystems. In addition, carbon peaking and carbon neutrality have raised higher requirements for the protection of water ecology and the environment. Therefore, further improvements are needed in system improvement, technological innovation, and governance capabilities.
- Under SDG14, Shanghai has focused on implementing the Comprehensive Yangtze River Conservation Strategy in recent years, promoting regional collaboration, and joint protection and management, strictly implementing fishing ban-based control policies, driving the sustainable development of fishery production methods, and systematically advancing the protection and restoration of inland waters and marine ecosystems.

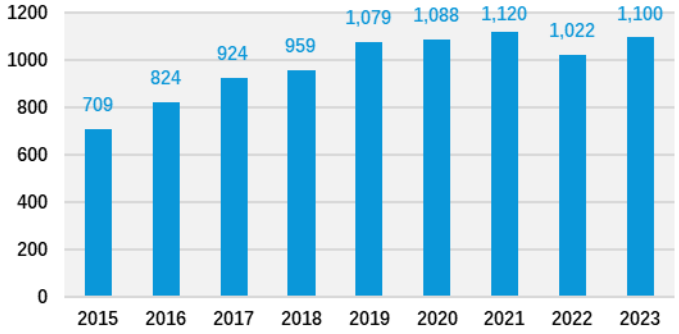
SDG14

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG14
Implement the Comprehensive Yangtze River Conservation Strategy	Improve the level of "three water coordination" management across the region		► Environmental protection investment (100 million yuan)	SDG14.5
	Pay attention to rural sewage discharge treatment and renovation			
	Strengthen pollution prevention and control from ships, ports, and terminals			
	Promote regional collaboration and joint protection and management	Rectification of sewage outfalls into the Yangtze River		
Sustainable fishery production	Strictly implement fishing ban-based control policies		► Gross fishery output value (100 million yuan) ► Marine products (10,000 tons) ► Freshwater products (10,000 tons)	SDG14.4
	Digital innovation empowers intelligent management and control of the fishing ban on the Yangtze River			
	Organize charitable aquatic life proliferation and release activities			
	Build the Yangtze River Estuary Marine Ranch Demonstration Area	Literacy education, demonstration, and promotion of the Yangtze River Estuary Marine Ranch Demonstration Area		
Inland water ecosystem protection and restoration	Advance the protection and restoration projects for water ecosystems		► Sewage treatment capacity of sewage plant (10,000 tons/day) ► Comprehensive utilization rate of industrial wastes (%) ► Total discharge of chemical oxygen demand in wastewater (10,000 tons) ► Proportion of surface water assessment sections with Class III excellent water quality	SDG14.1. SDG14.2.
	Carry out water ecosystem assessment and research activities	A gorgeous turn from a black and smelly river into a beautiful river - Suzhou River rectification		
Marine ecosystem protection and restoration	Comprehensively strengthen marine ecosystem protection			
	Scientifically implement marine ecosystem restoration	Fengxian Coastal Marine Ecological Protection and Restoration Project		
	Tighten supervision of marine ecological protection and restoration			
	Improve the monitoring system for marine ecological protection			

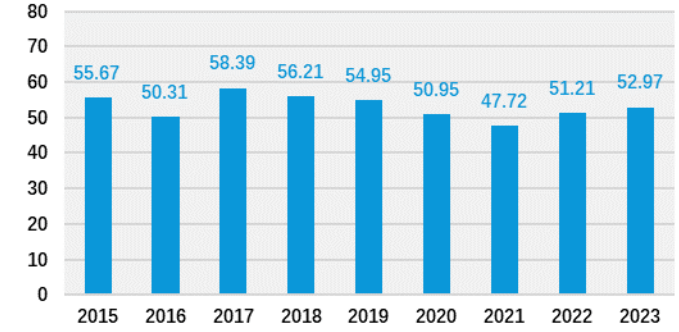
Key Indicators

Environmental Protection Investment (100 million yuan)



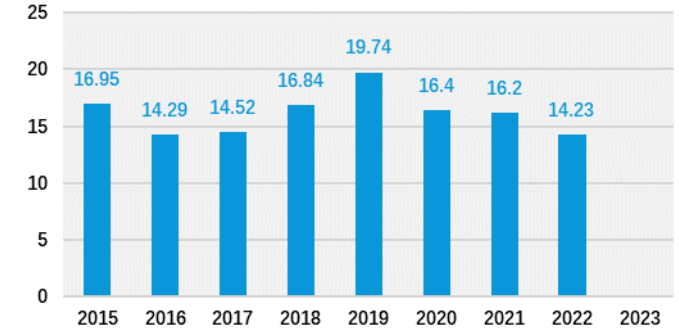
From 2015 to 2023, investment in environmental protection increased by **55.1%**.

Gross Fishery Output Value (100 million yuan)



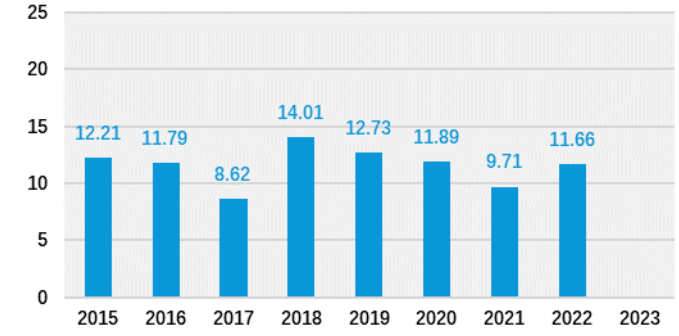
From 2015 to 2023, the gross fishery output value stood at an annual average of around **5.3 billion yuan**.

Marine Products (10,000 tons)



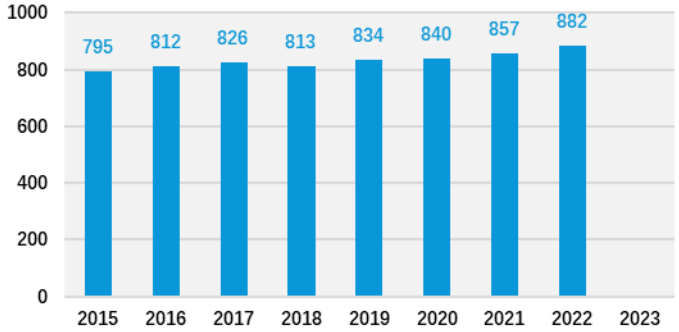
From 2015 to 2022, the output of marine products stabilized at an annual average of around **161,000 tons**.

Freshwater Products (10,000 tons)



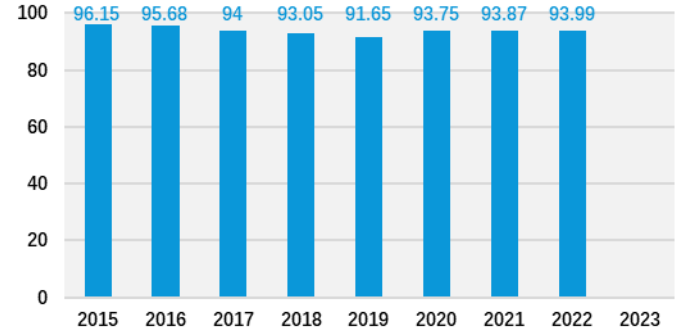
From 2015 to 2022, the output of freshwater products stabilized at an annual average of around **116,000 tons**.

Sewage Treatment Capacity of Sewage Plants (10,000 tons/day)



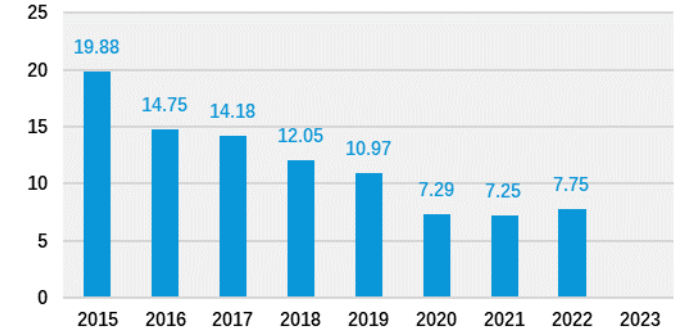
From 2015 to 2022, the sewage treatment capacity of sewage plants increased by **10.9%**.

Comprehensive Utilization Rate of Industrial Wastes (%)



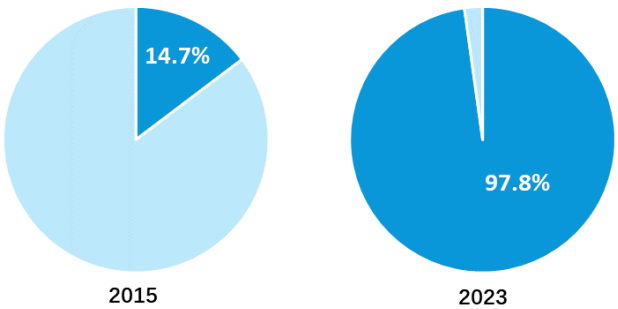
From 2015 to 2022, the comprehensive utilization rate of industrial wastes exceeded **90%**.

Total Discharge of Chemical Oxygen Demand in Wastewater (10,000 tons)



From 2015 to 2022, the total discharge of chemical oxygen demand in wastewater fell by **61.0%**.

The proportion of surface water assessment sections with Class III excellent water quality



From 2015 to 2023, the proportion of surface water assessment sections with Class III excellent water quality in the city increased from **14.7%** to **97.8%**, and the proportion of those with poor Class V water quality decreased from 56.4% to zero.

Major Progress

The water ecosystem quality of rivers and lakes has improved significantly

From 2015 to 2023, the water ecosystems of the city's main water bodies kept recovering, and the biodiversity index steadily increased. The biodiversity level of the Yangtze River Estuary and Hangzhou Bay reached "good", while the biodiversity level of the Suzhou River and the Huangpu River was "average". Dianshan Lake improved from a moderate-eutrophic state to a mild-eutrophic state in 2010 and has remained so up to date. The main nutritive salts in the lake, including ammonia nitrogen, total nitrogen, and total phosphorus, have shown a downward trend, and the occurrence trend of cyanobacterial blooms has been further controlled.

After years of intensive management, the water eco-environment quality of Shanghai's rivers and lakes has been significantly improved. During the "Thirteenth Five-Year Plan" period, Shanghai eliminated black and smelly rivers and lakes, as well as those with poor water quality. In 2015, 14.7% of the city's surface water assessment sections featured Class III excellent water quality, and 56.4%, Class V poor water quality. In 2023, 97.8% of the city's surface water assessment sections featured Class III excellent water quality, and no section had Class V poor water quality. Since 2020, the water quality of the entire state-controlled section of the Shanghai section in the mainstream of the Yangtze River has reached the Class II level for four consecutive years.

Water ecosystem management capabilities are steadily improving

Shanghai has consolidated the foundation for water ecosystem-related endeavors and improved its water ecosystem supervision capabilities. In accordance with the requirements of documents such as the Key River Basin Water Ecological Environment Protection Plan and the Ecological Environment Protection in Shanghai's 14th Five-Year Plan, Shanghai has further implemented water ecological protection. Based on the differences in regional ecological base and functional requirements, Shanghai has steadily promoted water ecosystem monitoring, evaluation, protection, and restoration measures focused on Dianshan Lake, Yangtze River Estuary, and other areas. It has continued to carry out research on the region-specific and classified evaluation technology system for its water ecosystems and provided technological support for the scientific formulation of detailed assessment scoring rules for water ecosystems in the city. From 2015 to 2023, the water ecosystems of the city's main water bodies kept recovering, and the biodiversity index steadily increased.

The water ecosystem survey and monitoring network continues to improve

Shanghai has carried out classified monitoring of biological communities since the early 1980s. It has tracked and regularly monitored aquatic life such as plankton and zoobenthos in major water bodies such as Dianshan Lake and the Suzhou River on a long-term basis. With the tightening of national requirements for water ecological monitoring

and evaluation and the standardization of water ecological assessment and evaluation during the "14th Five-Year Plan" period, Shanghai has carried out baseline surveys of water ecological conditions since 2022. Based on a water ecological monitoring network covering important water bodies such as the Yangtze River Estuary, Huangpu River, Suzhou River, and Dianshan Lake, as well as backbone rivers such as Dazhi River, it is committed to water ecological monitoring of main water bodies, which is focused on aquatic biodiversity, complemented by habitat surveys. The aquatic communities involved include phytoplankton, zooplankton, and zoobenthos. Moreover, more than 120 monitoring sites for fishery ecological resources and rare and endangered species have been set up in the coastal waters of the Yangtze River Estuary and Hangzhou Bay to continue to monitor the ecological resources of fishery waters and assess the status of water ecosystems and resources.

- **The "ten-year fishing ban" on the Yangtze River has delivered a great impact**

The "ten-year fishing ban" on the Yangtze River was officially implemented on January 1, 2021. At that time, there was no dedicated dock for enforcing the fishing ban in Shanghai, and the enforcement boats were outdated due to years of use, making it difficult to enforce the fishing ban. Shanghai regards the "ten-year fishing ban" as a practical step to implement the policy of "stepping up conservation of the Yangtze River and stopping over-development". Based on measures such as strengthening capacity building for law enforcement equipment and synchronizing legislation in three provinces and one city, solid progress has been made in implementing the ten-year fishing ban on the Yangtze River. With the terminal of the Changxing Island official base, high-speed law enforcement boats, and the intelligent management and control system for banning fishing in the Yangtze River completed, the law enforcement and supervision capacities for banning fishing in the Shanghai section of the Yangtze River have been improved. Three provinces and one city in the Yangtze River Delta have simultaneously implemented the Decision on Several Issues Concerning Promoting and Ensuring the Ban on Fishing in the e River Basin. Thanks to the joint efforts of all relevant departments in the city and relevant districts along the river, Shanghai has moved forward with all the efforts related to the fishing ban by both water and land means. Illegal fishing has been effectively curbed, and the goal of "four nones and four cleans" in the Shanghai section of the Yangtze River has been achieved. Through continuous monitoring in recent years, it has been found that the Yangtze finless porpoise population in the Yangtze River Estuary and its area of habitat have been expanding. Thirteen Yangtze finless porpoises were monitored in 2022 and 82 in 2023. A newborn finless porpoise was found in the Yangtze River Estuary in April 2023. Five Yangtze finless porpoises and two Chinese sturgeons have been monitored since the beginning of 2024. The Dongfeng Xisha and Qingcaosha waters have become relatively stable habitats for Yangtze River finless porpoises.

- **The Comprehensive Yangtze River Conservation Strategy is thoroughly implemented**

Based on the working mechanism of the Shanghai ecological civilization leading team,

Shanghai has established a "1+1+X" pollution prevention and control system. Shanghai has formulated and revised local regulations on drinking water source protection, and waste-free cities, and introduced local standards for aquaculture tailwater discharge. It also has incorporated the important work of comprehensive Yangtze River conservation into the ecological environment protection plan and issued and implemented the Implementation Plan for Intensifying the Protection and Restoration of the Yangtze River in Shanghai (2023-2025). Municipal departments such as Ecological Environment, Development and Reform, Water Affairs, Agriculture and Rural Areas, and Transportation have cooperated with each other, and the municipal and district-level authorities have collaborated to advance pollution prevention and control and the Yangtze River protection and restoration with high standards. As a result, the quality of the city's water environment has been greatly boosted on an ongoing basis.

- **Comprehensive steps have been taken to build Shanghai into a modern marine city**

Shanghai keeps tightening resource control, further develops the marine economy, and advances ecological restoration. The Yangtze River Estuary sea area management system has been fully established, and steady efforts have been made to solve historical legacies. The survey and modeling of 9,742 square kilometers of underwater topography at the Yangtze River Estuary and Hangzhou Bay have been completed, with the tidal flat resource distribution map and the underwater topographic map drawn. Shanghai also provides guidance and guarantees for the use of sea and islands for major national and municipal projects. The Pudong Marine Economic Development Demonstration City has been basically completed, and the Changxing Island Marine Economic Development Demonstration Zone is set to be built into an innovation hub for world-class marine equipment. Shanghai also has investigated the bottlenecks facing strategic emerging industries and plans to advance measures such as industrial chain optimization, industry-university-research cooperation, and talent attraction and development. The Lingang Coastal Project has been basically completed, and the construction of the Fengxian Project is underway. The Chongming Island is among the first batch of "Harmonious Islands" recognized by the Ministry of Natural Resources.

Important Measures

(1) Implement the Comprehensive Yangtze River Conservation Strategy

- **Improve the level of "three water coordination" management across the region**

Shanghai, with a focus on "three water coordination" management across the region, continuously improves the level of water resource security, keeps enhancing the comprehensive quality of the water environment, and steadily promotes the protection and restoration of water ecosystems. It has built four centralized drinking water sources in Jinze in the upper reaches of the Huangpu River, and Qingcaosha, Chenhang, and Dongfeng Xisha at Yangtze River Estuary, basically forming a city-wide intensive water

supply pattern that is "focused on two rivers, complemented by multiple sources". It pilots monitoring of new pollutants at water sources, and continues to strengthen automatic monitoring and early warning capabilities for characteristic factors of water sources and upland water, so as to ensure the environmental security of drinking water sources. It also continues to improve the urban sewage treatment capacity. Several urban sewage treatment plants such as Zhuyuan Sewage Treatment Plant Phase IV have been completed and put into operation. Projects such as Bailonggang Sewage Treatment Plant Expansion Project Phase III are progressing in an orderly manner. By the end of 2023, the city had a total of 43 urban sewage treatment plants, with a total treatment capacity of 10.225 million cubic meters per day. Comprehensive steps have been taken for the inspection and rectification of sewage outfalls into environmental water bodies, with the rectification of sewage outfalls into environmental water bodies along the Yangtze River completed two years ahead of schedule. Comprehensive river improvement has been promoted, with 20 ecologically clean small watershed demonstration sites built up. Shanghai firmly implements the ten-year fishing ban in the Yangtze River, increases the intensity of aquatic life proliferation and release, and comprehensively implements scientific research and conservation of Chinese sturgeons and finless porpoises, so that aquatic biological resources can continue to recover. The city's water ecological monitoring network has been optimized and enhanced, with important water bodies such as the Yangtze River Estuary, Huangpu River, Suzhou River, and Dianshan Lake, and backbone rivers such as the Dazhi River covered. The baseline surveys and regular monitoring of aquatic biological resources in the Yangtze River Estuary and important tributaries have been conducted, with aquatic ecological monitoring, evaluation, protection, and restoration measures launched. Shanghai also has made a list of beautiful rivers and lakes in the city that need to be conserved and built, to promote the orderly construction of beautiful rivers and lakes.

- **Pay attention to rural sewage discharge treatment and renovation**

Shanghai has issued the Technical Guidelines for Monitoring Farmland Non-point Source Pollution in Plain River Network Areas (Trial) to pilot region-specific monitoring and assessment of farmland non-point source pollution. It organizes demonstrations of how to standardize livestock and poultry breeding and build beautiful ecological pastures. The city has established 11 ministerial-level standardized demonstration farms for livestock and poultry breeding and 10 municipal-level beautiful ecological pastures. The equipment configuration rate for large-scale livestock and poultry farms' manure treatment facilities has reached 100%. Shanghai also has released the Aquaculture Tailwater Discharge Standards (DB 31/1405-2023) to promote the development and retrofitting of tailwater treatment facilities for aquaculture farms. It is committed to reducing the volumes of chemical fertilizer and pesticides used, boosting efficiency, and accelerating the collection and treatment of rural domestic sewage, with the treatment rate exceeding 95%.

- **Strengthen pollution prevention and control from ships, ports, and terminals**

Shanghai actively promotes the reception, transshipment, and disposal of ship

pollutants at major ports along inland rivers. It conducts special law enforcement on the ecological environment of the port, terminal, and ship sewage disposal units, and cracks down on illegal discharge of water pollutants by ships. It has basically completed the retrofitting of ship power receiving facilities, covering all the low-voltage, small-capacity standardized shore power facilities in inland rivers and outer port terminals. The shore power coverage rate of five types of specialized berths has exceeded 90%.

- **Promote regional collaboration and joint protection and management**

Shanghai fully leverages the leading and coordinating role of the Office of the Yangtze River Delta Regional Ecological & Environmental Protection Collaboration Group, to promote the joint protection and management of transboundary water bodies and the coordinated protection of drinking water sources. Together with Jiangsu and Zhejiang Provinces, it has issued a number of institutional documents such as the Special Plan for Joint Protection of Key Transboundary Water Bodies in Demonstration Zones, so as to establish and refine 13 specific working mechanisms in six major areas, with a focus on the 47 transboundary rivers and lakes in demonstration and coordination zones. Shanghai and the two provinces have jointly established a mechanism for joint decision-making and protection, and integrated management and control of transboundary drinking water sources in demonstration zones. Shanghai and Zhejiang simultaneously completed the coordinated division of drinking water source protection zones in Jinze, Shanghai and Changbaidang in Jiashan, Zhejiang, along the banks of the Taipu River, ensuring the transboundary water source protection zones are fully connected and protected in an integrated manner. Shanghai, Jiangsu, Zhejiang, and Anhui Provinces signed the Cooperation Agreement on Joint Prevention and Control of Cross-Provincial Water Pollution Emergencies in the Yangtze River Delta to jointly ensure the safety of drinking water.

Case 26 Rectification of sewage outfalls into the Yangtze River

In February 2019, the Ministry of Ecology and Environment launched a special action and pilot plan to inspect and rectify the sewage outfalls into the Yangtze River. In November 2019, it organized an inspection of the sewage outfalls within two kilometers along the mainstream of the Yangtze River in Shanghai, with Pudong, Baoshan, and Chongming Districts involved. At the end of 2020, the Ministry of Ecology and Environment officially delegated the tasks related to the sewage outfalls into the Yangtze River to the Shanghai Municipal Bureau of Ecology and Environment and the governments of Pudong, Baoshan, and Chongming Districts, requiring them to move forward with monitoring, tracing and rectification of these outfalls. Shanghai put pressure on itself, setting a goal to complete the rectification by the end of 2023, and fully advanced the rectification of sewage outfalls across the board, on the principle of "eliminating a batch of sewage outfalls by the law, cleaning up and merging another batch, and standardizing and rectifying still another batch".

Shanghai's approaches included classified rectification, high-level promotion, and technological empowerment. Firstly, it determined the principle of creating synergy based on local conditions, promoted the logic of classified rectification, and established a multi-linkage mechanism for municipality-district coordination and cross-department collaboration. It built a high-standard construction demonstration project for guidance and promoted the implementation of a number of rectification demonstration projects, such as the zero-discharge transformation of industrial

enterprises, agricultural and aquaculture wastewater treatment, and retrofitting of mixed rainwater and sewage connections in residential areas, to lead the rectification of sewage outfalls into the Yangtze River. Secondly, it set up a task force, performed in-depth research, and established systems to advance rectifications and account cancellations through high-level engagement, onsite supervision, and dynamic promotion. Thirdly, it applied technologies for empowerment and took a combination of measures to boost efficiency and quality.

By the end of 2022, more than 90% of the rectification task for the sewage outfalls into the Yangtze River had been completed, making Shanghai a leader among 11 provinces in the Yangtze River Economic Belt. In 2023, Shanghai took a step further and established a dynamic rectification and account cancellation system for the sewage outfalls into the Yangtze River, clarifying the conditions and procedures for account cancellation. Based on account cancellation as the lever, it endeavored to boost the quality of outfall rectification, and further strengthen regular and long-term management. By the end of November 2023, rectification and account cancellation of the sewage outfalls into the Yangtze River had been completed with high quality, two years ahead of the schedule required by the state. From 2020 to 2023, the water quality of the state-controlled section in the Shanghai section of the main stream of the Yangtze River remained stable at Category II. The water quality of centralized drinking water sources such as Chenhang, Qingcaosha, and Dongfeng Xisha along the Yangtze River all met standards. The water quality of rivers in relevant areas steadily improved.

Figure 30 Dongfeng Xisha of Chongming in the Yangtze River estuary

(2) Sustainable fishery production

- **Strictly implement fishing ban-based control policies**

On May 14, 2020, the Regulations of Shanghai Municipality on Chinese Sturgeon Protection and Management was introduced as China's first law for the protection of a single and specific kind of wild animals. Effective on June 6, 2020, this law provides a strong legal guarantee for the protection of Chinese sturgeons and the ecological development of the Yangtze River Basin. In 2021, the Shanghai Municipal People's Congress led the people's congresses of three provinces in the Yangtze River Delta in cooperative legislation. They issued and implemented the Decision on Several Issues

Concerning Promoting and Ensuring the Ban on Fishing in the e River Basin in Shanghai on April 1, providing a legal guarantee and guidance for jointly implementing the "ten-year fishing ban" on the Yangtze River. Shanghai has included the ten-year fishing ban on the Yangtze River as a top priority of the municipal Party committee and the municipal government for four consecutive years. The Municipal Commission for Discipline Inspection and Supervision has made the ten-year fishing ban a key part of political supervision. Based on the working system of "one supervision per month, one analysis per quarter, and one consultation per issue", the Commission works to ensure that primary and oversight responsibilities, jurisdictional and regulatory responsibilities are well-aligned and form synergy, through regular inspections and reminders.

- **Digital innovation empowers intelligent management and control of the fishing ban on the Yangtze River**

Given that Shanghai is located at the junctures of rivers and the sea, and provinces and the municipality, and has a vast expanse of waters, which makes it difficult to crack down on illegal fishing, Shanghai was the first in the country to build an intelligent management and control system for banning fishing in the Yangtze River. It has connected the system to the "Integrated Online Management" platform of the Municipal Urban Transportation Center, thus achieving digital transformation of water law enforcement, and offering the "Shanghai solution" for intelligent management and control in the Yangtze River Basin. With a total investment of 138 million yuan, the system integrates existing information resources from public security departments and districts along the Yangtze River and features 116 new sensing points. Meanwhile, a law enforcement mechanism for banning fishing in the Yangtze River has been established, so as to ensure jurisdictional responsibilities and grid-based management functions are fulfilled. With these efforts, a closed loop of law enforcement has been formed against illegal fishing in the fishing ban management zone along the Yangtze River, which involves intelligent identification, intelligent alarms, comprehensive assessment, command and dispatch, local supervision, timely investigation and punishment, and information sharing. Since the system was put into operation, the number of illegal fishing clues provided by the 12345 hotline and the China Fishery Law Enforcement Reporting and Acceptance Platform has dropped by nearly one-third year-on-year.

- **Organize charitable aquatic life proliferation and release activities**

Over the years, Shanghai has mobilized social forces and organized charitable proliferation and release activities for aquatic life in the Yangtze River estuary and inland waters, expanding the social impact of such efforts. Mainstream media such as CCTV have reported many times Shanghai's efforts to ban fishing in the Yangtze River and monitor and rescue Chinese sturgeons, which has greatly increased public awareness of ecological protection and their attention to the protection of rare and endangered aquatic life in the Yangtze River. Shanghai also maintains close contacts with the recreational fishing industry association to give play to their roles and guide the public to fish politely and in conformity with relevant rules. In addition, Shanghai makes publicity videos for science

literacy and the rule of law, together with public security and procuratorial authorities, which have been displayed on all advertising screens in subways and on platforms. Shanghai cooperates with the courts to build an eco-environment judicial protection base and organizes students and volunteers to participate in charity events such as proliferation and release. By promoting social co-governance, Shanghai has instilled the concept of no fishing, no selling, and no eating of Yangtze River fish in the minds of the people, building an urban governance environment featuring wide public awareness, participation, and consciousness.

- **Build the Yangtze River Estuary Marine Ranch Demonstration Area**

Shanghai has been committed to building a national-level marine ranch demonstration area in the Yangtze River estuary, which was completed and accepted on November 20, 2019. This national-level marine ranch demonstration area was assessed to be "good" in the annual evaluation in 2019 and 2020. By tracking, monitoring, and evaluating the area, it has been found that the water ecological environment of the area has improved, with the water quality stabilizing near Class II, and keeping improving. The demonstration area helps with ecological restoration, such as aggregation and settlement of biological species and resource conservation. The species and number of benthos in the artificial fish reef area have increased significantly over time, and the types of nekton have increased year by year. As a result, the biodiversity in the area has improved, which is of great significance to the ecological restoration and scientific conservation of aquatic biological resources in the Yangtze River estuary. Meanwhile, the demonstration area provides a good habitat for Chinese sturgeons during their reproductive migration and feeding migration, conducive to the recovery of its population.

Case 27 Literacy education, demonstration, and promotion of the Yangtze River Estuary Marine Ranch Demonstration Area

The Yangtze River Estuary Marine Ranch Demonstration Area is located in the waters of Dongtan on Chongming Island in the Yangtze River estuary. The longitude and latitude ranges in the geographical coordinates are 31°22′58″-31°24′36″N, and 121°59′21″-122°02′23″E. It covers an area of 14.4 square kilometers, with 64,854 hollow stere of artificial fish reefs.

As the first estuary-type marine ranch in China, the Yangtze River Estuary Marine Ranch is a typical model for the construction and development of estuary-type marine ranches, offering valuable experience for the construction of such ranches. The construction company of the project has attached great significance to the publicity of the demonstration area. Through the media, science literacy channels, and other resources, it demonstrates the philosophy, technology, and impact of the demonstration area, and related work to the public, and actively promotes it. The demonstration area has been included as the shooting location and important content in the central media programs such as the documentaries Love of the Yangtze River - Live Broadcasting of Twelve Provinces and Municipalities, Love of the Yangtze River, and Geographical China. Such programs have been played through CCTV, Shanghai TV, and other media, attracting wide attention from the public. Shanghai summarizes the overall impacts of the demonstration area and promotes it in the industry. It has compiled local standards for Shanghai in the Technical Specifications for the Construction of Zhuzhen Fish Reefs in the Yangtze River Estuary Marine Ranch. It has won two

invention patents for the "four-hole round cone-shaped tidal flat combined reefs and its construction method", and "a round cone-shaped tidal flat reefs and its construction method", and one utility model patent for the "four-hole round cone-shaped tidal flat combined reefs".

(3) Inland water ecosystem protection and restoration

- **Advance the protection and restoration projects for water ecosystems**

In recent years, Shanghai has released about 235 million species of aquatic life into fishery waters such as the Yangtze River estuary, the coast, and the Huangpu River. Among them, there are nearly 80,000 rare and endangered species such as Chinese sturgeon, mullet fish, and Songjiang perch. It has continued to maintain and build the Yangtze River Estuary Marine Ranch (artificial fish reef) project. It has built a total of 2,040 groups of four-hole round cone-shaped tidal flat combined reefs in the Yangtze River estuary, promoting ecological restoration, such as biological aggregation and benthos proliferation. Based on the central government's funds and local funds for water pollution prevention and control, the city has implemented nearly 90 projects funded by the central government for water pollution prevention and control, ranging from comprehensive water environment improvement, and water ecological restoration, to non-point source pollution prevention and control, and water source protection. With the aquatic ecological protection and restoration projects advanced, the quality of the regional water environment has significantly improved and degraded aquatic ecosystems have been restored. Aquatic life habitats have been restored, and biodiversity has significantly improved. With the rural environment improved, the rural landscape and living environment have become much better.

- **Carry out water ecosystem assessment and research activities**

Since 2021, the Shanghai Municipal Bureau of Ecology and Environment has organized key scientific and technological support activities, such as research on urban aquatic ecosystem zoning and classification methods and evaluation technologies and their pilot application in Shanghai, and research on systems for functional restoration of aquatic ecosystems and assessment and review technologies. Shanghai's aquatic ecosystem zoning and classification methods have been studied and established. In accordance with the Detailed Rules for Scoring Aquatic Ecological Assessment Indicators in the Yangtze River Basin (Trial) issued by the state, and Shanghai's reality, a preliminary system of aquatic ecological assessment and review indicators has been established. This system can serve as a universal, and region-specific guide, covering five first-tier indicators, i.e. water environment protection, aquatic ecosystem health, water habitat protection, water resources security, and social services. Second-tier indicators have been set based on the characteristics of important and basic aquatic ecospace. In the future, efforts will be made to further study and develop Shanghai's aquatic ecological assessment and review methods, and carry out a pilot program for the assessment and review in due course. Based on the review results, Shanghai will guide each district to advance aquatic ecological protection and restoration.

Case 28 A gorgeous turn from a black and smelly river into a beautiful river - Suzhou River rectification

The Suzhou River, also known as Wusong River, originates from Guajingkou of Taihu Lake. It runs through 8 districts of Shanghai into the Huangpu River, with a total length of 53.1 kilometers. It is a backbone river meandering through downtown Shanghai and also the "Mother River" of the local people. At the beginning of the 20th century, the Suzhou River was limpid and abundant with fish and shrimp. Since 1920, with the rapid economic and social development in Shanghai, tremendous domestic and industrial sewage has been discharged directly into the Suzhou River, making it ever more polluted. Since 1988, Shanghai has remained committed to the treatment policy that a comprehensive plan focusing on water treatment should be made for both the short and long run, and implemented step by step, with priorities defined. Given the key and difficult issues at different stages, Shanghai has implemented four phases, with a total investment of more than 40 billion yuan.

After thirty years of continuous rectification, the Suzhou River, once black and smelly, was fundamentally changed in 2000. In 2001, groups of small fish appeared in the urban section, and the water quality and aquatic ecosystem were fully restored. In 2023, the water quality of the entire river reached Category III, with that of its mainstream and tributaries greatly improved, and the difference between upstream and downstream rivers narrowed. From 2016 to 2023, 46 species of periphytons and 68 species of benthic invertebrates were detected in the Suzhou River. With the number of aquatic life species surging, biodiversity improved dramatically. In 2020, the 42-kilometer shoreline of the Suzhou River in the downtown area was connected, with a 23-kilometer green corridor and 650,000 square meters of green space created along the river. By coordinating water and land resources, cruise ship terminals along the river have been built and put into operation, and water tours on the Suzhou River have been launched. Cultural tourism festivals, and events on the water and land such as the Head of Shanghai River Regatta, dragon boat race, and Suzhou River Half Marathon have been held, enabling the people to get a stronger feeling of the rectification impact.

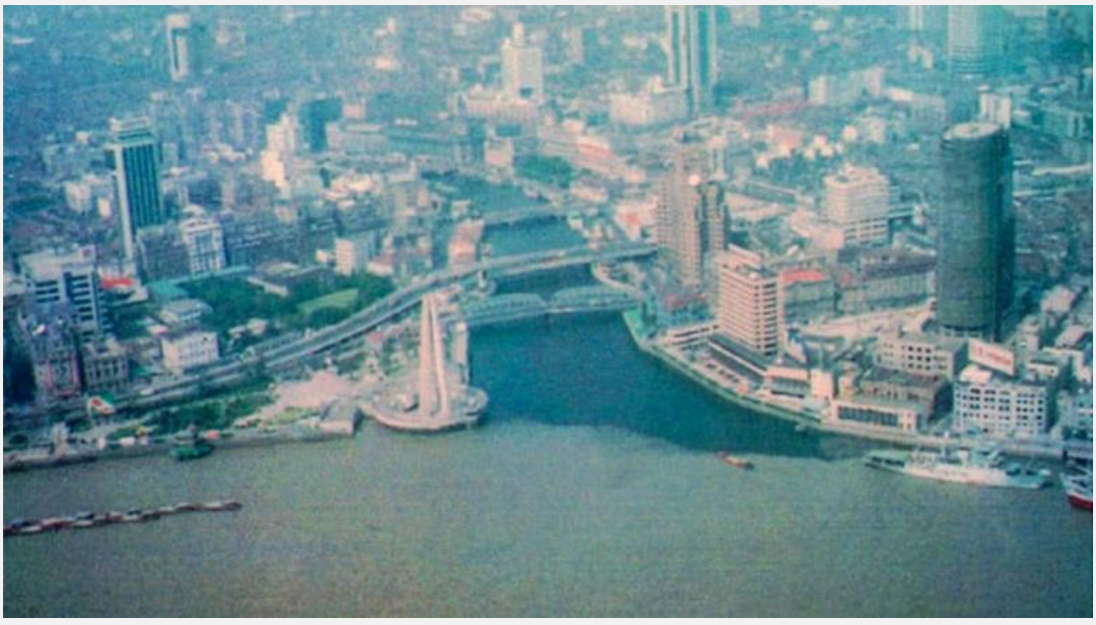


Figure 31 A "black belt" at the mouth of the Suzhou River before the rectification

Figure 32 The Suzhou River without the "black belt"after the rectification

(4) Marine ecosystem protection and restoration

• Comprehensively strengthen marine ecosystem protection

Shanghai has strengthened the protection of marine ecosystems across the board. It intensifies the protection of marine ecosystems such as salt marshes and wetlands, estuaries, bays, and islands, so as to maintain and improve the quality, diversity, stability, and sustainability of marine ecosystems. It conducts classified management and control of shoreline resources, strictly protects natural shorelines, and carries out surveys, monitoring, and evaluation of shorelines for ecological restoration. It also improves ecological and environmental management during the development and protection of island resources in sea areas, and no longer reclaims new land except for major national strategies and projects. The monitoring system for nature reserves is enhanced and the construction of management and protection infrastructure is strengthened, so as to maintain biodiversity and ecological safety in nature reserves. Stronger efforts have been made to protect the wetlands and waterbird habitats in Chongming Dongtan and Jiuduansha National Nature Reserve, to improve the ecological functions and carbon sequestration capabilities of wetlands. Shanghai also works to strengthen the protection and management of biological populations in the Jinshan Three Islands Marine Ecological Nature Reserve and strictly controls the invasive alien species communities. It enhances the systems for marine biodiversity surveys, monitoring, assessment, and protection, carries out marine biodiversity surveys in coastal waters, and establishes a marine biodiversity monitoring network. It carries out a census of invasive alien species in coastal waters and islands, tightens monitoring and early warning, controls removal and restoration of ecological functions, and continues to strengthen the monitoring, early warning and source tracing of key managed invasive alien species such as Spartina alterniflora Loisel and Canada goldenrod.

- **Scientifically implement marine ecosystem restoration**

Shanghai is committed to advancing the ecosystem restoration of important islands. Building Chongming into a "Harmonious Island" focuses on the restoration of marine ecosystems in Chongming Island, to gradually restore the degraded wetlands and create a national brand for ecological civilization and a benchmark for green development of the Yangtze River. It also works to restore the ecosystems of the marine ecological nature reserve on the three islands in Jinshan to enhance the quality and stability of the ecosystems on the islands and intertidal zones. It strengthens the protection and restoration of Hengsha Island to improve and restore the functions of salt marshes. It also commits itself to the ecological restoration of uninhabited islands including the Sheshan Island territorial sea base point. Shanghai is dedicated to ecological restoration of coastal zones. With a focus on the damaged or functionally degraded areas of the coastal zone in the Yangtze River estuary, and the coastal zones on the northern shore of Hangzhou Bay that are at higher risk of erosion and storm-tide disasters, it has carried out some ecological restoration projects such as salt marsh and wetland restoration, aquatic habitat restoration, and seawall ecological transformation. Shanghai also promotes the construction of coastal spaces and ecological corridors. Based on strengthened land and sea coordination, and better collaborated land and sea management, it works for the restoration and utilization of the Nanhui coastal ecological space in Pudong, and promotes the construction of ecological corridors in Chongming, the Dazhi River, Pufeng, Jinhui Port, and Jinfeng. Comprehensive sea area management is advanced. The inspection, cleaning and rectification of sewage outfalls into the sea have been intensified, and all of them are subject to classified supervision. Efforts have been stepped up to clean up marine litters, and marine and plastic litters are monitored and surveyed. The cleanup and rectification of litters on coastal tidal flats continue. The cleaning method featuring water and land linkage has been optimized, and a long-term mechanism has been established for cleaning up litters on coastal tidal flats.

Case 29 Fengxian Coastal Marine Ecological Protection and Restoration Project

Shanghai's Fengxian Coastal Marine Ecosystem Protection and Restoration Project is located in the middle of the northern coast of Hangzhou Bay, stretching from Zhonggang in Fengxian District in the east to the Huadian Ash-retention Dam in the west. This project is aimed to build a 17.4-kilometer coastal ecological corridor, so as to build an open belt-shaped multifunctional ecological space based on the ecological restoration of the coastal zone.

With a 7.47-kilometer-long seawall coastline, the project is being built by the Shanghai Construction Engineering Landscape Group. Starting on June 30, 2023, the construction mainly concerns the protection and restoration of habitats in the salt marsh wetland, and habitat diversity restoration in the coastal zone. It involves 31.83 hectares for the ecological management of Spartina alterniflora Loisel, 43.95 hectares for local salt marsh vegetation, 2,479 meters for the in-situ restoration of the wave breaker, 1,401.7 meters for the reconstruction of the tidal creek system, 4 new hydrological interconnecting pipes, 21 hectares of reef habitats in the subtidal zone, and one carbon flux tower, as well as supporting facilities such as signage, signs for promotion and literacy, and scientific research stations. As construction proceeds, the problems with some sections of the coastal zone will be addressed. Such problems include serious erosion, invasion of Spartina alterniflora

Loisel, single plant species, scattering of blocks along the wave breaker, poor integration of blue and green spaces, limited access to the sea space, and poor social services.

The invasion of Spartina alterniflora Loisel poses a serious threat to the ecosystem biodiversity of coastal tidal flats. The project's Spartina alterniflora Loisel eradication area is located between the wave breaker and the levee. In view of the construction conditions of medium and low tidal flats and soft tidal flats, the Shanghai Construction Engineering Landscape Group adopts the physical and ecological eradication method featuring "three mowings + plowing and deep burial", thus effectively eradicating the large-scale contiguous Spartina alterniflora Loisel. For sporadic corners or areas where plowing depth cannot reach 2 meters, the Group adopts the eradication method of "manual mowing + film shading", effectively inhibiting the growth of Spartina alterniflora Loisel until the plant dies. The overall eradication rate of Spartina alterniflora Loisel in the project area has exceeded 95%.

Based on the growth habits of common tidal flat plants in the Hangzhou Bay area, salinity and elevation of tidal flats, Shanghai selects reeds as the main restoration vegetation, and plants imperata cylindrica (L.) P. Beauv., and suaeda salsa (L.) pall. in intervals. In areas with higher tidal flat elevations, salt-alkali resistant hibiscus hamabo Sieb. & Zucc., a kind of small tree, are planted. Meanwhile, based on the distribution of local vegetation in the region, more plants are cultivated around the sporadic vegetation.

A carbon flux observation tower is being built in the restoration area of the salt marsh wetland to the west of Zhonggang. A 39-meter-high steel structure tower will be installed on the upper part of the observation tower. The tower will be equipped with facilities and equipment, and will monitor the carbon budget of the wetland and assess the wetland's ability to increase sinks and reduce emissions, through an eddy-related carbon flux observation system. Once completed, the observation tower will further improve the monitoring network of carbon fluxes in the coastal zone.

Figure 33 Spartina alterniflora Loisel plowing

- **Tighten supervision of marine ecological protection and restoration**

Shanghai has stepped up supervision of marine ecological protection in key areas. Ecological red lines and an ecological monitoring system for nature reserves have been established. Greater efforts have been made to regulate human behaviors within ecological red lines and track and monitor the ecosystems within the ecological red lines and in surrounding sea areas. The impacts of ecological red lines, nature reserves, and coastal

wetlands on ecological protection are assessed regularly. Shanghai also has strengthened law enforcement supervision in key areas. The cross-departmental and cross-regional joint law enforcement supervision mechanism has been improved, and relevant actions have been taken, such as the "Green Shield" initiative to strengthen supervision of nature reserves. Meanwhile, resolute steps have been adopted to stop and punish behaviors that damage ecosystems, species and biological resources. The city has intensified supervision of sea-use projects throughout the whole process. Efforts have been stepped up to carry out access management for offshore construction projects, review ecological sea use, and control discharges of pollutants into the sea. Shanghai has tightened supervision of marine ecological protection and restoration projects throughout the whole process, formulated post-restoration management and maintenance plans, and carried out long-term maintenance and daily patrols. The city has established a performance assessment system of marine ecological protection and restoration with Shanghai's characteristics, to continuously track and assess the impact of restoration efforts. The problems and risks in the ecological restoration process have been identified against the ecological restoration goals, and timely adjustments and corrections have been made.

- **Improve the monitoring system for marine ecological protection**

Shanghai regularly conducts resource base surveys on sea areas, coasts and uninhabited islands to understand the topography of uninhabited islands, coastal erosion and sedimentation, and blue carbon resource reserves in salt marshes. It carries out surveys and monitoring of wild bird resources to understand the type and number of birds in nature reserves. Efforts are also made to conduct refined bay surveys, and monitor and assess water quality, marine life, shoreline protection, and rare animals in important bay areas, so as to support the "Beautiful Bay" initiative. Shanghai also carries out coastal ecological trend monitoring to understand the basic ecological conditions and inter-annual changes in the city's sea areas. It monitors typical coastal ecosystems such as salt marshes, muddy coasts, and estuaries, and provides early warnings. It also tracks and analyzes the problems and sources of threats facing marine ecosystems. It carries out early warning and monitoring of marine ecological disasters, and keeps itself informed of the occurrence of red tides, the distribution, expansion trends and ecological hazards of invasive alien species, and marine microplastics, seawater intrusion, soil salinization, coastal erosion and other conditions. On that basis, it assesses the risks of marine ecological disasters to support the prevention and reduction of marine disasters. Shanghai promotes the interactive sharing of survey and monitoring data, and improves the levels of informatization and intelligence that support supervision. It integrates the marine ecological survey and monitoring databases, and analyzes the causes and trends of changes in marine ecological elements. It enables sharing and joint use of cross-level and cross-department data based on the municipal big data resource platform, to support marine ecological protection and restoration. It also explores and develops the application scenarios of new technologies such as artificial intelligence and big data in investigation and assessment, monitoring and early warning, and restoration construction to provide smart solutions for marine ecological protection and restoration.

SDG16: Peace, justice and strong institutions

SDG16

- SDG16 is committed to creating peaceful and inclusive societies for sustainable development, providing access to justice for all, and building effective, accountable and inclusive institutions at all levels. In pursuing this goal, the basic rights of all residents can be further protected, a more fair and just social environment can be built, and different groups can be fully tolerated and respected.
- Under the strategic framework of deeply implementing the important concept of People's City and moving faster to build a modern socialist international metropolis with a global influence, Shanghai will further modernize its urban governance and establish an urban governance community, where everyone participates, takes responsibility, contributes, and shares in the benefits, so as to build itself into a pacesetter for practicing the whole-process people's democracy.
- Under the SDG16 targets, Shanghai has actively advanced the building of a Peaceful Shanghai in recent years, with a focus on improving law and order, reducing road traffic accidents, and bettering the social environment for fire safety. It has promoted the building of a law-based government, ensuring the implementation of major strategic tasks, deepening the "unified online government service" reform, and refining the list system for government power and responsibilities. It has also practiced social governance based on joint establishment, shared governance and common sharing. It has ensured smooth channels for the public to express their opinion and improved the level of public legal services. It has supported and fostered social organizations to promote the healthy and balanced development of society.

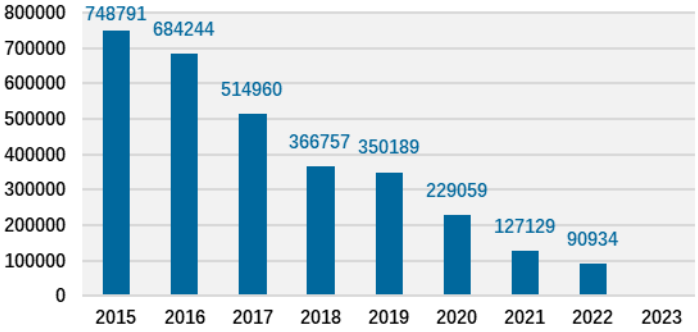
SDG16

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG16
Build a Peaceful Shanghai	Steadily improve law and order		►Number of public security cases investigated and dealt with by public security authorities (cases) ►Work safety accident (cases) ►Road traffic accidents (10,000 cases) ►Number of deaths from safety accidents to GDP (100 million yuan) for the whole year	SDG16.1
	Reduce road traffic accidents	Deepen the rectification of road traffic violations		
	Improve the social environment for fire safety			
Build a law-based government	Strengthen legal guarantee for the implementation of national strategies and work priorities for the whole city			SDG16.3
	Continue to deepen the "unified online government service" reform	The "unified online government service" by Shanghai Municipal Government		
	Improve the list system for government powers and responsibilities			
	Continue to strengthen legislation in key areas			
	Strengthen the standardization and institutionalization of administrative law enforcement and law enforcement supervision			
Practice social governance based on joint establishment, shared governance and common sharing	Strengthen diversified resolution of conflicts and disputes		►Civil disputes mediated through people's mediation (10,000 cases) ►Civil cases accepted by the Procuratorate (cases) ►Administrative cases accepted by the Procuratorate (cases)	SDG16.7 SDG16.8 SDG16.b
	Increase the supply of public legal services	The 5th Shanghai International Arbitration Forum and Shanghai Arbitration Week 2023		
	Vigorously build brands for "Shanghai Legal Services"			
	Make every effort to build an online and offline "direct lines to public opinion"			
Develop social organizations	Strengthen top-level institutional design	The "EGG Walkathon" Charity Program of Shanghai United Foundation	►Number of non-governmental organizations	
	Optimize the registration and review processes			
	Strengthen policy support and cultivation	The Shanghai Performance Trade Association committed to building "new performing arts spaces"		

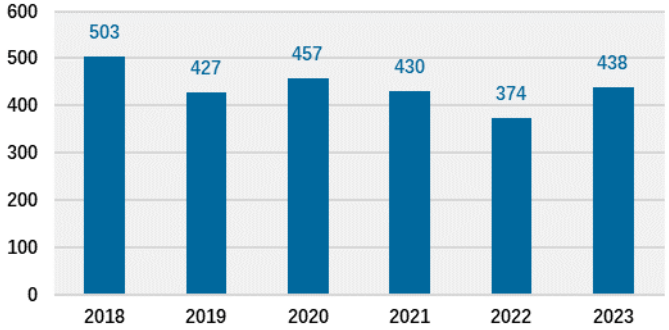
Key Indicators

Number of public security cases investigated and dealt with by public security authorities (cases)



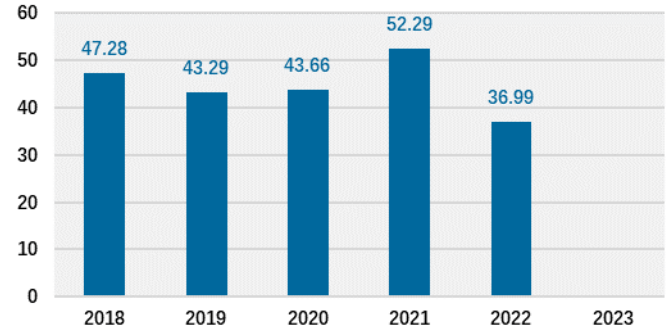
From 2015 to 2022, the number of public security cases investigated and dealt with by public security authorities decreased by **87.9%**.

Work safety accidents (cases)



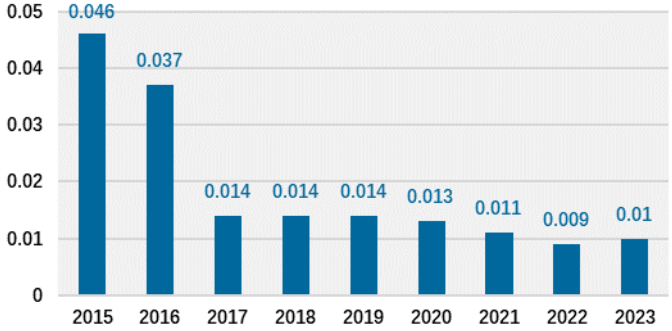
From 2018 to 2023, the number of work safety accidents decreased by **12.9%**.

Road traffic accidents (10,000 cases)



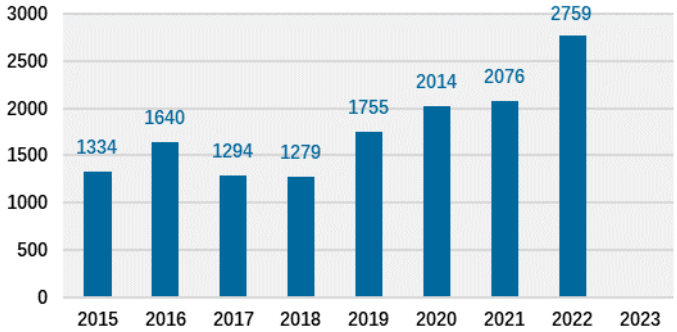
From 2018 to 2022, the number of road traffic accidents decreased by **21.8%**.

Number of deaths from safety accidents to GDP (100 million yuan) for the whole year



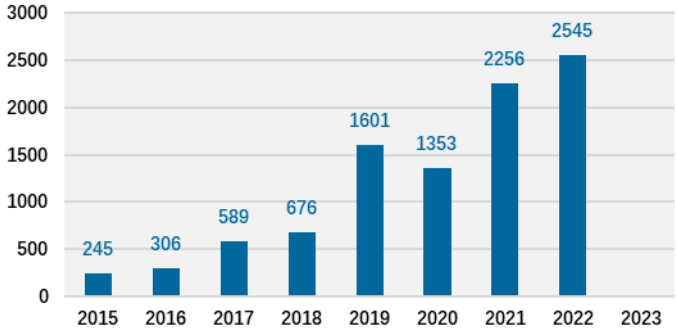
From 2015 to 2023, the number of deaths from safety accidents to GDP (100 million yuan) for the whole year decreased by **78.3%**.

Civil cases accepted by the Procuratorate (cases)



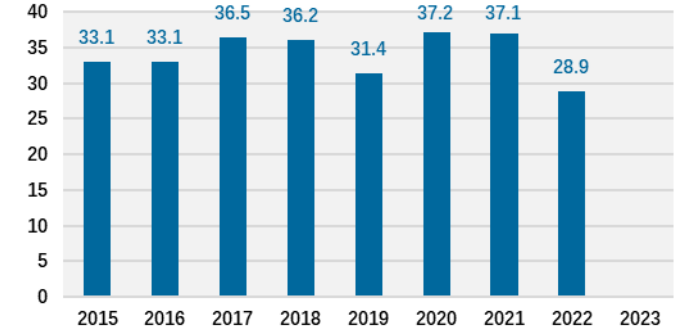
From 2015 to 2022, the procuratorate accepted a total of **14,151** civil cases.

Administrative cases accepted by the Procuratorate (cases)



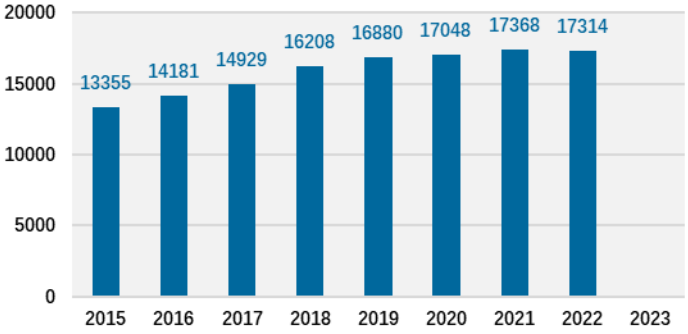
From 2015 to 2022, the procuratorate accepted **9,571** administrative cases in total.

Civil disputes mediated through people's mediation (10,000 cases)



From 2015 to 2022, the number of civil disputes mediated through people's mediation averaged **340,000** per annum.

Number of non-governmental organizations



From 2015 to 2022, the number of non-governmental organizations increased by **29.6%**.

Major Progress

Social security levels continue to improve[①]

In recent years, with the vigorous management of the Shanghai Public Security Bureau, the level of social security has continued to rise. A third-party survey shows that in 2023, the public sense of security and satisfaction with public security efforts in Shanghai achieved "double improvements" for 11 consecutive years following 2013. In 2023, all homicides and "two robbery" cases in the city were solved. The detection rate of burglary and pickpocket cases stayed above 95%, which was among the highest across the country. The number of completed and filed cases of telecom network fraud in the city dropped by 18.1% year-on-year respectively, achieving "five consecutive years of decline". Shanghai has become the only province in the country with no more than three deaths in a single road traffic accident in the past three years. In the anti-fraud endeavor, more than 27,000 suspects of telecom network fraud and related black and gray crimes were captured in 2023, with more than 600 million yuan of defrauded funds directly recovered. In addition, through data analysis and accurate early warning of industry risks, the Shanghai police have continued to crack down on major economic crimes such as credit fraud, professional salary fraud, and intellectual property infringement, strive to maintain good market economic order and safeguard the lawful rights and interests of the people.

Traffic safety has improved significantly

Since 2016, the city's traffic police have advanced key tasks such as large-scale rectification of road traffic violations and the development of smart transportation. By embedding the requirements of "fine management" and "comprehensive management" in tasks such as "reducing accidents and violations, and ensuring safety and smooth traffic", they have contributed to the upgrading of Shanghai's road traffic safety endeavor and kept building the "golden brand" of traffic management in Shanghai. In recent years, the death rate per 10,000 vehicles has dropped from 2.6 persons/10,000 vehicles in 2015 to 1.5 persons/10,000 vehicles. Polite driving has become more popular, the road traffic order has significantly improved, and alternating traffic and courtesy to pedestrians have become commonplace. As a result, the urban road congestion index has been in decline. Since 2015, the city hasn't witnessed any major traffic accidents and has been at the forefront of the country in terms of the overall impact of fatal accident prevention and control.

Efforts to build a law-based government have delivered impacts

The government has introduced better and more effective legislation in recent years. In 2023, the Shanghai Municipal Government submitted 14 draft local regulations to the Municipal People's Congress and its Standing Committee for review, and established,

[①] https://finance.sina.cn/2024-01-10/detail-inaayyrf6726123.d.html

revised, or abolished 40 government regulations. It consulted primary-level legislative contact points for a total of 59 laws and regulations throughout the year, receiving 965 pieces of feedback and adopting or partially adopting 90 pieces. The business environment continues to improve. Shanghai has worked for the revision and publishing of the Regulations of Shanghai Municipality on Optimizing Doing Business Environment so as to create a market-oriented, law-based, and internationalized world-class business environment. It also has organized the formulation of the Shanghai Tax and Fee Collection Service and Guarantee Measures (Draft), to provide a stronger legal guarantee for the continuous provision of refined tax services and a stronger sense of fulfillment among taxpayers. Shanghai also has optimized the enterprise-related notarial service mechanism. With twenty-five special service windows opened, and 59 dedicated service teams covering 4 fields established, exclusive service plans have been provided to 428 enterprises, exclusive service lists have been customized for 33 industry parks, and exclusive services have been provided to various business entities on the principle of special services for special matters in a prompt manner. The "unified online government service" for administrative approvals has become smarter and more easily accessible. In 2023, the Municipal Public Legal Service Center handled 13,958 administrative approvals. It handled 13,650 administrative approvals for lawyers, 58 for notarization, and 250 for judicial expertise.[①]

- **Social organizations are booming**

In the early days of reform and opening up, the number of social organizations in Shanghai was only over 600. By 2000, the number had only increased to over 3,000. Since then, with the rapid economic and social development in Shanghai, Shanghai's social organizations have grown in step with urban development, and its number keeps growing. As of the end of 2023, there were 17,283 social organizations in Shanghai, including 4,307 social groups, 12,349 social service agencies (private non-enterprise units), and 627 foundations. As an important part of the social governance community, social organizations have actively participated in building an urban governance community, where everyone participates, takes responsibility, contributes, and shares in the benefits. They are a symbol of civilization and progress in Shanghai.

- **Charitable giving has become a common trend**

Charity organizations have been growing in size and service scope. They have expanded from serving traditional areas including poverty alleviation to serving new areas such as education, culture, health, and environmental protection. The "big charity" concept has become a consensus in Shanghai. As of the end of 2023, there were 641 charity organizations in the city. The overall situation of charitable giving has improved, and the charitable donation network has been enhanced, further demonstrating the power of philanthropy in society that encourages people to pursue excellence and integrity. Community charities have achieved solid progress. Based on charity supermarkets and

① https://www.shanghai.gov.cn/nw12344/20240307/720aa919d8274a70b2088045fac5c5f0.html

community foundations as the platforms, various community charity activities have been carried out in an orderly manner, effectively arousing enthusiasm in residents for the charity cause. As of the end of 2023, there were 89 community foundations in the city. Charitable trusts have expanded in business scope, with their properties steadily increasing. Regulation of trusts has become more standardized, with its coverage ranging from poverty alleviation, and assistance for the elderly and the disabled, to education and student assistance, health, rural revitalization, and support for servicemen and their families. Charity brands are witnessing ever-increasing influence. Many charity brands with wide influence have been created. The "Shanghai Charity Week" is held every September to release the annual charity development report, with a focus on promoting charity culture and carrying forward the spirit of charity.

- **Community governance has become more vibrant**

Shanghai has fostered a number of outstanding community social organizations with vitality, credibility, and brand influence in recent years. A preliminary system for community social organizations has been established. This system is well aligned with the development of urban and rural communities in the city, features Party leadership, a reasonable structure, and complete functions, and delivers great impacts. Social organizations are engaged in building good neighborly relations, encouraging mutual support between neighbors, psychological consultation, community correction, and judicial mediation. They have played an active role in mediating neighborhood disputes and community conflicts and guiding residents to express their demands in a legal and orderly manner, thus contributing to the efforts to build a more harmonious community that benefits all residents. Social organizations guide residents to participate in pre-decision-making consultation, implementation promotion, and post-implementation evaluation of common issues in communities, and community affairs. They are committed to building a benign community autonomy and co-governance mechanism that promotes broad participation, encourages wide consultation and discussion, and joint contribution, and delivers shared benefits, so as to facilitate autonomy and co-governance of communities. They organize and carry out activities such as public services, sports and fitness, culture and leisure, ecology and environment to enrich people's cultural and intellectual lives, advocate public welfare concepts, improve their qualities, build social consensus, and promote cultural-ethical progress in communities.

Important Measures

(1) Build a Peaceful Shanghai

- **Steadily improve law and order**

Given the five law enforcement issues, i.e. "profit-seeking", non-standard, simple and calcified, violent, and "rent-seeking" law enforcement, Shanghai's public security and transportation authorities have adopted in-depth special rectification measures against

prominent problems in road traffic safety and transportation law enforcement. Market regulators have continued to promote anti-monopoly and anti-unfair competition law enforcement. In the year to date, they have investigated and dealt with seven suspected monopolistic practices in medicine, real estate, financial data, and other fields in accordance with the law, registered more than 1,500 anti-unfair competition cases, and closed more than 1,100 cases. The cultural and tourism authorities have carried out special inspections and clean-ups of illegal scripts against scripted entertainment business venues and major online cultural enterprises. The ecological and environment authorities have improved the mechanism linking administrative and criminal law enforcement, cooperated with the public security and procuratorial authorities to crack down on illegal and criminal behaviors such as hazardous waste pollution and falsification of automatic monitoring data, and submitted 12 suspected criminal cases. The urban management and law enforcement authorities have taken special rectification and law enforcement actions on the street environment, community environment, ecological environment, domestic garbage classification, illegal construction, and oil smoke nuisance, and investigated and dealt with 151,286 cases in accordance with the law.[①]

- **Reduce road traffic accidents**

The relevant functional departments of the government work together closely for collaborative governance, and the Municipal Road Traffic Safety Professional Committee has been established to build a joint prevention and control system for traffic accidents. From 2016 to 2022, the number of accidents and deaths were on a downward trend year by year. First, building a co-governance and joint management pattern. The General Office of Shanghai Municipal People's Government issued Opinions on Further Reducing Road Traffic Accidents in the City, further clarifying a working system for relevant functional departments of the municipal government to jointly promote accident prevention and comprehensive management. Preparations have been made to establish the "Shanghai Road Traffic Safety Professional Committee". Twenty-two functional departments have been coordinated and integrated to build a traffic safety management work pattern, under which each plays its part, engages in joint management and comprehensive governance, and addresses both symptoms and root causes. Second, keeping an eye on key hidden dangers and eliminating them regularly. A special action mechanism for regular accident prevention that is characterized by special action guidance, year-round commitment, and continuous efforts has been established. In recent years, a series of special rectification actions have been carried out, such as "Reducing Accidents and Controlling Major Traffic Accidents" for the prevention of major road traffic accidents, and "Hundred Days Battle" for the improvement of road traffic safety in autumn and winter, with detailed accident prevention and control tasks defined. With an emphasis on people, vehicles, enterprises, roads, and other links, inspections and rectifications have been conducted against hidden dangers on an ongoing basis. A host of effective measures have been consolidated for accident prevention and control, such as "large trucks stopping when turning right" and "installation and use of seat belt alarm devices on large buses". Third, strengthening

① https://www.shanghai.gov.cn/nw12344/20240307/720aa919d8274a70b2088045fac5c5f0.html

management of new forms of transportation. In response to hotspot issues such as delivery "riders" running indiscriminately, fatigued driving by online ride-hailing drivers, and new energy vehicles causing accidents, Shanghai has worked with relevant competent authorities to develop the traffic safety accountability standards for the express delivery and takeout industries, coordinated relevant enterprises to extend the delivery time for riders, and stepped up rectification of the electric bicycle parking chaos among riders. Fourth, promoting traffic safety extensively. Shanghai has continued to ensure that promotions and education on road traffic safety occur in ten types of locations (communities, families, institutions, organizations, campuses, shops, cinemas, construction sites, buildings, and networks), and are stepped up especially for key passenger and cargo transport enterprises, and key groups. Based on the "First Lesson for Public Safety Education" platform, Shanghai works to ensure awareness of traffic safety among primary and secondary school students. Greater efforts have been made to raise legal literacy on traffic safety and expose typical cases through traditional media, new media, and theme presentations, so as to increase people's awareness of obeying traffic laws to ensure traffic safety.

Case 30 Deepen the rectification of road traffic violations

Since 2016, the Shanghai Municipal Party Committee and the Shanghai Municipal People's Government have made an important decision to shoring up weak links in comprehensive traffic management, so as to modernize the capacity and system for urban governance, and arranged for and launched an initiative to rectify road traffic violations. From then on, the road traffic order has improved significantly, and alternating traffic and courtesy to pedestrians have become commonplace. Along with the tremendous improvement in road traffic order and capacity, the citizen's awareness of respecting and abiding by the law has been raised remarkably. First, staying committed to strict management in accordance with the law. Focusing on traffic violations that have caused deep concerns among the people, such as "illegal parking, illegal lane changing, and horn honking too much, and wrong-way driving", drunk driving, and large-power motor vehicle noise disturbing the public, Shanghai frequently organizes and carries out city-wide centralized rectifications and regional rapid and short-term rectifications. As a result, the rate of traffic violations by motor vehicle drivers that have been investigated and punished has risen year by year. Beneficial experience from this rectification initiative such as prohibiting parking of motor vehicles on solid yellow lines and prohibiting horn honking within urban areas was included in the newly revised Regulations of Shanghai Municipality on Road Traffic Administration, which was implemented in 2017. Second, expanding the scope of law enforcement. While consolidating the impact of law enforcement and management of motor vehicles, Shanghai advances the rectification of non-motor vehicle and pedestrian traffic violations. It introduced the Regulations of Shanghai Municipality on the Safety Administration of Non-motor-powered Vehicles to investigate and punish in accordance with the law the non-motor vehicles running red traffic, driving in the wrong way, and jaywalking pedestrians. It also applies information technology to increase the effectiveness of law enforcement and management, preventing non-motor vehicle and pedestrian traffic violations that are easy to occur from happening frequently. Moreover, the registration processes for electric bicycles are further regulated, basically preventing unlicensed electric bicycles from taking to the road. People driving scooters for the elderly and electric tricycles, and other groups that are very liable to violate the law are subject to tight control. Third, tightening off-site law

enforcement further. More new technologies are applied to traffic management. Sonar technology is used to assist with the investigation and punishment of motor vehicles honking their horns too much. Functions such as video event detection are used to investigate and punish pedestrians and non-motor vehicles jaywalking. Based on the "electronic signs" of non-motor vehicles, a pilot program is carried out to investigate and punish illegal behaviors such as non-motor vehicles driving in the wrong way, running red traffic, occupying motor vehicle lanes, and running despite prohibition signs. The "image search" is applied to accurately investigate and punish illegal behaviors such as not wearing seat belts and using mobile phones while driving. The upgraded recognition algorithms enable the "electronic police" to investigate and punish illegal behaviors such as failure to alternate traffic according to regulations, failure to avoid pedestrians as required, blocking at intersections, and failure to use lights as required.

- **Improve the social environment for fire safety[①]**

Shanghai is committed to fire safety management in assembly occupancies. The Shanghai Fire Department requires that all districts in the city strengthen fire safety management in assembly occupancies, especially hospitals, nursing homes, and children's welfare homes, and further promote the establishment of standards for standardized fire safety management. For multi-ownership, multi-purpose, and mixed-use business premises, each district must continue to identify root causes to problems and adopt rectification measures, as to whether fire safety management responsibilities are clear, whether a management mechanism is established, whether self-examination and self-correction of hidden fire hazards are implemented, and whether fire safety training and drills are carried out. Large commercial complexes, shopping malls, hotels, and other assembly occupancies are also the top priorities for fire safety management, especially public bathing places. Efforts must be focused on prominent problems pertaining to insulation and decorative materials, electrical wiring, evacuation conditions, fire separation, and electric heating to identify relevant risks and hidden dangers. Law enforcement must be strictly supervised and resolute measures must be taken for investigation and punishment in accordance with the law.

Shanghai has taken stronger emergency vehicle relocation measures to open up "life channels". The Shanghai Fire Department requires that community fire safety management be strengthened to keep "life channels" open. Sub-district and town organizations must be mobilized for investigations. Residential communities where illegal parking occupies fire lanes and seriously blocks the passage of fire engines should be classified and included in batches as key areas for supervision. On that basis, village property management companies must estimate the maximum number of parking spaces in the communities, and encourage owners to revise the community fire prevention convention and the owner parking convention. The number of motor vehicles entering the community must be strictly controlled through marking lines, and standardized management. At the same time, efforts must be made to improve emergency response through vehicle relocation and promote the implementation of the commitment system for turning the key after parking and emergency vehicle relocation in old communities. The

① https://www.163.com/dy/article/IMBBS48T0512DU6N.html

fire protection, housing construction, public security, housing management, and other departments in each district should improve the working mechanisms for consultation, assessment, and joint response, and address prominent problems such as illegal parking and charging of electric bicycles in residential areas, blocking and occupying of fire lanes, and crash of fire protection facilities in buildings. Further efforts need to be made to support centralized parking and charging places for electric bicycles and fire protection facilities and encourage the installation of charging and swapping cabinets to shore up weak links and clear the overdue payments. The fire department will also advance the "Three Clears" initiative to clear clutter in stairways, blocked emergency exits, and occupied fire lanes and rescue sites. Further efforts will be made to investigate and manage high-rise residential communities. The focus will be on rectifying problems such as the crash and deactivation of fire protection facilities, occupied and blocked evacuation passages, weak fire safety management capabilities, and incomplete emergency response plans for high-rise buildings. The failures of fire protection facilities in 578 high-rise residential buildings that were identified in the early stage of the survey will be tracked and rectified until they are resolved.

(2) Build a law-based government

- **Strengthen legal guarantee for the implementation of national strategies and work priorities for the whole city**

Shanghai has worked to ensure high-level reform and opening up in Pudong. It introduced the Provisions of Shanghai Municipality on Promoting Standardized and Innovative Development of Pudong New Area, in a bid to build Pudong New Area into a pacesetter for deep integration of China into global economic development and governance. At the same time, based on the creative legislative experience for Pudong New Area's laws and regulations, Shanghai has promoted the formulation of opinions proposed by the municipal government on improving the legislative working mechanism for Pudong New Area's laws and regulations, so as to better support institutional opening up. Shanghai also has worked to ensure the construction of the Lingang Special Area . It has guided overseas arbitration institutions to prepare application materials for setting up operations in the Lingang Special Area, made decisions in accordance with relevant regulations to approve the registration of the Korean Commercial Arbitration Board Shanghai Center, and reported to the Ministry of Justice for filing and coding. It has widened and deepened law-based cooperation. Together with the judicial administrative departments of Jiangsu, Zhejiang, and Anhui Provinces, it has signed and implemented the work plan on establishing a legal guarantee community for integrated development of the Yangtze River Delta through Chinese modernization, and on the annual key cooperation projects. It has worked for the accelerated construction of the Hongqiao International Central Legal District (Phase I). What's more, it has been committed to commercial mediation. The 6th Shanghai-Hong Kong Commercial Mediation Forum was hosted. A number of commercial mediation organizations were established, such as the Shanghai International Commercial Mediation Center for the Promotion of International Trade, the Hongkou North Bund Diversified Commercial Mediation Center, and the

Oriental Beauty Valley Commercial Mediation Center in Fengxian District.

- **Continue to deepen the "unified online government service" reform**

Shanghai has advanced "unified government services", and included 41 important municipal-level "one thing" in its scope. Shanghai commits itself to building one-stop, integrated services that are smart and easily accessible, optimizing one-stop, integrated services for more than 200 high-frequency matters. It has also built customer service experiences that are similar to "online shopping", and enabled online professional manual services for more than 350 high-frequency matters. In addition to promoting a "15-minute government service circle", Shanghai has boosted the construction of self-service terminals for government services and moved 1,212 matters online. It has thus served people more than 8.93 million times. It has innovated the service model for "free application". Based on the policies and services that benefit enterprises and the people, it has optimized the four links of the original policy and service fulfillment into two links of "confirmation of the wishes of enterprises and the public, and department fulfillment", enabling enterprises and the people to get things done in government agencies nearby, without submitting any materials. A total of 296 application-free matters for policy service have been launched at the city and district levels, benefiting more than 14.22 million enterprises and households (persons). Shanghai has further consolidated the "good and bad reviews" system for government services and effectively promotes service improvement and optimization. In the five years since the "unified online government service" reform was launched, there have been more than 81.98 million real-name registered individual users, more than 3.47 million legal entity users, 3,696 access matters, and a cumulative handling volume of over 450 million cases. The average daily handling volume exceeded 430,000 cases in 2023. The actual online processing rate has increased from less than 20% to more than 80%, and the positive rate among "good or bad" reviews has reached 99.94%.

Case 31 The "unified online government service" by Shanghai Municipal Government[①]

It has been more than two years since the prototype of the "unified online government service" was developed, and the service system was launched, enhanced, and upgraded. The "unified online government service" has become a government service brand first proposed by Shanghai, effectively strengthening users' sense of fulfillment and satisfaction in their daily lives and during the pandemic. The materials submitted for government approvals have decreased by 52.9% on average, and the processing time has been reduced by 59.8% on average. For example, the Big Data Center has rebuilt the approval process for opening a restaurant, reducing the times of visiting government authorities from 6 to just 1, and the processing time from 58 working days to 10 working days. Since its launch, the "Shanghai QR Code" for "unified online government service" has been used more than 370 million times by more than 14.41 million persons. Properly used and shared, the data, an inexhaustible resource, has greatly benefited the people and injected vitality into urban governance. At the district level, the "Shanghai QR Code" is becoming a super "toolkit" for improving the business environment and boosting government efficiency. To make "unified online government

[①]The "Unified Online Government Service" and an "Integrated Online Management" for Urban Operations: Two Networks Guiding the Governance of Greater Shanghai (baidu.com)

service" simpler, Fengxian District has explored how to minimize "approvals" for 490 matters, with links streamlined and approvals canceled as many as possible. Based on "Integrated Online Management", Xuhui District has developed the "Governance in Xuhui" platform to get the most out of data resources. In the future, Shanghai will work for more efficient, convenient, and targeted "unified online government service". For higher efficiency, it will improve the quality of the "unified online government service" to better ensure "getting one thing done efficiently". To enhance convenience, it will make the "unified online government service" user experience-oriented rather than department management-orientated, and ensure online services are provided whenever possible. To make "unified online government service" more targeted, it will adopt a proactive rather than passive approach, and provide customized and personalized government services in a more refined and profound way, based on the dedicated personal and corporate web pages.

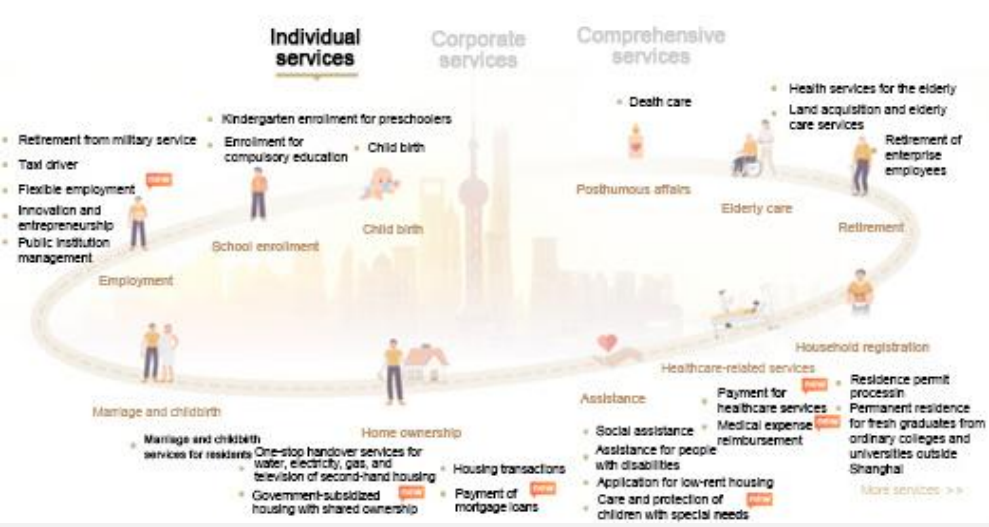


Figure 34 The"unified online government service" and "getting one thing done efficiently" for individuals

- **Improve the list system for government powers and responsibilities**

Shanghai has adjusted 155 matters pertaining to the rights and responsibilities of the archiving, commerce, planning & resources, emergency management, market regulation, and drug supervision departments in a timely and dynamic manner. It has deepened the reform of public institutions. According to the plan for this round of institutional reform, it has studied and formulated an adjustment and optimization work plan, based on the situations of public institutions responsible for administrative law enforcement in this city. The list of administrative licensing matters (2023 version) at the city, district, and sub-district levels has been compiled and published. The implementation standards and service guidelines for administrative licensing have been adjusted and updated. Shanghai has advanced the reform for standardized management of administrative filing. It has organized the standardization and cleanup of administrative filing matters and made a list of administrative filing matters for the city. The "one license for one business" reform has been deepened, with the List of Industries for the "one license for one business" Reform (second edition) formulated, and a reform guideline developed.

- **Continue to strengthen legislation in key areas**

Shanghai has introduced the Shanghai Regulations on Promoting the Construction of an International Commercial Arbitration Center to provide a legal guarantee for accelerating the building of an Asia-Pacific arbitration center that is globally oriented. The Shanghai Wildlife Protection Regulations have been published to design a wildlife protection system with Shanghai's characteristics. The Regulations on the Promotion of Green Transformation of Shanghai's Development Pattern have been released to promote green, low-carbon, sustainable, and high-quality development. The Regulations of Shanghai Municipality on Soil Pollution Prevention and Control have been unveiled to provide an institutional guarantee for tightening soil pollution control. The Shanghai Seed Regulations have been introduced to ensure seed industry security and promote agricultural development. The Measures of Shanghai Municipality for the Implementation of the Land Administration Law of the People's Republic of China have been released to standardize and improve land development, protection, and construction activities in this city. The Regulations of Shanghai Municipality on the Construction of Barrier-free Environment have been published to highlight Shanghai Spirit and its care for its people. In addition, the municipal government has introduced the Measures of Shanghai Municipality on Management of Urban Construction Archives and revised the Measures of Shanghai Municipality on Protection of Raw Water Diversion Pipes and Channels, the Measures of Shanghai Municipality on Management of Changxing Island Development and Construction, and the Measures of Shanghai Municipality on Management of Social Security Cards, so as to further strengthen the supply of legislation in different fields.

- **Strengthen the standardization and institutionalization of administrative law enforcement and law enforcement supervision**

Shanghai has formulated and implemented a plan for the implementation of the General Office of the State Council's three-year action plan to improve the quality of administrative law enforcement. Three regulations, namely, Measures of Shanghai Municipality on Supervision of Administrative Law Enforcement, Regulations of Shanghai Municipality on Administrative Penalty Hearing Procedures, and Measures of Shanghai Municipality on Management of Administrative Law Enforcement Certificates, have been implemented. Work priorities for administrative law enforcement under the "three systems" have been implemented, such as administrative law enforcement publicity, improvement of legal review quality, application of the comprehensive law enforcement system, collation of prominent issues in administrative law enforcement, and annual review of law enforcement archives. The "Top Ten Cases" and 90 "Guidance Cases" in administrative law enforcement for 2022 have been selected and released. Shanghai also has formulated and issued opinions on further standardizing the development and management of administrative discretion benchmarks in the city.

(3) Practice social governance based on joint establishment, shared governance and common sharing

- **Strengthen diversified resolution of conflicts and disputes**

Shanghai has fully implemented the "Tri-Institution Collaboration" mechanism involving police stations, judicial offices and law firms. Access to the city's "one thing" platform for dispute resolution has been given to ten additional municipal-level organizations and civil and commercial arbitration institutions. In 2023, a total of 21,280 online applications were received, 16,887 were accepted, and 16,079 were resolved, with a resolution rate of 95.1%. The city's people's mediation organizations accepted a total of 465,000 disputes, and successfully mediated 401,000 cases. Shanghai also works for the extension of dispute resolution resources to primary-level organs, establishing non-litigation dispute resolution centers (branches) in towns. The non-litigation dispute resolution centers at all levels have received 197,000 cases in total, including 172,000 pushed by courts, 25,000 applied for online by individuals, and 49,000 cases have been successfully mediated.

- **Increase the supply of public legal services**

Shanghai's 12348 Public Legal Service Platform served 925,000 persons in 2023. Shanghai has promoted the extension of high-quality legal service resources to suburban areas and expanded municipal-level public legal services to cover primary-level communities, so as to improve the convenience and accessibility of public legal services. The fifth "Oriental Lawyers" has been held to guide lawyers to better play their roles in urban renewal and governance, and conflict and dispute resolution. Efforts have been made to research, develop, and promote the "processing code" function for notary services, thus significantly increasing the online processing rate of notary services. The Measures of Shanghai Municipality on Management of Judicial Identification Fees have been revised and published to further standardize fee charging in the industry. The fifth Shanghai International Arbitration Forum and the Shanghai Arbitration Week 2023 were successfully held, further building the arbitration brand in Shanghai. Shanghai also has promoted "free application" for the reduction and exemption of legal aid recipients' notarization and judicial expertise fees. A total of 50,233 legal aid cases have been handled throughout the year, representing a year-on-year increase of 44.71%.

Case 32 The 5th Shanghai International Arbitration Forum and Shanghai Arbitration Week 2023[①]

On November 8, 2023, the opening ceremony of the 5th Shanghai International Arbitration Forum and Shanghai Arbitration Week 2023 was held in Hall D1, the parallel venue of Hall 4.2 of the National Convention and Exhibition Center (Shanghai). Hu Weilie, Vice Minister of Justice, and Zhang Yahong, Vice Mayor of the Shanghai Municipal People's Government, attended the forum

① https://www.shanghai.gov.cn/nw31406/20231110/5312ba7b6b2a49ed8dbb895c50987476.html; https://sfj.sh.gov.cn/zwyw_ggflfw/20231130/02e91577211f470ebaac9130f06d58f5.html

and delivered speeches. Xu Huili, Deputy Secretary-General of the Shanghai Municipal People's Government, presided over the opening ceremony of the forum and announced the opening of the Shanghai Arbitration Week 2023.

As a supporting event for the Sixth China International Import Expo, this forum was hosted by the Shanghai Municipal Bureau of Justice, Shanghai Council for the Promotion of International Trade, and Shanghai Arbitration Association, and organized by the Shanghai Arbitration Commission, Shanghai International Economic and Trade Arbitration Commission (Shanghai International Arbitration Center), and of China Maritime Arbitration Commission Shanghai Headquarters. The theme was "New Technology, New Track, New Momentum, and New Advantages". At the forum, the opening ceremony of the Shanghai Arbitration Week 2023 was held. During the Shanghai Arbitration Week 2023, the Shanghai Arbitration Commission, Shanghai International Economic and Trade Arbitration Commission (Shanghai International Arbitration Center), China Maritime Arbitration Commission Shanghai Headquarters, and relevant district judicial bureaus, law schools, and law firms organized 19 breakout sessions. Participants exchanged ideas, engaged in discussions, and provided suggestions on the topics of commercial dispute resolution, digital arbitration, and talent development. They promoted the arbitration and legal systems, deepened the international community's understanding and recognition of arbitration in Shanghai, and enhanced the international credibility, attractiveness, and influence of arbitration in Shanghai.

Figure 35 Opening ceremony of the Shanghai Arbitration Week 2023

Four consecutive sessions of the Shanghai Arbitration Week have been held since 2020, and it has become an internationally renown brand for exchanges and discussions on topics in international arbitration that highlight Shanghai's characteristics. Nineteen breakout sessions were held during the Shanghai Arbitration Week 2023, featuring distinctive themes, rich content, and multiple highlights. There were 30 organizers in total, including judicial bureaus of the Huangpu District, the Hongkou District and other districts, domestic and overseas arbitration institutions and organizations such as Shanghai Arbitration Commission, Shanghai International Economic and Trade Arbitration Commission, and China Maritime Arbitrators Association Shanghai Headquarters, universities including East China University of Political Science and Law, Tongji University, Shanghai Finance and Economics University, Shanghai International Studies University, Shanghai University, East China University of Science and Technology, and law firms including

Grandall, Jin Mao, Dentons, Duan & Duan, JT & N, Merits & Tree, Co-effort, Wintell, East & Concord, Anjie Broad, Zhong Lun, Global, Tiantai, Boss & Young, Democracy and Science, W&H, United, and UK-based Norton Rose Fulbright. The breakout sessions discussed a series of frontier and hot topics in international commercial arbitration, including corporate governance and arbitration, ESG and international commercial arbitration, financial arbitration, expert witnesses, and talent development, and provided constructive and practical suggestions for accelerating the establishment of an Asia-Pacific arbitration center that is globally oriented.

- **Vigorously build brands for "Shanghai Legal Services"[①]**

Under the unified planning of the Commission for Overall Law-based Governance of the Communist Party of China Shanghai Municipal Committee, the office of the commission has released the Notice on Selecting Brands for Building a Law-based Shanghai, so as to identify, collate, select, and foster a batch of distinctive and reputed brands for building a law-based Shanghai. All organizations, departments, and districts across the city have applied for 153 brands, covering various areas of legal work such as legislation, law enforcement, judiciary, compliance and legal literacy, and legal services. After rounds of reviews, the first batch of 15 "brands for building a law-based Shanghai" and 15 "shortlisted brands" for this initiative has been selected in 2024.

The selection of these brands this time for building a law-based Shanghai fully demonstrates the experience in and impact of innovation relevant organizations and regions have achieved from legal work for their organizations, fields, and regions, such as scientific legislation, strict law enforcement, impartial judiciary, compliance and legal literacy for all, and legal services. For example, initiatives such as the "Catalog of Minor Violations Exempt from Administrative Penalties" exemplify Shanghai's commitment to continuously optimizing a world-class, rule-of-law-based business environment.

- **Make every effort to build an online and offline "direct lines to public opinion"[②]**

In July 2020, the Shanghai Municipal Public Complaints Office established the Shanghai Municipal People's Suggestions Collection Office, the first provincial-level organization for the collection of people's suggestions in the country. In July 2021, Shanghai became the first to release the Several Regulations on the Collection of People's Suggestions in Shanghai, the country's first local regulation formulated by a provincial people's congress specifically for the collection of people's suggestions, so as to ensure the people's primary role in urban construction and development in a legal manner. Moreover, the Shanghai Municipal and District People's Suggestion Collection Offices have teamed up with more than 70 functional departments to carry out more than 150 special "active collection" activities and have received more than 30,000 suggestions. For example, the Municipal People's Suggestions Collection Office, in partnership with relevant departments, hosted the "Let's Talk about the '14th Five-Year Plan'" program, inviting citizen representatives to make suggestions for the city's development in the next five years.

① https://www.shanghai.gov.cn/nw31406/20240208/06b1d65204c04632885217e7dd80eaf7.html

② https://new.qq.com/rain/a/20220926A08WYZ00

Suggestions such as building an "expert think tank" and carrying out multi-channel communication and promotion of the city's image were directly written into the "14th Five-Year Plan". From 2020 to 2022, more than 160,000 pieces of opinion were received, and 98.5% of suggestions on key issues were adopted. The proposers ranged from primary school students to the elderly, from experts and scholars to Internet uploaders. The topics covered building the "five hubs", accelerating the urban digital transformation, promoting the renovation of old residential communities, and ensuring epidemic response. The suggestions concerned not only the "big picture" of reform and development but also the "daily life" of the public including dressing, food, housing, and transportation.

(4) Develop social organizations

- **Strengthen top-level institutional design**

Shanghai has promulgated the Regulations of Shanghai Municipality on Charity to regulate the operations of charity organizations. It has introduced normative documents such as the Measures of Shanghai Municipality on Registration and Management of Non-local Chamber of Commerce, the Interim Measures of Shanghai Municipality on Recognition and Derecognition of Charity Organizations, and formulated policy documents including the Guiding Opinions on High-Quality Development of Social Organizations in Shanghai, and the Implementation Plan on Special Initiatives for High-Quality Development of Community Social Organizations in Shanghai, in a bid to advance the development of social organizations in legal thinking and through legal means.

Case 33 The "EGG Walkathon" Charity Program of Shanghai United Foundation

Shanghai United Foundation, founded in 2009, is a 5A-level public foundation. It launched the "EGG Walkathon" charity program in 2011. Participants are required to join in a 12-hour, 50-kilometer ultra-long walking challenge to call on their relatives and friends to donate, in order to support charity projects for children, help children's charities across the country, and enable the healthy and happy development of children aged 0-18 on an equal footing.

Under the principle of happiness, independence, and effectiveness, the "EGG Walkathon" enables participants to realize values by challenging themselves and participating in charity activities, charity organizations to strengthen their professional capacities for communication and services, and children to truly benefit from guaranteed systems, professional services, and social care. The program has been held in Shanghai 14 times, mobilizing a total of nearly 140,000 persons to participate, and involving more than 4,600 volunteers. It has become the most representative charity event in Shanghai and even in China, and was once granted the "China Charity Award", the highest charity award from the Chinese government. It has raised more than 92 million yuan through creative fundraising, benefiting more than 1.47 million persons. In the past 14 years, the program has supported 950 charity projects in 31 provinces and municipalities across the country. The funds raised have been mainly used to fund charity organizations for children, helping local charity organizations to better serve children aged 0-18 in the region. At present, the program mainly serves children in difficulties who are struggling with a lack of family supervision or improper supervision in the central and western regions, children in difficulties across the country, left-behind children, disabled children, and migrant children.

Figure 36 "EGG Walkathon"

- **Optimize the registration and review processes**

Shanghai has established an open, transparent, scientific, and connected registration and review mechanism for social organizations, so as to boost the effectiveness of such registrations and reviews. It continues to advance the "unified online government service" reform to facilitate service recipients. It also promotes the "one thing" reform for the establishment of social organizations, and in addition to the registration services for incorporation, it probes into the "one-stop application" and "unified online government service" for "1+8" matters including bank account opening and tax registration, so as to make the most of data and save people from paying too many visits. Meanwhile, it accelerates the elimination of inefficient and ineffective social organizations, ensuring registration services are provided for both the establishment and exit of social organizations.

- **Strengthen policy support and cultivation**

Shanghai actively promotes the implementation of fiscal and tax support policies such as tax exemption qualifications for non-profit organizations, pre-tax deduction qualifications for charitable contribution, exemption of import duties and import VAT on donated materials for charity, exemption of VAT on membership fees of social groups, and donation notes for charitable causes. It has established and improved the system for government purchases of social organization services. It was the first in the country to build a unified platform for balancing supply and demand for government purchases of social organization services and continues to improve it. It strengthens the fostering and incubation of community social organizations, with the social organization service centers distributed in the city, districts, sub-districts, and towns. It strengthens publicity and model selection to improve the recognition and perception of social organizations in the whole society. It also encourages social organizations to "go global" and participate in international exchanges and cooperation.

Case 34 The Shanghai Performance Trade Association committed to building "new performing arts spaces"

The Shanghai Performance Trade Association, established in 2007, is an industrial social group formed voluntarily by operations in the performance industry in Shanghai (including artistic performance groups, performance agencies, and performance venues). It now has more than 260 member units. In the past 20 years, there has been an upsurge in the construction of new grand theaters across the country. However, the "post-95s" and "post-00s" are not satisfied with seeing imaginable and predictable performances in professional theaters. They prefer talk shows, live shows, immersive performances, and other small and niche performances, pursuing personalized, unique, and novel experiences. The performance consumer market is increasingly dominated by young people. Meanwhile, many art workers hope to be closer to the audience and create more performances suitable for small and new spaces.

In 2019, the association established the "Professional Committee for New Performing Arts Spaces", and formulated and launched the Operation Standards for New Performing Arts Spaces in Shanghai (Trial Version) in May of that year. It was the first in the country to do so, which marked the official creation of "new performing arts spaces". The "Standards" detail the operation requirements, hardware standards, and service standards for new performing arts spaces. Any venue that meets the regulations and has operating capacity can apply for holding performances. The association certifies and licenses the new performing arts spaces that have applied, and evaluates them annually. Those failing to meet the standards would not be certified or licensed. An "exit mechanism" has thus been established. After the release of the Standards, the Big World, Sinan Mansions, Shanghai No. 1 Department Store, Mao Livehouse, Dayin Jingshe Bookstore, Jazz at Lincoln Center Shanghai, Duzhe Bookstore, and Shanghai Metro Music Corner became the first batch of new performing arts spaces in Shanghai.

In 2019, the association awarded licenses to 50 institutions. By 2020, the number of new performing arts spaces that applied and were licensed had reached 100 and they were distributed in 14 districts across the city. After five years of cultivation and promotion, the new performing arts spaces, as the expansion of and complement to traditional professional theaters, have developed into an indispensable and important part of the performance sector in Shanghai. They are now "great places nearby" for citizens and "new urban tourist destinations" for Chinese and foreign tourists. The development of new performing arts spaces has resonated with Shanghai's urban renewal. Some new performing arts spaces that were opened up in old buildings and landmarks during the transformation of their physical spaces have become new hot spots, and attracted numerous visitors, bringing new life into the old buildings.

In the next step, the association will be committed to helping new performing arts spaces to create high-quality content, develop and attract talent with extensive performing arts skills, and build a more complete industrial chain covering links of creation, performance, and production to consumption, aiming to play a positive role in building Shanghai into an Asian Performing Arts Center as a social organization.

5. Prospects

Based on the framework of the 2030 Agenda for Sustainable Development, this report builds a vision system of Shanghai's urban strategic goals and a logical framework of the SDG system and analyzes key measures for Shanghai to achieve 17 sustainable development goals. According to the review, Shanghai further implements sustainable development ideas in the aspects of SDG2 Zero Hunger, SDG5 Gender Equality and Women's Empowerment, SDG6 Water and Sanitation, SDG9 Industry, Innovation and Infrastructure, SDG11 Sustainable Cities and Communities, SDG13 Climate Action, SDG14 Life below Water, SDG16 Peace, Justice and Strong Institutions, and makes significant progress and accumulates rich practical experience.

In the future, Shanghai will continue to strive for SDGs. Economically, Shanghai will deepen reform and opening up in every aspect under the guidance of major national development strategies, build a modern economic system, and advance high-quality economic development. Socially, Shanghai will focus on creating a high-quality life and better fulfilling people's expectations for a better life. Culturally, Shanghai will make efforts to advocate the city spirit and its qualities to further facilitate the building of an international cultural metropolis. In the field of governance, Shanghai will identify the features and laws of megacities to improve the modernization of urban governance in all respects and build a pacesetter for practicing the whole-process people's democracy. Environmentally, Shanghai will steadily work for ecological progress and move faster to build a beautiful homeland of harmony between humanity and nature.

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Prepared by	Preparation Team of the Shanghai VLR under the Shanghai Academy of Social Sciences Shanghai Coordination Center of World Cities Day

Annex

SUSTAINABLE DEVELOPMENT GOALS

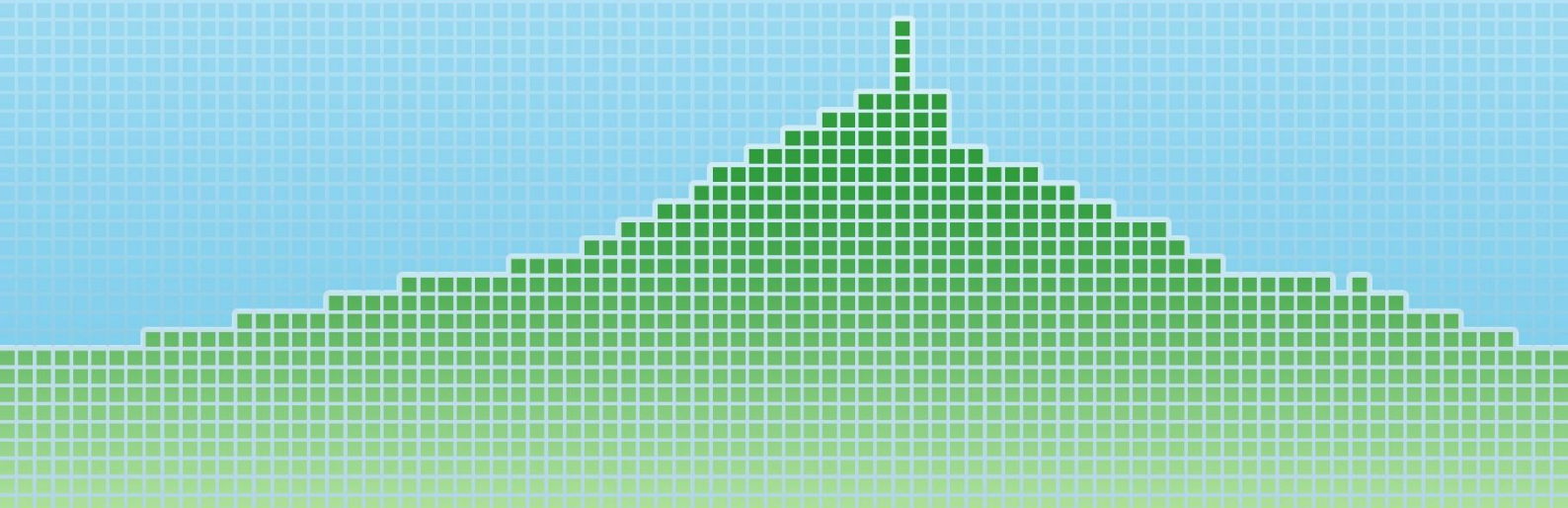
Songjiang

Voluntary Local Review

2024

Annual Report

Inclusiveness · Low-Carbon · Growth



Inclusiveness ·Low-Carbon ·Growth

UN SDGs Songjiang Voluntary Local Review 2024

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Songjiang - the root of Shanghai's local culture

Songjiang District is located in the southwest of Shanghai, and on the upper reaches of the Huangpu River, one of Shanghai's mother rivers. The district boasts a long history, rich culture and a vibrant economy. It is known as the "cultural root of Shanghai, the source of the Huangpu River, and the highest district in Shanghai". Songjiang is one of the earliest land areas in Shanghai, and one of the origins of the city's history and the birthplaces of its culture. Archaeological discoveries have found that 4,000 years ago, this area boasted a culture characterized by an urban agglomeration lifestyle - "Guangfu Park Culture". The place was first called Huating in 219 AD, and became Huating County in 751 AD. With more than 1,000 years of evolution, Songjiang has always been a cultural hub in Shanghai, and countless writers, artists, scientists, and revolutionary pioneers have emerged. Over the years, Songjiang has built the DNA and the spirit of Songjiang Culture, and become the cultural root of Shanghai.

Songjiang - a city of innovation, development and vitality

Songjiang is a young, innovative and dynamic city. Songjiang was transformed from a county into a district that is subject to the jurisdiction of Shanghai in 1998. The "Shanghai 2035" Master Plan released in 2018 positions Songjiang as one of the five key new cities. Songjiang enjoys great advantages in the basis of scientific and technological innovation and high-end industrial development in the suburbs of Shanghai Its goal and vision for strategic local development is to rely on "science and technology innovation" to lead the development of the G60 S&T Innovation Valley, build an advanced manufacturing hub that will drive the economic growth of the Yangtze River Delta, and grow into a major supporting area for building Shanghai into a globally influential science and technology innovation center. In 2023, the district was ranked third in Shanghai, with 1,001 enterprises applying for high-tech companies, and second in the city with 99 projects recognized as high-tech achievement commercialization projects. Currently Songjiang is accelerating the building of major technological innovation platforms such as the G60 Brain Intelligence Science and Technology Innovation Base, and leading the development of new suburban cities in Shanghai, aiming to lead high-quality development with technological innovation.

Songjiang - a livable place with beautiful landscape

Songjiang covers an area of 604.64 square kilometers, with abundant natural resources such as green mountains, forests, rivers, and lakes. It is one of the few areas in Shanghai that boasts both mountain and river scenery. Sheshan Mountain, the peak of land areas in Shanghai, is located in Songjiang. It is rich in ecological resources and historical and cultural heritage. Songjiang also abounds with natural and cultural resources such as Tianmashan, Xiaokunshan, Chenshan Botanical Garden, Zubai Lake, Pavilion Garden, and Shanghai Hi-tech Films and Televisions City. Songjiang makes full use of these advantaged resources to create an important heritage site for China's fine traditional culture and a livable place with natural landscape, characterized by "green mountains and lucid waters from a distance, and rich cultural heritage from up close".

1. Introduction

Songjiang is a municipal district in the southwest of Shanghai, located in the upper reaches of the Huangpu River, with a land area of 604.64 square kilometers and a permanent population of 1.9735 million by the end of 2023. Songjiang is not only a famous city with profound cultural and historical heritage, but also a dynamic new city driven by innovation.

The district boasts a long history, rich culture and a vibrant economy. It is known as the "cultural root of Shanghai, the source of the Huangpu River, and the highest district in Shanghai". It is one of the origins of Shanghai's history and the birthplace of its culture, which can date back to 4,000 years ago when the "Guangfu Park Culture" emerged in the late Neolithic period. Songjiang has always been a cultural hub in Shanghai, where countless writers, artists, scientists, and revolutionary pioneers have emerged. Through hard work and perseverance of its people, Songjiang has built the DNA and the spirit of Songjiang Culture and become the cultural root of Shanghai.

Moreover, Songjiang is one of the five important new cities identified in Shanghai's strategy for the new round of spatial development. While basing itself on the new development stage, implementing new development concepts, and building a new development paradigm, Songjiang New City serves as a source of inspiration and relies on the Yangtze River Delta G60 Science and Technology Innovation Valley as a strategic basis to strengthen the strategic portal support for the "Songjiang Hub" and target internationally advanced scientific and technological innovation capacities and industrial systems. As a trailblazer for scientific and technological innovation, it is dedicated to building a portal hub for the allocation of factor resources in the Yangtze River Delta for the high-speed rail era. It is endeavoring to build a "central node" for domestic circulation, and one of the important hubs for "strategic links" between domestic and international dual circulation, so as to help Shanghai and the Yangtze River Delta take the lead in building a new development paradigm.

Pursuing sustainable development has long been the core idea of Songjiang District in the course of its development. The *Songjiang New City Master Plan (2010-2020)*, proposed earlier based on the *Implementation Plan for the Songjiang District Regional Master Plan (2006-2020)*, has established the goal of building a "culturally advanced and livable new city" based on the concept of "innovation-driven and inclusive development". The *Comprehensive Plan and General Land Use Plan of Songjiang District, Shanghai (2017-2035)*, approved by the Shanghai Municipal Government in 2019, proposes the district's development goals for 2035, that is, building Songjiang into the southwest gateway of Shanghai that is striving for an excellent global city, a major supporting area for building Shanghai into a scientific and technological innovation center, an advanced manufacturing hub driving the development of the Yangtze River Delta, a major heritage site of China's fine traditional culture, and a livable place with special natural landscape, under the overall goal of building Shanghai into a modern socialist international metropolis with a

global influence. The 14th Five-Year Plan of Songjiang District issued in 2021 proposes the goals and outlooks for 2035, including "comprehensive improvement of global influence for the high-quality development of the cradle in G60 S&T Innovation Valley", "comprehensive enhancement of the cultural soft power of culturally advanced Songjiang" and "promoting green and healthy production and lifestyle in green Songjiang".

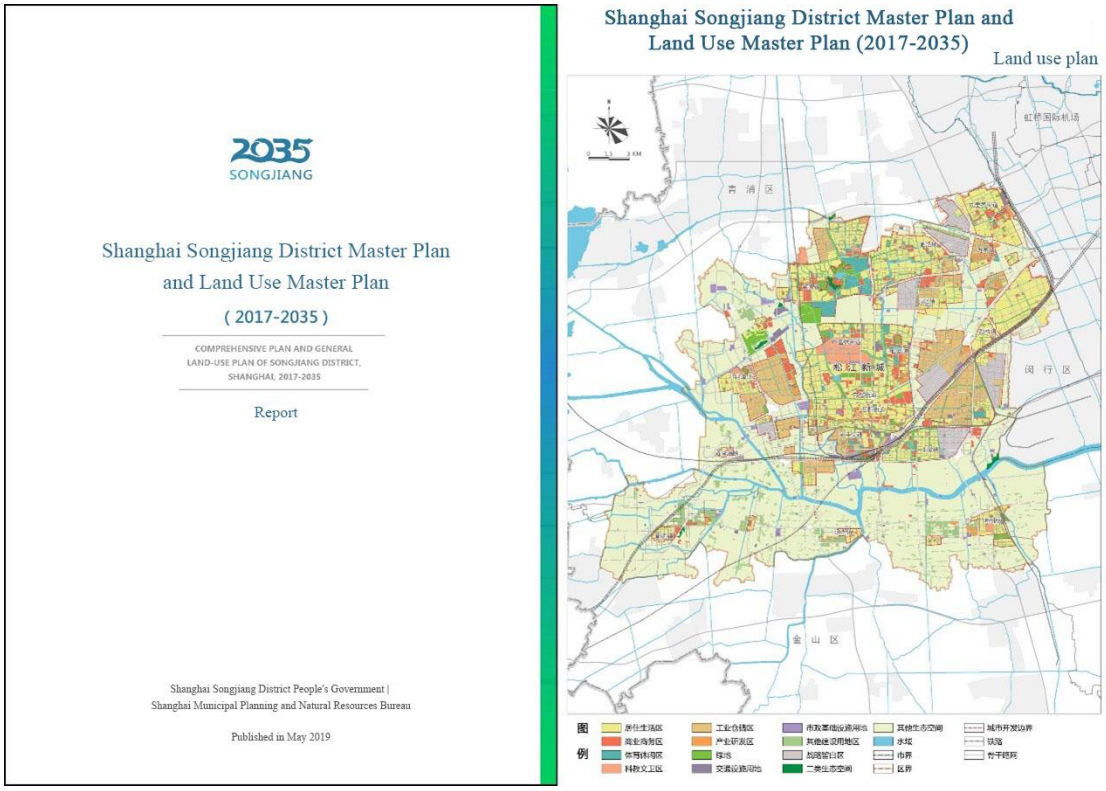


Figure 1 Comprehensive Plan and General Land Use Plan of Songjiang District, Shanghai (2017-2035)

Figure 2 17 SDGs of the 2030 Agenda

From the positioning changes in several important strategic plans of Songjiang District since the beginning of the 21st century, it can be seen that Songjiang has attached particular importance to innovation, cultural advancement, and green development in pursuing sustainable development. In terms of innovation, Songjiang has regarded scientific and technological innovation as the primary driving force for economic transformation and upgrading, and taken the building of G60 S&T Innovation Valley as the main spatial carrier and strategic lever to develop high-end and intelligent manufacturing, and promote economic transformation and development. In promoting cultural advancement, Songjiang, based on its profound historical heritage, has remained committed to a people-centric urbanization path to build a modern and livable city that integrates traditions and modernity. In pursuing green development, Songjiang has made full use of its unique natural landscape of green mountains and lucid waters. While protecting the ecological foundation, it has emphasized the integration of green development, cultural advancement, and industries, aiming to build an attractive new development paradigm of ecological space.

Based on the United Nations' *Transforming Our World: the 2030 Agenda for Sustainable Development* (hereinafter referred to as the "2030 Agenda"), Shanghai has conducted a voluntary local review of the implementation of the United Nations 2030 Agenda for Sustainable Development (referred to as the "voluntary local review") since 2021 and delivered its first report Shanghai Voluntary Local Review 2021 that year. It also has made it a regular endeavor to promote sustainable development in the city. Since 2022, Shanghai has organized voluntary local reviews at the district level. The voluntary local review reports are both separate district-level report outcomes, and integral parts of municipal-level report outcomes. Songjiang, one of the first batch of municipal districts to participate in the district-level voluntary local reviews in Shanghai, has prepared the *Songjiang Voluntary Local Review* reports for 2022 and 2023. In 2024, based on the existing framework and foundation, Songjiang continued to respond to the SDGs logical framework. Focusing on the annual theme of “Inclusiveness · Low Carbon · Growth”, it selected a number of priority review goals, and delivered the annual report *Songjiang VLR 2024*.

2. Review Methods and Processes

The *Songjiang VLR 2024* was co-created by relevant departments of the Songjiang District People's Government, professional research institutions, expert advisory committees, and relevant social organizations, under the guidance of the Shanghai Municipal Commission of Housing, Urban-Rural Development and Management, the Development Research Center of Shanghai Municipal People's Government, and the People's Government of Songjiang District, Shanghai. Multiple organizations worked together to prepare this report, with more than 20 government departments invited to participate in specific assessments and to provide case studies that could demonstrate the latest practices and achievements. During the preparation, many experts in different areas were consulted, and an expert advisory committee composed of authoritative experts from fields related to the annual theme was created to be responsible for the selection and discussion of priority review goals and related indicators. Furthermore, an emphasis was put on the analysis of multisource data, leading to a comprehensive understanding of residents' satisfaction with urban living environment through various dimensions such as urban health check-up. The Preparation Team of the *Songjiang VLR 2024* under the Shanghai Academy of Social Sciences is responsible for writing this report.

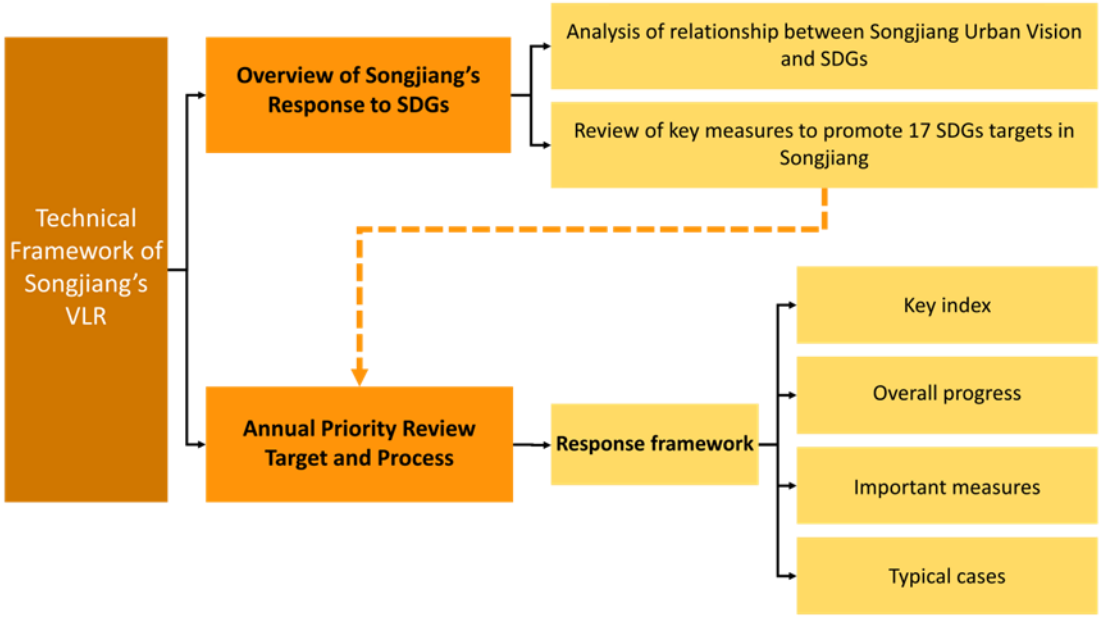


Figure 3 Technology Framework Diagram for *Songjiang Voluntary Local Review*

The *Songjiang VLR 2024* was prepared with reference to the requirements in the *Handbook for the Preparation of Voluntary National Reviews* issued by UN DESA's Division for Sustainable Development Goals and the *Guidelines for Voluntary Local Reviews* issued by UN-Habitat. References also include China's Voluntary National Review Report on Implementation of the 2030 Agenda for Sustainable Development issued by the Ministry of Foreign Affairs of the People's Republic of China in June 2021, the UN SDGs Shanghai Voluntary Local Review for 2021 and beyond, and local review results of other foreign

cities in relation to the SDGs at the district level provided on the UN websites related to the SDGs.

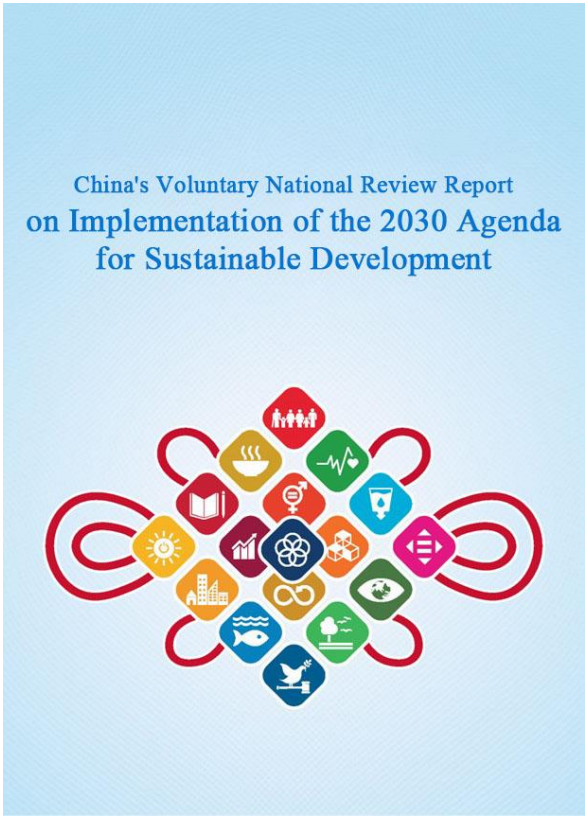


Figure 4 China's Voluntary National Review Report on Implementation of the 2030 Agenda for Sustainable Development (released in 2021)

In terms of review framework and content, the working team of the *Songjiang VLR 2024* established a framework of Songjiang District for voluntary local review by reference to the China's National Plan on Implementation of the 2030 Agenda for Sustainable Development, the 2018 China SDGs Indicator Construction and Progress Review Report, and the framework for Shanghai voluntary local review, and in combination with the suggestions from government departments of Songjiang and relevant experts.

During the review for 2024, the logical relationship between existing development strategies and key measures of Songjiang District and the 17 SDGs was further reviewed. On that basis, combined with the overall theme of the 2024 annual report "Inclusiveness · Low Carbon · Growth", and considering the theme of World Cities Day 2024 "Youth Leading Climate and Local Action for Cities", as well as the review progress of the SDGs for the *Songjiang VLR*, eight priority review goals for the voluntary local review 2024 were identified as follows: "SDG2 Zero Hunger", "SDG5 Gender Equality", "SDG6 Clean Water and Sanitation", "SDG9 Industry, Innovation and Infrastructure", "SDG11 Sustainable Cities and Communities", "SDG13 Climate Action", "SDG14 Life Below Water", and "SDG16 Peace, Justice, and Strong Institutions". Guided by the annual theme, these eight SDG targets were examined, and highly relevant targets were selected as the priorities for review. The relationships between the annual themes and the SDG targets are shown in Table 1.

Table 1 Relationships between the SDG targets and the annual report subjects

SDGs	Content	Subjects	Attention
2.1	By 2030, end hunger and ensure access by all people, in particular, the poor and people in vulnerable situations, including infants, to safe, nutritious, and sufficient food all year round.	Growth	★★
2.2	By 2030, end all forms of malnutrition, including achieving targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons in 2025.	Growth Inclusiveness	★★
2.3	By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists, and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.	Growth Inclusiveness	★★
2.4	By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding, and other disasters, and that progressively improve land and soil quality.	Growth	★★
2.5	By 2020, maintain the genetic diversity of seeds, cultivated plants, and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional, and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.	Growth	★★
2.a	Increase investment, in rural infrastructure, agricultural research, and extension services, technology development, and plant and livestock gene banks to enhance agricultural productive capacity in developing countries, especially the least developed countries.	Growth	★
2.b	Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Agenda.	Growth Inclusiveness	★
2.c	Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, to help limit extreme food price volatility.	Growth	★★
5.1	End all forms of discrimination against all women and girls everywhere.	Inclusiveness	★★
5.2	Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.	Inclusiveness	★★
5.3	Eliminate all harmful practices, such as child, early and forced marriage, and female genital mutilation.	Inclusiveness	★
5.4	Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies, and the promotion of shared responsibility within the household and the family as nationally appropriate.	Inclusiveness	★★
5.5	Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in	Inclusiveness Growth	★★

	political, economic, and public life.		
5.6	Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences.	Inclusiveness Growth	★★
5.a	Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance, and natural resources, in accordance with national laws.	Inclusiveness Growth	★★
5.b	Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.	Inclusiveness	★
5.c	Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.	Inclusiveness	★★
6.1	By 2030, achieve universal and equitable access to safe and affordable drinking water for all.	Inclusiveness Growth	★★
6.2	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.	Inclusiveness	★
6.3	By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing the release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.	Low Carbon Inclusiveness	★★
6.4	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.	Low Carbon Growth	★★
6.5	By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.	Low Carbon Inclusiveness	★★
6.6	By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers, and lakes.	Low Carbon	★★
6.a	By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programs, including water harvesting, desalination, water efficiency, wastewater treatment, recycling, and reuse technologies.	Low Carbon Growth	★
6.b	Support and strengthen the participation of local communities in improving water and sanitation management.	Inclusiveness	★★
9.1	Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.	Growth Low Carbon	★★
9.2	Promote inclusive and sustainable industrialization and, by 2030, significantly raise the industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries.	Inclusiveness Growth	★★
9.3	Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services,	Growth Inclusiveness	★★

	including affordable credit, and their integration into value chains and markets.		
9.4	By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.	Growth Low Carbon	★★
9.5	Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending.	Growth Inclusiveness	★★
9.a	Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological, and technical support to African countries, least developed countries, landlocked developing countries, and small island developing States.	Growth Inclusiveness	★★
9.b	Support domestic technology development, research, and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities.	Growth	★★
9.c	Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020	Growth	★
11.1	By 2030, ensure access for all to adequate, safe, and affordable housing and basic services and upgrade slums.	Inclusiveness Growth	★
11.2	By 2030, provide access to safe, affordable, accessible, and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities, and older persons.	Inclusiveness Growth	★★
11.3	By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated, and sustainable human settlement planning and management in all countries.	Inclusiveness Growth	★★
11.4	Strengthen efforts to protect and safeguard the world's cultural and natural heritage.	Inclusiveness	★
11.5	By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to the global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.	Inclusiveness Low Carbon	★★
11.6	By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.	Inclusiveness	★★
11.7	By 2030, provide universal access to safe, inclusive, and accessible, green and public spaces, in particular for women and children, older persons, and persons with disabilities.	Inclusiveness Growth	★★
11.a	Support positive economic, social, and environmental links between urban, peri-urban, and rural areas by strengthening national and regional development planning.	Inclusiveness Growth Low Carbon	★★
11.b	By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and	Low Carbon Inclusiveness	★★

	plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels.		
11.c	Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.	Inclusiveness	★★
13.1	Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.	Low Carbon Inclusiveness	★★
13.2	Integrate climate change measures into national policies, strategies, and planning.	Low Carbon Inclusiveness	★★
13.3	Improve education, awareness-raising, and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning.	Inclusiveness Low Carbon	★★
13.a	Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible.	Low Carbon Inclusiveness Growth	★
13.b	Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth, and local and marginalized communities.	Low Carbon Inclusiveness	★
14.1	By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.	Low Carbon Inclusiveness	★★
14.2	By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and taking action for their restoration to achieve healthy and productive oceans.	Low Carbon Inclusiveness	★★
14.3	Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.	Low Carbon	★★
14.4	By 2020, effectively regulate harvesting and end overfishing, illegal, unreported, and unregulated fishing, and destructive fishing practices and implement science-based management plans, to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics	Low Carbon Growth	★★
14.5	By 2020, conserve at least 10 percent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.	Low Carbon Inclusiveness	★★
14.6	By 2020, prohibit certain forms of fisheries subsidies that contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported, and unregulated fishing, and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.	Low Carbon Growth	★★
14.7	By 2030, increase the economic benefits to small island developing states and least developed countries from the	Low Carbon Growth	★

	sustainable use of marine resources, including through sustainable management of fisheries, aquaculture, and tourism.		
14.a	Increase scientific knowledge, develop research capacity, and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular, small island developing states and least developed countries.	Low Carbon Inclusiveness	★
14.b	Provide access for small-scale artisanal fishers to marine resources and markets.	Low Carbon Growth	★★
14.c	Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want.	Low Carbon Inclusiveness	★★
16.1	Significantly reduce all forms of violence and related death rates everywhere.	Inclusiveness	★★
16.2	End abuse, exploitation, trafficking, and all forms of violence against and torture of children.	Inclusiveness	★★
16.3	Promote the rule of law at the national and international levels and ensure equal access to justice for all.	Inclusiveness Growth	★★
16.4	By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets, and combat all forms of organized crime.	Inclusiveness	★★
16.5	Substantially reduce corruption and bribery in all their forms.	Inclusiveness	★★
16.6	Develop effective, accountable, and transparent institutions at all levels.	Inclusiveness	★★
16.7	Ensure responsive, inclusive, participatory, and representative decision-making at all levels.	Inclusiveness Growth	★★
16.8	Broaden and strengthen the participation of developing countries in the institutions of global governance.	Inclusiveness	★
16.9	By 2030, provide legal identity for all, including birth registration.	Inclusiveness	★
16.10	Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.	Inclusiveness Growth	★★
16.a	Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime.	Inclusiveness	★
16.b	Promote and enforce non-discriminatory laws and policies for sustainable development.	Inclusiveness Growth	★★

Note: The "degree of attention" is determined by taking into account the correlation between the sub-goals and the annual themes, Songjiang's actual development stage, and the priorities of the annual review. ★ indicates that attention should be paid in this year's review, while ★★ indicates that keen attention should be paid in building the response review framework.

3. Overview of Songjiang's Responses to SDGs

Songjiang's Responses to SDGs

Under the vision and goals of Shanghai's urban development strategy for 2035, Songjiang has compiled the *Comprehensive Plan and General Land-Use Plan of Songjiang District (2017-2035)* (referred to as the "Songjiang 2035 Plan"), proposing its own 2035 vision and goals of "basically building a modern new Songjiang with 'innovation, cultural advancement, and green development'". Songjiang will grow into a key supporting area for building Shanghai into a globally influential scientific and technological innovation center, while pursuing high-quality development based on "Created in Songjiang". Songjiang will endeavor to become a livable modern district featuring industry-urban integration and green development, boasting greater cultural advancement and better environment, and leading the city in key development indicators. The Songjiang 2035 Plan also defines Songjiang's function as a city, that is, "building Songjiang into the southwest gateway of Shanghai that is striving for an outstanding global city, a major supporting area for building Shanghai into a scientific and technological innovation center, an advanced manufacturing hub driving the development of the Yangtze River Delta, a major heritage site of China's fine traditional culture, and a livable place with special natural landscape". Songjiang's three goals of innovation, cultural advancement and green development have strong logical links with the SDGs target system. Innovation mainly concerns economy, society, and culture, cultural advancement concerns society, culture and governance, and green development is associated with economy, governance and environment. This report establishes a logical correspondence between the three sub-goals for Songjiang's urban development and the 17 SDGs (see Figure 5). It is worth noting that each SDG has a rich connotation, and the logical correspondence above only reflects the most important response relationships.

- **Innovative Songjiang**

The *Songjiang 2035 Plan* proposes that, S&T innovation should drive the transformation and upgrading of Songjiang's economy from "Made in Songjiang" to "Created in Songjiang": "S&T innovation is the primary driving force for this transformation and upgrading. With the construction of G60 S&T Innovation Valley as the main carrier and strategic lever, Songjiang will strengthen the leading and driving roles of S&T innovation, vigorously develop high-end manufacturing and intelligent manufacturing, improve the functional layout featuring mutual support and coordinated development of innovation support, headquarters R&D, high-end manufacturing, intelligent manufacturing, service

integration, commercial business, and modern logistics, in a bid to embark on a new path for economic transformation and development, based on the shift toward mid and high-end regional economic structure, and mid and high-speed economic growth". To that end, Songjiang has focused on promoting innovative development (SDG9), boosting economic growth and ensuring employment opportunities for all residents (SDG8), reducing regional inequalities (SDG10), and adopting responsible consumption and production patterns (SDG12, and SDG7).

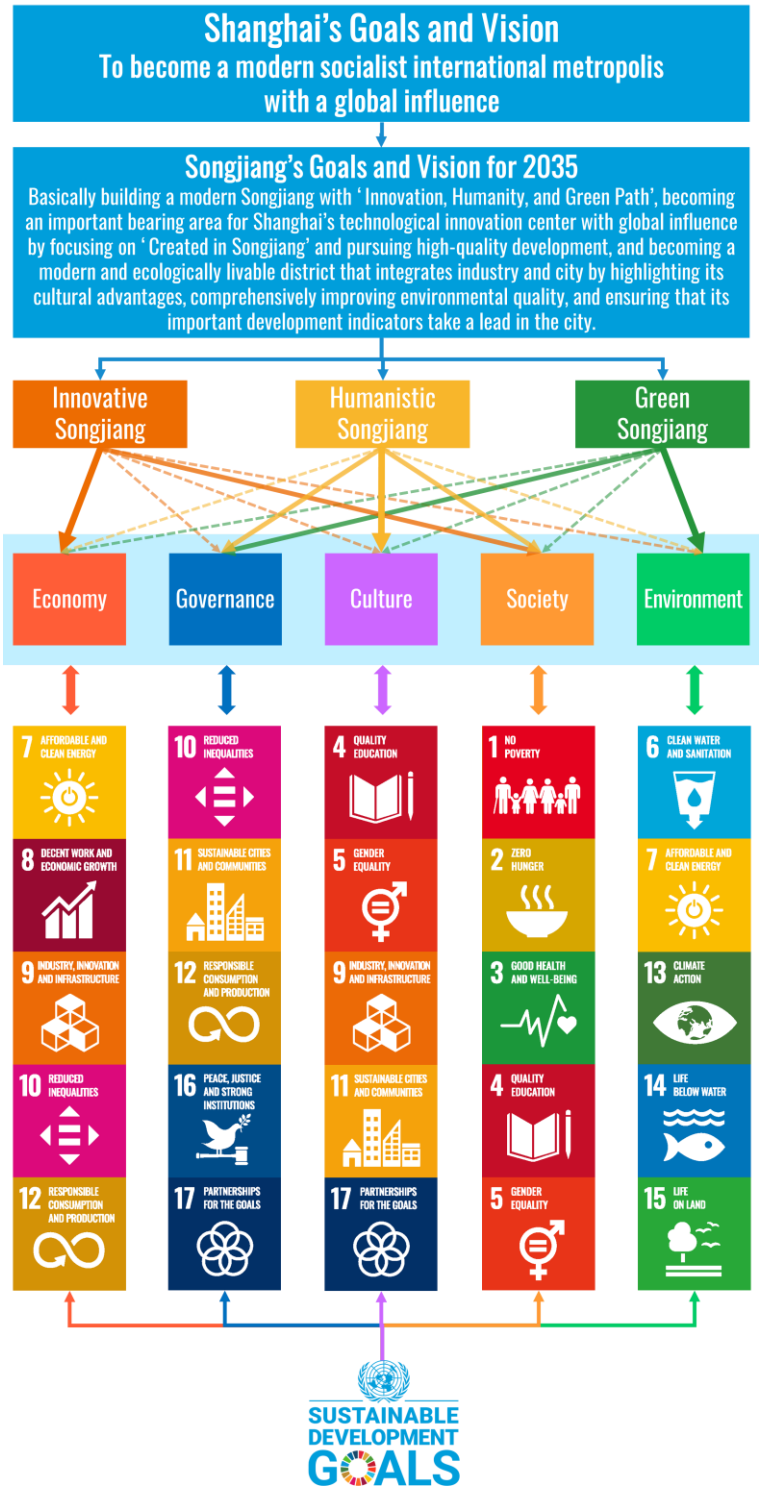


Figure 5 Logical correspondence between Songjiang's goals and the SDGs

- **Humanistic Songjiang**

The Songjiang 2035 Plan proposes a "people-centric" new urbanization path: "To build a charming city of happiness and humanity, efforts will be made to seize the opportunity of the national comprehensive piloting for new urbanization, stay committed to the development concept of 'people centricity', identify problems, and shore up weaknesses. Specifically, Songjiang will enhance coordinated rural and urban development, improve urban spatial layout, and boost urban-city integration and urban upgrading. It will promote a balance between workplace and residence, and the integration of production, living, and ecosystem, intensify comprehensive renovation and ecological improvement of the regional environment, and upgrade urban and rural public service systems. It will ramp up infrastructure construction, and build a comprehensive transportation system integrating four networks (namely, the national high-speed rail network, Shanghai rail transit network, Songjiang tram network, and ground transportation). It will promote the coordinated development of urban and rural areas to the south and north of the Huangpu River, advance the development of specialty towns, modernize agriculture, and boost equal access to basic public services in urban and rural areas." To that end, Songjiang needs to focus on ensuring access to better public services for all (SDG4 and SDG3), safeguarding fairness and justice (SDG5 and SDG16), improving people's living standards (SDG1 and SDG2), and building inclusive urban communities (SDG11).

- **Green Songjiang**

The Songjiang 2035 Plan proposes to build a green city of harmony between humanity and nature: "Efforts will be stepped up to manage the ecological environment, with the environmental quality such as air, water, soil, and greening quality stabilized and improving, and the total pollutant discharges declining in the region. Along with the significant improvement in the level of resource conservation and intensive utilization, and the continued increase in the per capita park green space area, the quality of urban and rural ecological environment will improve further. An urban ecological space will thus be built, featuring integration between gardens, forests and waters, and the city, so as to meet local people's expectations for a high-quality life. A green and low-carbon lifestyle will be more widely adopted and become local people's conscious awareness. Songjiang will move faster to build a modern city where people live in harmony with nature to open up a new chapter for the construction of a beautiful Songjiang." To that end, Songjiang needs to tackle the challenges of climate change (SDG13), conserve the ecological space resources across the district (SDG14 and SDG15), ensure urban water and energy security (SDG6 and SDG7), and adopt sustainable consumption and production patterns (SDG12).

Songjiang's Important Measures to Drive SDGs

Benchmarked against the 17 SDGs, Songjiang has made significant progress in sustainable development in recent years and has taken some creative measures (see Table

2). On that basis, the *Songjiang VLR 2024* selects 8 SDGs for priority review (SDG 2 Zero Hunger; SDG 5 Gender Equality; SDG 6 Clean Water and Sanitation; SDG 9 Industry, Innovation and Infrastructure; SDG 11 Sustainable Cities and Communities; SDG 13 Climate Action; SDG 14 Life below Water; and SDG 16 Peace, Justice and Strong Institutions).

Table 2 Songjiang's important measures to drive SDGs

SDGs	Songjiang's measures
1 NO POVERTY	● Improve subsistence allowances ● Establish multi-level mechanisms for helping people in need ● Strengthen the mechanism for supporting employment assistance ● Implement targeted assistance for special groups in need
2 ZERO HUNGER	● Eliminate food waste ● Promote the development of green agriculture and eco-cycle agriculture ● Advance the high-quality development of modern green agriculture ● Promote the application of scientific and technological advances in agriculture
3 GOOD HEALTH AND WELL-BEING	● Continue to optimize the allocation and layout of medical and health resources ● Advance the building of a Healthy Songjiang ● Improve the family doctor service system ● Improve the public health management system
4 QUALITY EDUCATION	● Promote public beneficial and inclusive preschool education ● Promote the "Joint Development Plan of Urban and Rural Schools" ● Improve service capability and level of vocational education ● Build a "New Hub for Basic Education around the Songjiang University Town" ● Deepen the integration of information technology with education and teaching
5 GENDER EQUALITY	● Promote gender equality ● Ensure women's rights to participate in and discuss state affairs ● Create an atmosphere of caring children's growth by entire society ● Establish a unique path for the healthy growth and development of teenagers that reflects the characteristics of Songjiang
6 CLEAN WATER AND SANITATION	● Improve water quality of the Huangpu River and other rivers ● Improve the environment for the water source protection zones in the upper reaches of the Huangpu River ● Build and update water supply network facilities in urban and rural areas ● Improve the water consumption efficiency
7 AFFORDABLE AND CLEAN ENERGY	● Develop renewable energy ● Develop natural gas as clean energy ● Improve the layout of the new energy industry ● Promote low-carbon development practices
8 DECENT WORK AND ECONOMIC GROWTH	● Promote economic vitality ● Take targeted actions for economic relief and revitalization ● Promote and ensure employment ● Stimulate and boost consumption
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	● Build an industrial innovation system ● Promote green development ● Drive urban digital transformation ● Build a supporting area for scientific and technological innovation with a global influence

- Provide high-quality public services for all
- Create a child-friendly city
- Build a youth-friendly city
- Build an elderly friendly city

- Enhance the vitality of old areas
- Comprehensively improve the urban and rural living environments
- Improve transit-oriented urban development
- Promote the construction of Songjiang New City

- Promote the building of a "zero-waste city"
- Build a multi-level sustainable transportation system
- Promote integrated development of culture and tourism across the district
- Building a resilient, modern new city

- Promote energy conservation, emission reduction, and carbon reduction
- Strengthen climate change risk management
- Encourage public engagement in addressing climate change

- Promote the Clean Water Action
- Promote the construction of beautiful rivers and lakes
- Build a national ecological water conservancy scenic area
- Promote groundwater environmental protection, supervision, and management

- Protect biodiversity
- Build a multi-functional "urban forest" with Songjiang characteristics
- Build an "urban park-community park-street garden" system
- Actively carry out soil pollution control actions

- Improve urban governance capabilities based on whole-process people's democracy
- Strengthen the rule of law in Songjiang
- Build a smart government providing "Unified Online Government Service"
- Guarantee urban security via "One Network Management"

- Promote friendly cooperation between cities
- Promote the development of major functional areas for opening up
- Continuously improve the business environment
- Actively carry out promotional activities

4. 2024 Priority Review Goals

SDG-2 Zero Hunger

SDG-5 Gender Equality

SDG-6 Clean Water and Sanitation

SDG-9 Industry, Innovation and Infrastructure

SDG-11 Sustainable Cities and Communities

SDG-13 Climate Action

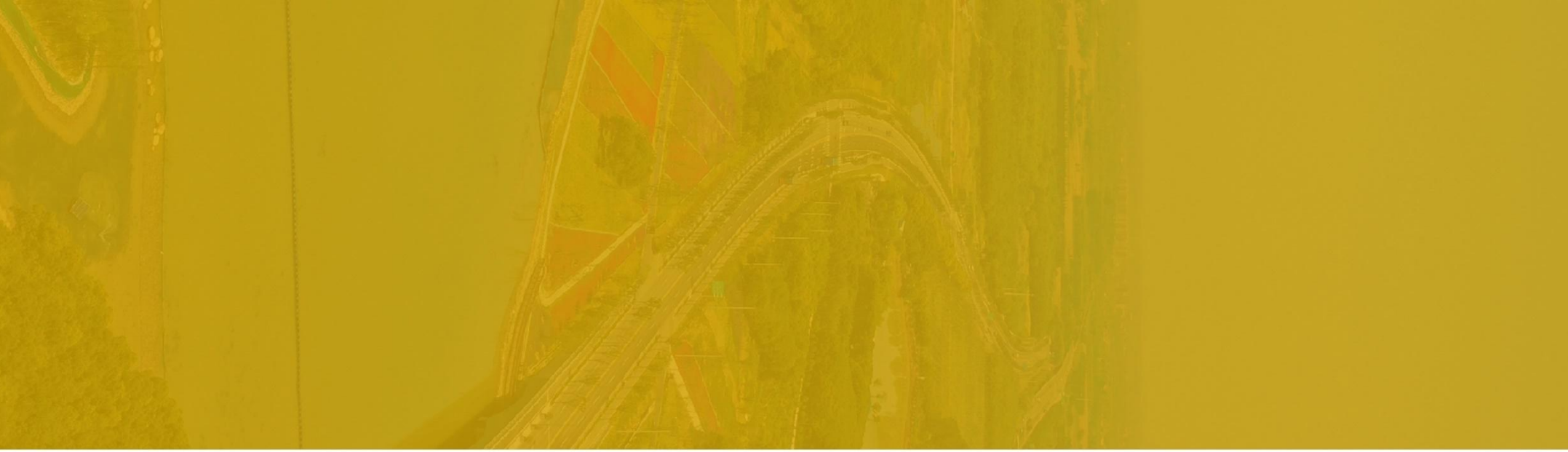
SDG-14 Life Below Water

SDG-16 Peace, Justice and Strong Institutions

SDG2: Zero Hunger

SDG2

- The SDG2 Zero Hunger aims to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture. Achieving this goal can effectively ensure access to enough safe and nutritious food for all, and help establish a more inclusive and sustainable system for modern agricultural production and supply.
- Shanghai, including Songjiang, has already addressed people's subsistence problem and established a system for sufficient and diversified food production and supply. However, when benchmarked against standards of higher-quality and healthy living, there are still problems such as structural imbalances in residents' dietary nutrition, and heavy health risks associated with unreasonable nutritional intake. In addition, the urban modern agricultural system has yet to be improved in comprehensive competitiveness and guarantee capacity.
- Driven by the SDG2, Songjiang has taken promoting health and well-being for the people as its primary goal in recent years. It has taken multiple measures to improve citizens' nutrition and health, foster healthier dietary habits, innovate the ways to spread knowledge of a healthy lifestyle, reduce food waste across all links such as consumption, storage, and harvest, and promote the development of industries such as high-quality paddy rice, with a view to establishing a resilient modern urban agriculture system.



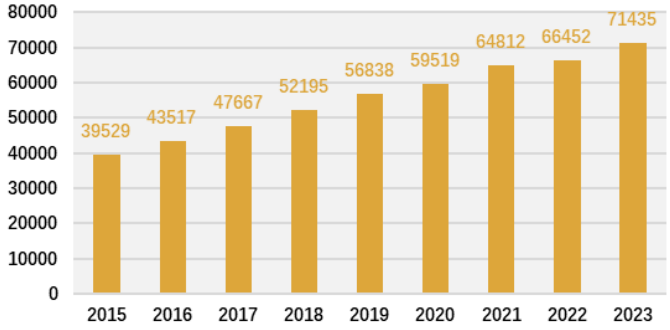
SDG2

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG2
Improve Citizens' Nutrition and Health	Promote the Healthy Diet Concept and Build "Nutrition-Based Communities"		► Per Capita Disposable Income (yuan)	SDG2.1 SDG2.2
	Continue to Optimize Nutritional Recipes for the Elderly and Provide High-Quality and Balanced Meal Assistance Services for the Elderly			
	Find New and Engaging Ways to Promote Health Literacy and Spread Health Knowledge			
Reduce Food Waste	Promote through Multiple Channels and at Various Places to Reduce Food Waste in the Catering Industry			
	Promote Smart Grain Warehouses to Reduce Losses in Grain Storage			
	Boost Agricultural Production and Reduce Waste in the Harvesting Process			
	Provide Technical Training and Guidance to Strengthen Agricultural Machinery Operators' Skills and Expand Agricultural Production Capacity	"Agricultural Machinery Extended Warranty Service" Provided across Songjiang		
Develop Urban Agriculture	Carry out Rice Breeding Studies and Build a Rice Breeding, Propagation and Promotion System	New Rice Variety "Songxiangjing 1855" Successfully Bred	► Gross Agricultural Output Value (in 100 million yuan) ► Total Power of Agricultural Machinery (in 10,000 kilowatts) ► Total Rice Sown Area in (in 10,000 hectares) ► Number of New High-Quality Rice Varieties ► Planting Area of High-Quality Rice Varieties (in 10,000 mu) ► Number of High-Standard Farmland Construction Projects ► Net Income per Family Farm (in 10,000 yuan)	SDG2.5
	Promote the "Shennong Code" System for the Digital Management of Agricultural Business Entities-Agricultural Products-Agricultural Land			
	Make Targeted Technological Breakthroughs and Get the Innovation Chain of Key Technologies-Technological Support-Demonstration Bases Aligned	Xinbang Town Applies 5G Systems and Agricultural Robots to Build a Digital Agriculture System for Rural Areas		
	Ramp up System Construction and Promote Moderate-Scale Operation for Agricultural Production	Develop the Rice Industry Chain and Improve the Operation of Industrial Cooperatives		
	Promote High-Standard Farmland Construction			

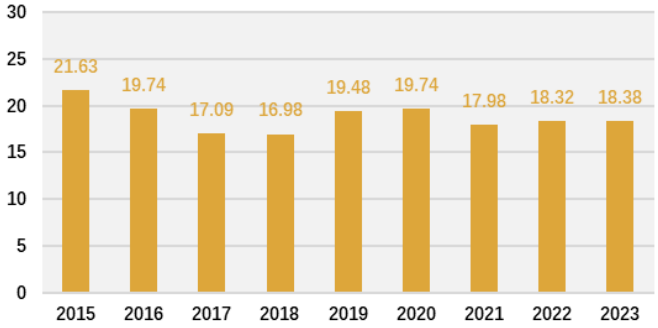
Key Indicators

Per Capita Disposable Income (yuan)



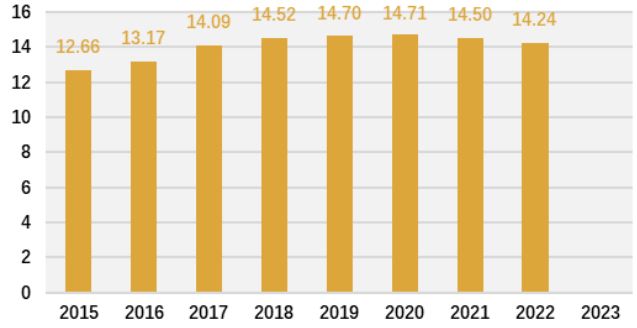
From 2015 to 2023, the per capita disposable income increased by **80.7%**.

Gross Agricultural Output Value (in 100 million yuan)



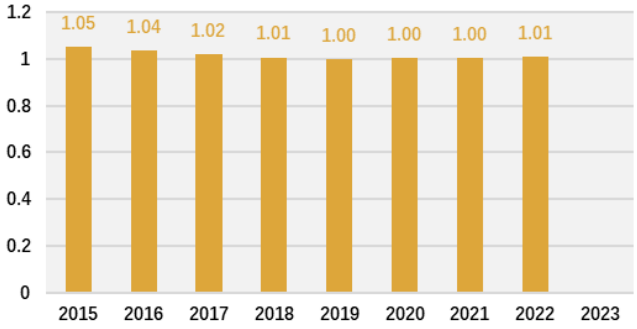
From 2015 to 2023, the average annual agricultural output value remained at **1.8 billion yuan** or so.

Total Power of Agricultural Machinery (in 10,000 kilowatts)



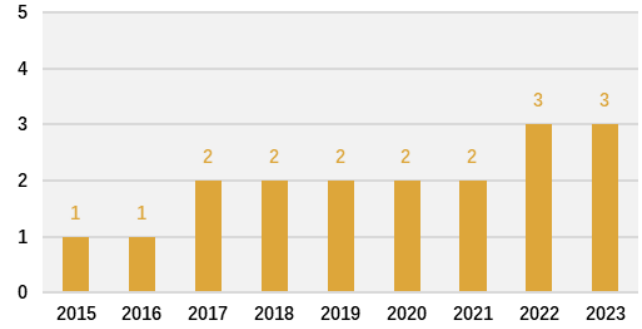
From 2015 to 2022, the total power of agricultural machinery reached an average of **140,700 kilowatts**.

Rice Sown Area (in 10,000 hectares)



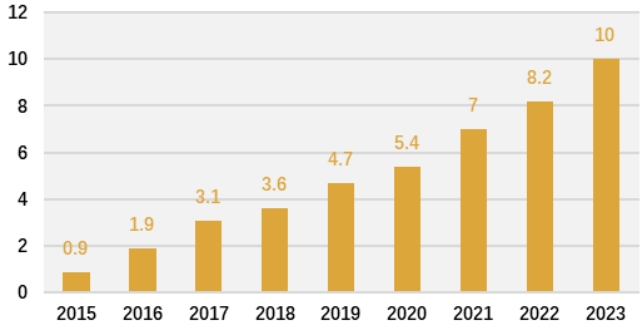
From 2015 to 2022, the rice sown area remained above **10,000 hectares**.

Number of New High-Quality Rice Varieties



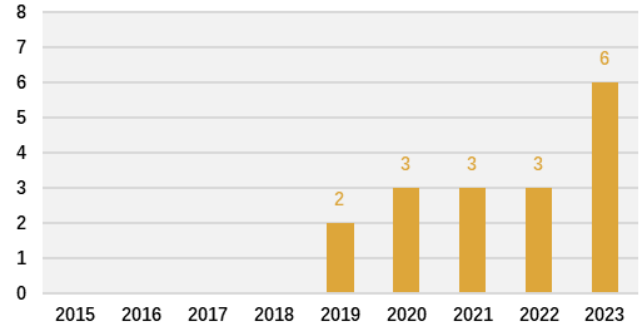
From 2015 to 2023, the cumulative number of innovatively bred new high-quality rice varieties increased from 1 to 3.

Planting Area of High-Quality Rice Varieties (in 10,000 mu)



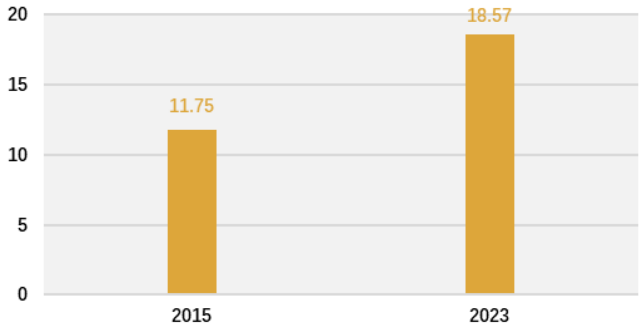
From 2015 to 2023, the planting area of high-quality rice varieties increased from 9,000 mu to 100,000 mu.

Number of High-Standard Farmland Construction Projects



From 2019 to 2023, the number of high-standard farmland construction projects increased from 2 to 6.

Net Income per Family Farm (in 10,000 yuan)



From 2015 to 2023, the net income per family farm increased by 58.0%.

Major Progress

- **The Balanced Diet Initiative Has Delivered Significant Results** [1]

Songjiang continues to promote the Balanced Diet Initiative to improve the nutrition and health literacy among the public. In 2024, the Shanghai Songjiang District Sijing Town Central Kindergarten was awarded the title of "National-level Kindergarten Committed to Nutrition and Health". Seven schools including Songjiang Experimental School Affiliated to Shanghai Normal University, Sijing No. 5 Primary School, Songjiang District Sijing Primary School, Sijing No. 4 Kindergarten, Sijing No. 8 Kindergarten, Xiangze Kindergarten, and Songjiang District Xiaokunshan Kindergarten were recognized as "Schools (Kindergartens) Committed to Nutrition and Health in Shanghai". In the "Balanced Diet·Cooking Skills" skills competition of the 2024 Shanghai Second Nutrition Guidance and Skills Competition, the Shihudang Community Health Service Center won the team award, and Wang Jinyun from the Center was awarded the third prize under the Nutrition Knowledge and Skills Category.

- **Residents' Health Management Capabilities Continue to Improve** [2]

Songjiang actively promotes health literacy in medical and health institutions. It builds health literacy brands such as "health talk show", health literacy competition for medical workers in the health system, "Health Smart House" livestreaming, and the "Health Online" column of Songjiang Newspaper. It also sets up a column in the "Healthy Songjiang" WeChat video account to increase the push of excellent videos on health literacy, and uses the "Songjiang Health Promotion" WeChat public account to further push original content for health literacy.

- **Rice Farming and Harvesting Continue to Be Mechanized, with the Loss Rate of Mechanized Rice Harvesting Dropping for Three Consecutive Years**

Songjiang District registered a rice sown area of 153,099.9 mu in 2023, including 122,043.4 mu for mechanized direct sowing, and 27,858 mu for mechanized transplanting. The comprehensive mechanization rate in major links such as rice farming and harvesting across the district reached 99.4%. Songjiang is also committed to reducing the loss of mechanized rice harvesting by providing annual training on the reduction of loss of mechanized rice harvesting. In 2022-2024, the loss rate of mechanized rice harvesting across the district dropped from 2.2% to 1.5%, with the annual loss per mu reduced by 4.2 kilograms, and the annual loss decreased by 630,000 kilograms.

[1] Healthy Songjiang, https://m.thepaper.cn/newsDetail_forward_27489858

[2] Songjiang District Health Commission, https://www.songjiang.gov.cn/govxxgk/SHSJ16/2023-03-31/16a64521-9bab-45ea-a175-9fedfe0cdab3.html

- **The Intelligent Management of Grain Reserve Warehouses Has Been Upgraded to Further Reduce Losses in Grain Storage**

Songjiang has informatized all four grain reserve warehouses within the district. It applies advanced information technologies such as IoT, big data, and cloud computing for intelligent warehousing management and visualized remote supervision, providing strong support for real-time adjustments and control, ensuring the safety of grain reserves, and realizing information collection and real-time supervision of grain reserves throughout the entire process from entry to exit.

- **The Food Waste Management System Has Been Enhanced for the Catering Industry** [1]

Songjiang continues to increase the frequency and intensity of supervision and inspections against food waste, integrating the prevention of food waste with food security supervision and inspections in the catering industry. It urges food service providers to implement various measures laid out in the Anti-Food Waste Law, establish and improve the management system for preventing food waste in the catering industry, and put signs of no food waste in prominent positions at dining places. It also guides them to promote "small portions" and "half portions", and provide packaging services. In addition, it encourages merchants on takeout platforms to display slogans of no food waste on the homepage. In 2023, it urged 8,807 food service providers to carry out self-inspections and self-rectifications, inspected 8,791 food service providers, and organized "random restaurant inspections" eight times, with 59 restaurants inspected.

- **The Innovation Capabilities of the Seed Industry Continue to Improve, and High-Quality Rice Varieties Have Won Many Awards**

Songjiang has successfully bred 3 high-quality rice varieties on its own and obtained the rights of one new plant variety. Among them, "Songxiangjing 1018" won the gold award in the second national high-quality rice variety tasting event (for japonica rice) and is currently one of the high-quality late japonica varieties making the greatest breakthroughs in Shanghai. "Songzaoxiang No. 1" has won the gold award in Shanghai's local high-quality rice competition many times and is now the rice variety with the largest sown area in Shanghai that is launched during the National Day holiday. Songjiang also has established a "2+3" improved variety supply guarantee system for integrated rice breeding, propagation, and promotion. With a centralized and contiguous high-standard rice breeding base of 2,200 mu, more than 900,000 kilograms of improved rice varieties can be produced per annum, fully meeting the needs for rice varieties across the district. In recent years, the coverage of improved rice varieties across the district has remained at 100%, and that of leading rice varieties has exceeded 99%.

[1] Songjiang Newspaper, https://www.shsjb.com/Article/index/aid/7984105.html

- **The Database of Cultivated Land Resources for Agricultural Production Has Been Built, and Agricultural Digitalization and Intelligence Have Been Strengthened Significantly**

Songjiang actively promotes the transformation of agriculture using digital technology and was included in the list of "Pioneer Counties in National Agricultural Technology Modernization" in 2021. As of 2024, the information of 1,100 agricultural business entities across the district has been networked, digitalized, and informatized throughout the whole processes, and a database of cultivated land resources for agricultural production in the district has been built to monitor 38,371 agricultural plots in real time. Songjiang also vigorously advances the construction of agricultural digital infrastructure. As of 2023, the district's mechanized production area was about 11,000 mu, the total power of agricultural machinery and equipment was 62,200 kilowatts, and the number of agricultural machinery processed was 1,196 units (sets). The mechanization rate of main crop cultivation and harvesting was 99%, and that of facility-based vegetable fields was 48.9%. The rate of facility and equipment for manure treatment in livestock and poultry farms and the large-scale breeding rate of pigs both reached 100%. The district continues to strengthen its exemplary role in various fields. It has established an automated field pest and disease monitoring system for planting in large croplands, provided automatic control equipment and environmental intelligent control systems for flower facilities and cultivation, and built intelligent environmental monitoring systems, vital sign monitoring systems, and feeding systems for livestock and poultry breeding.

- **Songjiang Continues to Develop Family Farming, and Has Been Ranked First in Shanghai for Many Consecutive Years in "Three Rates and One Influence"**

On the principle of "family farming, moderate scale, one priority industry, and intensive production", Songjiang has achieved the goals of green products, efficient output, industrial integration, resource conservation, and environmental friendliness, and thus stabilized grain growers. It has been ranked first in Shanghai for many consecutive years in "three rates and one influence" (land output rate, productivity, resource utilization rate, and brand influence) and come out top in the city for four straight years in rural revitalization review. In 2023, the operating area per family farm and net income per family farm in the district grew by 32% and 58% respectively against 2015. With all these efforts, it has found an effective path to stabilize food production while increasing farmers' income for megacities, and a path to agricultural modernization.

- **Songjiang Continues to Advance the Construction of Water-Saving, Efficient, and High-Standard Farmland, Leading the City in the Percentage of High-Standard Farmland**

While attaching equal importance to construction and renovation, construction quantity and quality, and engineering construction and post-construction management and maintenance, Songjiang is committed to coordinating production capacity

improvement and green development, with a focus on promoting the construction of high-standard farmland that is concentrated and contiguous, water-saving and efficient, stable and high-yielding, and ecologically friendly. According to the new round of permanent capital farmland classification, Songjiang has 135,000 mu of permanent capital farmland. As of the end of 2023, about 114,300 mu of high-standard farmland was built and accepted, accounting for 84.67%, and ranking the district among the top in the city.

Important Measures

(1) Improve Citizens' Nutrition and Health

- **Promote the Healthy Diet Concept and Build "Nutrition-Based Communities"[①]**

In 2023, Songjiang carried out the Nutrition Week campaign and provided services such as on-site consultations, health lectures, nutrition classes, and free community clinics for schools, communities, and enterprises within its jurisdiction, via community health service centers, in an effort to raise people's awareness of healthy and nutritional dieting, and leverage the leading role of regular promotions of nutritional dieting in building "nutrition-centered communities". An online health literacy program was also carried out under the theme of "Preserving Health with a Balanced Diet and Food as Medicine". About 50 related offline activities for the campaign were conducted in the district in the year, benefiting 12,015 persons, with more than 20,000 copies of promotional leaflets, roll-up banners, posters, and stickers issued.

- **Continue to Optimize Nutritional Recipes for the Elderly and Provide High-Quality and Balanced Meal Assistance Services for the Elderly[②]**

Given the construction of the "15-minute community life circle", Songjiang selects areas with a large elderly population and strong demand for meal assistance and continues to expand the supply of meal assistance services for the elderly, by adopting a public construction and public operation model to meet their basic needs for food supply, inviting local catering companies to operate the places that provide meal assistance services for the elderly, introducing outstanding urban meal assistance chains into community canteens for the elderly, and relying on "central kitchens" to provide meal delivery services. As of the first half of 2024, Songjiang built 25 community canteens for the elderly, and 190 meal assistance stations for the elderly, benefiting more than 58,000 elderly people. Some community canteens for the elderly focus on developing menus and nutritional recipes for the elderly, customizing meal sets for the elderly, and launching special dishes with

① People's Government of Songjiang District, Shanghai, https://sj.investchn.com/news/detail/id/384666.html

② Shanghai Civil Affairs Bureau, https://mzj.sh.gov.cn/jicxx/20240719/f402d8d5f7d646ffb5292800d7a72ad8.html

Songjiang characteristics. They also introduce smart application scenarios, with the fat content, calories and other data of each dish displayed on the electronic screen, allowing the elderly to "see nutrition on one screen".

- **Find New and Engaging Ways to Promote Health Literacy and Spread Health Knowledge** [1]

Songjiang encourages medical workers to find new ways of health communication, making health knowledge more engaging and easier to spread. In 2024, the "Talk Show for Health Literacy" competition was carried out among medical workers in the district. It also continues to identify talent for promoting healthy literacy and keep medical workers updated with language characteristics of the time to extensively disseminate and promote health knowledge, in a bid to help residents understand the "secrets of health", and strengthen their health self-management capabilities.

(2) Reduce Food Waste

- **Promote through Multiple Channels and at Various Places to Reduce Food Waste in the Catering Industry**

Songjiang has posted more than 10,000 posters to stop food waste in all food service providers across the district and placed promotional boards in the a la carte areas and banquet halls of large and medium-sized hotels, centralized venues for banquets in rural areas, and other food service providers that are highly demanded for food services during festivals. It also promotes frugality and prevention of waste using electronic screens in major business districts and communities, media platforms, and other channels within its jurisdiction. In the canteens of government agencies, based on this concept, it sets up the "turning waste into treasure" tasting areas and introduces delicacies such as "rabbit-shaped steamed buns with bean dregs" and pickles made with leftover ingredients for agency officials to taste, leading a new trend of economical dining. Moreover, it mobilizes all agencies to participate in the canteens' "Tips for Prevention of Food Waste" solicitation event with rewards and signs the Food Saving Initiative with agency officials and staff.

- **Promote Smart Grain Warehouses to Reduce Losses in Grain Storage** [2]

Songjiang actively promotes the construction of smart grain warehouses. In the warehouses, there are sensors placed at various points of the grain piles to accurately monitor the temperature and humidity of grain stored in real time. This system can also analyze and promptly detect temperature and humidity abnormalities, and remind workers to check whether there are pests or mildew in the grain stored. The smart grain warehouse collects real-time meteorological information such as temperature, humidity,

[1] Healthy Songjiang, https://m.thepaper.cn/newsDetail_forward_28082335
[2] Songjiang Newspaper, https://www.shsjb.com/Article/index/aid/7984105.html

and wind speed outside the warehouse through the newly built weather station in the warehouse. Based on the collected information and the temperature and humidity of the grain in the warehouse, the appropriate intelligent ventilation method and duration can be set, which, together with the green grain storage technologies such as air conditioning and temperature control, can reduce consumption, improve quality, and thus further reduce losses in grain storage.

- **Boost Agricultural Production and Reduce Waste in the Harvesting Process**

Songjiang continues to implement two policies: subsidies for the purchase of agricultural machinery and subsidies for the standardized disposal of agricultural machinery to guide farmers to purchase safe, reliable, applicable, advanced, environmentally friendly, and energy-saving machinery, and ensure maintenance and repairs, to keep agricultural machinery in its best condition, and reduce operating losses. In 2023, 340 tractors with more than 70 horsepower, 99 self-propelled direct seeding machines, 47 high-speed rice transplanters with more than 6 rows, and 179 harvesters with more than 80 horsepower, and advanced and applicable agricultural machinery and equipment that could be put into operation for grain production during the supervision period of the whole district provided a solid guarantee for accelerating the comprehensive and high-quality development of agricultural mechanization in Songjiang. In the year, the comprehensive mechanization rate of rice farming and harvesting reached 99.4%①.

- **Provide Technical Training and Guidance to Strengthen Agricultural Machinery Operators' Skills and Expand Agricultural Production Capacity**

Songjiang provides training and guidance to agricultural machinery operators and promotes the reduction of losses in grain harvesting to further improve the operation skills of the operators and reduce losses in mechanized harvesting. First, it provides training to agricultural machinery operators on the performance and operation technologies of agricultural machinery to improve their service capabilities and skills and reduce losses arising from misoperation. Second, it provides technical guidance on the integration of agricultural machinery and agronomy, and promotes the mechanized operation technologies for paddy field tillage and site preparation, and for rice planting to intensify the resistance of rice to lodging and reduce source losses caused by lodging.

Case 1 "Agricultural Machinery Extended Warranty Service" Provided across Songjiang

In order to ensure the good performance of agricultural machinery, reduce the failure rate of agricultural machinery operation, and improve the operation quality of agricultural machinery, Songjiang has implemented the "Agricultural Machinery Extended Warranty Service" in the whole district through the government's service procurement since 2017. Thanks to this project, the farming quality for grain production has been improved, the growth of individual rice plants has

① Agriculture, Rural Areas, and Farmers in Songjiang, http://www.amic.agri.cn/secondLevelPage/info/31/172908

been boosted, and the lodging of rice in the late phase has been reduced, thus reducing the losses in the harvesting process. Secondly, great efforts have been made to maintain and repair the parts of combine harvesters that are prone to cause mechanical harvesting losses such as the rice stripping device, conveying device, threshing device, and cleaning device for extended warranty services, thus ensuring good performance of the machinery and significantly reducing the failure rate of agricultural machinery and grain losses. Over the past three years, the loss rate of mechanized rice harvesting in Songjiang has decreased from 2.2% to 1.5%, with the annual loss per mu reduced by 4.2 kilograms, and the annual loss decreased by 634,000 kilograms.

In 2023, extended warranty services were provided for 812 sets of agricultural machinery in Songjiang District, including three 50-70 (exclusive) horsepower tractors dedicated to vegetables, 357 tractors with 70 horsepower and above, and 114 self-propelled hole seeders with 10 rows and above, 43 four-wheel ride-on rice transplanters with 6 rows or more, 195 semi-feed harvesters with more than 80 horsepower, 14 full-feed harvesters with more than 80 horsepower, and 86 6-12-ton grain dryers. The service completion rate reached 92.5%.

Figure 6 Agricultural machinery operators in Songjiang District are harvesting rice through machine

(3) Develop Urban Agriculture

- **Carry out Rice Breeding Studies and Build a Rice Breeding, Propagation and Promotion System**

In 2020, Songjiang established the "Shanghai Songjiang District Rice Research Institute", and built a high-standard 50-mu rice breeding base, thus shoring up its weaknesses in rice breeding from the organizational structure, greatly improving the rice breeding hardware and software conditions, and enhancing its breeding and testing capabilities for new rice varieties. Meanwhile, through coordination and collaboration,

efforts have been made to boost cooperation between the Songjiang District Agricultural Technology Promotion Center, the Shanghai Songjiang District Rice Research Institute, and three local seed companies (bases), and build and improve a rice breeding, propagation, and promotion system that integrates variety selection, improved variety propagation, demonstration, and promotion. Songjiang organizes high-quality new variety demonstrations, on-site observation, and exchanges every year, and carries out research and training on high-quality variety cultivation supporting technologies, high-quality rice tasting, and other activities to enhance promotion capacities, continuously boost the alignment of improved varieties with advanced methods, and expand the coverage of improved varieties, so as to promote the upgrading and transformation from "selling grain" to "selling rice".

Case 2 New Rice Variety "Songxiangjing 1855" Successfully Bred

In 2022, the Songjiang District Agricultural Technology Promotion Center and the Shanghai Songjiang District Rice Research Institute successfully bred a new rice variety "Songxiangjing 1855", which was approved by the first session of the seventh Shanghai Crop Variety Approval Committee. This is a new addition to the "Songjiang Rice" exclusive varieties. Thanks to the efforts of the Songjiang District Agricultural Technology Promotion Center, the Shanghai Songjiang District Rice Research Institute, and three local rice seed companies, the "2+3" improved rice variety propagation system that integrates rice variety breeding, improved variety propagation and supply, and promotion services has been established.

Figure 7 "Songjiang Rice" high-quality rice

First, led by the Songjiang District Agricultural Technology Promotion Center, greater efforts are made to demonstrate and promote new varieties, and to research better methods for improved varieties, and supporting cultivation technologies. In 2023, two new rice variety demonstration sites were established and 3 new and improved rice varieties were displayed and demonstrated, covering an area of 100 mu. A total of 15 demonstration entities were selected to promote key technologies such as mechanized rice production, alignment between improved varieties and advanced methods, balanced application of nitrogen, phosphorus, and potassium nutrients and side-deep fertilization, and green prevention and control of diseases, pests, and weeds. Second, with the Shanghai

Songjiang District Rice Research Institute providing technological support, efforts are made to introduce, screen, and breed new and improved rice varieties, and purify and rejuvenate leading varieties to build a scientific variety updating and replacement system. So far, four new improved rice reserve varieties (classes) with potential have been bred, maintaining Songjiang's advantages in variety sources for developing the rice industry.

- **Promote the "Shennong Code" System for the Digital Management of Agricultural Business Entities-Agricultural Products-Agricultural Land**

Songjiang continues to promote the "Shennong Code" system and incorporates the "Shennong Code" into the "Suishen Code" system. With Songjiang Rice as a pilot project, breakthroughs have been made in basic application scenarios and a full-chain traceability and supervision system has been aligned. Based on the "Shennong Pocket" platform, 1,100 agricultural business entities in the district are subject to unified management to make information networked, digitalized, and informatized throughout the whole process. The "Hunongan System" is promoted to make agricultural product quality monitoring standardized and transparent. A database of cultivated land resources for agricultural production across the district has been built to monitor 38,371 agricultural plots in real time. A basic cultivated land resources database has also been established using remote sensing technology, making the information on land resources clear and transparent.

- **Make Targeted Technological Breakthroughs and Get the Innovation Chain of Key Technologies-Technological Support-Demonstration Bases Aligned**

To meet development needs, Songjiang is committed to making breakthroughs in crucial production stages and key equipment. For example, to digitalize and automate rice planting, Tushibao Cooperative has built a digital agricultural data-driven system for 1,000 mu of grain fields based on China Mobile's 5G + Beidou positioning system. Songjiang also actively cooperates with universities. It established the "Shanghai Jiao Tong University Songjiang Professor Workstation", and holds the "Songjiang Rice" Industrial Development Forum to attract experts and scholars to participate, forging a comprehensive scientific and technological support service model. In terms of grain, vegetables, pigs, and aquatic products, several science and technology demonstration bases have been built to effectively improve the quality of agricultural products through the integration and promotion of advanced technologies.

Case 3 Xinbang Town Applies 5G Systems and Agricultural Robots to Build a Digital Agriculture System for Rural Areas

Since 2013, Xinbang Town has been committed to enabling modern agricultural automation and unmanned planting through 5G systems and applications of digital agricultural technology and equipment.

First, Linjian Village Tushibao Cooperative has built a data collection and management system for 1,000 mu of grain fields, based on the high-precision spatial data collected over roads and fields in rural areas using China Mobile's 5G + Beidou high-precision positioning system. With this system, real-time data of pieces of farmland can be watched with no need to go to the fields, enabling

automatic map-based navigation for autonomous driving of agricultural machinery and drone spraying.

Second, the large-scale application of digital agricultural technology and equipment in different segments will be enabled. As a pilot project for the construction of unmanned farms for grain production in Shanghai, Xinbang Town will transform and build no less than 1,000 mu of unmanned farms, develop intelligent operation equipment systems such as functional operating platforms, picking robots, and remote sensing drones, as well as retrofitting relevant unmanned intelligent equipment from 2020 to 2025. Relying on 5G technology, agricultural equipment such as surveying and mapping drones, unmanned plant protection drones, and smart rice transplanters will be used for higher-precision operations. Farm spraying, harvesting, and other procedures will also be digitalized. With the QR code technology, agricultural production data will be traced, and the innovation of agricultural production technology will drive improvements in agricultural management efficiency.

Figure 8 Unmanned intelligent equipment is working on an unmanned farm for food production

- **Ramp up System Construction and Promote Moderate-Scale Operation for Agricultural Production**

Songjiang has established a farmland transfer system, a moderate-scale land operation system, and an operator entry and exit system, to systematically regulate the production and management of family farms. On the principle of "legal compliance, voluntariness, and compensation", it promotes the unified transfer of farmers' contracted land via village committees, centralizes farmers' land, and encourages moderate-scale operations, so as to hand over the land to farmers who are truly interested in agricultural production. Bearing in mind fairness and efficiency, it determines the scale of rural land operation by households based on the employment transfers of local rural labor, and the situation of land transfers, while ensuring that the scale of production undertaken by the family labor is aligned with existing productivity. Under the entry mechanism, farmers from collective economic organizations are assessed and selected by the local villager congress through the democratic and merit-based selection processes, after their voluntary application.

Under the exit mechanism, an age limit is set for operators, with those aged 60 automatically retiring to hand the land over to younger farmers for operation. Meanwhile, a performance review system has been established, covering rotation arrangement, timely harvesting, safe use of varieties and pesticides, and site appearance. The underperforming farmers would be eliminated under the one-vote veto system.

Case 4 Develop the Rice Industry Chain and Improve the Operation of Industrial Cooperatives

Songjiang is committed to building "high-quality rice industrial cooperatives", aiming to drive common family farms to work with leading enterprises and cooperatives with strong sales capabilities to compete in the market. By the end of 2023, 13 rice industrial cooperatives were established, joined by 405 family farms. Their marketing campaigns drove sales by 57,500 mu, and the income of family farms in the cooperatives increased by about 360 yuan per mu.

Figure 9 Farmers of Huimin Specialized Agricultural Cooperative in Songjiang are harvesting rice

In 2020, guided by the Songjiang District Agricultural and Rural Affairs Committee and the town-level Agriculture and Rural Development Office, Fan Huifeng established the Huimin High-quality Rice Industrial Cooperative based on the Shanghai Huimin Specialized Agricultural Cooperative. Through regulated and standardized management, the Industrial Cooperative drove sales of high-quality rice in the town, and boosted continued increases in the income of family farms, thus achieving a win-win for both the Industrial Cooperative and the family farms.

In the year, the Industrial Cooperative drove the sales of 43 family farms' more than 5,000 mu of high-quality rice. In 2023, the Industrial Cooperative drove 57 family farms to standardize the planting and large-scale operation of about 9,500 mu of high-quality "Songjiang Rice", enabling the family farms to sell about 3,500 tons of high-quality "Songjiang Rice" in the year and get an extra

income of nearly 400 yuan per mu.

As one of the leading entities of high-quality rice production and marketing cooperatives in Songjiang District, the Huimin Specialized Agricultural Cooperative has been focused on branding and cultivation in the integrated development of production and marketing. By opening Taobao and Pinduoduo stores, it connects with city, district, and town news media, holds harvesting celebrations, and carries out livestreaming activities in the fields, striving to keep more citizens informed of "Songjiang Rice", and recognizing "Huifeng Brand" and "Songjiang Rice", in a bid to expand the reputation of "Songjiang Rice". Meanwhile, it actively participates in municipal and district high-quality rice evaluation events, and won the gold award in the 2023 municipal-level medium and late-maturing rice tasting event. It also promotes cooperation with sales platforms such as Oriental Shopping, Dingdong Maicai, and Taobao to attract new and regular customers with high-quality rice, thus stabilizing the sales of "Songjiang Rice", and increasing income.

- **Promote High-Standard Farmland Construction**

Songjiang continues to promote the construction of high-standard farmland, aiming to ensure coverage of more than 90% of high-standard farmland per 150 meters in the district by 2030, and 100% by 2035. It also continues to strengthen the construction of high-standard agricultural infrastructure, with 138,000 mu of high-standard farmland built since 2008. Meanwhile, it stresses the guiding principle of paying equal attention to the construction and management of high-standard farmland and has built and improved the post-construction management and maintenance system. In line with the requirements of "supervision by the district and implementation by towns", it defines the roles and responsibilities of authorities of different levels in farmland infrastructure management and maintenance, in the approach of "maintenance coordination by towns, and day-to-day management and maintenance by villages". Based on the annual assessment results, rewards and subsidies are provided for farmland infrastructure management and maintenance, and funds are appropriated to each town for farmland infrastructure management and maintenance.

SDG5: Gender Equality

SDG5

- SDG5 Gender Equality aims to eliminate gender-based discrimination and empower all women and girls. Achieving this goal can help eliminate unintentional and invisible barriers caused by unconscious biases and implicit associations, eliminate institutional barriers to gender equality, eliminate all forms of violence against women and girls, and ensure every woman and girl enjoys full gender equality.
- Compared with advanced regions at home and abroad, Songjiang still has room for improvement in female employment, female entrepreneurship, and female participation in decision-making. There is a role conflict between women's personal career development and childbearing, which restricts women from unlocking their creativity. The urban and rural social security systems are still not sufficiently gender-friendly.
- Under SDG5, Songjiang has actively shored up its weaknesses in recent years. It enables families to develop proper family values by promoting family development, ensures women's employment and career development with measures such as establishing platforms and providing financial support, and improves the maternity security system by enhancing the full life cycle health management mechanism for women and children, to build a sustainable city committed to gender equality and inclusiveness.

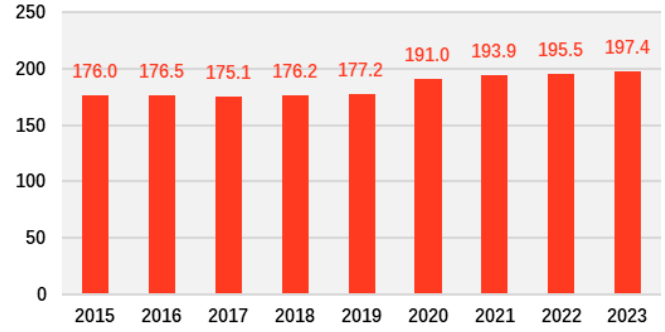
SDG5

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG5
Promote Family Development and Construction	Promote Proper Family Values Through "Proper Family Values·Civilized Travel" Activities	"Xiaodoudou Dream Bookstore" Parent-Child Reading Guidance Project	► Permanent Population (in 10,000 persons) ► Number of Registered Marriages (in 10,000 couples) ► Birth Rate(‰) ► Number of Births of Registered Population	SDG5.4
	Carry out Activities for Family Civility and Create a Happy Family			
Female Employment and Career Development	Establish a Gender-Sensitive Review Mechanism to Prevent the Release of Recruitment Information for a Single Gender at the Source			SDG5.4 SDG5.5 SDG5.c
	Create Employment Service Platforms for Women in Multiple Ways and Advance the Female Employment and Entrepreneurship Initiative			
	Further Improve Female Employment Security Services Through Policy Support and Financial Subsidies			
	Build a Learning and Exchange Platform for Innovation and Entrepreneurship by Women in 9 Cities in the G60 S&T Innovation Valley of the Yangtze River Delta and Motivate Women to Innovate and Start Businesses	Themed Activities for the S&T Innovation Alliance for Innovation and Entrepreneurship by Women in the G60 S&T Innovation Valley of the Yangtze River Delta		
Improve the Maternity Security System	Improve Institutional Guarantee and Build a "One-Stop" Marriage and Pregnancy Healthcare Service Model		► Life Expectancy of Registered Male Population (year) ► Life Expectancy of Registered Female Population (year) ► Infant Mortality Rate (‰) ► Premarital Examination Rate (%)	SDG5.6
	Further, Improve the Maternal Management Model and Improve the Health Management of Women and Children Throughout Their Life Cycle			
	Advance the Construction of Service Systems for Pediatric Diagnosis and Treatment, and Prenatal and Postnatal Care Guidance	Songjiang Creates a Distinctive Service Model for Scientific Childcare		
	Promote High-Quality HPV Vaccination Services and Pay Attention to Women's Health			
	Jointly Create a Child-Friendly City with Multiple Parties			

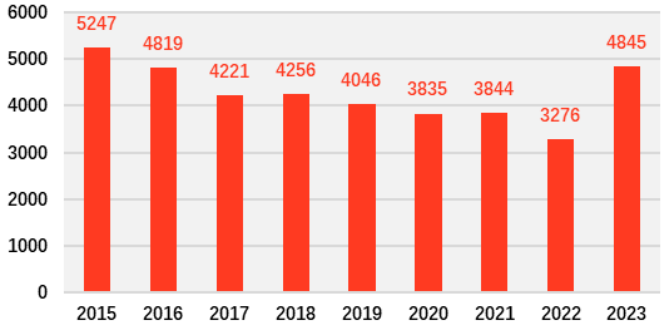
Key Indicators

Permanent Population (in 10,000 persons)



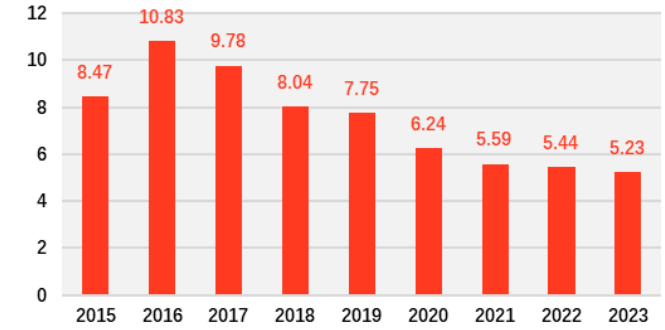
From 2015 to 2023, the permanent population increased by **12.1%**.

Number of Registered Marriages (in 10,000 couples)



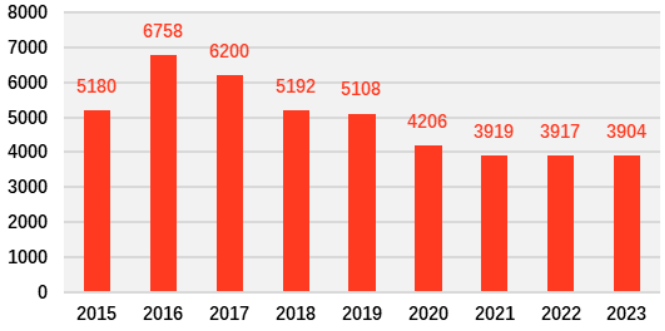
From 2015 to 2023, the number of registered marriages totaled **38,000 couples**.

Birth Rate (‰)



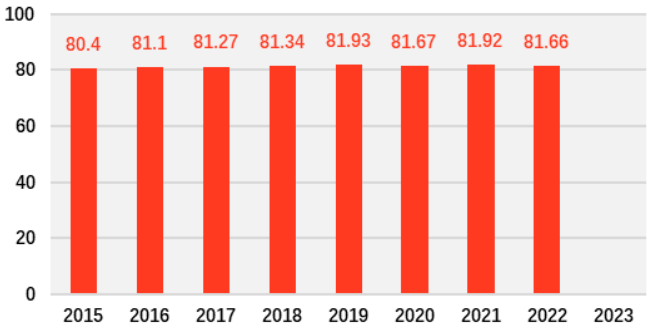
From 2015 to 2023, the birth rate remained above **5‰**.

Number of Births in Registered Population



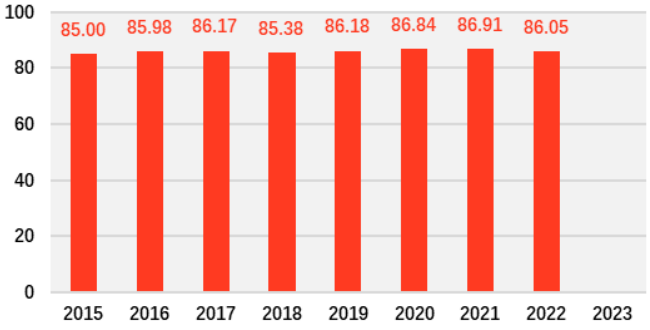
From 2015 to 2023, the cumulative number of births in the registered population was **50,100**.

Life Expectancy of Registered Male Population (year)



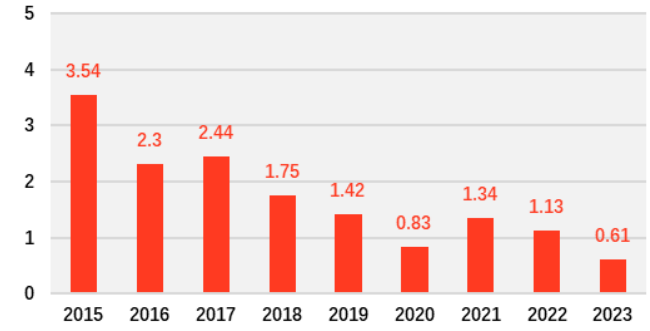
From 2015 to 2022, the life expectancy of registered male population increased from 80.4 years to **81.66 years**.

Life Expectancy of Registered Female Population (year)



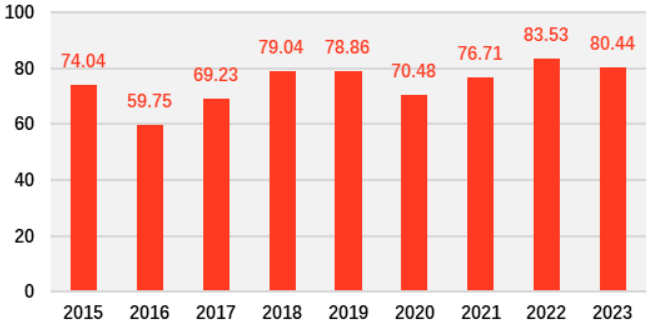
From 2015 to 2022, the life expectancy of registered female population increased from 85.00 years to **86.05 years**.

Infant Mortality Rate (‰)



From 2015 to 2023, the infant mortality rate decreased from 3.54‰ to **0.61‰**.

Premarital Examination Rate (%)



From 2015 to 2023, the premarital examination rate increased from 74.04% to **80.44%**.

Major Progress

- **Remarkable Results Have Been Achieved in Promoting Family Civility, Enabling Harmonious Family Ties, Good Family Education, and Proper Family Values**

Since 2015, by leveraging the unique roles of women in social and family lives, promoting family virtues of the Chinese nation, and building proper family values, Songjiang has been committed to building a harmonious society based on harmonious families, and advancing "Happiness and Wellness Project for Ten Thousand Families". It has mobilized families to participate in primary-level governance and take part in activities such as improving the living environment, promoting changes in customs, and advocating mutual assistance among neighbors, to promote harmonious family ties, good family education, and proper family values.

- **The Coverage and Influence of Family Education Activities Keep Expanding**

Songjiang held celebrations for the 25th Family Education Promotion Week and the 21st Family Culture Festival in 2023, guiding women's federations at all levels to hold more than 480 activities, which covered more than 25,000 persons. It promotes the "Family Reading Initiative", rolls out the "Family + Bookstore" plan for family reading based on the resources of Zhongshuge Bookstore, and regularly holds family education activities such as "Parent-Child Reading Club" and "Parents Growth Meeting". As of 2023, it held a total of 15 related activities, covering 715 families and 1,430 persons. It regularly holds the "Xiaodoudou Dream Bookstore" Guidance Project for parent-child illustrated book reading (36 sessions provided, covering 564 families) and the "Good Family Education in Songjiang" Guidance Project for parent-child companionship (19 sessions carried out, covering 852 persons), organizing more than 70 family education, parent-child reading, and parent-child gaming activities in communities, which covered more than 3,500 persons.

- **More Female Employment Service Platform Have Been Built, with Supporting Mechanisms Improved**

Songjiang actively builds recruitment platforms and holds various female-specific job fairs to expand female employment and ensure equal opportunities for women in the workplace. The 2024 Fangsong Subdistrict Job Fair & Special Job Fair for Women was held under the Songjiang Special Initiative for Employment Facilitation in Spring bringing together 62 companies, providing 196 jobs for women, and recruiting 799 persons. These vacancies covered smart manufacturing, tourism and trade, construction and communications, automobiles and machinery, and financial services, providing wide choices for female job seekers. Songjiang also provides policy support, and financial subsidies to strengthen women's willingness to work and stabilize their employment. In 2023, the flexible employment subsidies for older surplus rural workforce benefited more

than 500 female workers, and the employment subsidies such as employment subsidies for fresh graduates benefited 215 female workers.

- **The Entrepreneurship and Development Platforms for Rural Women Keep Emerging and Channels Continue to Expand**

The Songjiang District Female Talent Association for Rural Revitalization was established in 2024 as a liaison service platform for the healthy growth of rural female leaders, female farmers, and female talent. Leveraging the advantages of "female-oriented" brands, the "Guofengsenxian•Guofeng Premium Products" marketplace has been expanded and upgraded. Ten Guofeng fairs have been held, bringing together more than 220 representatives of female farmers, female makers, and time-honored companies. The "Huicui Hall" for Guofeng Premium Products has been created to provide a brand promotion and display platform for female entrepreneurs, female farmers, and female makers, based on the resources of subdistricts and towns.

- **Female Talent Teams Keep Expanding, and the Female Talent Studio Demonstration Project Has Delivered Significant Impacts** [1]

Songjiang has witnessed expanding female talent teams, with their structures optimized and capacities significantly improved. From 2017 to 2022, 26 district-level female talent studios were fostered and established in the district. In 2023, ten female talent studio demonstration projects were assessed and unveiled, including "'Heart's Hope' Care for Children with Congenital Heart Diseases", and "'Gathering Her Power' Heart-warming Service Enterprises". In the same year, 10 district-level female talent empowerment projects were launched, including "'Cloud Shuixuan' Talks on Taxation" and "Technology Express".

- **One-stop Premarital Check-Up Services Have Been Provided, Making Songjiang the Number One District in the City for 14 Consecutive Years in Premarital Check-Up Rate**

By strengthening cooperation between relevant government authorities, and optimizing resource integration, Songjiang provides one-stop premarital check-up services to improve prenatal and postnatal care. With its premarital check-up rate higher than the city average, it has become the No. 1 district in the city for 14 straight years, ensuring the quality of newborns in the district keeps improving.

- **Scientific Childcare in Families of 0-3-Year-Olds Keep Improving as Community-Level Working Mechanisms for Scientific Childcare Are Enhanced**

Taking the opportunity of the national pilot program for scientific childcare in families

[1] Shanghai Songjiang, https://www.thepaper.cn/newsDetail_forward_22437398

under the family planning policy, Songjiang, with public needs in mind, explores the community-level working mechanism for scientific childcare that features "standard places, market-based operations, regular guidance, professional teams, and branded services", and establishes a guidance service system for scientific childcare with Songjiang characteristics.

- **Great Headway Has Been Achieved in the Early Childhood Development Base Construction Project**

Songjiang actively promotes the early childhood development base construction project, and explores and builds an early childhood development service mechanism featuring government promotion, cross-departmental collaboration, and public participation. In 2019, Songjiang District Maternal and Child Health Hospital partnered with Songjiang District Fangsong Subdistrict Community Health Service Center, Songjiang District Zhongshan Subdistrict Community Health Service Center, and Songjiang District Fangsong Subdistrict Prenatal and Postnatal Care Guidance Service Center to build an early childhood development base, aiming to achieve seamless connection of early childhood development services from pre-pregnancy, pregnancy and childbirth, to neonate period, infancy and early childhood, and preschool period, based on a clinical and health care sequential model. The early childhood development base provides multi-dimensional and comprehensive early childhood development services ranging from good health, adequate nutrition, and responsive caregiving, to early learning, safety, and security, for nearly 100,000 persons per annum.

Important Measures

(1) Promote Family Development and Construction

- **Promote Proper Family Values Through "Proper Family Values·Civilized Travel" Activities**

In 2023, Songjiang organized six series of activities under the theme of "Proper Family Values·Civilized Travel". To strengthen collaboration among schools, families, and society, the district launched smart parent classes themed with "Good Parents in Songjiang", and held lectures on parenting adolescents. To carry forward China's fine traditional culture, activities related to the theme of "Our Holiday" were carried out during Chinese New Year and other traditional festivals, including "Share My Family's Happiness in the New Year", "Let's Visit You"-themed Hero Commemoration during the Tomb Sweeping Festival, "Chinese Valentine's Day"-themed illustrated book reading for the traditional festival, and the inheritance of intangible cultural heritage. The themed activities of "A Letter from Home" were also conducted to enhance parent-child communication, such as reading Fu Lei's Family Letters and writing family letters between parents and children. Primary-level

women's federations were guided to carry out themed activities such as reciting poems on family values and playing stories on family values to promote positive family values and support harmonious family ties, good family education, and proper family values.

- **Carry out Activities for Family Civility and Create a Happy Family**

In 2024, Songjiang launched 12 issues of "Live Broadcast of Songjiang"-themed family interviews, telling the stories of the "most beautiful families" at the national, municipal, and district levels, so as to enhance the demonstration effects of these families for cultural advancement. The "Alliance of the Most Beautiful Homes in Songjiang"-themed activity was carried out, and themed activities such as "Finding the Most Engaging Books" and "Enjoying the Most Beautiful Scenery to the South of the Huangpu River" were also conducted for the most beautiful families, creating a positive atmosphere of striving for excellence and courtesy. The "Marriage and Childcare Services for All Families Initiative" was advanced to cultivate a new marriage and childcare culture. The city-level wonderful families were invited to encourage newlyweds to get married on May 20, or Chinese Valentine's Day, so as to provide further guidance to young people on marriage, love, childbirth, and family. To advance the "Healthy Family Initiative", primary-level women's federations organized parent-child marathons, parent-child sports meetings, parent-child green cycling, and so on.

Case 5 "Xiaodoudou Dream Bookstore" Parent-Child Reading Guidance Project

The "Xiaodoudou Dream Bookstore" Parent-Child Reading Guidance Project is a project under the "Good Family Education in Songjiang" brand of Songjiang District Women's Federation. This project is dedicated to children's mental development, family culture construction, and the promotion of books for all. Since the first "Xiaodoudou Dream Bookstore" was established in August 2017, more than 600 related activities have been carried out in the "Home Center", Zhongshuge Bookstore, and communities, benefiting nearly 10,000 families. This project was rated as one of the top ten innovative cases on family, family education, and family values in Shanghai. It aims to promote parent-child reading as a "regular interaction model" for more families and make high-quality book lists the best "enlightenment education module" and reading habits an "ethical and cultural treasure" for family development.

Figure 10 "Xiaodoudou Dream Bookstore" parent-child reading scene

(2) Female Employment and Career Development

- **Establish a Gender-Sensitive Review Mechanism to Prevent the Release of Recruitment Information for a Single Gender at the Source**

Songjiang attaches great importance to women's equal rights and interests in employment and takes measures to prevent and eliminate discrimination in employment. For vacancies posted on http://jobs.rsj.sh.gov.cn, the Songjiang District Human Resources Platform, the "Songjiang Employment" WeChat public account, and other platforms, it requires such platforms to formulate publishing rules, establish a gender-sensitive review mechanism, and clarify clauses against gender discrimination. In addition, it requires these platforms to pay particular attention to discrimination against women, directly or indirectly, in recruitment information, such as job restrictions, salary differences, and unfair working conditions, lay out clauses against gender discrimination in their publishing rules, and comply with the gender equality principle in all recruitment information they release. These platforms must build special review processes before publishing to ensure every piece of the recruitment information has been scrutinized for multiple rounds, so as to prevent the release of recruitment information for a single gender at the source.

- **Create Employment Service Platforms for Women in Multiple Ways and Advance the Female Employment and Entrepreneurship Initiative**

Songjiang launches a special recruitment month for women under the theme of "Employment Services Warm People's Hearts like Spring Breeze". It creates a district-level mentoring group for the "Seagull Program", recruiting 20 top-notch women including female entrepreneurs and college students as Seagull mentors to help female college students achieve career development through district-school collaboration. Under its guidance, the Songjiang District Women Entrepreneur Association has carried out special committee activities and launched the "Let's Share" themed salon covering five sections that are about management, sports, fashion, health, and life, respectively, promoting exchanges and interactions, resource sharing, and healthy development of female entrepreneurs. Diversified services such as care for elderly March 8th Red-Banner Pacesetters and domestic services for communities under the themes of "Good Aunts in Songjiang", "Good Sisters in Songjiang" and "Warmth for Seniors" have been provided to further leverage the roles of women and contribute to economic and social development. In 2023, Songjiang held the "Healthy China Mother-Care Campaign" Publicity Month & Family Rice Transplanting Festival Themed Experience Event. It established the first batch of 6 district-level female talent internship bases for rural revitalization. The "Twenty-Four Solar Terms"-themed parent-child experience classes were held, guided reading for research-based learning and hands-on experience were provided, and children were encouraged to save and cherish food and carry forward China's traditional culture. The district's "Going to the Countryside"-themed activities for the spread of science &

technology, culture, and health knowledge were held to promote women's services for thousands of families.

Figure 11 Fangsong Subdistrict Job Fair & Special Job Fair for Women was held under the Songjiang Special Initiative for Employment Facilitation in Spring

- **Further Improve Female Employment Security Services Through Policy Support and Financial Subsidies**

Songjiang has developed a series of supporting measures and encourages enterprises to create more jobs suitable for women through policy support, and financial subsidies. It also continues to improve the employment service system to provide a full range of employment services for female job seekers. Service windows for career guidance, and job registration are set up at job fairs on campuses, in communities, and industrial parks to provide personalized employment guidance and advisory services for female job seekers. For women who have found jobs under different categories, Songjiang has launched various subsidies, such as cross-town (district) subsidies for the older surplus rural workforce, flexible employment subsidies for the older surplus rural workforce, and employment subsidies for fresh graduates. By providing financial support, it aims to reduce the economic burden on female workers, strengthen their willingness to work, and stabilize their employment.

- **Build a Learning and Exchange Platform for Innovation and Entrepreneurship by Women in 9 Cities in the G60 S&T Innovation Valley of the Yangtze River Delta and Motivate Women to Innovate and Start Businesses**

Songjiang continues to strengthen contact and communication with the women's federations of Suzhou, Wuhu, and seven other cities to improve the Science and Technology Innovation Alliance Mechanism for Women in the G60 S&T Innovation Valley. It organized three female entrepreneurial teams from the Songjiang District Women

Entrepreneur Association, Lingang Science and Technology City, and Chedun Town to participate in the 9th Suzhou Women's Entrepreneurship and Innovation Competition & the 3rd "Creating the Future" Yangtze River Delta G60 S&T Innovation Valley Science, Technology and Industrial Innovation Trial, motivating women with role models to make contributions to the new era. In 2023, it further improved the Regular Working Mechanism for Science and Technology Alliance for Innovation and Entrepreneurship by Women in Nine Cities in the G60 S&T Innovation Valley of the Yangtze River Delta, clarifying the rotation system for the women's federations in the nine cities. Songjiang also organized 6 entrepreneurial teams of female college students to participate in the Yangtze River Delta Entrepreneurship & Innovation Competition for Female College Students (Jiaxing Leg) under the theme of "Little Phoenix Spreads Its Wings to Create a Smart Future". The "Haima + Growth Support Center for Families with Elderly People Suffering Cognitive Impairment" squeezed into the final round and won the third prize. The Songjiang District Women's Federation won the Outstanding Organization Award.

Case 6 Themed Activities for the S&T Innovation Alliance for Innovation and Entrepreneurship by Women in the G60 S&T Innovation Valley of the Yangtze River Delta

Under the leadership of the CPC Songjiang District Committee, the Songjiang District People's Government, and the Shanghai Municipal Women's Federation, the Songjiang District Women's Federation has launched a series of themed activities for the S&T Innovation Alliance for Innovation and Entrepreneurship by Women in the G60 S&T Innovation Valley of the Yangtze River Delta since 2019, in a bid to enable women to contribute to the integrated high-quality development of the Yangtze River Delta.

In 2019, the Songjiang District Women's Federation, the Joint Conference Office of G60 S&T Innovation Valley of the Yangtze River Delta, and the Shanghai Lingang Songjiang Science and Technology City jointly held themed activities for women in the nine cities to celebrate the 70th anniversary of the founding of the People's Republic of China, under the theme of "We Women Stay Committed to the Party, Contribute to the G60 S&T Innovation Valley, and Serve the Yangtze River Delta". The women committed to science and technology innovation from the nine cities in the G60 S&T Innovation Valley of the Yangtze River Delta, including Songjiang District, Jiaxing, Hangzhou, Jinhua, Suzhou, Huzhou, Xuancheng, Wuhu, and Hefei, gathered together to establish the "S&T Innovation Alliance for Innovation and Entrepreneurship by Women in the G60 S&T Innovation Valley of the Yangtze River Delta".

In 2020, under the theme of "Striving for a Better Future Through Women's Creation", the Entrepreneurship Project Competition for Women from Nine Cities in the G60 S&T Innovation Valley of the Yangtze River Delta was held. After the preliminary and final rounds, "Top Ten Entrepreneurship Projects", 10 "Excellent Entrepreneurship Projects", and several "Excellent Organization Awards" were recognized, among 190 projects applied by the nine cities in the G60 S&T Innovation Valley of the Yangtze River Delta. The Shanghai Technology Entrepreneurship Foundation for Graduates launched the "Eaglet Program" to provide interest-free and mortgage-free small credit entrepreneurial loans to entrepreneurs. At the event site, interested entrepreneurs signed up for the "Eaglet Program", laying a solid foundation for expanded innovation and entrepreneurship by women from the nine cities in the G60 S&T Innovation Valley of the Yangtze

River Delta.

In 2021, under the theme of "Upholding the Party's Leadership and Showcasing Housekeeping Skills", a housekeeping skills competition for women from the nine cities in the G60 S&T Innovation Valley of the Yangtze River Delta was held. Bringing together 54 participants from the nine cities, this event contributed further to the building of housekeeping teams in the cities, and united and mobilized women housekeepers there to underpin and guarantee the comprehensive economic and social development of these cities with domestic services. It also worked with the Songjiang District Human Resources and Social Security Bureau, and the Songjiang District Women Entrepreneur Association to provide employment and entrepreneurship services, such as online and offline job fairs for women.

Figure 12 The Entrepreneurship and Innovation Competition for Women from the G60 S&T Innovation Valley of the Yangtze River Delta

In 2022, under the theme of "Upholding the Party's Leadership and Innovating through Elite Women", the Event on Showcasing the Demeanor of Elite Women from Emerging Industries in Nine Cities in the G60 S&T Innovation Valley of the Yangtze River Delta was held. Ten elite women from the cities communicated and showcased their demeanor online and offline. A total of 47 female entrepreneurial projects were recommended to compete in the first Yangtze River Delta G60 S&T Innovation Valley Science, Technology and Industrial Innovation Competition themed with "Creating the Future". Among them, Shanghai Meikesheng Energy Storage Technology Co., Ltd. won the first prize for the growth group in the final round. The first batch of 10 science, technology, and industrial innovation bases for women from nine cities in the G60 S&T Innovation Valley of the Yangtze River Delta were unveiled.

In 2023, the Regular Working Mechanism for Science and Technology Alliance for Innovation and Entrepreneurship by Women in Nine Cities in the G60 S&T Innovation Valley of the Yangtze River Delta was further improved, clarifying the rotation system for the women's federations in the cities to facilitate communication among elite women there. To strengthen interplay with other districts, Songjiang organized 6 entrepreneurial teams of female college students to participate in

the Yangtze River Delta Entrepreneurship and Innovation Competition for Female College Students (Jiaxing Leg) under the theme of "Little Phoenix Spreads Its Wings to Create a Smart Future". The "Haima + Growth Support Center for Families with Elderly People Suffering Cognitive Impairment" squeezed into the final round and won the third prize. The Songjiang District Women's Federation won the Outstanding Organization Award.

(3) Improve the Maternity Security System

- **Improve Institutional Guarantee and Build a "One-Stop" Marriage and Pregnancy Healthcare Service Model**

Songjiang has formulated a standardized technical guidance document Management Standards for Premarital Medical Examination, based on its development status, clarifying the departments' responsibilities and special funds appropriation to ensure the implementation of free premarital and pregnancy examinations. The Songjiang District Health Commission has strengthened its collaboration with the Civil Affairs Bureau, the Women's Federation, and the Administrative Service Center to form synergy and establish a closely integrated "one-stop" marriage and pregnancy healthcare service model. The "three-in-one" service of marriage registration + pre-marital consultation + pre-marital examination is provided in the same area of the Songjiang District Administrative Service Center. For that, the Civil Affairs Bureau assigns dedicated persons for guidance, the Women's Federation intensifies efforts for health literacy, the Administrative Service Center organizes and coordinates, and the Health Commission is responsible for the provision of marriage and pregnancy medical examinations. Songjiang is active in promoting the integration of marriage and pregnancy examinations and has been the first in the city to pilot the "premarital examination + pre-pregnancy examination" services, providing both pre-pregnancy examination and genetic counseling services to expecting couples who come for premarital examination.

- **Further, Improve the Maternal Management Model and Improve the Health Management of Women and Children Throughout Their Life Cycle**

Songjiang continues to enhance the maternal and child health service system with community health service centers as the base and midwifery medical institutions as the core and improve the intensive comprehensive prevention and treatment system for high-risk pregnancies that integrates maternal health management, comprehensive treatment, and recovery. Under the maternal management model of "responsibility for the first diagnosis, pregnancy tracking, and fine management", pregnancy profiling is intensified, and with a focus on the process management of prenatal and postnatal care, the role of the maternal system health service network in the early warning is leveraged to improve the health management of women and children throughout their life cycle. The high-risk pregnant woman-specific case management is also adopted, ensuring dedicated persons for specific patients, full-process management, dynamic supervision, and centralized

treatment.

- **Advance the Construction of Service Systems for Pediatric Diagnosis and Treatment, and Prenatal and Postnatal Care Guidance**

Songjiang continues to advance training for community general practitioners on pediatric diagnosis and treatment capabilities. By providing special training for pediatricians and general practitioners, and bringing pediatric experts from higher-level hospitals to practice in communities, it works to ensure the level of community pediatric diagnosis and treatment services. It also closely connects with municipal children's specialized hospitals, advantaged hospitals, and regional medical centers to enhance the pediatric diagnosis and treatment service capabilities of community health centers. Moreover, Songjiang is committed to raising people's awareness of their responsibilities to their families, promoting the concept that the "family is the first person responsible for children's early development and health management." Twenty prenatal and postnatal care guidance centers provide routine prenatal and postnatal care guidance services to families with 0-3-year-olds once or twice a week. Expertise on children's balanced nutrition, parent-child games, children's meals, and sleep is spread via charity livestreaming of "Healthy Families - Community Tour for Prenatal and Postnatal Care". Door-to-door guidance services and various themed parent-child activities are carried out regularly. With the help of authorities such as the Women's Federation, the Education Bureau, and the Sports Bureau, themed activities such as "'Good Parents in Songjiang' Family Education Themed Salon", "'Family Mobilization' Sports Carnival", and "'Maternal and Infant Health Community Tour' Lectures" have been held to deliver more benefits to families and improve services for scientific childcare.

Case 7 Songjiang Creates a Distinctive Service Model for Scientific Childcare

Songjiang actively promotes the transformation and development of family planning and implements a national pilot program for scientific childcare based on maternal and child health resources and the family planning service network. Under the model for scientific childcare of "government promotion, cross-departmental collaboration, operation by private and non-profit organizations, and public welfare services ", it provides guidance services to families with 0-3-year-olds, covering scientific childcare, parent-child activities, healthy behavioral norms, and lifestyle development. With these efforts, it has discovered a scientific childcare guidance service system with Songjiang characteristics.

So far, a specialized and professional teaching team for prenatal and postnatal care guidance services in communities has been created. The team is comprised of 44 scientific childcare instructors, each holding a kindergarten teacher qualification certificate or a 4/5-level maternity nurse certificate. In the 15 subdistricts and towns across the district, there are 20 prenatal and postnatal care guidance service centers (including branches), each with standardized facilities and environment, and an area of more than 150 square meters. Each center is separated into office areas, teaching areas, activity areas, fine motor development areas, parent-child reading areas, role-playing areas, outdoor activity areas, and other functions, boasting a warm and attractive environment for children. In each center, there are also special toilets for children, and various apparatuses and teaching aids to support the growth and development of infants and young

children, creating a favorable guidance atmosphere for scientific childcare.

Every year, 6,400 routine classes are held by community prenatal and postnatal care guidance service centers across the district, benefiting 66,000 0-3-year-olds. About 160 themed activities, door-to-door guidance, lectures & training, and teaching activities in the communities are carried out or provided every year, benefiting 7,000 families with infants and young children.

Figure 13 Prenatal and postnatal care guidance service centers in Songjiang District

- **Promote High-Quality HPV Vaccination Services and Pay Attention to Women's Health**

In 2023, Songjiang launched the "Hu Hua Program", an HPV vaccination service program for vulnerable groups, in order to promote high-quality HPV vaccination services. Under this program, 200 female minors aged 9-14 who met the conditions for minimum living allowances, low-income groups, and families with financial difficulties were vaccinated fully and for free. Mother and daughter, if vaccinated together, were entitled to preferential treatment. The daughter (only one 9-14-old daughter) could be vaccinated for free, if her mother got full-price vaccination, in order to increase the HPV vaccination rate of girls aged 9-14. Meanwhile, a two-pronged approach was adopted for vaccination promotion and education. On the People's Daily Health APP, and the WeChat public accounts of disease control centers of different districts and the Songjiang District Women's Federation, knowledge about cervical cancer was disseminated, and preferential policies and vaccination services were promoted, in a bid to call on parents and society to pay attention to the health of girls of the above age and reach as many women with such needs as possible.

- **Jointly Create a Child-Friendly City with Multiple Parties**

In 2023, Songjiang guided women's federations at all levels to celebrate Children's Day

on June 1, and collaborated with Yueyang Subdistrict on the day to hold a themed gala on child-friendliness, under the theme of "Blooming Flowers under the Clouds — Upholding the Party's Leadership and Building a Child-Friendly District". The UNICEF Songjiang Representative Office released a series of Huating-themed charity projects, such as the "Child-Friendliness in Huating" project for children's development and the "Children's Development in Huating" camp for psychological development. Songjiang also worked with the Songjiang District Musicians Association to hold the Songjiang District Children's Singing Contest for Children's Day, under the theme of "We Are the Future of China and Will Make It Stronger", with nearly 100 children squeezing into the final round and winning awards. It partnered with Songjiang District Special Education School and Xingyue Child Growth Service Center to hold the Exhibition of Autistic Children's Works themed "Making Your Dream Come True". The "Huating Children's Learning Club" project for vision broadening, the "Child-Friendliness and Happy Growth in Huating" project for child development, and 45 reading club activities for teenagers were held, benefiting nearly 1,300 persons. The phase 2 of broadening winter and summer camps for self-reliant teenagers, under the theme of "Huating Children's Learning Club" in Songjiang District for "Inspiring Children and Providing Company", was held and benefited 56 children in difficulty. With the help of the Cultural and Ethical Progress Office, the "Appreciating New Year Paintings to Celebrate the New Year"-themed activities were held in the winter camp, helping children make their tiny New Year's wishes come true. The district also participated in the solicitation of outstanding cases on children's participation in Shanghai and recommended 9 district-level projects. It solicited, promoted, assessed, reviewed, and recommended 16 child-friendly hospitals that participated in the assessment.

SDG6: Clean Water and Sanitation

SDG6

- SDG6 Clean Water and Sanitation aims to ensure the availability and sustainable management of water and sanitation for all. Achieving this goal can help effectively mitigate the risks associated with water availability due to challenges like climate change, and improve the R&D and production capacity of water resource utilization technologies, thereby strengthening the sustainability and integrity of humanity and ecosystems.
- Located in a typical water network in Jiangnan (literally, "south of the Yangtze River"), Songjiang is rich in surface water resources but still faces the challenge of water shortage due to pollution. However, as more people settle in the new city, and the modern industrial system develops, the water supply pressure cannot be ignored. The water quality still cannot meet people's needs for a better life. The water supply system across the district has yet to be enhanced in resilience and emergency response capacity.
- Driven by SDG6, Songjiang is actively overcoming various challenges it faces. It has intensified water supply security through the construction of regionalized water supply systems, protection of water sources, and building of water supply capacities. It has enhanced water quality by advancing water factories' purification technologies, upgrading water supply pipelines, and piloting direct drinking water systems. Moreover, it has improved its water ecological environment through projects such as the construction of eco-clean watersheds, and comprehensive river and lake environmental management. It also works to improve water consumption efficiency by building a water-saving society and promoting water conservation in industrial production.

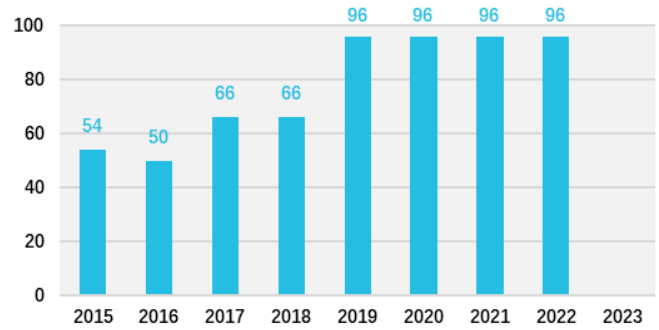
SDG6

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG6
Guarantee Water Supply Capacity	Construction of Regionalized Water Supply Systems	Ensure Stable Water Supply at Peak Times and Uninterrupted Access to Water Supply Services	► Tap Water Supply Capacity (10,000 cubic meters/day) ► Total Supply of Tap Water (in 10,000 tons) ► Daily Average Water Supply (in 10,000 cubic meters) ► Total Annual Water Sales (in 10,000 cubic meters)	SDG6.1
	Advance Water Source Protection and Water Supply Capacity Building			
	Emergency Water Supply Assurance			
	Improve Water Supply Layout and Promote Intensive Water Supply in Suburbs			
	Promote Ecological Protection of Drinking Water Sources			
Improve Water Quality	Upgrade Purification Technology of Water Plants		► Tap Water Penetration Rate (%)	SDG6.3
	Water Supply Pipeline Renovation	Renovation Projects of Outdated Water Supply Pipeline Networks in Xilin Community and Tianle Community		
	Direct Drinking Water System Pilot Construction			
Water Environment and Water Ecological Management	Construction of Eco-Clean Watersheds			SDG6.6
	Comprehensive Management of River and Lake Environments	Water Ecological Management in Moon Lake		
	Water Ecosystem Protection			
	Rural Domestic Sewage Treatment			
Improve the water consumption efficiency	Advance the Construction of a Water-Saving Society		► Industrial Water Consumption (in 10,000 cubic meters) ► Domestic Water Consumption (in 10,000 cubic meters) ► Annual Per Capita Water Consumption (in tons)	SDG6.1
	Promote Water Conservation in Industrial Production	Tsingtao Brewery Shanghai Songjiang Manufacturing Co., Ltd. Builds a Water-Saving Enterprise		

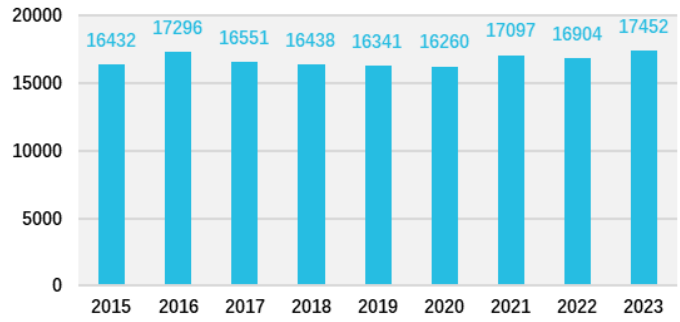
Key Indicators

Tap Water Supply Capacity (10,000 cubic meters/day)



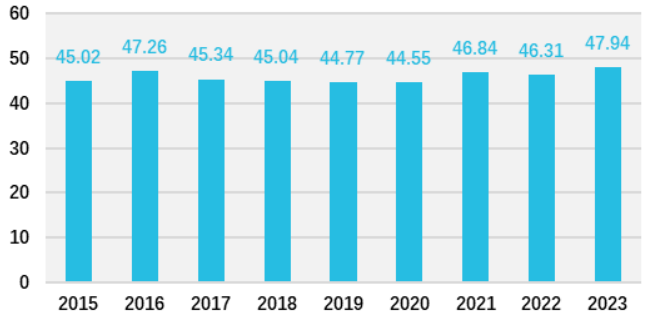
From 2015 to 2022, the tap water supply capacity increased by **77.8%**.

Total Tap Water Supply (in 10,000 tons)



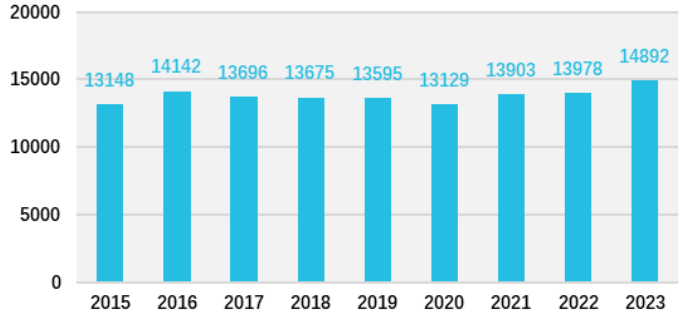
From 2015 to 2023, the annual total tap water supply remained above **160 million tons**.

Daily Average Water Supply (in 10,000 cubic meters)



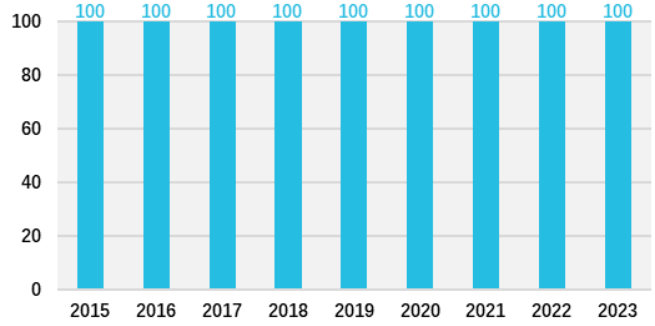
From 2015 to 2023, the daily average water supply increased by **6.5%**.

Annual Water Sales (in 10,000 cubic meters)



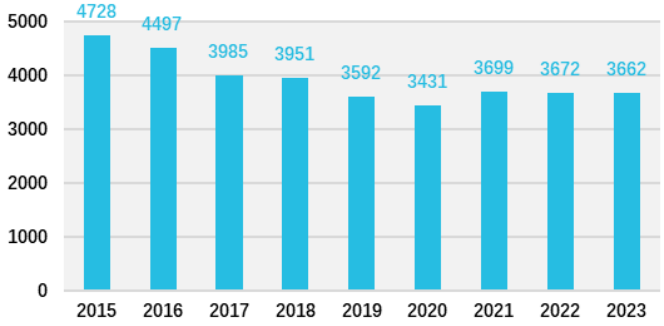
From 2015 to 2023, the annual water sales increased by **13.3%**.

Tap Water Penetration Rate (%)



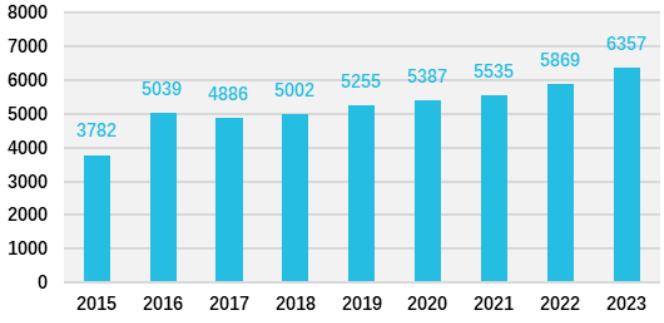
Since 2015, the tap water penetration rate has remained stable at **100%**.

Industrial Water Consumption (in 10,000 cubic meters)



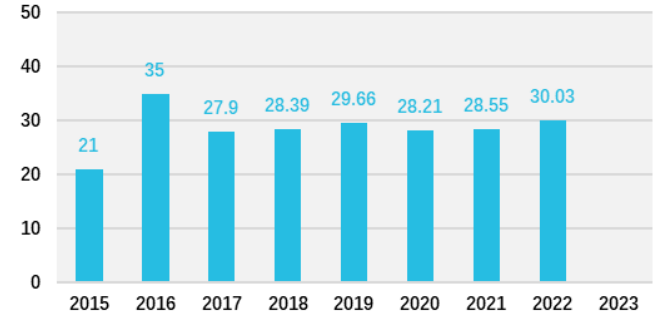
From 2015 to 2023,the industrial water consumption decreased by **22.5%**.

Domestic Water Consumption (in 10,000 cubic meters)



From 2015 to 2023, the domestic water consumption increased by **68.1%**.

Annual Per Capita Water Consumption (in tons)



From 2015 to 2022, the annual per capita water consumption remained at around **30 tons**.

Major Progress

- **Capacity to Satisfy Peak Water Demands Continues to Improve**

In response to high temperatures and peak water demand, Songjiang ensures stable water pressure, excellent water quality, and sufficient water supply by optimizing water dispatching through the smart water system. Seventy-nine secondary water supply facilities have been installed in 79 residential communities across the district to meet peak water demands in summer. The operation managers of the secondary water supply inspect the water pump houses at least once a week. Under the 24-hour duty system, quick response and night maintenance are ensured to avoid disturbing residents as much as possible. Water quality monitoring has been intensified, especially that of algae-related indicators in summer, ensuring the safety of tap water. Moreover, the production equipment is inspected and maintained in advance, and the water supply networks are scientifically dispatched, ensuring efficient and stable water supply. All these measures have ensured the safety and convenience of water consumption by residents in Songjiang when water demands peak in summer.

- **Water Quality Has Significantly Improved as the Water Quality Supervision System Keeps Being Enhanced**

Songjiang Tap Water Co., Ltd.'s qualified rate of finished water quality tested by itself and of water quality monitoring at the municipal and district levels are both 100%, maintaining a high level of water security. The raw water, process water, and finished water are tested every day through the full-process water quality testing system comprised of "testing center + water plant laboratory + water plant operation team". At the same time, 26 water quality monitoring points in the pipeline network and 79 water pump houses for secondary water supply across the district are sampled and tested. In addition, 64 online water quality monitoring instruments are installed at key points, and 48 sets of online water quality instruments are used in the water pump houses for secondary water supply, enabling water quality monitoring and dynamic management throughout the whole process of water supply. Special attention is paid to the issue of algal bloom in raw water. Relevant indicators such as disinfection by-products, microorganisms, and algae are strictly controlled to ensure that the indicators of residual chlorine and microbial in water in the pipeline networks meet the requirements of water supply. Based on the data from the three-level water quality testing system, the trend of water quality changes is predicted promptly, the changes in water quality at water sources are observed 24 hours a day, and more tests are carried out on relevant indicators when appropriate, so as to ensure that the water quality is stable and up to standard when water demands peak in summer.

- **Water Environment Management Has Delivered Significant Impacts, Making Songjiang More Livable**

Songjiang has achieved positive results in its battle against pollution. It has completed the comprehensive treatment of volatile organic compounds in 338 industrial enterprises and comprehensively advanced the investigation and rectification of sewage outfalls into rivers. The Songjiang Wastewater Treatment Plant Phase IV and the Western Wastewater Treatment Plant Phase III have been renovated and expanded, and the early phase of four stormwater detention and retention tanks is under construction, effectively reducing the direct discharge of sewage. Efforts have also been made to build, upgrade, and renovate rural domestic sewage treatment facilities, ensuring full coverage of the rural areas. Flood control security has been steadily improved, and the regional flood control and drainage capabilities have been strengthened through reinforced embankments and sluices. The water resources allocation capacity has been significantly strengthened, and the water quality and water supply services have been improved through the renovation of water supply pipeline networks and the improvement of sewage treatment facilities. The comprehensive water management has been intensified. The water law enforcement and supervision have been tightened, ensuring the intensity and effectiveness of water management.

- **Water-Saving Capabilities Keep Improving, and Water Use Efficiency Has Been Increased**

The Shanghai Water Authority has issued a notice on industrial opinion on the Shanghai Songjiang District Water Supply Plan (2023-2035), emphasizing the goal of reducing the water pipeline leakage rate to less than 6% by 2035. A contract-based water conservation management model has been promoted for industrial water conservation. The industrial water reuse rate has been increased, based on measures such as digital management improvement and water resource recycling. For example, Chint Electric Co., Ltd. has greatly improved the water use management efficiency through the water resource digital management optimization project and the boiler waste heat reuse project. Its industrial water reuse rate has thus reached 97.3%, and the indirect cooling water recycling rate reached 99%. Songjiang also actively promotes water-saving apparatuses and technologies. It has adopted planned water use and quota-based management, and implemented over-quota and over-plan water management for non-resident water users. At the same time, it promotes water conservation in urban households and the code of water-saving conduct. It also boosts the use of water-saving domestic water apparatuses, and ramps up the supervision and management of water efficiency labels, prohibiting production and sales of products that do not meet water-saving standards.

Important Measures

(1) Guarantee Water Supply Capacity

● Construction of Regionalized Water Supply Systems ①

Songjiang steps up the construction of water sources and water supply plant networks to improve water quality. It implements a stringent water resources management system, promotes the improvement of comprehensive water management, and strengthens initial rainwater interception and pollution control. It stresses the construction of water supply systems, proves water demand, and researches the water plant expansion and pipeline network supporting projects. In terms of strengthening the capacity for flood control and security, Songjiang continues to regulate backbone rivers, and strengthen embankment management, to improve the flood control and drainage capabilities. Moreover, it enhances sewage treatment facilities, and improves sewage treatment effectiveness, to ensure the quality of the water environment. Smart water construction has also been put on the agenda to achieve intelligent water supply management. To improve fine management capabilities, Songjiang promotes the implementation of the river and lake chiefs system, strengthens water conservancy project construction and management, intensifies water and soil conservation supervision, improves water administrative service capabilities, enhances the hydrological station network system, and establishes a long-term management mechanism for rainwater and sewage diversion.

Case 8 Ensure Stable Water Supply at Peak Times and Uninterrupted Access to Water Supply Services

At the peak time of water supply in the summer of 2024, residents' water demand surged. Since the beginning of August, the maximum daily water supply of Songjiang Tap Water Co., Ltd. has exceeded 250,000 tons for several days in a row. This also meant the busiest time of the year for operation managers of secondary water supply on the front line of water supply. There are secondary water supply facilities in 70 residential communities across the district.

In response to the peak water demand in summer, Songjiang Tap Water Co., Ltd. takes advantage of the smart water system, properly adjusts the operating status of the units, and continuously monitors the pressure of the pipeline networks, supplying more water at peak times and storing more water in troughs, thereby ensuring stable water pressure, high water quality, and sufficient water supply. In order to ensure water supply security, operation managers of secondary water supply inspect 79 water pump houses once a week. In addition to inspections and investigations, operation managers of secondary water supply are responsible for maintaining and repairing secondary water supply facilities. In hot weather, to ensure stable water supply to residents, the Secondary Water Supply Management Office implements a 24-hour duty system, and troubleshoots at night as much as possible to avoid peak water consumption by residents.

① Notice of the People's Government of Songjiang District, Shanghai on the Issuance of the 14th Five-Year Plan for Water System Management in Songjiang District, Shanghai, https://www.songjiang.gov.cn/govxxgk/SHSJ43/2022-12-19/2c19393f-b595-4fac-8c62-dd8f8930e9e1.html

The company will continue to inspect operation security for water supply at peak times, identify weak links in operations, and move faster to address issues on water consumption at peak times, to ensure uninterrupted access to water supply services.

- **Advance Water Source Protection and Water Supply Capacity Building**

Songjiang has implemented a series of important measures for water source construction to ensure water supply security and improve water resource management efficiency. With the Songjiang Raw Water Branch Project built in the water source in the upper reaches of the Huangpu River, water can be supplied from the Jinze Reservoir. Meanwhile, the Songpu and Xietang water intakes are used as backup and emergency water intakes, thus enhancing water supply security. With the new Chedun Water Plant completed, the water supply capacity of the district's water supply companies has been expanded to 660,000 cubic meters per day, ensuring the qualified rate of water quality. As the secondary water supply facilities in residential communities built before 2000 were completed, the meter-based water management has been fully handed over to water companies. Moreover, water quality has been significantly improved after the renovation of small-diameter and high-risk water supply pipeline networks. The expansion and supporting pipeline network project of the Xiaokunshan Water Plant has started, in a bid to improve the water supply system.

- **Intensify Emergency Water Supply Assurance**

With the embankments along rivers such as the Huangpu River reinforced, the 164-kilometer first-line river embankment has met the fortification standard for the first time in 50 years. To enhance Songjang's capacity for emergency response, efforts have been made to strengthen the monitoring, early warning, and emergency problem-solving capabilities, increase the density of hydrological station networks, and establish a professional flood prevention and rescue team. In terms of water source and water plant network construction, Songjiang has built the Songjiang Raw Water Branch Project in the water source in the upper reaches of the Huangpu River, making it possible for water can be supplied from the Jinze Reservoir, and it also uses the Songpu and Xietang water intakes as backup and emergency water intakes, thus enhancing water supply security. As for the water quality of emergency drinking water sources, the water intake of Xietang Songjiang No. 2 Water Plant is monitored, ensuring the emergency drinking water sources meet the Class III standards, and the water from such sources is safe[①].

- **Improve Water Supply Layout and Promote Intensive Water Supply in Suburbs[②]**

Songjiang is committed to optimizing its water supply layout. While closing small and

① Shanghai Emergency Drinking Water Source Water Quality Report (October 2023), https://www.songjiang.gov.cn/govxxgk/SHSJ19/2023-11-16/6e7add12-4e1c-43a9-b039-329b03719675.html

② 30th Anniversary | Optimizing Layout, Improving Water Quality, and Coordinating Integrated Water Supply in Urban and Rural Areas — Review of Intensive Water Supply in the Suburbs of Shanghai, https://www.thepaper.cn/newsDetail_forward_7208313

medium-sized water plants and inland water intakes, it focuses on protecting water sources, coordinating the supply of raw water, and effectively strengthening raw water's response to sudden pollution. At the same time, it advances the construction and expansion of water plants, promotes advanced treatment, and upgrades and rebuilds water supply pipeline networks, significantly improving water quality. For the integration of water supply in urban and rural areas, Songjiang has achieved coordinated development of urban and rural areas and ensured the homogeneity of water supply in the suburbs and urban areas. It also is committed to stepping up the construction of water sources and water plant networks. For example, it has built the Songjiang Raw Water Branch Project in the water source in the upper reaches of the Huangpu River, making it possible for water can be supplied from the Jinze Reservoir, and also has backup and emergency water intakes, thereby enhancing water supply security. Songjiang's intensive water supply measures have helped ensure the security and stability of water supply, and high water quality, and enabled more reliable drinking water services for residents.

- **Promote Ecological Protection of Drinking Water Sources①**

To consolidate the achievements of ecological environment protection in water sources, Songjiang further improves the compensation mechanism for ecological protection of water sources. In recent years, it has appropriated all the ecological compensation funds for water sources it has received to relevant subdistricts and towns where the water sources are located, achieving remarkable impacts from ecological compensation, and steady progress in regional green development. The original industrial enterprises located in the secondary protected areas of drinking water sources in Songjiang accounted for approximately 54% of the total number of industrial enterprises in the city's secondary protected areas. A total of 289 industrial enterprises in six subdistricts needed to be demolished. As of the end of the 13th Five-Year Plan Period, all industrial enterprises in the secondary protected areas of drinking water sources in the district were demolished, rectified, and accepted. For this endeavor, the Songjiang District People's Government invested nearly 5.2 billion yuan of government funds, freed up 2,538.5 mu of land, demolished 1,239 plants and buildings covering an area of 982,000 square meters, and reduced wastewater discharges by 1.007 million tons per year.

(2) Improve Water Quality

- **Upgrade Purification Technology of Water Plants②**

Songjiang has achieved full coverage of advanced treatment for tap water. The

① Source: With Water Flowing from Water Sources, Songjiang Receives Excellent Results in the Assessment of Ecological Compensation for Water Sources Since the Beginning of the "14th Five-Year Plan" Period, https://www.songjiang.gov.cn/xwzx/001002/001002011/20240506/83c97fe8-fc93-4108-b22b-2bfc4fd79bb0.html

② Songjiang Ensures High-Quality Drinking Water, and Takes the Lead in Enabling Full Coverage of Advanced Treatment in the Suburbs, https://nyncw.sh.gov.cn/mtbd/20180705/0009-40195.html

advanced treatment processes enable water plants to meet the 106 indicators newly unveiled by the state for the quality of finished water. Water plants such as Xiaokunshan Water Plant have adopted the advanced treatment processes, while the No. 2 Water Plant of Songjiang Tap Water Co., Ltd., without occupying more land, has successfully added advanced treatment processes based on its innovative reconstruction plan, effectively saving electricity. Sewage treatment facilities have also been further improved. Thanks to reconstruction and expansion projects, such as Songjiang Sewage Treatment Plant Phase IV, new sewage treatment capacity has been developed and sewage treatment effectiveness has been enhanced. All these measures have helped ensure the continuous improvements in the purification technology of water plants in Songjiang, and the security and stability of water supply, and also improve the quality and efficiency of water supply services.

- **Water Supply Pipeline Renovation**

Songjiang has renovated outdated water supply pipeline networks at scale, including the renewal of small-diameter and high-risk water supply pipeline networks, thus effectively improving water quality and reducing the leakage rate. To improve its capacity for water supply services, it advances meter-based water management by water plants, and intensifies maintenance and management of secondary water supply facilities. Smart water construction has been put on the agenda to achieve intelligent water supply management using intelligent technologies, covering real-time monitoring of raw water quality and monitoring of water pressure and water quality in secondary water supply. It also promotes the district metering, upgrading, and renovation projects of water supply pipeline networks, tightens the collection and management of data on users' water meters, and enables digitalization and informatization of water supply, further reducing the leakage rate of the water supply pipeline networks. Songjiang launched the renovation project of outdated water supply pipeline networks in 2024, which mainly involved Fangsong and Yueyang Subdistricts. The project was carried out in the summer to eliminate hidden dangers and improve water quality. New materials and technologies were used in the project, such as PE pipes and PPR pipes. Such materials, which are lightweight, resistant to high temperatures and high pressures, boast smooth inner walls that are not prone to scaling and bacterial growth, and have long useful life, effectively improving residents' experiences with water consumption.

Case 9 Renovation projects of outdated water supply pipeline networks in Xilin Community and Tianle Community[①]

Songjiang launched the renovation project of outdated water supply pipeline networks in Xilin Community and Tianle Community on July 26 and 29, 2024 respectively. This renovation project lasted 60 days, involving nearly 5.7 kilometers of pipelines.

Tianle Community was built in 1995, and its water supply pipeline networks have been in

[①]Give Residents Access to "High-Quality Water" and "Safe Water"! The Outdated Water Supply Pipeline Networks Renovation Project to Kick off in Songjiang in 2024, https://www.thepaper.cn/newsDetail_forward_28263518

operation for years. The cast iron water pipelines used in the community were built many years ago, with some pipes and valves leaking, aging, or corroding, posing a hidden threat to people's safety, and damaging the quality of water supplied every day.

To address residents' concerns over the water they used, Songjiang Tap Water Co., Ltd. inspected all the outdated pipeline networks in the district in a cyclic manner and developed renovation plans based on the networks' conditions. The renovation endeavors in Tianle Community and Xilin Community mainly concerned the reconstruction of 3,994-meter and 1,703-meter-long buried pipelines respectively. The new pipelines, mainly made of PE and PPR, are lightweight, resistant to high temperatures and high pressures, and boast smooth inner walls that are not prone to scaling and bacterial growth, and a useful life of up to 50 years.

In order not to interrupt residents' daily mobility during the construction period, the construction team piled all the construction materials at a point outside the community. They adopted a section-by-section construction approach, excavating land, replacing pipelines, and backfilling the excavation site step-by-step. Once the construction was completed, road traffic was restored.

Figure 14 Construction site

- **Direct Drinking Water System Pilot Construction**

Songjiang is committed to improving the quality of tap water across the board, involving key links such as raw water, water plants, water supply pipeline networks, and secondary water supply, to improve the quality of tap water to the extent that it is directly drinkable across the city. The direct drinking water pipeline network system is at the core of the direct drinking water project. Stainless steel pipelines are widely used in such systems for their corrosion resistance, low friction resistance, and good tightness, which can ensure high-quality water is safely sent to users. In addition, direct drinking water can help improve the quality of residents' lives, meet people's needs for more hygienic and economical, safer and easier-to-get drinking water, address a common cognitive bias against direct drinking water, and raise public awareness of the importance of direct drinking water. Based on these measures, the pilot construction of the direct drinking water system in Songjiang aims to improve the quality and efficiency of water supply

services and ensure higher-quality drinking water for residents.

(3) Water Environment and Water Ecological Management

● Construction of Eco-Clean Watersheds

Songjiang has improved the conditions of rivers and lakes, and enhanced water quality through river regulation, water system connection, and ecological revetment construction. It has controlled agricultural non-point source pollution, increased the treatment rate of domestic sewage, and ensured that industrial wastewater and large-scale aquaculture wastewater are treated and discharged in compliance with relevant standards. To prevent and control soil erosion, it has adopted measures such as vegetation restoration and soil conservation, which have effectively reduced soil erosion. As for ecological restoration, it has intensified water ecological restoration and biodiversity protection through wetland restoration and riverbank ecological transformation. With scientific and technological support and supervision stressed, the district has stepped up efforts to research technologies involved in water and soil monitoring, river and lake health, ecological revetment, and non-point source control, while improving management. It aims to build several high-quality eco-clean small watersheds by 2025 and develop an eco-clean small watershed system that supports the basic modernization of river basins by 2035, to promote harmony between humanity and nature.

● Comprehensive Management of River and Lake Environments

Songjiang has implemented comprehensive management measures to enhance the quality of river and lake environments. First, it has improved the natural purification capacity and ecological functions of rivers through river regulation and ecological restoration projects carried out, such as desilting, dredging, and bank slope regulation. It has strengthened the water system connection. With beheaded rivers aligned and water systems connected, water bodies have become more fluid, and the self-restoration capacity of the water environment has been improved. With the river chief and lake chief systems adopted, the responsibilities of river chiefs and lake chiefs at all levels have been defined, which has helped strengthen the management and protection of rivers and lakes. In upstream river basins, soil conservation, and water source conservation projects have helped reduce soil erosion and protect water sources. In addition, Songjiang has strengthened cross-regional collaboration with surrounding areas to promote comprehensive management of river basins, and comprehensively improve the regional water environment.

Case 10 Water Ecological Management in Moon Lake

As the only lake in Songjiang that is managed by the district government, Moon Lake is subject to higher standards for water quality than normal rivers. In recent years, the total phosphorus of Moon Lake per month has been at a critical value, and its water quality was at risk of failing to meet standards in some months. According to the data monitored 23 times from 2020 to November 2021,

Moon Lake was rated as Class IV water once, Class V 19 times, and Poor Class V three times, indicating it was worse than the surrounding water systems in cross-sectional water quality. As the water quality indicators of lakes are much higher than those of rivers, the Moon Lake sections still could not meet the performance indicators stably, even if the water quality in the upper reaches was up to standard. Besides, as a core scenic spot in the Songjiang Ecological Water Conservancy Scenic Area, Moon Lake has heavy tourist traffic. Visitors can see Sheshan Mountain from the lake, but its water, which was not lucid enough, left it out of place with the surrounding scenery.

At the end of 2023, the Songjiang District Water Authority implemented the Moon Lake Water Ecological Restoration Project (Phase I), which covered a water area of 36,036m^2. It adopted four measures to further improve the water quality and lucidity of the lake, in an approach of starting from the shore and extending to the water. Firstly, it used bottom substrate modifiers and double-layer soft enclosures in the pollution source control project to treat the bottom substrate of the lake and set up a pretreatment area. It also used the bottom substrate modifiers to quickly degrade harmful substances in the bottom substrate, such as ammonia nitrogen, nitrite, and hydrogen sulfide, and decrease the content of organic matter, thus making the bottom substrate odorless.

Secondly, aquatic plant communities were built. At the two water inlets of Changxiangjing and Sanguantang, based on the pioneer species of tall submersed plants such as Stuckenia Pectinatus and Hydrilla Verticillata, an upstream aquatic biological capture area was built for the preliminary interception and purification of total phosphorus in the water. In the key areas of Moon Lake, the "underwater turf" comprised mainly of Vallisneria Spinulosa was planted to ensure that the phosphorus indicator in the area is below the water quality target on a long-term basis, and to keep water clear. Finally, aquatic animal communities were constructed. With macrofauna and zooplankton released, the underwater food chain was further improved. Based on the eating habits of snails, shellfish, and cladocera, the zooplankton and epiphytic algae in the water were controlled to support stable nutrient cycling, energy flow, and information transmission inherent in the "macrophyte-dominated clear water" ecosystem, and ensure the stable impacts of the project on a long-term basis.

With water ecosystems built and water resources regulated continuously, the water ecosystems in Sanguantang and Changxiangjing water inlets and the key areas of the lake have been gradually restored. This has ensured the water body of Moon Lake meets relevant standards on a long-term basis and made it crystal clear (the lake is 1.8 meters deep). This has also enabled visitors to enjoy better and more beautiful water scenery and a green ecological environment characterized by harmony between man and water.

Figure 15 Moon Lake before and after treatment

- **Water Ecosystem Protection[①]**

Songjiang is committed to advancing river regulation and ecological restoration. Through dredging and regulation, it has improved the conditions of rivers, made water bodies clear and odorless, kept beheaded rivers aligned, and eliminated Poor Class-V water bodies. With the connectivity of water systems enhanced, the water environmental carrying capacity has been expanded, and the regional ecological environment has been improved. To control pollution sources, Songjinag has intensified the treatment of industrial, agricultural, and domestic sewage, ensuring sewage is discharged in compliance with relevant standards. Songjiang also pays attention to the construction of water ecosystems and the restoration of ecological functions. With aquatic plants planted and waterfront greenways built, a good environment for biological habitat has been built, and the structural and functional integrity of water ecosystems has been gradually restored. To build a sponge city, it has strengthened the absorption, storage, and slow release of rainwater by rivers based on ecological restoration, thus promoting the healthy development of urban water recycling systems.

- **Rural Domestic Sewage Treatment**

Songjiang has fully renovated the combined sewer systems, which cover residential communities, street-side stores, and commercial blocks, as well as municipal connection points, enterprises, and public institutions, thus effectively reducing direct discharges of sewage. It also continues to advance the construction and upgrading of rural domestic sewage treatment facilities, ensuring the full coverage of all preserved villages in the district. To further enhance the impact of rural domestic sewage treatment, Songjiang has developed an action plan for upgrading and impact enhancement. This plan clarifies issues such as promoting rural sewage treatment for scattered farmhouses and non-preserved villages through intensified long-term operation, maintenance, and management of rural domestic sewage treatment and classified policies, and strengthening digital empowerment. By strengthening organization, leadership, and financial guarantee, it has worked to ensure that funds have been provided for the operation, maintenance, and management of rural domestic sewage treatment facilities.

(4) Improve the water consumption efficiency

- **Advance the Construction of a Water-Saving Society**

Songjiang implements the strictest water resources management system featuring control of total water consumption and efficiency, to build a water-saving society. It has formulated and implemented a water-saving action plan, clarifying the goals and measures for water-saving. It also works to raise public awareness of water-saving and

[①]Shanghai: Clear Waters, Green Banks, and Harmony Between Man and Water Make "Beautiful Rivers and Lakes" Approachable, https://www.thepaper.cn/newsDetail_forward_26957504

disseminate water-saving knowledge and skills through promotions and education. It encourages all sectors of society to participate in water-saving initiatives to jointly build a water-saving society, which has provided solid water support and guarantees for the sustainable development and ecological civilization of the district. With these measures, Songjiang has achieved significant progress in saving water for domestic use, providing experience that other districts can draw on.

- **Promote Water Conservation in Industrial Production**

Songjiang has significantly improved the industrial water use efficiency by increasing the water reuse rate, encouraging industrial enterprises to adopt a contract-based water-saving management model, and adopting measures such as improving digital management of water resources, reusing boiler waste heat, and renovating rainwater harvesting systems. It has advanced industrial water-saving technological transformation, tightened smart management of production water, and promoted water-saving processes and technologies such as efficient cooling, washing, and water recycling. In building water-saving enterprises, it has promoted water-saving and efficiency improvement in high water-consuming industries, adopted measures such as differential water prices and setting up water-saving benchmarks, and strengthened advanced treatment and standard reuse of wastewater. In addition, it has strengthened water resource management, exercised control of total water consumption and efficiency, and strictly controlled the total amount of water resource development and utilization, and water use efficiency. To build a water-saving society, it has intensified agricultural water conservation, improved agricultural irrigation water use efficiency, promoted in-depth water conservation in industrial enterprises, promoted water-efficient apparatuses, and increased the popularity of urban water-saving apparatuses. Meanwhile, it has utilized more non-traditional water resources, and promoted the utilization of rainwater as a resource and the recycling of tailwater from sewage treatment plants, as part of the efforts to build a sponge city.

Case 11 Tsingtao Brewery Shanghai Songjiang Manufacturing Co., Ltd. Builds a Water-Saving Enterprise

Tsingtao Brewery Shanghai Songjiang Manufacturing Co., Ltd. is a water-saving company in Shanghai, where slogans on water-saving can be seen everywhere. It adopts the liner indirect cooling technology in its factory. After the filtered tap water passes through the liner, the water temperature rises. Collected by the hot water tanks, the water is mainly used to clean the gelatinization boilers, saccharification boilers, and wine pipelines, and occasionally to clean bottles, canteens, and bathrooms. The amount of hot water used for cooling can hit 863 cubic meters per day, with a 100% recycling rate. Moreover, the pure water treated using the secondary RO pure water equipment is mainly used for product filtration and packaging film cleaning. The concentrated water thus generated is collected and used for packaging sterilization and sewage station cleaning. The amount of concentrated water reused is 220.3 cubic meters per day, with a 100% recycling rate.

Through water-saving renovations over the years, the company's total water consumption and water consumption per unit product have decreased year by year. The industrial water reuse rate has exceeded 98%, the process water reuse rate is about 63.5%, and the condensed water reuse rate

is about 70%. The company was named the water efficiency leader in key water-using enterprises in Shanghai in 2022.

Figure 16 Tsingtao Brewery pure water treatment unit

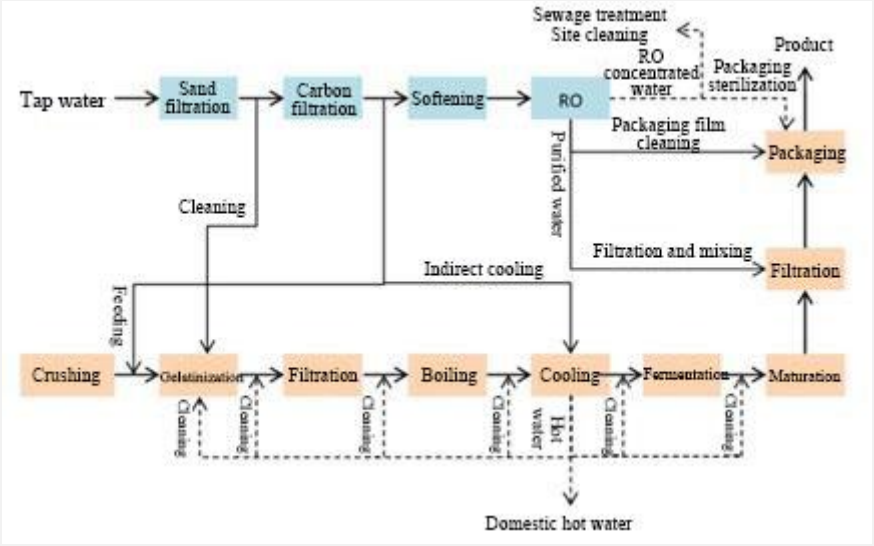


Figure 17 Illustration of series reuse of Tsingtao Brewery process water

SDG9: Industry, Innovation and Infrastructure

SDG9

- SDG9 Industry, Innovation and Infrastructure aims to build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation. Achieving this goal can help effectively unlock economic vitality, improve economic competitiveness, introduce and promote new technologies, and improve resource utilization efficiency.
- As the innovation cradle in the G60 S&T Innovation Valley of the Yangtze River Delta, Songjiang has achieved great progress in innovation in recent years. Benchmarked against international advanced levels, Songjiang will need to move faster to build momentum for innovation and development, deepen the integration between innovation and industrial chains, and further increase the economic density and input-output efficiency going forward.
- Under the SDG9 goal, Songjiang encourages the development of small and medium-sized enterprises (SMEs) and industrial parks through measures such as financial service support, digital development, and brand development. It vigorously boosts the development of new quality productive forces in areas such as leading industries, key industries, new segments, and future industries. It advances technological innovation and transformation by digitalizing traditional industries, building resource recycling capabilities for industrial production, and developing clean and environmentally friendly technologies. It also promotes the development of new infrastructure, including digital infrastructure, high-level innovation infrastructure, high-performance terminal infrastructure, and sustainable infrastructure.

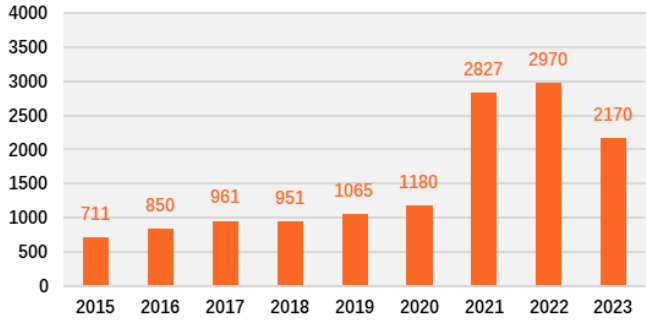
SDG9

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG9
Development of Industrial Parks and SMEs	Financial Service Support for SMEs	The Financial Product Manual for Songjiang Released for the First Time	► Number of Private Enterprises ► Number of Listed Companies	SDG9.3
	Digital Development of Industrial Parks			
	Brand Development of SMEs			
	Excellent Service Program for SMEs			
Development of New Quality Productive Forces	Development of Leading Industries	Songjiang's AI Industry Gets on the Fast Track	► Gross Industrial Output Value of Strategic Emerging Industries (in 100 million yuan) ► Output Value of the New Energy Industry (in 100 million yuan)	SDG9.4 SDG9.b
	Development of Key Industries			
	Development of New Segments			
	Future Industry Development	Songjiang's Satellite Internet Industry Leads the Market		
Sci-tech Innovation and Technological Transformation	Digital Transformation of Traditional Industries	Automaker Goes Digital	► Research and Development (R&D) Expenditure (in 100 million yuan) ► Number of High-Tech Enterprises ► Number of New Sci-tech "Little Giant" Enterprises and "Little Giant" Cultivating Enterprises ► Annual Patent Authorization Volume	SDG9.5
	Resource Recycling Capacity Building in Industrial Production			
	Development of Clean and Environmentally Friendly Technologies			
Development of New-Type Infrastructure	New Digital Infrastructure			SDG9.4
	High-Level Innovation Infrastructure			
	High-Performance Terminal Infrastructure	"One Network Management" and "Unified Online Government Service" Contribute to Governance Modernization		
	Sustainable Infrastructure with Disaster Resilience			

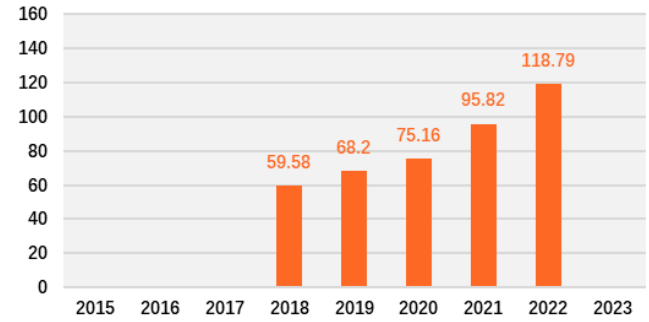
Key Indicators

Gross Industrial Output Value of Strategic Emerging Industries (in 100 million yuan)



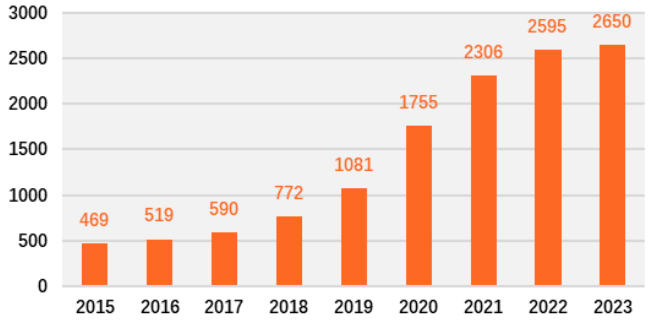
From 2015 to 2023, the gross industrial output value of strategic emerging industries increased from 71.1 billion yuan to **217 billion yuan**.

Research and Development (R&D) Expenditure (in 100 million yuan)



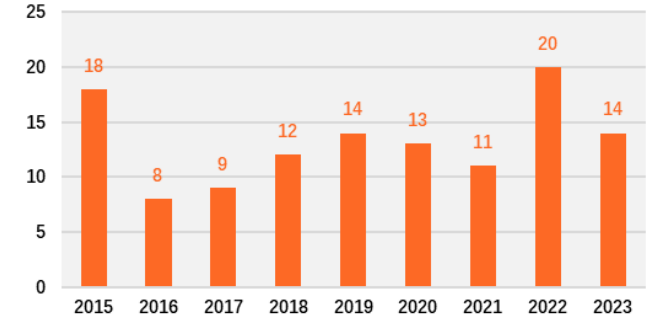
From 2018 to 2022, the research and development (R&D) expenditure increased by **99.4%**.

Number of High-Tech Enterprises



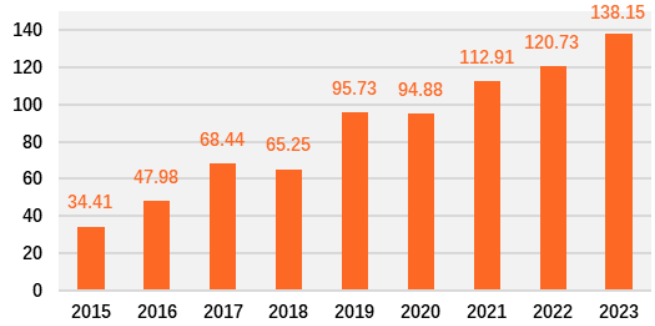
From 2015 to 2023, the number of high-tech enterprises increased by **4.65 times**.

Number of New Sci-Tech "Little Giant" Enterprises and "Little Giant" Cultivating Enterprises



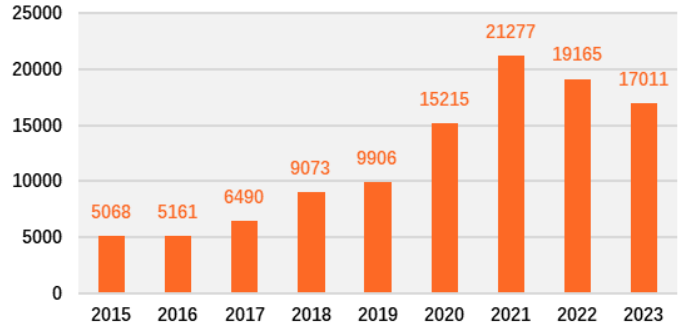
From 2015 to 2023, a total of **119** new sci-tech "little giant" enterprises and "little giant" cultivating enterprises were established.

Output Value of the New Energy Industry (in 100 million yuan)



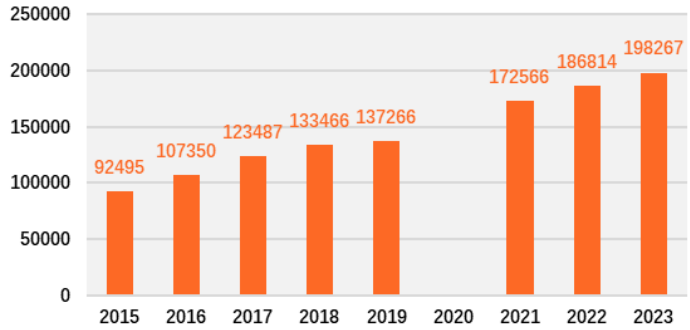
From 2015 to 2023, the output value of the new energy industry increased by **301.5%**.

Annual Patent Authorization Volume



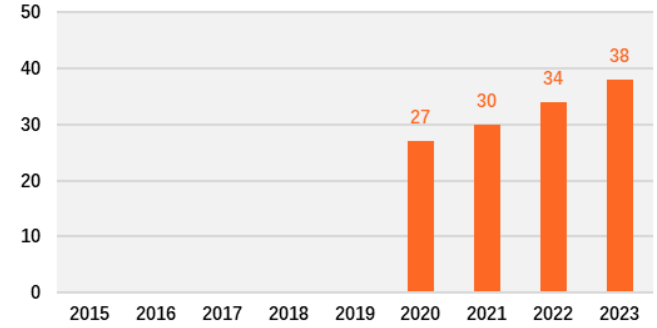
From 2015 to 2023, the annual patent authorization volume increased by **235.7%**.

Number of Private Enterprises



From 2015 to 2023, the number of private enterprises increased by **114.4%**.

Number of Listed Companies



From 2020 to 2023, the number of listed companies increased by **40.7%**.

Major Progress

The Business Environment Continues to Be Improved and Upgraded

Songjiang has introduced a reform plan 6.0 to improve the business environment, and an action plan to increase confidence, expand demand, stabilize growth and promote development, established a "service package" system for key enterprises, and promoted the targeted reach of preferential policies and measures for enterprises. It has added 4.092 billion yuan in tax reduction, fee reduction, tax refund, and deferral. While witnessing diversified financial services empowering the real economy, and the establishment and operation of a state-owned capital investment master fund valued at more than 10 billion yuan, the district has explored new financing models such as the combination of appropriation and investment, and fund pools for loan risk compensation. It is ranked fourth in the city in the size of policy financing guarantee, third in the registered amount of intellectual property mortgage financing, second in the total amount of credit for technology loans, and third in the total number of listed companies. It has expanded the high-quality use of resources such as land, promoted "industrial production in buildings", created "intelligent manufacturing space", and implemented several industrial structure adjustment projects. As a result, 194 hectares of construction land have been reduced. It also has facilitated the city's first water rights deal. Moreover, it has been committed to attracting "sophisticated, specialized, top-notch, and most sought-after" talent, providing permanent residence for 7979 talent.

Momentum for Industrial Innovation Remains Stable

Songjiang has increased investments in advanced manufacturing. Seventy projects including Shanghai Shaanxi Coal Research Institute, Quectel Global Headquarters, and JD East China Supply Chain Headquarters have started construction. Eighty projects including INESA and SHGS Satellite Factory have been completed and put into operation. Equal importance has been attached to digital transformation, and digital industrialization. The Yangtze River Delta Institute of China Telecom Industry Research Institute was established. The smart manufacturing maturity assessment coverage of enterprises above designated size has reached 80%. Twenty-seven new smart factories above the municipal level were founded. Songjiang is ranked first in the city in the number of outstanding national-level smart manufacturing scenarios. Tencent G60 Intelligent Computing Center, Shanghai Intelligent Computing Platform, and other AI large model platforms were built. The first satellite manufacturing lighthouse factory in the Yangtze River Delta officially started operation. The municipal industrial innovation base for commercial cryptography was put into operation. Songjiang has implemented the initiative to enable high-quality development of industries through service-oriented manufacturing and is ranked first in Shanghai in the number of service-oriented manufacturing demonstration enterprises above the municipal level. State-owned assets and state-owned enterprises have fully played their roles as the powerhouses of service development in promoting development,

meeting people's basic living needs, and gathering resources.

- **The Ability of Innovation Cradles Has Been Significantly Enhanced**

Songjiang's R&D spending has exceeded the 10 billion mark for the first time, and the R&D expenditure as a percentage of GDP has reached 6.79%. In particular, 91.4% of R&D spending has been from market entities. High-level innovation carriers are clustering at a faster pace, major R&D platforms such as G60 Brain Scientific and Technological Innovation Base Phase II are steadily advanced, and positive results have been achieved in the development of low-carbon technology functional platforms and graphene new material centers. Thirty-three projects have won the Shanghai Science and Technology Award, and 12 innovation outcomes including chimeric monkeys and AST large silicon wafers have been unveiled at the Shanghai Science and Technology Innovation Achievements Exhibition. The scientific and technological achievement commercialization system has been continuously improved. The G60 Employee Scientific and Technological Achievement Releasing and Trading Center has been built and put into use. The Shanghai Intellectual Property Trading Center Songjiang Service Office and the Weiliji Liuling Technology Development Center have been established. Songjiang is ranked second in the city in the number of recognized municipal-level high-tech achievement commercialization projects. Companies fully play their roles as primary innovation entities. There are 1,219 national-level and municipal-level specialized and sophisticated enterprises in the district, continuing to make Songjiang the No. 2 district in the city. Songjiang also is ranked third in the city in the total number of national-level high-tech enterprises and intellectual property demonstration enterprises. With 18 new academician (expert) workstations, the district is at the forefront of the city in terms of the total number of such workstations.

- **Digitalization Is Taking Effect at a Faster Pace**

The "Unified Online Government Service" makes government services easier to access. The actual and full online service rates have reached 94% and 90% respectively. Ninety-three easy-to-handle, quick-handle, and smart services have been launched. An offline virtual window for "inter-provincial service" for the Yangtze River Delta has been opened. The "One Network Management" makes the city run more smartly. Thirteen thousand videos and 25,000 IoT sensing devices have been connected, and 15 typical application scenarios have been launched. The "One Network Collaboration" for integrated office, storage of public data on the blockchain, and other critical breakthroughs have delivered positive results. Efforts have been made to enhance the digital empowerment of diversified social governance. More real-life scenarios have been digitalized, such as smart wet markets and easy-to-access medical services.

Important Measures

(1) Development of Industrial Parks and SMEs

● Financial Service Support for SMEs[①]

Songjiang has launched the "Online Cloud Service for Inclusive Finance", aiming to improve the efficiency of credit review and ensure the continuity of offline financial services based on online products such as business quick loans and tax loans. The fee reduction and profit-sharing policy provides small and micro enterprises with preferential interest rates to ease the pressure on enterprises from loan repayment. A green path for cross-border businesses has been opened up to meet enterprises' needs for cross-border financing, improve their financing structure, and provide interest and exchange rates hedging tools through the "Cloud Service" platform. The "Xinyidai" Integrated Financial Service Platform 2.0 has been launched, featuring new modules such as policy guides, financial products, equity investment, credit evaluation, and roadshow hall. Songjiang has collaborated with the Shanghai Economic Information Center, the Songjiang District Development and Reform Commission, and the Yangtze River Delta G60 S&T Innovation Valley Financial Service Center to jointly build the G60 S&T Innovation Valley Financial Services Professional Module of the Yangtze River Delta Data Model Laboratory and deepen data applications such as cross-regional credit data integration, data governance, and model R&D.

Case 12 The Financial Product Manual for Songjiang Released for the First Time

In order to support financing for technology enterprises in Songjiang, the Songjiang District Development and Reform Commission, and the Songjiang State-owned Assets Investment, Operation and Management Group held in April 2024 the "Intelligent Financing·Mutual Development" Songjiang District Investment-Loan Linkage (First Batch) Project Promotion Campaign 2024.

As an important part of financial institutions' efforts to deepen services for scientific and technological enterprises, investment-loan linkage helps better achieve a balance between returns and risks, enjoying favorable conditions and broad prospects in Songjiang. This event aimed to provide a bridge for exchanges and cooperation between banking institutions and investment institutions, and a platform for scientific and technological innovation enterprises to access direct and indirect financing at different stages of development. In addition to the co-organizing banks, representatives from many investment institutions and brokers such as ABC International, Houxue Capital, Atom Ventures, CITIC Securities, Kaiyuan Securities, as well as those from industrial parks such as Lingang Songjiang Science and Technology City, and Shanghai Qifu Intelligent Technology

① Songjiang Unveils its Guide on Financial Services for Enterprises to Cope with the Epidemic, with 35 Resident Financial Institutions Releasing Bail-Out Policies for Enterprises, https://new.qq.com/rain/a/20220425A06JDW00; Songjiang's "Xinyidai" Integrated Financial Service Platform 2.0 Released to Alleviate MSMEs' Difficulties to Access Financing, https://www.thepaper.cn/newsDetail_forward_24991742

Industrial Park participated in the event.

Bank credit is an important source of corporate financing. To address the difficulties of high-tech enterprises, technology SMEs, private technology enterprises, and specialized and sophisticated enterprises in accessing financing, banking institutions have developed targeted products such as science and technology innovation loans and technology enterprise loans, which can better meet the financing needs of science and technology innovation enterprises at different stages of development. At the event, the ICBC Shanghai Branch Investment Banking Department, the Science and Technology Innovation Finance Department of Agricultural Bank of China Shanghai Branch, China Construction Bank Shanghai Branch Songjiang Sub-branch, and SPD Bank Songjiang Branch introduced and promoted their financial services in terms of service initiatives, successful cases, and special products for science and technology innovation enterprises.

Unlike the participants in past bank-enterprise connectivity activities, the participating technology companies this time mainly included companies selected and recommended by the co-organizing banking institutions that had taken out a loan but needed investments, and those had been invested by the Songjiang State-owned Assets Investment, Operation and Management Group but needed loans. Representatives from six companies, including Lukin Medical, Youye Information Technology, and Schalod, staged a roadshow and introduced the development status, main products, core advantages, and equity financing needs of their companies, which drew the attention of the investment institutions present and won their recognition.

In addition, the Songjiang Financial Product Manual 2024 was released for the first time at this event. The manual contains 100 special financial products and financing plans from 40 financial institutions in the district, including commercial banks, insurance companies, securities companies, and "7+4" local financial enterprises, and identifies contacts, aiming to provide comprehensive, targeted, convenient, and efficient financial services for the real economy.

Figure 18 Scene of the Songjiang District Investment-Loan Linkage (First Batch) Project Promotion Campaign 2024

● Digital Development of Industrial Parks[①]

Songjiang held the "Hundred Cities and Thousand Industrial Parks Tour" for

① The "Hundred Cities and Thousand Industrial Parks Tour" for Industrial Internet Integration into Industrial Parks in Songjiang Successfully Held, https://www.shkp.org.cn/articles/2023/12/wx45892

Industrial Internet Integration into Industrial Parks to promote in-depth integration and application of the industrial Internet in industrial parks, and ultimately boost the digital, networked, and intelligent transformation of manufacturing enterprises. This event covered policy promotion, facility construction, technology application, standard formulation, application promotion, corporate services, and resource integration, to help build digital application scenarios with industrial characteristics and boost the digital transformation of industrial parks based on the "platform + industrial park" integrated development model. Meanwhile, measures such as supply and demand alignment, policy support, benchmark platform and service provider licensing, digital transformation maturity analysis, introduction of the identification and resolution system, corporate case sharing, and service and product display have been adopted to build an industrial Internet ecosystem featuring connectivity and synergistic innovation, to enhance corporate competitiveness and support their high-quality development.

- **Brand Development of SMEs[①]**

In order to promote the brand development of SMEs, Songjiang has implemented a series of measures including industrial cluster fostering, brand-building support, technological innovation and standard formulation, exhibition subsidies, quality improvement and certification, digital transformation, industrial data application, policy supply, and service improvement. These measures aim to raise companies' brand awareness, enhance product quality and market competitiveness, and expand brand awareness and influence through professional, specialized, and intensive development. Moreover, by funding enterprises to participate in the standard formulation, subsidizing enterprises to participate in exhibitions, promoting digital transformation and intelligent construction, and improving policy support and services, Songjiang is committed to building internationally competitive SME brands to promote high-quality development of the regional economy.

- **Excellent Service Program for SMEs**

Songjiang is committed to improving the service level and core competitiveness of SMEs by implementing the Special Support Plan for the Development of Specialized and Sophisticated SMEs. The plan encourages companies to make progress in technological innovation, market expansion, brand building, management improvement, and financing services by providing one-time funding. Songjiang also encourages and supports the construction of SME service platforms, rewards recognized platforms and provides

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①Good news! Two More Clusters in Songjiang Recognized as "Shanghai Special Industrial Clusters of SMEs", https://www.songjiang.gov.cn/zjsj/002004/002004001/20240731/09e222b5-46c6-4d58-b22d-47192f190248.html; Songjiang Issues the Notice on Organizing Application for Special Funds for Industrial Transformation and Upgrading in Songjiang in 2021 (Independent Branding Projects), https://www.ssme.sh.gov.cn/policy/policy!policyDetail.do?id=2c91c29c78213eb701783500f225016d; Notice on Issuing Three-year Action Plan to Create a New Hub for Advanced Manufacturing Through "Made In Shanghai" Brands in Songjiang (2021-2023), https://www.songjiang.gov.cn/govxxgk/SHSJ43/2022-10-11/f24a2948-b57a-4e51-9275-3c62fe06a94a.html

professional services through the Small and Medium-sized Enterprise Development Service Alliance. In addition, it helps companies understand and apply for government subsidies, as well as strict procedures for project application and management through policy promotion and guidance, so as to ensure the effective use of funds.

(2) Development of New Quality Productive Forces

● Development of leading industries[①]

Songjiang has adopted a series of important measures to promote the development of leading industries such as artificial intelligence (AI). Home to national and municipal-level specialized and sophisticated enterprises, Songjiang has built a complete industrial chain for integrated circuits (IC) and made progress in independent innovation in the materials and equipment segments. It also holds high-level forums to discuss industrial innovation and ESG development. For the biomedical industry, Songjiang has released special policies to provide all-round support from drug R&D to marketization, so as to enhance the industry's capacities for independent innovation and build 100-billion-level industrial clusters. For the AI industry, it chiefly relies on the G60 S&T Innovation Valley to promote the development of industrial clusters and has brought together a number of industry-leading companies. It also has made great strides in AI+intelligent manufacturing, AI+AR/VR, and industrial Internet.

Case 13 Songjiang's AI Industry Gets on the Fast Track

Computing power is the foundation of AI. Songjiang has made forward-looking plans and remains at the forefront of computing power infrastructure construction. The district has been approved to build 7 data center projects, including the Tencent Yangtze River Delta Artificial Intelligence Advanced Computing Center, INESA Intelligent Computing Center (Songjiang), and Beidou Space-Time (Shanghai) Big Data Integrated Application Industrial Base.

In Songjiang, an innovation cradle in the G60 S&T Innovation Valley of the Yangtze River Delta, the first batch of the Tencent Yangtze River Delta Artificial Intelligence Advanced Computing Center project, the largest GPU intelligent computing center in China, has been put into operation. This project has a total investment of 45 billion yuan and a planned land area of 236 mu, with 24,000 racks planned to be built. Once completed, it will become a global-leading intensive and efficient AI computing hub. In addition, Beidou Boyang and Huawei have recently signed a contract to jointly build Beidou Boyang·Huawei Space Information Shanghai Computing Center. Through this center,

① Songjiang Holds High-Level Forum on ESG Development in the Semiconductor Industry, https://www.thepaper.cn/newsDetail_forward_27868849; Notice on the Issuance of Several Policies and Regulations on Accelerating the High-Quality and Clustered Development of the Biomedical Industry in Songjiang District, https://www.songjiang.gov.cn/govxxgk/SHSJ2/2022-08-04/64e2e515-5128-40be-9a94-f7e87f134305.html; Rules for the Implementation of Several Policies and Regulations on Accelerating the High-Quality and Clustered Development of the Biomedical Industry in Songjiang District, https://www.shanghai.gov.cn/cyfz-gqwj13/20230511/1e587db6e12044a2ad41538f02c5c82c.html; Research Report on the Development of High-End Industries in Songjiang District - Artificial Intelligence and Biomedical Industries as Examples, https://qrd.songjiang.gov.cn/contents/99/9403.html; Songjiang Enters into New Segments as Innovation Cradle in the G60 S&T Innovation Valley of the Yangtze River Delta to Embrace the Future, https://www.thepaper.cn/newsDetail_forward_27486150

they will focus on all-round synergistic innovation in areas such as AI computing power platforms and spatial information industry platforms.

The continued progress of AI technology is closely related to the development of high-level innovation platforms. In building high-level innovation platforms, Songjiang fully leverages the resources of universities to provide solid support for further improving the industrial ecosystems for AI. Donghua University, which is located in the district, has established the Artificial Intelligence Research Institute, and Shanghai University of Engineering and Technology has established the G60 S&T Innovation Valley Robot Industry Technology Research Institute in the district. The Songjiang Robot Research Center of Tongji University, a district-school cooperation project, is also located in the district.

For the industrial application of AI, Songjiang has brought together several technology enterprises, which focus on three sectors of "AI + specific industry", industrial Internet, and robots and parts. In the field of "AI + intelligent manufacturing", Shanghai Baolong Automotive Corporation is a leading domestic auto parts company. Comau's complete engineering solutions for domestic automakers can help them achieve a production capacity of 60 to 70 units per hour. In the field of "AI + AR/VR", Shanghai Graphic Design Information Co., Ltd. (GDI) is a leader in the 3D graphics technology industry.

Figure 19 Display of Shanghai Baolong Automotive Corporation's air suspension products

Development of Key Industries

Songjiang has adopted a host of measures to promote the high-quality development of key industries, including industrial cluster construction, technological innovation, and R&D, enhancing the resilience of industrial and supply chains, promoting digital transformation, building smart factories, deepening application of industrial Internet, providing policy support and services, strengthening the development of industrial parks, building strong brands, and promoting green and low-carbon development. These measures aim to accelerate the establishment of modern industrial systems, enhance the core competitiveness of the regional economy, ensure the stability and competitiveness of

industrial chains, and promote the shift of industries toward high-end, green and low-carbon industries, and ultimately achieve sustainable development of industries in Songjiang, through technological innovation, industrial upgrading, digital transformation and policy support.

- **Development of New Segments[①]**

Songjiang has taken comprehensive measures to promote the development of new segments such as the digital economy and the metaverse. In the field of digital economy, Songjiang has accelerated the formation of innovative industrial clusters for the digital economy by building industrial Internet platforms, and smart factories, and promoting the R&D, and application of core industrial software and hardware. Meanwhile, it has implemented the "Industrial Clustering" Initiative to strengthen digital industrialization and digital transformation and promote the integrated development of large, medium, and small-sized enterprises. To promote green and low-carbon development, it provides financial support based on the Measures for Managing Special Funds for Green and Low-carbon Development. It also encourages energy conservation and carbon reduction, and renewable energy development and construction in multiple fields such as industry, commerce, architecture, and public institutions. For the metaverse and intelligent terminal industries, Songjiang will leverage its existing digital economy and artificial intelligence infrastructure to explore related technological advancements and industrial applications. This aims to drive the high-quality development of intelligent terminal industries and promote industrial agglomeration through the construction of smart factories and intelligent buildings.

- **Future Industry Development[②]**

Songjiang District has adopted a range of important measures to promote the development of future industries. In the health industry, the district actively focuses on cutting-edge fields of biomedicine, promoting the transformation of scientific and technological achievements in brain-computer interfaces, synthetic biology, gene and cell therapies, and has made significant progress in innovative pharmaceuticals and high-end formulations. In the future intelligent industries, Songjiang District has made in-depth deployments in areas like industrial internet, robotics and system integration, and intelligent terminals. The district has gathered a group of technology-oriented enterprises and maintains a leading position in the construction of computing power infrastructure.

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①Notice of the People's Government of Songjiang District, Shanghai on Issuing the Measures for Managing Special Funds for Green and Low-carbon Development in Songjiang, https://www.songjiang.gov.cn/govxxgk/SHSJ43/2023-04-28/c83876f3-81d4-40d5-bcb5-4c5ce6102f5e.html; Notice on the Issuance of the Plan for Building G60 Digital Economy Innovation Industry Demonstration Zone in Songjiang New City, https://www.songjiang.gov.cn/govxxgk/SHSJ6/2022-09-27/a06050f4-32a4-481d-a65d-9b464242fc69.html

② Innovating Towards the Future: Exploring Shanghai's Intelligent Manufacturing in the "Future Health" Industry, http://sh.xinhuanet.com/20231021/dd3ebcb60bfe408c9fa32e224dac4b30/c.html; Songjiang District, Shanghai Actively Seizes New Fields and Tracks in Future Industries, http://www.chinadevelopment.com.cn/news/zj/2024/07/1903856.shtml

In the future energy industry, the focus is on green and low-carbon development such as new energy vehicles and solar photovoltaics. In the space industry, Songjiang District leverages its satellite internet industry foundation to promote the development of the commercial aerospace sector. It collaborates with research institutions to jointly advance future space technologies. Regarding the materials industry, Songjiang District has laid out plans in the field of new materials. It supports the research and development of core strategic materials in key fields to bolster the construction of national key projects.

Case 14 Songjiang's Satellite Internet Industry Leads the Market

The development of the satellite internet industry in Songjiang has now shown a "leading effect". Centered around SpaceSail, a leading enterprise in the industry chain focusing on low-earth-orbit (LEO) satellite constellation operations and services, and driven by the implementation of the "G60 Starlink" plan, Songjiang is leveraging the construction and operation of a global LEO satellite communication network to build China's first satellite internet industry cluster that integrates resource aggregation, demonstration, research and development, and application. The cluster currently includes GENESAT, the first "lighthouse factory" for satellite manufacturing in the Yangtze River Delta, Lianchen Qianfan, which operates in the form of an innovation incubator, and DS and Transcom, which focus on terminal development within the upstream and downstream sectors of the satellite industry chain. In the future, Songjiang will gradually build a vibrant satellite internet industry ecosystem.

The development of the satellite internet industry in Songjiang District focuses on building the LEO satellite constellation - G60 Starlink. The district has already completed the launch and technical verification of experimental satellites. The first phase will involve the deployment of 1,296 satellites, with plans to expand the constellation to over 10,000 satellites in the future. In December 2021, Songjiang District launched the "G60 Starlink" plan and began the construction of the satellite internet industry headquarters base. By focusing on the construction and operation of a global LEO satellite communication network, the plan aims to drive the development of industries such as satellite and component research and manufacturing, communication, navigation, and remote sensing (CNR) terminals and network devices, network operations and satellite maintenance, industry applications, and value-added services. This will foster an innovation ecosystem for multimedia satellite applications with a scale exceeding 20 billion yuan.

In December 2023, GENESAT's G60 satellite manufacturing digital factory officially started production in Songjiang. "We are currently fully committed to supporting the construction of Shanghai's satellite internet constellation. In 2022, we secured orders for over 300 networking satellites for the G60 Starlink. We expect to deliver 54 satellites in 2024, and more than 100 satellites by 2025," said Cao Jin, General Manager of GENESAT. On the technical side, the company will begin research and development of the next-generation GEN2 flat-panel internet satellites and make key technological breakthroughs in 2024, aiming for higher performance, lower costs, and higher delivery efficiency.

SpaceSail, established in 2018, deploys and operates LEO satellite constellations through an international and commercial model, providing global customers with LEO satellite internet services and industry solutions with high-bandwidth, low-latency, high-quality, highly secure, and global coverage. It is understood that previously, the overall launch pace of global LEO satellites was primarily controlled by the United States. In recent years, SpaceSail has successfully broken through this technological monopoly, engaging in both commercial competition and cooperation

with international leading companies. The company is accelerating the construction of "space-air-ground integrated networks (SAGIN)" and working towards global commercialization.

In addition, regarding commercial spaceflight exploration in the future space, Songjiang District has gathered aerospace eco-chain companies such as Shangshi Aerospace, Kejian, Huitian New Material, ACT Materials, CnTech, Pengxi Aerospace, and Mitsui Chemicals Functional Composites. The district has also formed close cooperation with the Commercial Aircraft Corporation of China, Ltd. (COMAC). Shanghai Spaceflight Precision Machinery Institute, dedicated to the development of space technologies and the peaceful utilization of space, undertakes major strategic tasks such as manufacturing launch vehicle structures, developing power systems, and performing strength and environmental testing of aerospace products. The institute's developed and mass-produced products include the Long March launch vehicles and spacecraft, contributing to the successful launches of Long March rockets and Shenzhou spacecraft.

Figure 20 G60 Satellite Internet Industry Base

(3) Sci-tech Innovation and Technological Transformation

- **Digital Transformation of Traditional Industries**

To promote the digital transformation of traditional industries, Songjiang District has implemented a series of measures, including providing digital diagnostic services, supporting digital and intelligent project renovations, building smart factories, promoting "Gongfu" innovative applications, encouraging enterprises to obtain digital certifications, driving small and medium-sized enterprises (SMEs) to migrate to cloud platforms, supporting key technology research and demonstration applications, promoting smart manufacturing equipment, constructing industrial internet platforms, strengthening supply-demand matching for digital transformation, establishing industrial demonstration parks for digital transformation, advancing new infrastructure construction, creating innovation carriers for digital transformation, and enhancing the introduction and cultivation of digital transformation talents. These measures aim to

accelerate the digital transformation of Songjiang's manufacturing industry through multifaceted support, such as financial subsidies, technological upgrades, innovative applications, platform development, supply-demand matching, and talent training. The goal is to enhance enterprise competitiveness and drive high-quality economic development.

Case 15 Automaker Goes Digital

Digitalization is a powerful tool for enhancing the core competitiveness of the automotive industry. As an important manufacturer in the upstream components sector, Baolong, located in Songjiang District, is one of the early pioneers of digitalization among manufacturing enterprises. As early as 2005, Baolong established an information center to develop information technology software and began exploring and applying digitalization in 2008. Currently, with the advancement of a full-chain digitalization project, the company's entire process - spanning production, sales, management, and research - has been fully digitized. The smart factory, built on advanced technologies such as simulation and modern sensing, integrates computer-aided design (CAD), product data management (PDM), enterprise management software, and other systems. It serves as a hub for the workshop's intelligent management system, achieving integrated optimization from design and processes to management, manufacturing, logistics, and other areas. In the past, every step from order acquisition to delivery required offline communication. Now, these steps are fully connected online, saving manpower and enabling managers and customers to track the order progress in real time. Thanks to the digital "intelligent brain", the company's production efficiency has increased by around 30%, inventory stagnation has decreased by 75%, and on-time delivery has reached 100%.

- **Resource Recycling Capacity Building in Industrial Production** ①

Songjiang District has established a city-level coordination mechanism based on the Implementation Opinions on Further Support for the Steady Development of the City's Resource Recycling Industry, clarifying responsibilities and promoting planning and regulatory measures. Additionally, through the Songjiang District Green and Low-Carbon Development Special Funds Management Measures, the district provides financial support to encourage energy conservation, emission reduction, and renewable energy development. Furthermore, the district has implemented the Songjiang District's Three-Year Action Plan on the Digital Transformation of the Manufacturing Industry (2023–2025), aiming to improve resource efficiency in manufacturing through digital and intelligent transformations. The district also strengthens its efforts in air quality management through the Shanghai Songjiang District Clean Air Action Plan (2023–2025), which includes straw burning control, livestock and poultry farming pollution prevention, social non-point source management, and the enhancement of monitoring and enforcement capabilities. At the same time, the district advances the circular renovation of industrial parks, facilitating

① Notice on the Issuance of the Implementation Opinions on Further Support for Steady Development of the City's Resource Recycling Industry, https://fgw.sh.gov.cn/fgw_zyjyhhjbh/20211101/df76ba2290a3459d9040d1c0b8c21140.html; Notice from the People's Government of Songjiang District, Shanghai on the Issuance of the Shanghai Songjiang District Clean Air Action Plan (2023-2025), https://www.songjiang.gov.cn/govxxgk/SHSJ43/2024-04-08/d5ea81e1-6d73-4d76-98d3-a9e6382876af.html

the co-construction and sharing of facilities and the cascading use of energy. This approach aims to achieve efficient resource recycling, build a highly efficient, environmentally friendly, and sustainable industrial production system, and boost high-quality economic development.

- **Development of Clean and Environmentally Friendly Technologies** [1]

Songjiang District has taken a series of key measures to promote the development of clean and environmentally friendly technologies. These measures encompass industrial support and sci-tech innovation, green and low-carbon development, the Clean Air Action Plan, environmental regulation and pollution control, ecological protection and restoration, solid and hazardous waste management, and green building and infrastructure construction. Through policy documents such as the Measures for the Support and Management of Songjiang District's Industrial Support Funds, the district backs enterprises' technological innovation and industrial upgrades. Additionally, policies like the Songjiang District Green and Low-Carbon Development Special Funds Management Measures encourage energy conservation, emission reduction, and renewable energy development. Moreover, Songjiang has implemented the Clean Air Action Plan, strengthened environmental regulatory enforcement, and focused on ecological protection and restoration. The district actively participates in joint prevention and control of solid and hazardous waste in the Yangtze River Delta region and promotes green building and infrastructure construction. These efforts aim to create a clean, environmentally friendly, and sustainable industrial environment, providing a solid ecological foundation for high-quality regional economic development.

(4) Development of New-Type Infrastructure

- **New Digital Infrastructure**

Songjiang District has undertaken comprehensive measures to build new digital infrastructure, focusing on enhancing network capabilities, computing power, and data infrastructure. These efforts include actively promoting 5G network coverage and broadband network upgrades, accelerating the construction of industrial internet platforms, supporting the development of advanced computing centers, participating in the construction of national big data center nodes, optimizing edge computing layouts, and building data authorization and operation platforms. In addition, the district focuses on creating a digital economy innovation demonstration zone to promote the digital transformation of industries. It provides financial subsidies and rewards, strengthens the introduction and training of talents in digitization, and promotes smart city development to achieve the digitalization of urban management and public services, ultimately

[1] Notice from the People's Government of Songjiang District on the Issuance of the Measures for the Support and Management of Songjiang District's Industrial Support Funds, https://www.shanghai.gov.cn/nw12344/20240826/d4a7f9433f27447ca43347898df7a613.html

enhancing the high-quality development of the regional economy.

- **High-Level Innovation Infrastructure**

To build high-level innovation infrastructure, Songjiang District has implemented a series of important measures, including promoting the development and layout of major research platforms, accelerating the construction of new-type infrastructure, carrying out innovation infrastructure construction actions, building integrated and converged infrastructure, developing intelligent terminal infrastructure, providing policy support and financial assistance, and attracting and serving talents. These measures cover the construction of 5G networks, broadband networks, satellite internet facilities, the development of industrial internet clusters, the layout of major scientific and technological infrastructure, and the creation of artificial intelligence computing and empowerment platforms. Meanwhile, the district has introduced relevant policies to provide subsidies and rewards for enterprises, strengthen the talent service system, and drive high-quality regional economic development through sci-tech innovation.

- **High-Performance Terminal Infrastructure**

Songjiang District has implemented a series of important measures in building high-performance terminal infrastructure to enhance the intelligence of perception, transportation, energy, and services. These measures include establishing urban perception facilities with over 20 million IoT sensor nodes, advancing intelligent vehicle support services and autonomous driving test scenarios, creating a digital twin smart airport and intelligent waterway network, building an integrated smart cold chain logistics system, developing a flexible and shared intelligent energy-use facility network, deploying a clean and efficient hydrogen energy application system, creating a new-generation smart campus with integrated online and offline capabilities, developing advanced and accessible intelligent medical care service facilities, building secure and convenient intelligent elderly care infrastructure, and constructing high-quality smart living facilities with a shared life.

Case 16 "One Network Management" and "Unified Online Government Service" Contribute to Governance Modernization

Songjiang District's digital transformation in governance will focus on the development of "One Network Management" and "Unified Online Government Service". Currently, the district has launched the government external network upgrade project and the big data resource platform project. Their completion will enable centralized and unified management of public data across the district, ensuring security, controllability, and on-demand sharing of public data. The Urban Operations Command Platform ("One Network Management" Phase II) will plan the construction of essential platforms, including IoT middleware platforms, video middleware platforms, AI middleware platforms, and intelligent analysis platforms. It will also innovate digital applications for urban governance, such as the 12345 hotline, grid analysis, smart approval, dump truck supervision, and smart elevators. The Comprehensive Government Service Management Platform ("Unified Online Government Service") project has been approved for implementation and is now

in the bidding phase. It will focus on building a "Unified Online Government Service" framework centered on "One-stop Service" or "All-in-One Counter Processing", upgrading the comprehensive service management platform and intelligent service hall, and adding self-service processing points.

In the digitalization of life, the focus will be on community life and other basic livelihood guarantees, promoting the widespread application of intelligent services, and continuously enhancing the public's sense of gain. The construction of the "Community Cloud" platform will continue, with the promotion of smart parking and smart energy facilities in communities, among other application scenarios. Based on existing projects such as the Sharp Eyes program and smart security, and leveraging video and AI middleware platforms, efforts will be made to continuously explore and expand application scenarios. The "One-Click Call Service for the Elderly" in Songjiang, which has been included in the city-level urban digital transformation pilot projects, will be accelerated, using digital technologies to upgrade elderly care services. This will help bridge the "digital divide" for senior citizens, allowing them to gradually enjoy the convenience brought by Internet technologies, with ongoing expansion of application scenarios throughout the process.

● Sustainable Infrastructure with Disaster Resilience [①]

Songjiang has strengthened its climate and ecological environment monitoring network, enhanced the regulation and cleanliness of energy systems, and initiated pilot projects for virtual power plants and smart energy networks. It has optimized the meteorological disaster protection standards for urban power and gas supply facilities to ensure the safe operation of infrastructure. The district is accelerating the improvement and renovation of living environments, enhancing the climate change adaptation capabilities of sensitive industries such as agriculture, and building a resilient territorial governance system for comprehensive disaster prevention. Additionally, efforts are being made in water system management and natural disaster prevention. These measures have not only enhanced the district's early warning and response capabilities for extreme weather and disasters but also bolstered the disaster resilience of its infrastructure. This ensures the safety of urban operations and the stability of residents' lives, laying a solid foundation for sustainable development and increased regional resilience.

[①] Notice from the Office of the Shanghai Songjiang District Natural Disaster Prevention and Control Committee on the Issuance of the 2023 Songjiang District Report on Natural Disaster Prevention and Control, https://www.songjiang.gov.cn/govxxgk/SHSJ10/2024-04-25/9e35dad9-c2f1-43fb-9aae-0a05279bfc68.html

SDG11: Sustainable Cities and Communities

SDG11

- SDG11 Sustainable Cities and Communities focuses on building inclusive, safe, disaster-resilient, and sustainable cities and human settlements. By pursuing this goal, it ensures that everyone has access to adequate, safe, and affordable housing and that cities and communities are green, safe, inclusive, and resilient.
- Currently, Songjiang still faces issues of unbalanced and insufficient urban-rural development. The public encounters various challenges in employment, education, healthcare, elderly care, and housing. The distribution of high-quality resources in people's livelihoods is still uneven, and the capacity and level of urban governance need further improvement. The task of building a sustainable and resilient city remains challenging.
- Aligned with SDG 11, Songjiang is dedicated to building a sustainable, modern city that is livable, business-friendly, and tourist-attractive. In recent years, Songjiang has been working to build sustainable, shared urban areas by developing waterfront public spaces, constructing greenways, advancing community co-governance, and promoting the creation of green communities. The district is also accelerating sustainable urban renewal through the improvement of the urban renewal system, the renovation of urban villages, and the refinement of community governance. Additionally, Songjiang is promoting the deep integration of urban and rural development through high-quality development of leisure agriculture and rural tourism, the construction of high-quality rural roads, and the protection of historical and cultural heritage areas.

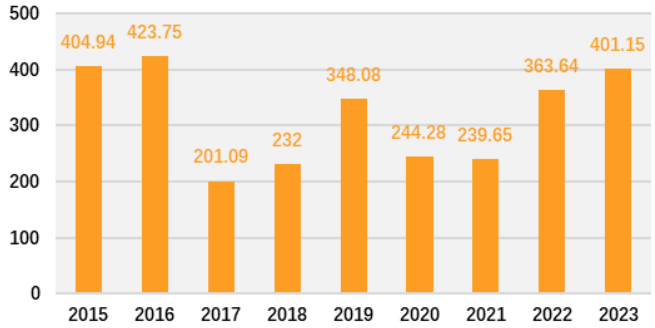
SDG11

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG11
Sustainable shared community construction	Develop diverse-themed waterfront public spaces	"Galaxy" Waterfront Public Space	► Number of urban parks ► Annual newly built green spaces (in hectares) ► Annual newly built greenways (in kilometers) ► Bus operation mileage (in 10,000 kilometers) ► Percentage of new energy and clean energy buses in the total fleet (%)	SDG11.7 SDG11.2
	Promote the construction of greenways in Songjiang	Tongbotang Greenway		
	Advance community co-governance			
	Promote the creation of green communities	Thames Town Green Community in Fangsong Subdistrict		
Sustainable urban renewal	Improve urban renewal systems and implementation plans	Yunjian Granary Cultural and Creative Park	► Floor area completed of houses (in 10,000 square meters) ► Floor area under construction of affordable housing (in 10,000 square meters) ► Number of newly built public rental houses	SDG11.1 SDG11.3 SDG11.4
	Accelerate urban village renovation	The Urban Village Renovation Project for Plots Including Tahui in Jinsheng Village, Shihudang Town		
	Advance the refinement of community governance			
Deep integration of urban and rural development	Promote high-quality development of leisure agriculture and rural tourism	Yunjian Wushe Rural Complex		SDG11.a
	Promote high-quality rural road construction and management	Hongyang Highway at Xingda Village, Yexie Town		
	Promote the protection of historical and cultural heritage areas			
	Comprehensively advance the construction of the "15-minute community life circle"			

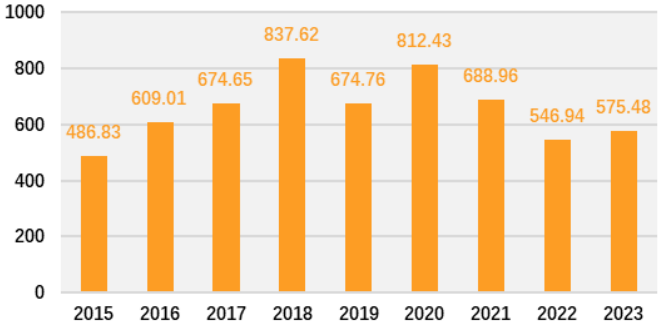
Key Indicators

Floor area completed of houses (in 10,000 square meters)



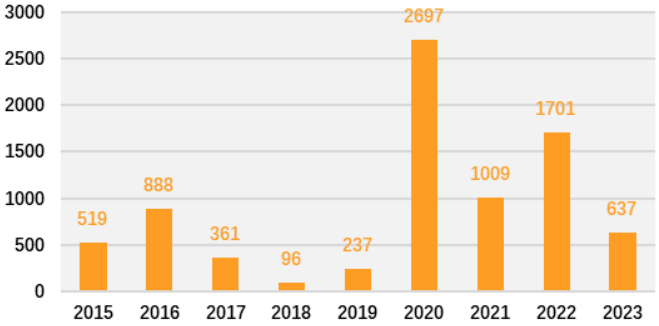
From 2015 to 2023, the annual average of the floor area completed of houses reached **3.17 million** square meters.

Floor area under construction of affordable housing (in 10,000 square meters)



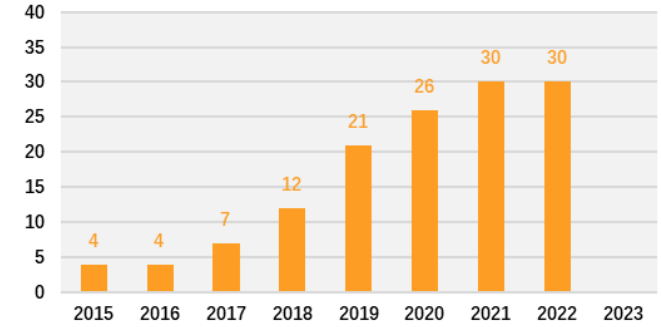
From 2015 to 2023, the annual average of the floor area under construction of affordable housing remained around **6.5 million** square meters.

Number of newly built public rental houses



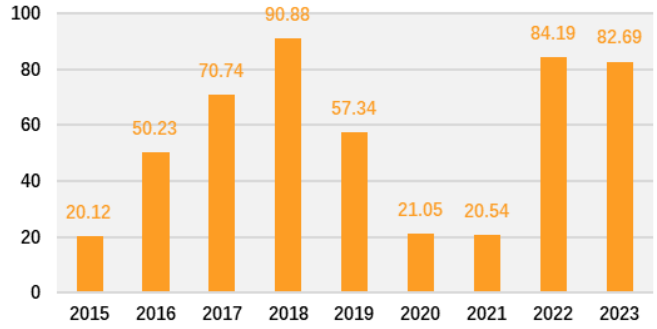
From 2015 to 2023, the number of newly built public rental houses reached **8,145**.

Number of urban parks



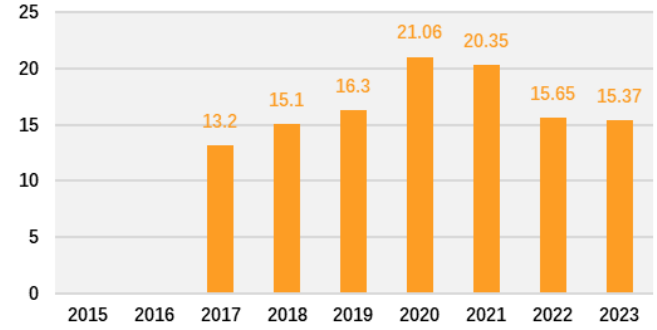
From 2015 to 2022, the number of urban parks increased from 4 to **30**.

Annual newly built green spaces (in hectares)



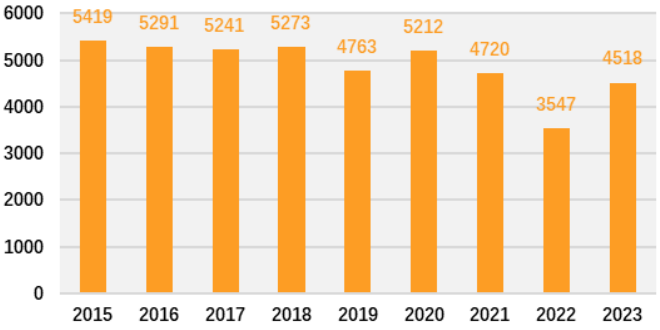
From 2015 to 2023, an average of **55 hectares** of green spaces were newly built each year.

Annual newly built greenways (in kilometers)



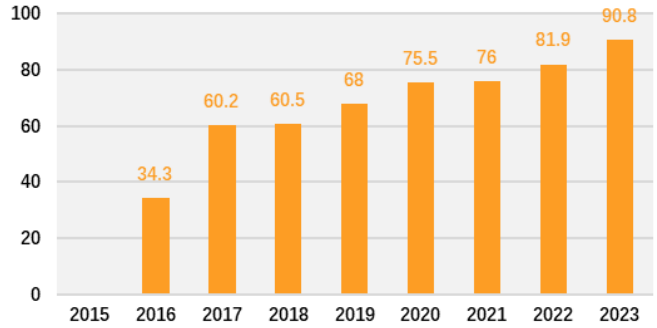
From 2017 to 2023, a total of **117 km** of greenways were newly built.

Bus operation mileage (in 10,000 kilometers)



From 2015 to 2023, the bus operation mileage remained above **35 million km**.

Percentage of new energy and clean energy buses in the total fleet (%)



From 2016 to 2023, the percentage of new energy and clean energy buses in the total fleet increased from 34.3% to **90.8%**.

Major Progress

- **High-Quality Renovation of Old Housing Leads to Continuous Improvement of Living Environment**

In line with the annual goal of renovating 600,000 square meters, Songjiang District has established a renovation project pool covering approximately 3 million square meters of old housing, primarily targeting outdated residential compounds built before the end of 2000 with incomplete functions and inadequate facilities. The renovation scope not only addresses structural issues of the buildings but also incorporates residents' needs, enhancing facilities such as elder-friendly installations, non-motorized vehicle charging stations, and smart parcel lockers. By the end of 2023, Songjiang had completed 1.811 million square meters of renovation, benefiting 17,302 households, with a total investment of 1.347 billion yuan. Key renovation projects, including Lantian Second Village, Shen's Three Residences, and Wushe Laojie in Maogang Town, were completed, improving the appearance of residential compounds and the overall living environment. The Lantian Second Village renovation project won the title of "Municipal Civilized Demonstration Construction Site" and the "Honghua Cup" award for high-quality projects. Additionally, projects like Sheshan Xinyuan, Lintian Beiyuan, and Xiangjiang Huayuan were recognized as "Municipal Civilized Construction Sites", showcasing the high quality and effectiveness of Songjiang's old housing renovation efforts.

- **Simultaneous Renovation of Old Urban Areas and Urban Villages Promotes Continuous Improvement of Livable Environment**

Songjiang District's old urban area renovation began in 2012, involving the Yueyang, Yongfeng, and Zhongshan subdistricts. A total of 46 plots have been renovated, achieving a contract signing rate of 92%, and 8,878 resettlement housing units were secured through diverse resettlement methods. As one of the pilot projects in the city, the urban village renovation in Songjiang secured six slots, covering 23 renovation plots in five subdistricts, with a contract signing rate of 96%. By June 2024, a total of 2,933 households had signed relocation agreements, and the construction of 2,692 resettlement housing units had begun, with delivery expected by the end of the year. Additionally, some projects have completed municipal roads, landscaping, and public construction, while 218,000 square meters of commercial housing have also started construction. From 2021 to 2023, three new projects were established, covering 1,044 mu (approximately 69.6 hectares), and the resettlement for village residents, enterprises, and public institutions is ongoing.

- **Significant Achievements in the Creation of Refined Management Demonstration Areas Contribute to Continuous Improvement in Urban Quality and Living Environment**

Songjiang District has made substantial progress in enhancing urban quality and the

living environment through the development of 19 planned demonstration areas. This encompasses various aspects, including residential communities, public buildings, street spaces, green parks, waterfront spaces, underground spaces, and rural areas. In residential communities, efforts have focused on addressing residents' concerns such as parking difficulties and the lack of charging facilities, improving the livability of these areas. In the public building sector, green design principles have been employed to enhance the environmental and social benefits of the buildings. In street spaces and green parks, road and sidewalk improvements have been made, pocket parks have been added, and street landscapes and pedestrian comfort have been upgraded. In waterfront and underground space construction, the emphasis has been on creating safe and aesthetically pleasing waterfront areas, while strengthening the safety management of underground spaces. Additionally, the development of rural areas through the "10-Minute Life Circle" concept has enhanced rural revitalization, meeting the diverse needs of villagers.

- **Continuous Improvement in Greenway Construction Drives Effective Expansion of Ecological Spaces**

Songjiang District has been continuously improving its greenway system. In accordance with the construction requirements for a three-tier greenway system at the city, district, and community levels, efforts have been made to strengthen the role of city-level and district-level greenway backbones, while leveraging the convenience advantages of community greenways. This has helped extend the greenway network, supporting the healthy development of the district's greenway system. The ecological spaces in Songjiang District have been effectively expanded. By utilizing key roads, backbone rivers, and mountain resources, green pedestrian spaces have been integrated into these areas, significantly increasing the supply of green ecological spaces to meet the needs of citizens. Notable examples include the completed Sheshan Greenway, Jiasong South Road Greenway, and Diannpu River Greenway. The quality of greenways in Songjiang District continues to improve. Following the specific requirements of the Shanghai Greenway Construction Guidelines, and considering the actual conditions of the greenway locations, several distinctive and well-themed greenways have been created. For example, the Tongbotang Greenway connects cultural and historical attractions along its route, reflecting the cultural heritage of the ancient Songjiang.

- **Continuous Advancement in Green Community Construction Accelerates Improvement of Community Livability and Intelligentization**

Since 2021, the Songjiang District Office for Refined Management has led district-level departments in key initiatives, including establishing and improving community living environment construction and remediation mechanisms, promoting the greening of community infrastructure, creating livable community environments, enhancing community informatization and intelligentization, fostering a green culture within communities, and innovating specialized projects. They have organized application submissions, conducted evaluations and reviews, and implemented joint inspections

through various methods such as on-site visits, report hearings, data checks, and direct inquiries to ensure the quality of these initiatives. By the end of 2023, 284 out of the district's 298 communities had met the basic standards, with a pass rate of 95.3%. Among these, 100 communities were recognized as district-level green community demonstration units, representing 35.5% of the total, while 5 were designated as city-level green community demonstration units. Notably, the green community initiative of Thames Town in Fangsong Subdistrict was included in the Ministry of Housing and Urban-Rural Development's Excellent Case Compilation of Green Community Actions.

- **High-Quality Development of Leisure Agriculture and Rural Tourism Promotes Integration of Agriculture and Tourism**

Songjiang District currently has one national 5-star leisure agriculture and rural tourism enterprise, four 4-star enterprises, five 3-star enterprises, and over 20 premium destinations. It attracts more than one million visitors annually, generating over 30 million yuan in agricultural product sales revenue. The district has been recognized as a National Modern Agricultural Demonstration Area, a National Agricultural Green Development Pilot Zone, a National Leader in Agricultural Technology Modernization, a Key National Leisure Agriculture County, a Model County in the National Integrated Agricultural Supply Chain, and a Model County for National Rural Entrepreneurship and Innovation.

- **"Four Good Rural Roads" Demonstration Initiative Promotes High-Quality Development of Rural Roads**

Songjiang District has advanced the demonstration initiative of "Four Good Rural Roads" and "Most Beautiful Rural Roads", continuously leveraging their role as examples to guide progress. From 2019 to 2023, Songjiang successfully established five city-level demonstration towns, 206 demonstration roads, and one premium road. In 2024, it plans to create 24 city-level demonstration roads and two premium roads. Additionally, Hongyang Highway, Yingshi Road, Yangdian Highway, and Caojiabang Highway were recognized as the Top Ten "Most Beautiful Rural Roads" in Shanghai in 2020 and 2022. Under the theme "'Four Good Rural Roads' Construction Guided by Party Building Creates the 'Red Journey and Road of Initial Aspirations'", Caojiabang Village in Maogang Town presented a written exchange as a village-level model at the 2021 National On-site Meeting for Four Good Rural Roads. The head of the Maogang Town Highway Station was selected as a finalist for the second "Most Outstanding Highway Worker" award, co-hosted by the Ministry of Transport and the All-China Federation of Trade Unions, demonstrating significant exemplary and motivating effects.

Important Measures

(1) Sustainable Shared Community Construction

- **Develop diverse-themed waterfront public spaces**

Leveraging its abundant natural resources, Songjiang District has developed diversified, high-quality waterfront spaces. Based on the geographical advantage of intertwined rivers and lakes and the close connection between the city and water, the district has built visible, accessible, and experiential waterfront areas. Through the establishment of a station system, a "15-minute life circle" has been formed, linking public spaces along the waterfront and enhancing residents' accessibility and engagement. Stations are set up every 250 meters to ensure full-service coverage across the area. By integrating residential, commercial, educational, and other land uses, the surrounding spaces of the waterfront areas have been revitalized, creating diverse and vibrant spaces. These waterfront regions not only function as ideal leisure destinations for citizens but also provide practical services, promoting comprehensive community development and vitality.

Case 17 "Galaxy" Waterfront Public Space

The "Galaxy" waterfront public space stretches from the Guangfulin Cultural Relics Park in the west to Tongbotang in the east, bordered by Yinze Road to the south. The conceptual design spans approximately 183,900 square meters. The primary goal of the "Galaxy" waterfront space redesign is to connect the three sections along the riverbanks: By utilizing floating bridges, sunken bridges, and tunnels, riverbank gaps are bridged, creating a continuous connection of open nodes along the river. This project transforms a once-isolated landscape green space into a compound public space system.

Natural elements are integrated to create diverse and shared riverside landscapes. Through measures such as internal and external connectivity, the focus is on improving water quality and restoring aquatic habitats, blending the new urban area with its surrounding natural landscapes. Guided by the concepts of vibrant and ecological waterfronts, the design aims to create rich waterfront spaces that foster daily vitality. With strategies like removing levees to restore greenery and optimizing railings, the linear waterfront boundaries are improved to create interactive spaces between water and the city. The vision of a colorful "Galaxy" and the seamless integration of greenery along the waterfront enriches distinctive planting zones, creating the unique "Ten Scenic Views".

The slow traffic system is improved to build a multi-directional, accessible roaming network. By linking cloud bridges and building or renovating pedestrian bridges across the river, the aim is to stitch together gaps in the riverside walking network, enhancing connectivity between the two shores and fostering shared vitality in the waterfront area. By creating vibrant cycling paths, "Galaxy" walking routes, and waterfront activity nodes form an enjoyable cycling loop and shaded walking system, establishing a harmonious balance of movement and tranquility within an ecologically friendly and interconnected three-way system.

Service functions are integrated to create vibrant spaces with distinct characteristics. Focusing on the urban design of the planned commercial areas, sports parks along both sides of the "Galaxy", and the office-commercial land to the north of Donghua University, the goal is to integrate the urban functions of the waterfront spaces. Through innovative and integrated design concepts, a complete and mixed-use public service facilities development belt around the "Galaxy" will be constructed. Combining the construction of viewing platforms, bridge underpass stands, waterfront platforms, and rest station facilities, the design integrates the cultural essence of "the roots of Shanghai", forming a spiritual space that connects the past and present. This ensures full-service coverage and the creation of diverse impression scenes, ultimately crafting a "Galaxy" feast of vitality.

Figure 21 West Starting Point of the "Galaxy" - Guangfulin Cultural Relics Park

- **Promote the construction of greenways in Songjiang**

Based on the 14th Five-Year Plan for the Green Space System in Songjiang District (Special Research on Greenways), Songjiang District continues to advance the construction of its greenway system. Focusing on annual goals, the district has developed a scientific plan to promote greenway construction, making good use of municipal financial subsidies to encourage subdistrict and town authorities to fully utilize policies and accelerate greenway development. In advancing the district-level greenway construction, the district has accurately understood the needs of the residents along the greenway, responded promptly to concerns from the People's Congress and the CPPCC regarding the construction of waterfront greenways, and actively coordinated with local authorities and functional departments to resolve the challenges and obstacles in greenway connectivity.

Case 18 Tongbotang Greenway

Tongbotang Greenway is an important part of the greenway construction in the Songjiang New City and serves as a key section of the "New City Green Chain" greenway loop, which is formed by the connections to Zhangjiabang, Shenjingtang, and Renmin River. The greenway runs from Renmin River in the south to Zhangjiabang in the north, with a total planned length of approximately 11.8 kilometers along both banks. It passes through the Zhongshan, Guangfulin, Fangsong, and Yueyang subdistricts. The original spatial layout along both sides of Tongbotang was simple, with a lack of tiered greenery, and pedestrian pathways were not continuous. In 2021, a landscape renovation was carried out for the section between Renmin River and the G60 Shanghai-Kunming Expressway

(commonly referred to as the Hukun Expressway), covering a total length of about 7.43 kilometers. The renovation incorporated the existing site into the greenway system, restored the riverside greenery, and addressed over 10 connectivity gaps, including spaces under bridges.

The greenway construction follows the theme "Vibrant Greenway, Shared Garden". The riverside landscape renovation fully incorporates elements of Songjiang's historical culture, enhances the greenery and landscaping, and adds facilities such as seating, pergolas, small leisure squares, and scenic lighting. The focus is on creating waterfront space that supports the leisure activities of citizens, offering places to rest and enjoy the views. Drawing from the cultural heritage, the project makes full use of the existing riverside resources and cultural elements, allowing the greenway to integrate with the surrounding functional areas. A colored permeable asphalt pathway runs along the entire eastern bank, enhancing the area with decorative bridge features, river railings, seating areas, fitness equipment, and unique pergolas. This enriches the leisure space for surrounding residents and improves the landscape. The overall Tongbotang waterfront landscape system emphasizes the diversity and layering of plant communities, beautifying the riverside green spaces. Additionally, night lighting has been improved, with fixtures placed along the levees, railings, trees, and small squares, illuminating the Tongbotang area and highlighting this garden-style waterfront promenade. This enhancement elevates the night-time experience for residents, creating a composite landscape greenway that strengthens ecological features, integrates functional spaces, and promotes health and diversity, thus improving the recreational activities of nearby residents.

Figure 22 Tongbotang Greenway

- **Advance community co-governance**

In the process of advancing community co-governance, Songjiang District has implemented key measures such as Party building guidance, multi-party collaboration, and refined management, significantly improving the level of community governance. Through the "multi-grid integration" management model, resources from various departments, including urban operations, urban management, and police service, have been integrated to achieve efficient management and coordinated handling of community affairs. Building on the "15-minute community life circle" initiative, Songjiang District has further optimized infrastructure construction, advanced the improvement of basic service facilities in communities, and enhanced community autonomy and shared management

capabilities through extensive participation from residents and social forces. At the same time, Songjiang has actively trained community workers and social organizations, providing various training and practice opportunities to strengthen their roles in community governance. This has driven innovation in grassroots governance, creating a positive situation of multi-party co-governance and social co-construction. These measures have improved the quality of life and management levels in communities, promoting the modernization of community governance in Songjiang District.

- **Promote the creation of green communities**

Songjiang District has implemented various measures to promote the creation of green communities. First, the CPC Songjiang District Committee and the Songjiang District People's Government have placed high importance on this initiative, with the Deputy District Mayor serving as the head of a special task force. The Deputy District Mayor organizes promotion conferences and training sessions and personally awards certifications to qualified units. The Songjiang District Office for Refined Management enhances its work research and promptly addresses any issues. Second, a well-established coordination mechanism has been put in place, led by the Songjiang District Office for Refined Management, with relevant departments, subdistricts, and towns collaborating to ensure efficient task implementation. Third, a "dual-track" approach has been adopted. A total of 283 eligible communities have been identified, with 15 selected as pilot sites. Progress is being made while experiences are continuously summarized. Meanwhile, random inspections and special supervision are carried out simultaneously to ensure the timely resolution of problems. Additionally, the creation of green communities has been integrated with other urban governance efforts, promoting an overall improvement in governance standards. Last but not least, extensive consultations with residents and businesses have been conducted. Efforts have been made to increase publicity and use various platforms to highlight the success of the green community initiative, raising public awareness and enhancing community governance.

Case 19 Thames Town Green Community in Fangsong Subdistrict

In recent years, Thames Town in Songjiang District has continuously promoted community governance and improved the living environment through Party building guidance and multi-party collaboration. Firstly, the community established a leadership group for the creation of green communities, integrating resources from property management, commercial areas, and relevant functional departments within the district, thereby building a strong organizational foundation. Additionally, the community set up 12 WeChat work groups, facilitating joint construction and shared responsibility, and promoting the efficient creation of green communities. Community horticulturists regularly participate in landscaping maintenance, ensuring high coverage of green landscapes.

In terms of co-construction and co-governance, Thames Town has adopted the subdistrict-level "three-pronged" governance model, formulating six normative agreements, including the Residents' Charter and the Thames Town Characteristic Landscape Management Regulations, further enhancing the standardization of community management. Furthermore, the town has continuously upgraded its hardware facilities, such as improving water quality and enhancing

riverside cityscape amenities through ecological governance actions, creating a beautiful aquatic ecological environment.

The construction of smart communities is another highlight of the town. Through the "Smart Public Security" project, the community upgraded its security system, optimized video surveillance, and installed high-definition monitoring equipment, micro checkpoints, and a 3D perception management platform, effectively enhancing the community's security management capabilities. In 2021, the community introduced an intelligent access control and facial recognition system, achieving fully intelligent management of entrances and exits.

In addition, the town focuses on building a low-carbon community, promoting low-carbon transformation through energy-saving and environmentally friendly measures such as photovoltaic facilities and solar-powered street lights. The community has also added and renovated fitness trails, improving the living environment for residents and striving to create a "15-minute life circle", offering a higher quality residential experience.

(2) Sustainable urban renewal

- **Improve urban renewal systems and implementation plans**

Songjiang District has advanced urban renewal through a series of key measures. First, the district established an urban renewal leadership team and built a work network involving the district, relevant departments, subdistricts, towns, and project implementation entities, ensuring effective execution of the renewal. Second, the district issued relevant documents and plans promptly, such as the Songjiang District Urban Renewal Action Plan (2023-2025). In addition, based on the overall planning of Shanghai and Songjiang, it dynamically optimizes the project database to promote high-quality development and governance. Third, the district actively conducted publicity and research and learned advanced experiences through participating in urban renewal forums, summarizing project experiences, and examining the data of state-owned enterprises. This resulted in the development of case reports, providing practical support for subsequent urban renewal actions. These measures have provided solid institutional guarantees and innovative pathways for urban renewal in Songjiang District.

Case 20 Yunjian Granary Cultural and Creative Park

The Yunjian Granary Cultural and Creative Park is a typical example of urban renewal and cultural innovation in Songjiang District. Located on Songhui East Road, Songjiang District, the project covers 136 mu (approximately 9.07 hectares) with a building area of about 40,000 square meters. Originally built as a grain warehouse in the last century, it has been transformed over the years into a creative park that integrates culture, technology, sports, tourism, and other functions. The project follows the principle of "restoring the old to its original state", retaining the original appearance of the historic buildings while incorporating modern technologies to breathe new life into the old structures. The use of graffiti art and multimedia technology, such as the graffiti Rice Field Watcher on the iconic silos, has significantly enhanced the park's appeal.

Yunjian Granary has established a multifunctional area based on its three key focuses: sci-tech innovation, cultural creativity, and sports innovation. The park includes various sections, such as

the beer culture zone, art exhibition and interaction zone, and sci-tech office zone. It has attracted over 90 enterprises and institutions and organized a variety of artistic activities, cultural and creative markets, and performances, drawing a large number of citizens and tourists. It has become one of the popular check-in spots for Internet celebrities in Shanghai. After four years of operation, Yunjian Granary has not only become a national 3A-level tourist attraction but has also won several prestigious awards, including the Yangtze River Delta Urban Renewal Contribution Award.

The success of this project lies in its smart blend of historical culture and modern innovation. By attracting visitors and businesses through various activities and sharing historical stories, it has created a culturally rich and unique local space. This has led to a seamless integration of culture, commerce, and community.

Figure 23 Yunjian Granary Cultural and Creative Park

- **Accelerate urban village renovation**

Songjiang District is actively promoting the renovation of urban villages through a series of measures. First, the district has strengthened its policy support. By utilizing the urban village renovation policy toolkit, it has formulated the Management Measures for Special Loan Funds for Urban Village Renovation in Songjiang District to address the current challenges of a sluggish market and low social capital participation. Second, the district has accelerated the completion of existing projects. Adjusting the scope of renovations and optimizing planning indicators have helped resolve issues such as a shortage of resettlement housing and financial pressures, enabling the implementation of projects like the Sheshan Urban Village. Meanwhile, subdistricts and towns are enhancing cooperation, consolidating resources, and speeding up the construction of resettlement housing to ensure the smooth progress of renovation projects. Lastly, the district has developed the Three-Year Action Plan (2024-2026). Following the principle of "implementing a batch, reserving a batch, and planning a batch", it has coordinated resources from all sides and accelerated the scale and pace of urban village renovations, to fully launch the overall renovation projects by the end of 2026 and complete most of the renovation tasks by 2027.

Case 21 The Urban Village Renovation Project for Plots Including Tahui in Jinsheng Village, Shihudang Town

The Urban Village Renovation Project for Plots Including Tahui in Jinsheng Village, Shihudang Town is a pioneer of the new round of urban village renovations in Songjiang District. The project was recognized at the municipal level in January 2022 and adopts a cooperative renovation model, in which rural collective economic organizations collaborate with partners for the redevelopment. Surrounding the project area are several key facilities, including the city-level historical protection building Lita Pagoda, the Party School of the CPC Songjiang District Committee, the Songjiang District Mental Health Center, and town-level public service facilities such as the Shihudang Town Community Cultural Activity Center and the Community Health Service Center. In stark contrast, within urban villages, the buildings are old, the infrastructure is underdeveloped, external migrants are densely populated, and private rental housing is common. Long-standing problems such as "dirty, chaotic, and poor" conditions, as well as issues related to social security, fire safety hazards, and other risks, are particularly prominent. The project presents a typical urban village situation, leading to the emergence of public demand for urban renewal. After adjustments to the scope of the renovation, the project received city-level recognition in January 2024. The project area is bordered to the east by Changshi Road, to the south by Gande Road, to the west by Xincun Road, and to the north by Minta Road, covering a total area of 451.6 mu (approximately 30.11 hectares), with a planned building area of about 761,100 square meters. The total investment in the project is 11.1 billion yuan. The project spans 401.37 mu (approximately 26.76 hectares), consisting of six plots, home to 296 households and 7 enterprises and public institutions. So far, 260 households (259 village households and 1 enterprise) have completed relocation, with a signing rate of nearly 86%. The project will undergo planning upgrades in five areas: historical culture, health ecology, public facilities, integration of industry and city, and creation of a harmonious and livable environment. The goal is to develop a diversified, comprehensive, and smart town. The first and second phases of the project are for relocation and resettlement housing, the third phase will feature commercial residential buildings, and the fourth phase will consist of commercial and office-commercial spaces. The first phase of the project, which serves as a key livelihood guarantee project for the relocation and resettlement of Songjiang Hub construction, officially began construction in the third quarter of 2023. As of June 18, 2024, the main structures of 10 resettlement housing buildings and 7 supporting buildings have been fully topped out, marking a significant step forward for the relocated residents as they move closer to settling into their new homes.

Figure 24 Aerial View Rendering of the Shihudang Tahui "Urban Village" Renovation Project

- **Advance the refinement of community governance**

In the process of building a sustainable city and developing the community, Songjiang District places particular emphasis on the refinement of community governance. By hiring professionals such as fire safety lecturers and community planners, the district enhances community safety and planning standards, while promoting multi-party collaboration to create a new grassroots governance model. Additionally, the district strengthens residents' self-management by establishing systems like the Residents' Charter and encouraging their participation in green and environmental activities, thus improving the quality of community life. The creation of refined management demonstration areas integrates the "Three Beauties" construction and the "15-minute life circle", forming community management models with distinctive features. For example, the G60 Science and Innovation Cloud Corridor in Xinqiao Town has been built into a demonstration landmark featuring the integration of industry and city. Finally, leveraging grid-based management and smart systems, Songjiang has achieved timely identification and resolution of community issues, enhancing both community safety and residents' quality of life, while advancing refined governance and intelligent management in the region.

(3) Deep integration of urban and rural development

- **Promote high-quality development of leisure agriculture and rural tourism**

Songjiang District has accelerated the development of leisure agriculture and rural tourism through a series of measures. First, the district has formulated several planning documents, including the 14th Five-Year Plan for Agricultural Development in Songjiang District, which clearly outlined development goals and key areas, ensuring organic alignment between top-level designs and individual projects. Second, the district enhances its infrastructure development by creating multiple demonstration villages. Improving the living environment and introducing specialized industries have promoted the enhancement of both rural economy and cultural value. Songjiang also encourages social capital participation, utilizing idle resources to develop homestays and leisure agriculture projects. Additionally, combining agricultural culture, ecological experiences, and other elements, the district has promoted a unique development model that integrates agriculture, culture, and tourism, increasing the added value of leisure agriculture. Furthermore, Songjiang has increased its promotional efforts by hosting distinctive festival events to raise the profile of leisure agriculture and rural tourism. Lastly, by introducing various financial support projects, Songjiang has vigorously promoted rural infrastructure construction and cultural activities, thus enhancing the quality and efficiency of the region's agricultural and tourism industries.

Case 22 Yunjian Wushe Rural Complex

The project covers seven natural villages, including Zhuding Village, Caojiabang Village, and Rutang Village in Maogang Town, with a total planned area of 40,560 mu (approximately 2704 hectares), of which the core area covers 15,500 mu (approximately 1033 hectares). In terms of

functional structure, the project forms a "one axis, two centers, and nine areas" layout: "One axis" refers to the tourism space linkage axis; "two centers" refer to the Comprehensive Tourism Service Center and the Comprehensive Life Service Center; and "nine areas" include the Modern Agricultural Demonstration Area, Happy Countryside Amusement Area, Floral Viewing and Leisure Area, Wetland Sightseeing and Expansion Area, Comprehensive Agriculture-Tourism Service Area, Themed Farm Experience Area, Rural Countryside Demonstration Area, High-Standard Farmland Demonstration Area, and Urban Integrated Community. The project involves 19 industrial projects, with a total investment of 326 million yuan.

Figure 25 Yunjian Wushe Rural Complex

- **Promote high-quality rural road construction and management**

Through comprehensive planning, optimized construction, policy support, technological innovation, and informationized management, Songjiang District has made significant progress in advancing the construction of "Four Good Rural Roads". Since 2018, the district has formulated and revised the Songjiang District Rural Road Construction Plan, and it is expected that by 2027, the road network density will increase to 211 kilometers per 100 square kilometers. By building, reconstructing, and maintaining roads to high standards, more than 600 kilometers of road projects have been implemented. To ensure financial support, the district has introduced a city-district 1:1 subsidy policy and implemented differentiated funding support policies for the four towns in Punan, increasing assistance for rural areas. During the maintenance process, the district has actively explored the use of "Four New Technologies", such as cold recycling technology and ultra-thin asphalt technology, promoting the application of green and energy-saving technologies. Furthermore, the district has accelerated the pace of informationized management, advancing the "One Road, One File" informatization construction for roads to enhance the intelligence of road inspection and maintenance, ensuring the continuous improvement of road quality and safety management.

Case 23 Hongyang Highway at Xingda Village, Yexie Town

Through the "Four Good Rural Roads" demonstration project - Hongyang Highway, Xingda Village in Yexie Town, Songjiang District, has explored a path to common prosperity through industrial integration and rural revitalization. Leveraging its rich historical background, Xingda Village has promoted rural revitalization through the construction of rural roads, gradually upgrading multiple rural roads, particularly the construction of the Hongyang Highway. This has achieved transportation-tourism integration and industrial development.

Firstly, the Hongyang Highway has enhanced the attractiveness of rural tourism by improving road conditions and elevating the scenic landscapes along the route. The five-star rural homestays and leisure forest landscapes along both sides of the road offer visitors a rich tourism experience. Additionally, village regulations, residents' charters, and the Road Chief System further ensure the regular management and maintenance of the road. This creates a positive interaction mechanism between transportation and tourism, promoting mutual benefits for both sectors.

Secondly, Xingda Village has increased the economic income of its residents by innovating financing models and developing distinctive rural brands. The 88-Mu-Tian homestay in the village, centered around the rice culture, incorporates the intangible cultural heritage of Yexie cake and has launched a series of unique tourism projects, attracting a large number of visitors. Through the integration of agriculture and tourism, the village has also promoted local agricultural products and created employment opportunities for the local workforce, effectively addressing issues of aging population and resource underutilization in the village.

Lastly, the construction of the Hongyang Highway has spurred the development of surrounding industries. Xingda Village has designated several plots of land for commercial and service industries. These include projects such as a public service center, a commercial exhibition center, and a digital wellness community. This has further enhanced industrial agglomeration and promoted the diversification of rural development.

Through the construction of the "Four Good Rural Roads" demonstration project, Xingda Village in Yexie Town has achieved a development pattern characterized by smooth transportation, thriving industries, and beautiful rural landscapes, laying a solid foundation for the common prosperity of its residents.

Figure 26 Xingda Village in Yexie Town, Songjiang District

- **Promote the protection of historical and cultural heritage areas**

Songjiang District boasts a rich historical and cultural heritage, with abundant resources distributed throughout the district. Preserving historical architecture and cultural landscapes is a crucial task in urban-rural integration development. Among the 44 historical and cultural heritage preservation areas in Shanghai, Songjiang District has three listed: Songjiang Cangcheng, Songjiang Fucheng, and Xiatang Historic Zone of Sijing Town. In recent years, Songjiang has consistently promoted the protection and development of historical and cultural heritage areas through measures such as the revitalization and preservation of historical buildings and the deep integration of culture and tourism to drive the dynamic development of these areas. For example, in the Xiatang Historic Zone of Sijing Town, the restoration of cultural relics and the relocation of residents have been completed. The former residences of Ma Xiangbo and Shi Liangcai have been listed as revolutionary cultural relics and have become patriotic education bases. Additionally, the Three Mansions in Sijing has been recognized as a "Great Attraction for Citizens Right at Their Doorstep".

- **Comprehensively advance the construction of the "15-minute community life circle"**

Songjiang District is fully advancing the construction of a "15-minute community life circle" that covers both urban and rural areas. The district has developed an action plan that defines community life circles in new urban areas, large residential areas, and town centers; industry circles in parks and industrial clusters; and rural life circles in certain rural areas. To improve livability within these circles, Songjiang has deployed administrative management, rental housing, convenience services, smart applications, and other facilities. To enhance business-friendly development, the district has offered employment security and services. To increase tourist attractions, the district has incorporated public spaces, scenic water systems, sports, and recreational resources. To make it ideal for education, the district has included cultural activities, basic education, and childcare facilities. For elderly care, it has focused on services for the elderly and health management. For example, the Guangfulin area has implemented the concept of a "15-minute community life circle". By fully leveraging the area's water system resources and optimizing urban land use, it has further upgraded public service facilities, creating a high-quality, multi-functional urban area in the northern part of Songjiang New City that is concentrated, highly visible, and accessible to all citizens.

SDG13: Climate Action

SDG13

- SDG13 Climate Action: Committed to taking urgent action to combat climate change and its impacts. Through the implementation of this goal, Shanghai effectively drives the transformation of systems in energy, industry, transportation, food, agriculture, and forestry, reducing the risks brought by the uncertainties of climate change to manageable levels.
- Currently, Songjiang, like other regions around the world, faces disaster risks due to climate change, including extreme heat, cold waves, heavy rainfall, floods, droughts, and storms. These risks have the potential to place enormous pressure on urban operations and governance, and more critically, they can pose significant threats to the safety of people's lives and property.
- Aligned with SDG13, Songjiang has actively taken measures in recent years to help the city address the challenges of climate change. The efforts include promoting eco-environment governance, building a "zero-waste city", enhancing the green development capabilities of enterprises, and achieving energy conservation, emission reduction, and carbon cuts. The district has also worked to improve its climate change risk management by enhancing the comprehensive climate change observation network, conducting climate change impact assessments, building meteorological disaster risk warning systems, and developing plans for responding to extreme weather events. Furthermore, it has promoted public engagement in addressing climate change through initiatives such as creating a "last mile" multi-faceted meteorological science popularization platform, organizing meteorological science popularization activities, and advancing meteorological education in schools.

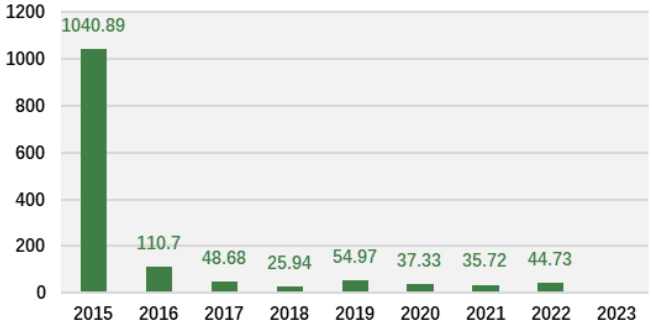
SDG13

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG13
Promote energy conservation, emission reduction, and carbon reduction	Fully promote eco-environment governance		► Total sulfur dioxide emissions (in tons) ► Air quality index (%) ► Environmental protection investment (in 100 million yuan) ► Concentration of fine particulate matter (PM2.5) (in micrograms per cubic meter)	SDG13.1
	Promote the building of a "zero-waste city"			
	Enhance the green development capabilities of enterprises	Build a platform for green low-carbon technology and management exchanges		
Climate change risk management	Enhance the comprehensive climate change observation network		► Number of meteorological observation stations ► Network density of meteorological observation stations ► Meteorological forecast accuracy (%)	SDG13.1 SDG13.2
	Analyze climate change data and assess climate change impacts			
	Build meteorological disaster risk warning systems			
	Develop plans for responding to extreme weather events	Typhoon In-Fa monitoring and early warning linkage		
Public engagement in addressing climate change	Create a "last mile" multi-faceted meteorological science popularization platform		► Number of new energy buses promoted	SDG13.3
	Organize key activities centered around Science Literacy Day, Meteorological Day, and the Science and Technology Festival	Conduct meteorological science popularization activities in downtown		
	Leverage the Shanghai Meteorological Education School Alliance (Songjiang) to share resources	Songjiang Yueyang Primary School conducts a series of meteorological science popularization activities		

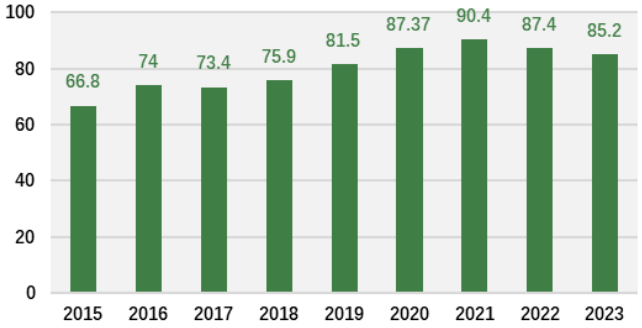
Key Indicators

Total sulfur dioxide emissions (in tons)



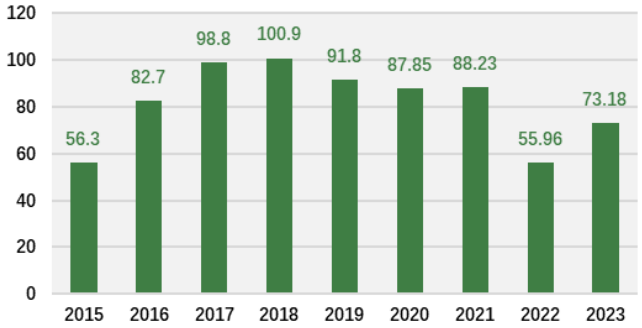
From 2015 to 2022, total sulfur dioxide emissions decreased by **95.70%**.

Air quality index (%)



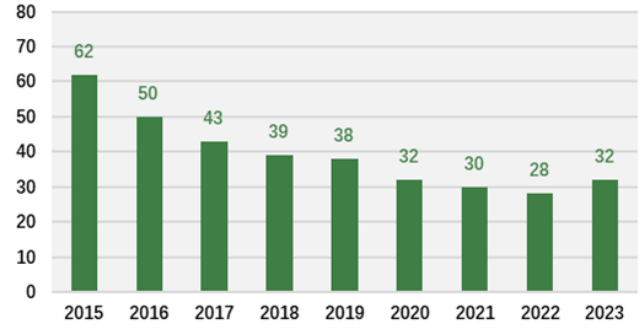
From 2015 to 2023, the air quality index increased from **66.8%** to **85.2%**.

Environmental protection investment (in 100 million yuan)



From 2015 to 2023, the annual environmental protection investment averaged **8.175 billion yuan**.

Concentration of fine particulate matter (PM2.5) (in micrograms per cubic meter)

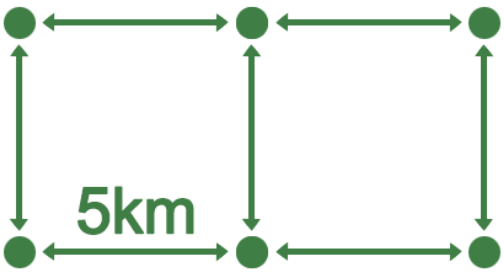


From 2015 to 2023, the concentration of fine particulate matter (PM2.5) decreased by **48.39%**.

Number of meteorological observation stations

As of November 2024, the number of meteorological observation stations monitoring the four key elements (temperature, precipitation, wind direction, wind speed) and more reached 23.

Network density of meteorological observation stations

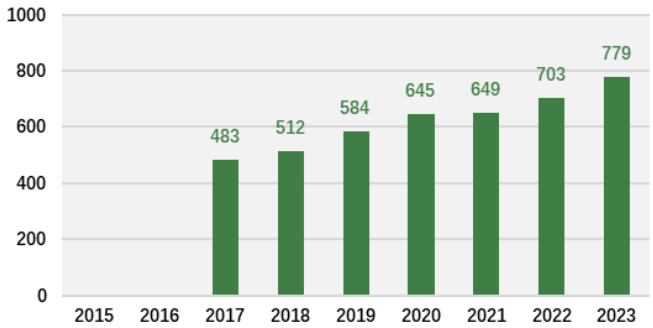


As of November 2024, the average distance between meteorological observation stations monitoring the four key elements (temperature, precipitation, wind direction, wind speed) and more was less than 5 km.

Meteorological forecast accuracy (%)

In 2023, the accuracy of 24-hour weather forecasting was 86.9%.

Number of new energy buses promoted



From 2017 to 2023, the number of new energy buses promoted increased by **61.28%**.

Major Progress

- **The Battle Against Pollution Drives Comprehensive Eco-environmental Improvement in Songjiang District**

In recent years, Songjiang District has actively engaged in the battle against pollution, comprehensively advancing the protection of blue skies, clear waters, and clean soil, leading to a significant improvement in the region's eco-environment quality. To win the fight for blue skies, Songjiang has focused on controlling industrial air pollution and vehicle emissions, extensively promoting new energy vehicles, and strengthening the source substitution for volatile organic compound (VOC) emissions. In terms of water system management, Songjiang has improved wastewater treatment facilities and advanced the construction of river and lake ecosystems to ensure high-quality water bodies. The district has also enhanced the management efficiency of river-bound sewage discharge outlets. Additionally, Songjiang has actively promoted soil pollution prevention, implementing resource recovery and harmless treatment of solid waste. Through a combination of targeted pollution control and legal enforcement, Songjiang has gradually established a systematic and long-term ecological governance framework, becoming a model for regional green development.

- **"Zero-Waste City" Construction Achieves Milestone Progress**

Since 2023, Songjiang District has included the construction of a "zero-waste city" as a key annual initiative, making significant progress in this area. The project is centered around promoting regional eco-environmental protection and sustainable development, creating a replicable and scalable model. It encompasses 66 construction indicators, 46 of which have already met the target values for 2025. Songjiang's "zero-waste city" initiative has yielded remarkable results, not only increasing the comprehensive utilization rate of hazardous waste and municipal solid waste but also strengthening the role of low-carbon and green development. Through sci-tech innovation and the development of a circular economy, the district has further advanced pollution reduction and carbon cuts, positioning Songjiang as a leader in sustainable development and eco-environmental governance.

- **The Capacity to Respond to Extreme Weather Disasters such as Typhoons Is Continuously Increasing**

In recent years, Songjiang District has continuously enhanced its risk management and response capabilities for extreme weather events like typhoons and heavy rainfall, under the deployment of Shanghai's municipal-level meteorological disaster defense system. Meteorological departments have proactively conducted preparations for red alert drills and established a joint response mechanism based on the activation of contingency plans triggered by meteorological disaster early warnings. These early warning systems

have effectively served as the first line of defense for disaster prevention and mitigation. The "one network management" meteorological empowerment system provides digital support for flood and typhoon prevention. The meteorological "prophet" system delivers decision-making support for the CPC Songjiang District Committee, the Songjiang District People's Government Office, the city operations center, and the flood control command office, among others. During typhoon events, meteorological plugins are used by various city operation departments to access real-time data, providing "zero time difference" information for responding to typhoons and other weather disasters. This significantly empowers deployment and command capabilities.

- **Public Awareness of Climate Change and Related Issues Continues to Elevate**

Amid the new era of advancing high-quality development in education, science, technology, and talent integration at the national level, and in response to the challenges of global climate change, the Songjiang District People's Government, leveraging the joint mechanism for science popularization in Shanghai, has fully utilized important opportunities such as World Meteorological Day, National Science Literacy Day, Disaster Prevention and Mitigation Day, China Meteorological Administration Science and Technology Week, and Shanghai Science Festival. By integrating comprehensive online and offline resources and the advantages of relevant committees, offices, and bureaus, the government has adopted an open and collaborative approach to serve the public, participate in campus meteorological science popularization competitions, promote the popularization of scientific research results and academic resources, and carry out climate change and dual-carbon science popularization for various industries and groups. These efforts aim to enhance public awareness of climate change and encourage and promote active public engagement in addressing climate change.

- **Significant Progress is Achieved in Building Meteorological Science Popularization Brands and Platforms**

Songjiang District has developed a series of climate change communication brands and premium activities in conjunction with events like World Meteorological Day and Shanghai Science Festival. Through Meteorological Day, the Science and Technology Festival, and Science Literacy Day, both online and offline meteorological science popularization activities have been organized, such as Meteorological Science Popularization in Commercial Areas, Meteorological Science Popularization in Communities, Meteorological Science Popularization in Schools, 100-meter Scroll Meteorological Painting, and Patriotic Education + Meteorological Science Popularization. These efforts aim to make climate change science popularization a regular and institutionalized activity, in line with the theme of World Meteorological Day on March 23. The district has also built and improved a meteorological science popularization expert database, further expanding public access to climate change knowledge and enhancing the public's scientific literacy in addressing climate change. Additionally, communication and collaboration with media have been strengthened to ensure targeted, tiered dissemination,

improving the overall effectiveness of the outreach efforts.

- **Meteorological Science Popularization in Schools Shows Distinctive Features**

Songjiang District has developed a multi-faceted meteorological science popularization platform, with the Songjiang Science Popularization and Education Base as its core. Lectures on meteorological disaster prevention, mitigation, and climate change knowledge are brought into schools, promoting climate awareness through science popularization activities, courses, and other forms. In line with climate change and related topics, a series of meteorological brand competitions for youths are organized. These include the Campus Meteorological Science Popularization and Innovation Competition, the Carbon Exploration and Environmental Creativity Competition, and the Drawing Competition for Meteorological Science Popularization, all designed for different age groups of students. The goal is to encourage students to actively respond to climate change and adopt green lifestyles, using creative solutions and innovative achievements to raise awareness of weather and climate change. Additionally, the district explores ways to raise awareness of weather and climate phenomena under the backdrop of climate change, promoting meteorological culture. In collaboration with Songjiang Yueyang Primary School, Songjiang District recorded Mini-lectures on Meiyu, which won first place in the national meteorological science experiment and campus meteorological courseware performance event organized by the Chinese Meteorological Society.

Important Measures

(1) Promote energy conservation, emission reduction, and carbon reduction

- **Fully promote eco-environment governance**

Songjiang District continues to make deep progress in the battle against pollution, implementing various measures to drive eco-environmental governance. In terms of air pollution control, Songjiang District has carried out projects such as the reduction of volatile organic compounds (VOCs) and the compilation of greenhouse gas inventories. Additionally, measures like protecting water sources, regulating river-bound sewage discharge outlets, and improving rural wastewater treatment have been taken to enhance water system protection. The district has made solid progress in advancing the battle for soil protection by implementing soil pollution control and solid waste management measures. It has strengthened the supervision of industrial land, pollution investigations, and assessments while optimizing the control of soil pollution at its source. Simultaneously, Songjiang District is accelerating the construction of a modern environmental governance system. Through collaborative pollution reduction, carbon cuts,

eco-environmental education, and other forms, the district is enhancing its governance capabilities and public engagement, thus comprehensively promoting continuous improvements in the eco-environment.

- **Promote the building of a "zero-waste city"**

Songjiang District has vigorously promoted the construction of a "zero-waste city" by introducing implementation plans, encouraging the creation of "zero-waste units", and organizing related publicity activities. As a result, 46 construction indicators have met their target goals. Through multiple surveys and training sessions, Songjiang has further advanced the "zero-waste city" initiative, organizing relevant departments to visit Zhejiang to learn from their advanced experiences. In terms of project implementation, Songjiang District has advanced several key projects, recognized numerous "zero-waste factories" and "zero-waste units" as model organizations, and widely promoted zero-waste construction across various sectors. Additionally, the district has ensured a high coverage of green buildings in newly constructed buildings through the promotion of green civil construction and energy-saving renovations. Furthermore, Songjiang District has actively promoted publicity efforts by producing promotional videos, hosting creative competitions, and offering online educational courses, thus raising public awareness and engagement.

Figure 27 "Zero-Waste City" Green Promotion Activity

- **Enhance the green development capabilities of enterprises**

Songjiang District has improved the green development capabilities of enterprises through business training. Particularly on National Low-Carbon Day, the district's ecological environment bureau held "Dual Carbon" training sessions, helping enterprises grasp relevant knowledge about carbon finance tools and carbon information disclosure. This not only clarified the future low-carbon technology development paths for enterprises but also provided clear direction for them to fulfill their social responsibilities, promoting their active participation in green development. Through these initiatives, the collaboration between government and businesses has become more closely aligned, green

development awareness has gradually taken root, and the green development capabilities of enterprises have been significantly enhanced. Meanwhile, through platforms such as seminars and training sessions, Songjiang District has initially established a platform for green low-carbon technology and management exchange, advancing technological innovation and the achievement of sustainable development goals within the region.

Case 24 Build a platform for green low-carbon technology and management exchanges

Songjiang District has achieved remarkable results by continuously optimizing the business environment, promoting green and low-carbon development, and establishing a government-enterprise collaborative environmental protection development model. Since 2023, the Songjiang District Ecological Environment Bureau has released the Measures for Continuously Optimizing the Business Environment and Promoting the Construction of a Beautiful Songjiang. Through seminars, environmental protection fairs, business training, and other forms of engagement, the bureau has strengthened the interaction between the government and enterprises to drive their green development.

Figure 28 A Scene of Green Low-carbon Technology and Management Exchange

On one hand, Songjiang District has built a government-enterprise exchange platform through the organization of seminars, advancing green and low-carbon development. In July 2023, a seminar was jointly held by several local departments to discuss the green and low-carbon development strategy for Songjiang New City. Representatives from multiple enterprises participated in roundtable discussions and proposed suggestions on green development tailored to their specific corporate characteristics. Through these exchanges, the model of government-enterprise collaboration in advancing green and low-carbon development has been strengthened.

On the other hand, Songjiang District has also organized environmental protection fairs, showcasing renewable and eco-friendly products, green low-carbon technologies, and more. These efforts have raised citizens' awareness of environmental protection and promoted the adoption of sustainable consumption lifestyles. Through these innovative product displays, Songjiang has effectively expanded the reach of green development concepts and increased public awareness of

eco-friendly and energy-saving products.

(2) Climate change risk management

- **Enhance the comprehensive climate change observation network**

For a long time, the surface meteorological observation stations in Songjiang have been relatively dense, but the observed parameters were limited. Many of the stations only monitored rainfall, mainly using tipping-bucket rain gauges, with relatively few stations monitoring climate change factors such as temperature, humidity, air pressure, and wind. To address the issues of limited monitoring parameters and insufficient scientific methods, the meteorological departments in Songjiang have focused on strengthening station densification and upgrading equipment. Efforts have included the gradual upgrading and renovation of rainfall-only stations and outdated sites, expanding the range of monitored factors. Rainfall monitoring methods have been optimized by transitioning from tipping-bucket rain gauges for liquid precipitation to multi-phase precipitation weighing observations. Since 2015, through continuous years of development, ground-based observation stations have achieved full coverage in all subdistricts and towns of Songjiang District, significantly enhancing the district's climate change monitoring capabilities. As of November 2024, 23 stations are monitoring the four key elements and more, accounting for 100% coverage, with an average distance between stations of less than 5 km. Additionally, nine mini-intelligent meteorological stations have been set up along rivers, parks, and scenic areas. One multi-phase precipitation monitoring station and one automatic monitoring station for precipitation and weather phenomena have also been established.

- **Analyze climate change data and assess climate change impacts**

The Songjiang District Meteorological Bureau conducts statistical analyses on 30 years of climate data every 10 years to derive standard values. Each year, the major meteorological factors in Songjiang are statistically recorded. Additionally, the bureau uses the 30-year climate average as a standard to document and access the climate conditions of the current year. Songjiang has established a government-led meteorological disaster defense system in the context of climate change. The district has developed and issued the Special Emergency Response Plan for Meteorological Disaster Handling in Songjiang District, Shanghai, promoting closed-loop management for the entire life cycle of meteorological disaster defense. A "one-click" emergency warning release system has been established and improved, ensuring that all warnings are released via various channels within 10 minutes. Meteorological disaster risk warnings are directly communicated to all committees, offices, bureaus, subdistricts, and towns. The district continues to deepen industry and meteorological cooperation mechanisms. It has established the Joint Consultation Mechanism for Air Quality in Songjiang District with the Ecological Environment Bureau, the Joint Consultation Mechanism for Forest Fire Risk

Forecast and Early Warning in Songjiang District with fire departments, and launched meteorological insurance projects such as Rice High-Temperature Meteorological Index Insurance + Derivatives with insurance departments.

- **Build meteorological disaster risk warning systems**

To address the "last mile" issue in the meteorological disaster risk warning system, as well as the inadequacies in service refinement and digitization, the Songjiang District Meteorological Bureau has taken the following steps: 1. Leveraging digital transformation. Within the overall framework of "one network management", it has developed and deployed the meteorological prophet system, which focuses on intelligent applications for scenario-based meteorological disaster risk warnings and covers subdistricts, towns, and urban operation centers. 2. Comprehensively building a refined and dynamic risk warning service system for meteorological disasters A "fast track" mechanism for direct access to meteorological warning information has been set up to enhance collaboration with departments such as water affairs and emergency management. This mechanism facilitates a regular process for receiving and issuing warning information and strengthens flood prevention coordination. 3. Improving the meteorological disaster risk thresholds and linkage service systems for key industries and fields. The district has researched the impact thresholds of disastrous weather on industries. In collaboration with multiple departments, it has jointly established a risk warning service and response threshold system for strong convective winds and their impact on urban operations. Additionally, the Guideline for Meteorological Services for Major Construction Projects in Shanghai has been issued for the construction sector. This guideline employs intelligent analysis to assess potential construction risks, providing insights into personnel safety and project quality risks at construction sites. It offers data support for decision-making in construction and production, enhancing smart implementation and management capacity of construction projects, thus ensuring construction safety.

- **Develop plans for responding to extreme weather events**

Songjiang District continues to strengthen its ability to respond to extreme weather events. 1. Enhancing the construction of an emergency linkage mechanism led by meteorological warnings. The district has promoted the establishment of a city-level meteorological risk warning linkage system by the disaster prevention committee. It works with the flood control office and the emergency management bureau to improve the "call-response" service mechanism for meteorological disasters. 2. Building a meteorological disaster risk prevention service system. The district has conducted comprehensive risk surveys of meteorological disasters and developed a short-term risk pre-assessment business for meteorological disasters. It has also carried out risk assessment services refined down to each subdistrict and town. For major catastrophic weather events, the district provides refined decision-making services for highly impacted areas within Songjiang. The meteorological prophet system's meteorological disaster risk warning services have been extended to subdistrict and town communities. The district collaborates

with emergency management departments to build model communities for disaster prevention and mitigation.

Case 25 Typhoon In-Fa monitoring and early warning linkage

Typhoon In-Fa (the 6th typhoon of 2021) affected Songjiang District from July 24 to 28. It was the first typhoon of 2021 to impact East China, characterized by strong intensity and slow movement. Due to its influence, from 00:00 on July 24 to 08:00 on July 28, one subdistrict/town in the district saw over 400 mm of rainfall, while 11 subdistricts/towns received more than 350 mm, and 15 subdistricts/towns recorded over 300 mm. The highest accumulated rainfall was in Xinqiao Town at 402.4 mm, followed by 390.6 mm at the Songjiang National Meteorological Observation Station. During the impact of In-Fa, the maximum wind speed was the highest recorded in the past ten years, with wind speeds generally exceeding Level 8 across the district. The highest wind speed was observed in Chedun Town at 26.5 m/s (Level 10), and the Songjiang National Meteorological Observation Station recorded 20.8 m/s (Level 9).

The Songjiang District Meteorological Bureau initiated a Level IV typhoon emergency response at 07:00 on July 23 and upgraded it to Level III at 10:00 on July 24. From the moment Typhoon In-Fa was reported, the bureau's leadership took a proactive role in command, participating in weather consultations throughout the process, guiding operations on the front lines, and leading early deployment of warning services and emergency response preparations. All meteorological staff remained on duty, closely monitoring the changes in weather systems and providing timely updates to ensure the safety and smooth operation of the city with full meteorological support.

The measures taken included: (1) Accurate forecasting and timely warnings. During the impact of Typhoon In-fa, the meteorological bureau communicated multiple times with the flood control and emergency management departments via phone, WeChat, and other means, providing timely updates on the latest forecasts and real-time conditions. The bureau issued 5 typhoon warnings, 1 strong wind warning, 4 heavy rain warnings, and 1 thunderstorm warning. Comparing these forecasts with the actual situation, the forecast conclusions were accurate, particularly in predicting rainfall, wind impact periods, and severity, which provided strong support for the district's flood control efforts. (2) Proactive decision-making support. During the impact of Typhoon In-fa, the meteorological bureau sent the latest weather information to government departments through fax and email, providing accurate data to support decision-making for district leaders and departments, ensuring safe and orderly flood and typhoon defense operations. (3) Focused action and strengthened coordination. During the impact of In-fa, the district strictly implemented a leadership shift system and 24-hour emergency duty schedule. To address high water levels in internal rivers and urban waterlogging, the meteorological bureau strengthened communication with the flood control, water affairs, and emergency management departments, providing real-time updates on the latest typhoon developments and wind and rain conditions. In collaboration with the agricultural department, the meteorological bureau issued agricultural weather service notices, advising farmers to harvest early and reinforce their facilities to minimize the impact of wind and rain. For urban traffic management, the bureau provided updates on wind and rain conditions every two hours to the metro transportation and traffic police command centers to ensure the safety of the public. (4) Broad dissemination and public service. The meteorological bureau used various channels, including WeChat, websites, TV, radio, apps, SMS, and emails, to disseminate weather forecasts and provide timely warnings and public weather services for Typhoon In-Fa. On July 22,

23, and 25, the bureau held three briefings for the public via the district's converged media center, informing them of the typhoon's path, direction of movement, future impacts, and the meteorological department's response measures. The public was reminded to stay updated on weather forecasts and to enhance their awareness of risk avoidance and self-rescue.

(3) Public engagement in addressing climate change

- **Create a "last mile" multi-faceted meteorological science popularization platform**

The meteorological education in Songjiang continues to be carried out both online and offline. Since the Songjiang Meteorological Education Base was established in 2023, it has received 25 batches of visitors, totaling approximately 4,200 people, including students from various schools such as the Wushu School in Maogang Town, Shanghai Songjiang No.2 High School, East China University of Political Science and Law, Shanghai Xiwai International Kindergarten, Xiaokunshan School, and Songjiang Yueyang Primary School. Meteorological educators from the district's meteorological bureau have visited multiple locations, including the Dongjing Town Party and Mass Service Center, Yueyang Subdistrict Community Party and Mass Service Center, Sheshan Party and Mass Service Center, Guangfulin Subdistrict Jiufengyuan Square, and Chedun Town Xiangdong Community, to provide meteorological education for residents. The district's meteorological bureau also participated in the "Virtue Nourishes Shanghai, You Are in the Clouds" summer lecture series and the "Caring Summer Day-care" courses, which covered topics on sci-tech civilization, ecological civilization, and urban civilization. These engaging lectures allowed children to broaden their horizons and gain insights into the charm of the people's city civilization. The "Cloud Weather Report" program produced 38 episodes, 32 of which were adopted and shared by the Shanghai Songjiang user account on WeChat Channels. Additionally, the bureau assisted Zhaoyang No. 11 Primary School in Zhaotong City, Yunnan Province, in establishing a meteorological observation station, launching the "meteorological science popularization + charitable assistance" initiative. The goal is to cultivate children's practical and creative abilities through hands-on activities and cooperative creation.

- **Organize key activities centered around Science Literacy Day, Meteorological Day, and the Science and Technology Festival**

Around key dates such as March 23 (World Meteorological Day), May 12 (Disaster Prevention and Mitigation Day), the Shanghai Science and Technology Festival, and National Science Literacy Day, Songjiang District has organized major themed activities such as the "Growing Under the National Flag" and "Climate Action Frontline: You, Me, and Cloud" science popularization events. During the World Meteorological Day activities, the Songjiang District Meteorological Bureau, in collaboration with the District Committee of the Communist Youth League, held the "Growing Under the National Flag" Flag-raising Ceremony for Youths and the 2023 World Meteorological Day Themed Event, which

recruited 13 families to participate in the flag-raising ceremony and science popularization activities. During the Disaster Prevention and Mitigation Day activities, the district's meteorological bureau partnered with Songjiang Yueyang Primary School to host the "Thunderstorms? No Fear!" lightning safety drill. For the 2024 World Meteorological Day on March 23, the "Climate Action Frontline: You, Me, and Cloud" science popularization event was held for the first time in the Songjiang INCITY. This event demonstrated the integration of meteorological science and technology into the community and public life, while further encouraging citizens to pay more attention to climate change, take part in climate actions, and jointly protect our Earth home.

Case 26 Conduct meteorological science popularization activities in downtown

On March 23, 2024, World Meteorological Day, the Songjiang District Meteorological Bureau expanded its promotional efforts to Songjiang INCITY, where a science popularization event was held. This innovative initiative received support from multiple departments and featured a series of engaging activities centered around the theme of "cloud". The event lasted for three days and attracted approximately 2,000 participants. In recent years, the district's meteorological department has continuously strengthened sci-tech innovation to provide meteorological support for the modernization of Songjiang New City. This event exemplified the deep integration of meteorological science and societal needs, raising public awareness of climate issues and placing participants "on the frontline of climate action".

This event marks the first time Songjiang District has extended its meteorological promotional efforts to a large shopping mall, Songjiang INCITY. The event featured several innovative approaches, as outlined below: 1) Expanding spaces for promotion. By selecting a busy shopping mall as the venue, the event broke free from the traditional confines of scientific halls and professional science popularization venues. This approach brought science closer to the public's daily life, allowing scientific knowledge and spirit to merge with people's leisure activities and enrich their intellectual lives. 2) Multi-department collaboration. The event received strong support from multiple departments and units, including the Shanghai Meteorological Museum, the Science and Technology Department of the Shanghai Meteorological Service, the Shanghai Meteorological Society, the Songjiang District Science and Technology Association, the Songjiang District Converged Media Center, and Guangfulin Subdistrict in Songjiang District. 3) Diverse activity formats. Spanning three days, the event utilized "cloud" as the central theme, creating an immersive "cloud flavor" experience. The event featured a variety of engaging activities such as informative meteorological science knowledge boards, captivating meteorological science lectures, hands-on workshops for making meteorological instruments, and fun DIY activities such as "Make a Cloud". These activities enabled citizens to gain a deeper understanding of the relationship between clouds and weather while experiencing the mysteries and charm of meteorological science. 3) Wide public participation. The event had a lively atmosphere, with active participation from the public. According to preliminary statistics, the event reached approximately 2,000 people.

This event is a concrete example of the Songjiang District Meteorological Bureau's active efforts to integrate meteorological science with societal needs. It calls on citizens to pay attention to climate change, engage in climate action, and work together to protect our Earth. As World Meteorological Day events continue to be held year after year, the issue of climate change is receiving increasing attention. This event further raised public awareness of climate issues, enhanced energy-saving and

emission-reduction consciousness, and contributed to efforts against global warming, placing participants "on the frontline of climate action".

- **Leverage the Shanghai Meteorological Education School Alliance (Songjiang) to share resources**

The district's meteorological bureau collaborates with alliance schools to share multi-level meteorological education resources, engaging in comprehensive, in-depth, and long-term cooperation on meteorological science and innovation education for youths. The bureau will also form teams of meteorological advisors in schools and utilize interdisciplinary meteorological teaching resources to conduct meteorological science exchanges, volunteer services, expert lectures, and other activities. These efforts will contribute to the development of meteorological talent with innovation and practical abilities. Songjiang District is also actively establishing schools with specialized meteorological education. Songjiang Yueyang Primary School, recommended by the Shanghai Meteorological Society, was selected as one of the third batch of meteorological education-featured schools by the Chinese Meteorological Society. In 2018, Fu Congbin, an alumnus of Songjiang Yueyang Primary School, climatologist, academician of the Chinese Academy of Sciences, and professor at the School of Atmospheric Sciences of Nanjing University, donated the "Cloud Meteorological Station" to the Yueyang Primary School. Taking this opportunity, the school launched the Cloud Meteorology curriculum, focusing on meteorological education as a breakthrough. The school organizes a series of activities every year, including meteorological field trips, meteorological-themed large-scale garden-touring games, DIY meteorological T-shirt workshops, long scroll meteorological paintings, and meteorological knowledge competitions, guiding children into the fascinating world of meteorology.

Case 27 Songjiang Yueyang Primary School conducts a series of meteorological science popularization activities

Songjiang Yueyang Primary School has a history of over 120 years, with a rich cultural heritage. The campus features ancient trees and a meteorological station donated by its alumni. The school offers a variety of meteorological courses and has designated March as "Meteorology Month". In recent years, with the support of the Songjiang District Meteorological Bureau, the school has seen an increase in meteorological education resources and expanded learning spaces. Meteorological experts regularly visit the school for guidance, and students frequently visit the meteorological station for hands-on learning. The primary school has actively collaborated with meteorological departments to explore and establish new models and methods for meteorological science popularization, resulting in a series of meteorological science activities.

(1) Special meteorological knowledge lectures

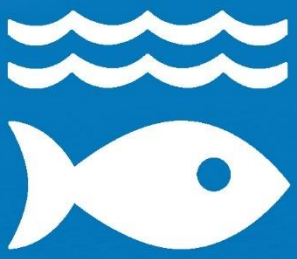
At the national meteorological science experiment and campus meteorological courseware performance event organized by the Chinese Meteorological Society, the Mini-lectures on Meiyu, jointly produced by the Songjiang District Meteorological Bureau and Songjiang Yueyang Primary School, won first place. The Mini-lectures on Meiyu are unique and stand out from regular classes, providing a sense of traveling through time. In the classroom, students, dressed in traditional Hanfu, continuously ask questions about topics such as "What is Meiyu?" and "What are the

characteristics of Meiyu?" The teacher, dressed in a long linen shirt, invites the meteorological club advisor, Gu Hantao, to answer these questions. Mr. Gu provides detailed explanations of the general concept of Meiyu, its formation causes, and its impact on production and daily life. When attentive students, observing the local Meiyu weather, ask, "Why were there several sunny days during this year's Meiyu period?" the teacher and students engage in a Q&A session and clarify that having 2 to 3 sunny days during the Meiyu period is a normal phenomenon known as the "Meiyu intermission".

(2) "100-meter Scroll Meteorological Painting" event

This event, jointly organized by the Songjiang District Meteorological Bureau and Songjiang Yueyang Primary School, is a large-scale meteorological-themed painting activity. The goal of the event is to showcase the beauty of meteorology, popularize meteorological knowledge, and increase public attention and understanding of meteorological science through children's creativity. The event received strong support from the district's education bureau, cultural bureau, and various schools. The Songjiang District Meteorological Bureau was responsible for the planning and organization of the event, guiding meteorological knowledge; the education bureau mobilized schools to participate and organized student registration; the cultural bureau assisted with venue provision and artistic guidance. The event featured a unique format, using a hundred-meter-long scroll as the canvas and inviting students to create their paintings on it. Students were encouraged to depict various weather phenomena based on their understanding and imagination, such as blue skies, white clouds, strong winds, heavy rain, rainbows, sunrises, and more. During the painting process, meteorological professionals and art teachers were on hand to provide guidance, answering students' questions related to meteorological knowledge and painting techniques. The event also exhibited a variety of methods for knowledge dissemination. For example, a meteorological knowledge display area was set up on-site, where students and their parents could learn about meteorological observation instruments, the weather forecasting process, meteorological disaster prevention, and more through panels, models, and videos. Additionally, meteorological science lectures were delivered, with experts invited to explain the mysteries and importance of meteorology. The event featured a wide range of interactive activities, including weather-related riddle games, meteorological knowledge quizzes, and more. These activities allowed students to learn about meteorology in a fun and engaging way, enhancing the enjoyment and participation of the event. To further encourage student involvement, awards were set up to recognize and reward excellent paintings.

SDG14: Life Below Water



SDG14

- SDG14 Life Below Water focuses on the protection and sustainable use of oceans and marine resources to promote sustainable development. In pursuing this goal, we can effectively promote the protection of fragile aquatic habitats, advance the establishment of a complete, effective, and fairly managed water environment ecosystem, protect the diversity of life below water, and ensure the sustainable development of fisheries.
- Located in the southwest of Shanghai, Songjiang is rich in natural resources such as green waters and lush mountains, offering the potential to create a livable, picturesque environment. However, like other regions, Songjiang also faces significant pressure to restore aquatic ecosystems. The concept of sustainable development imposes higher demands on the protection of the water eco-environment, necessitating further improvements in system completeness, technological innovation, and governance capabilities.
- In alignment with SDG14, Songjiang has been actively promoting the green and high-quality development of fisheries in recent years, strengthening and expanding its distinctive aquatic industries. Efforts have been made to advance the construction of eco-clean watersheds and achieve systematic, large-scale governance. Additionally, the district is pushing forward comprehensive management of river and lake environments, aiming to comprehensively improve the waterway environment quality across the entire region.

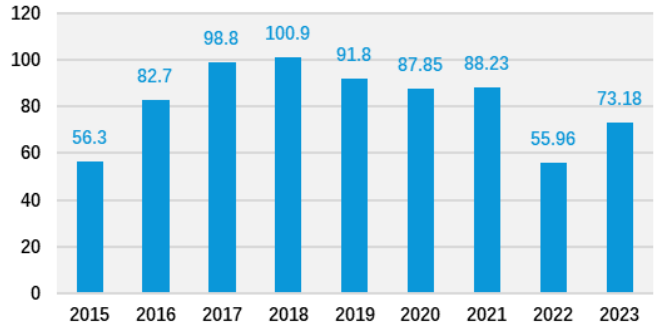
SDG14

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG14
Promote Green and High-Quality Development in Fisheries	Advance green and high-quality development of aquaculture	Achieve phase-by-phase progress in the large-scale breeding and factory domestication of mandarin fish (Siniperca chuatsi)	► Gross fishery output value (in 100 million yuan) ► Freshwater products (in10,000 tons)	SDG14.4
	Strengthen technological innovation to support the industry			
	Promote the development of the aquatic seed industry			
	Expand the advantages of distinctive aquatic industries			
Promote the construction of eco-clean watersheds	Achieve systematic, large-scale governance		► Environmental protection investment (in 100 million yuan) ► Percentage of environmental protection investment in GDP (%) ► Wastewater treatment volume (in 10,000 tons) ► Urban wastewater treatment rate (%) ► Total length of rivers with sewage discharge outlets inspected and remediated (in kilometers) ► Water quality compliance rate at national and municipal assessment sections (%)	SDG14.1 SDG14.2
	Implement the "agriculture, forestry, and water" integrated plan	Maogang Town Huangqiao Village Eco-clean Watershed Demonstration Site		
Push forward comprehensive management of river and lake environments	Advance dredging and governance of medium and small rivers	Dianpu River Takes on a New Look with Clear Water and Green Banks		
	Implement the clear water protection program			
	Renovate sewage discharge outlets in water source protection areas			

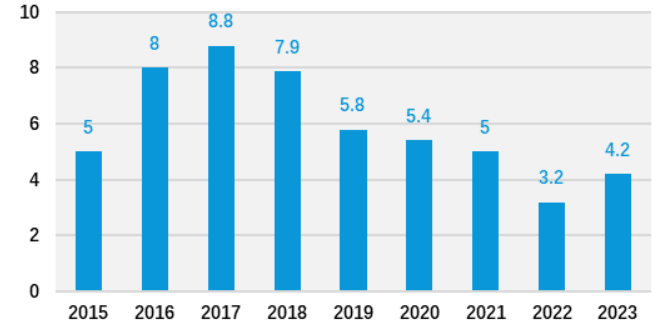
Key Indicators

Environmental protection investment (in 100 million yuan)



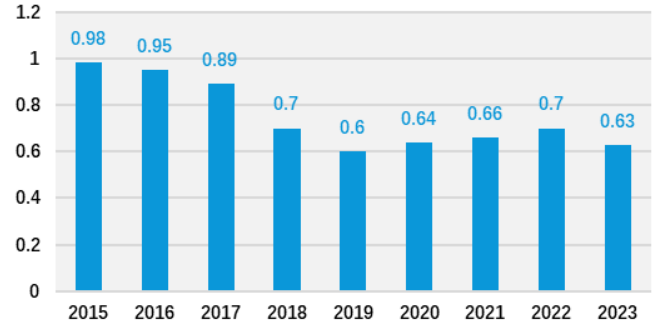
From 2015 to 2023, the annual environmental protection investment averaged **8.1 billion yuan**.

Percentage of environmental protection investment in GDP (%)



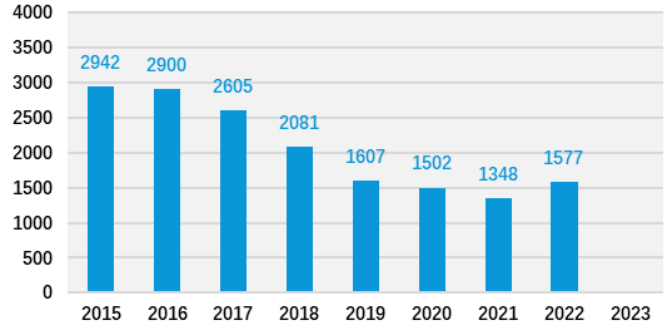
From 2015 to 2023, the percentage of environmental protection investment in GDP averaged about **5.9%**.

Gross fishery output value (in 100 million yuan)



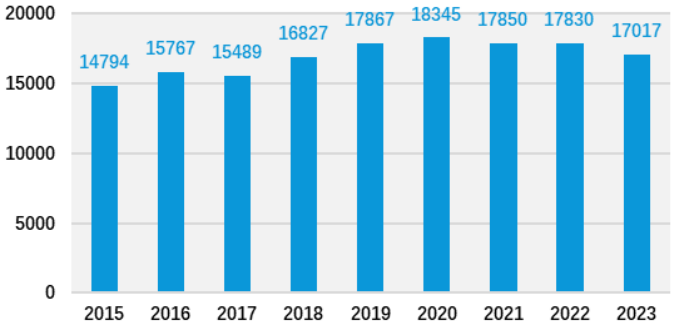
From 2015 to 2023, the gross fishery output value remained stable at an average of **75 million yuan** annually.

Freshwater products (in 10,000 tons)



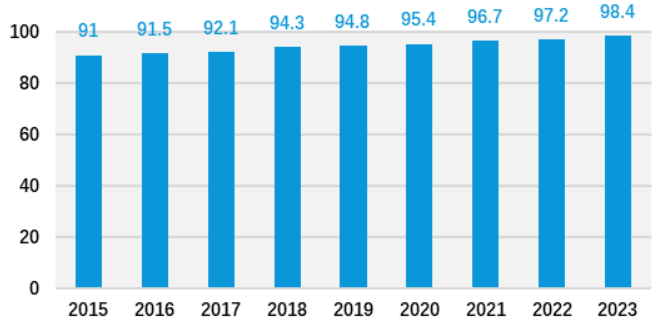
From 2015 to 2022, the output of freshwater products dropped by **46.4%**.

Wastewater treatment volume (in 10,000 tons)



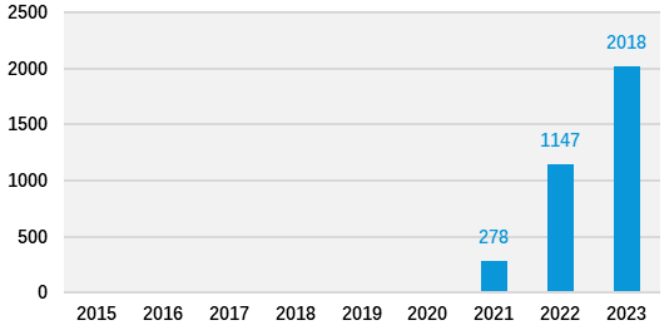
From 2015 to 2023, the wastewater treatment volume increased by **15.0%**.

Urban wastewater treatment rate (%)



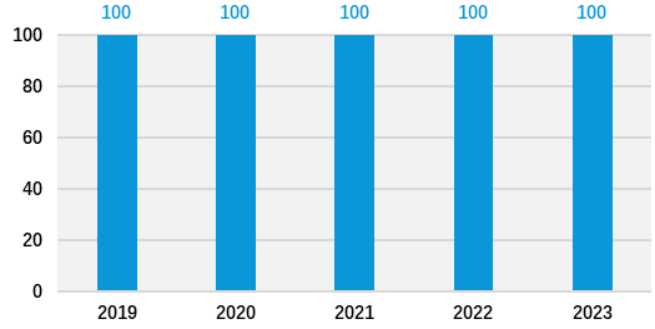
From 2015 to 2023, the urban wastewater treatment rate increased from 91% to **98.4%**.

Total length of rivers with sewage discharge outlets inspected and remediated (in kilometers)



By 2023, the inspection and remediation of sewage discharge outlets for rivers had covered a total length of **2,018 km**.

Water quality compliance rate at national and municipal assessment sections (%)



Since 2019, the water quality at national and municipal assessment sections **has fully met the standards**.

Major Progress

The Full Coverage of Green Production Models is Achieved in Aquaculture

Guided by the concept of green development, Songjiang District has actively promoted green production models in aquaculture, innovated technologies and applications, enhanced seed industry development, and strengthened distinctive industries. These efforts have led to positive results in advancing the green and high-quality development of the aquaculture industry. Three national-level key bases, one municipal-level key base, three demonstration bases for green farming of high-quality crabs, and ten demonstration farms for healthy aquaculture for the "Five Major Actions" in promoting green and healthy aquaculture technologies have been successfully established.

Aquaculture Technologies See Significant Improvement

Songjiang District has focused on the innovation and application of core production technologies, with science and technology projects progressing steadily. The district has developed the "Songjiang Model" for farming Chinese mitten crabs (Eriocheir sinensis). Localized breeding of large-sized Australian redclaw crayfish (Cherax quadricarinatus) seedlings has been successful, and the localized breeding and factory domestication of mandarin fish (Siniperca chuatsi) has made significant progress. The development of the distinctive aquatic seed industry has significantly advanced, with three aquaculture seed companies expanding (one national-level quality seed farm and two district-level quality seed farms). The "Pujiang No. 1" species of Wuchang bream (Megalobrama amblycephala) has been successfully preserved, selected, and promoted, while the preservation of roughskin sculpin (Trachidermus fasciatus) remains stable. The "Jianghai 21" variety of Chinese mitten crab has reached 100% quality seed coverage in key breeding farms, and one parent breeding base for "Jianghai 21" Chinese mitten crabs has been established. Additionally, one breeding base for Australian redclaw crayfish seedlings has been created. The Chinese mitten crab industry cluster has achieved high-quality development. The district has adhered to the complementary approach of the "Jianghai 21" quality seed selection and the "Songjiang Model", continually enhancing and innovating the "Songjiang Model" to provide technical support for the growth of the industry cluster.

Water Quality Steadily Improves

Songjiang District is located in the upstream section of the Huangpu River, running from east to west. It is influenced by water from Dianshan Lake, Taipu River, and Zhejiang Province, and discharges into the sea via the Huangpu River. The district is home to three major tributaries of the Huangpu River: Xietang, Yuanxiejing, and Damaogang. In recent years, the water quality in Songjiang District has steadily improved. From 2020 to 2023, the water quality at national and municipal assessment sections in Songjiang fully met the

required standards, with the proportion of water quality classified as better than Class III (including Class III) increasing from 83.3% to 95.7%. In 2023, two of the four national assessment sections met the Class II water quality standards, while two of the 23 municipal assessment sections exceeded the target class water quality standards. Among the 507 town-level and above assessment sections, 475 met or exceeded Class III water quality standards, accounting for 93.7%.

- **Wastewater Treatment Capacity Continues to Enhance**

Songjiang District has been continuously improving its wastewater treatment capacity, addressing water pollution at the source. In November 2023, the Songjiang Western Wastewater Treatment Plant Phase III expansion project was completed and put into operation. The project innovatively adopted a "semi-underground, single-layer covered" design, making land use more efficient and environmentally friendly. After the expansion, the plant's treatment capacity nearly doubled, increasing from the original 100,000 cubic meters per day to 195,000 cubic meters per day. In addition, during the 14th Five-Year Plan period, Songjiang has been advancing projects such as the expansion and reconstruction of the Songjiang Wastewater Treatment Plant Phase IV, the Songshen Wastewater Treatment Plant Phase III, and the Songdong Wastewater Treatment Plant Phase IV. Once completed, Songjiang's wastewater treatment capacity will increase from the current 511,000 cubic meters per day to 768,000 cubic meters per day.

- **Aquatic Biodiversity is Restored**

Songjiang District has strengthened the regulation of illegal fishing activities, enhancing collaboration between district-level and town-level fishing and water management departments. The district has actively implemented the "Net Removal 2023" campaign and the "Linking Administrative Law Enforcement and Criminal Punishment" approach to combat illegal fishing. This includes the removal and banning of illegal fishing nets, punishing destructive activities like electrofishing, and protecting fishery resources in natural waterways and rivers. The district has adopted a "three-dimensional" control approach, utilizing smart fisheries monitoring systems that combine human oversight with technology, allowing for round-the-clock, efficient electronic video surveillance of key locations and waters. This has shifted the focus from passive inspections to proactive early warnings. Local river chiefs and agricultural and rural departments are also guided to promote legal education and conduct joint river patrols, removing illegal fishing gear such as earth cages. As a result, illegal net fishing has significantly decreased, and the special regulation campaign has achieved notable results. Songjiang District has organized activities to release and replenish aquatic biological resources. This initiative aims to conserve and utilize these resources effectively, enhance the overall management level of aquatic biological resource conservation, improve the ecological environment of water bodies, achieve sustainable fishery development, promote harmony between humans and nature, and maintain aquatic biodiversity.

Important Measures

(1) Promote Green and High-Quality Development in Fisheries[①]

- **Advance green and high-quality development of aquaculture**

Songjiang District has focused on the "Five Major Actions" in promoting green and healthy aquaculture technologies, tailored to the local aquaculture situation and development needs, actively promoting the green development of aquaculture to ensure the safety and quality of aquatic products. In 2023, 17 business entities in the district successfully passed Shanghai's assessment for green production in aquaculture. The district also provided technical guidance for the establishment of 2 demonstration farms for healthy aquaculture and 4 bases for green production in aquaculture. The Shennong Koudai system recorded a total of 122,908 on-site and online checks throughout the year, with an exceptionally low non-compliance rate of 1‰, showing significant improvement compared to the previous year.

- **Strengthen technological innovation to support the industry**

Songjiang District, driven by scientific research projects, has implemented various sci-tech development policies and promoted deep collaboration between industry, academia, and research institutions. The district actively built the Songjiang Aquaculture Technology Innovation Platform to enhance the technological depth of aquaculture. To strengthen research on aquaculture technologies for distinctive fish species, Songjiang District Aquatic Station applied for and successfully obtained approval for the Shanghai agricultural science and technology innovation project titled Research on Large-Scale Breeding and Factory Domestication Techniques for Mandarin Fish. Additionally, four municipal-level technology-boosted agriculture projects are currently under research. At the same time, the district has actively pushed forward the district-level trials on "Aquaculture Technology Innovation and Promotion". Leveraging its "Five Major Actions" key bases, the district has carried out aquaculture technology innovation experiments, including "flow tank + largemouth bass (Micropterus salmoides)" pond engineering-based recirculating water culture and comparative trials of different sizes of Australian redclaw crayfish seedling cultivation. These trials aim to optimize the structure of aquaculture species, improve the overall farming efficiency, and enhance the role of key bases in demonstrating and leading integrated technical models, thereby promoting the green and high-quality development of aquaculture. To comprehensively enhance the skills of farmers and technicians, six centralized technical training sessions were held throughout the year, training 83 people. In total, 252 on-site guidance sessions were conducted,

① Source: [Review of Rural Revitalization Efforts] Promoting Green and High-Quality Development of Aquaculture to Aid Rural Revitalization, https://www.songjiang.gov.cn/govxxgk/SHSJ3/2024-02-20/146461ba-a68d-48bb-b03c-a270b1ee41aa.html

benefiting 433 farmers, with 136 publicity materials distributed. The guidance focused on healthy farming techniques, green production practices, and the management of aquatic product quality and safety.

- **Promote the development of the aquatic seed industry**

The aquatic seed industry is a strategic and foundational core sector in fisheries. It is essential for ensuring the safe and effective supply of aquatic products and promoting the green, high-quality development of aquaculture. In 2023, the Songjiang District Aquatic Station continued to focus on the cultivation of high-quality Chinese mitten crabs - "Jianghai 21", establishing the largest "Jianghai 21" parent base to date. This base continues to provide high-quality parent crabs for the annual quality seed selection and breeding. Currently, the district has set up three demonstration bases for green farming of high-quality river crabs, with the "Jianghai 21" quality seed coverage reaching 100%, far exceeding the city's average level. Additionally, efforts have been actively made to preserve and selectively breed the "Pujiang No. 1" species of Wuchang bream and the roughskin sculpin. In 2023, the "Pujiang No. 1" species of Wuchang bream produced 60.4 million fry and 22 million fingerlings, while the roughskin sculpin produced 130,000 fry and 70,000 fingerlings. In the artificial breeding and feed-based domestication of mandarin fish, the factory-based workshops produced over 6,000 fingerlings (with an average size of 5 cm) and successfully domesticated over 4,000 of them, with a domestication success rate of approximately 70%.

- **Expand the advantages of distinctive aquatic industries**

To further enhance and innovate the "Songjiang Model" for Huangpu River hairy crabs, 2023 saw the implementation of experimental studies on the "river crab + oriental river prawn" multi-nutrient level farming model, the "June hairy crab + giant river prawn" dual species farming model, and two types of composite aquatic plant cultivation models. In collaboration with universities, research institutions, and other industry-academic-research entities, joint trials on substitute compound feed for river crabs were conducted to replace mixed juvenile fish. These efforts provide technical support for the development of the river crab industry cluster and promote the improvement and efficiency enhancement of the river crab industry. Research and surveys were carried out on river crab farming models, and training sessions on Huangpu River hairy crab farming techniques were organized. In addition, the "field school" under Shanghai Yuyue Aquatic Professional Cooperative provided on-site observation and guidance services. Throughout the year, 44 individuals participated in training sessions, 63 received on-site guidance services, and 225 benefited from remote guidance services.

Case 28 Achieve phase-by-phase progress in the large-scale breeding and factory domestication of mandarin fish (Siniperca chuatsi)

After the successful artificial breeding of mandarin fish, Songjiang District further overcame the technical challenges of factory-based domestication using compound feed for juvenile fish. A total of 24 parent groups of mandarin fish were induced to spawn artificially, resulting in the

hatching of 690,000 fry. Factory cultivation produced 100,000 juvenile fish ranging from 3-5 cm. After two weeks of feeding training, the factory domestication rate reached 81.5%, with a survival rate of 89.4%. This marked a preliminary breakthrough in the localized breeding and factory domestication of mandarin fish.

The leader of the quality seed farm explained that initially, live bait was used to open the fish's mouth, but gradually, the feed was mixed in until it completely replaced the live bait. Using live fish as bait not only increased breeding costs but also posed a significant risk, as live fish are often carriers of pathogens that can severely affect the survival rate of mandarin fish. Therefore, the Songjiang District Aquatic Station, the East China Sea Fisheries Research Institute of the Chinese Academy of Fishery Sciences, and Shanghai Songjiang Aquatic Breeding Farm Co., Ltd. collaborated to research factory farming techniques for mandarin fish, actively exploring factory-based farming modularization and pond-to-factory relay farming models. This marks the first integrated and large-scale research on breeding, cultivation, domestication, and farming techniques for mandarin fish in Shanghai.

The objective of this experiment is to promote the high-quality development of modern facility fisheries in Songjiang District, based on the district's advantages in the aquatic seed industry. It focuses on expanding production capacity, optimizing structure, and improving layout, and aims to explore factory-based farming modularization and pond-to-factory relay farming models.

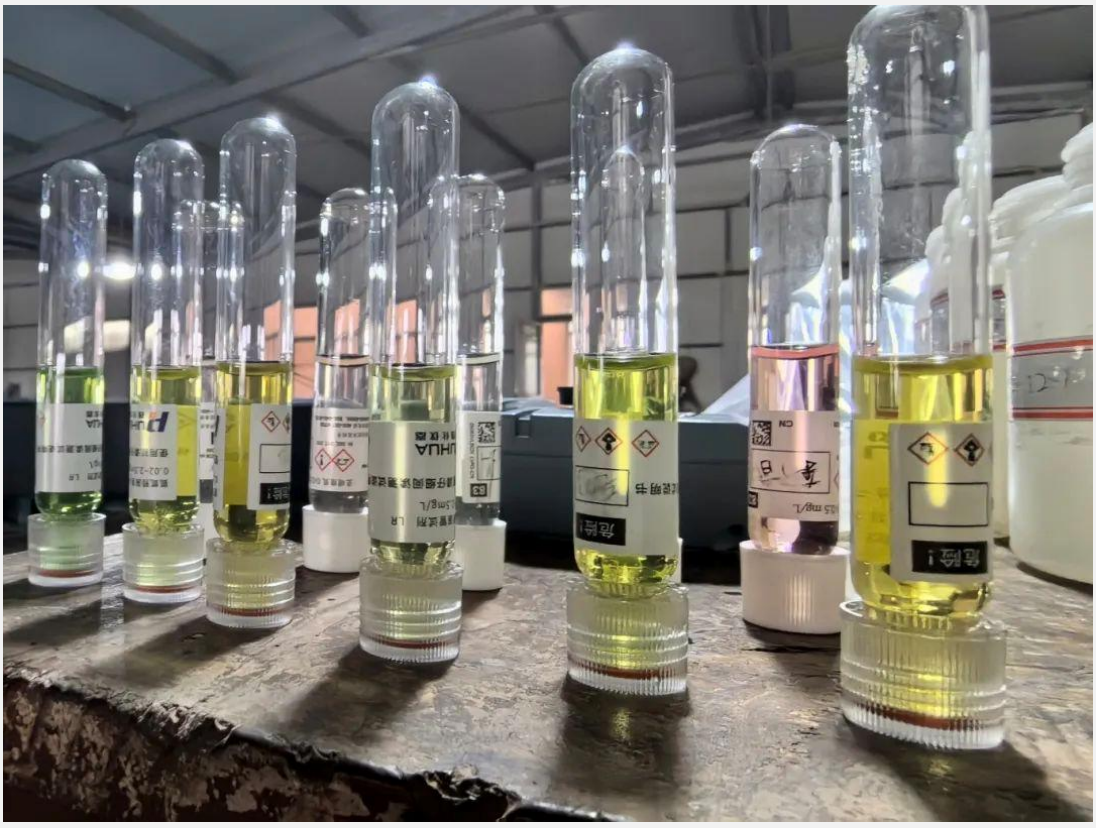


Figure 29 Cultivation of Mandarin Fish Fingerlings

(2) Promote the construction of eco-clean watersheds

- **Achieve systematic, large-scale governance** ①

Since the implementation of the 14th Five-Year Plan, Songjiang has shifted its overall water environment management goal from simple water improvement to the restoration of water ecosystems. The approach has evolved from focusing on individual river section treatment to centralized, large-scale management, with a shift from pollution source control to comprehensive ecological governance. Additionally, the district has successfully established 10 district-level demonstration units for eco-clean watersheds, including Dangwan Village in Xiaokunshan Town, Dongxia Village in Shihudang Town, Huangqiao Village in Maogang Town, and Nanyang Village in Xinbang Town. Moreover, Yongfeng Village, Dangwan Village, and Tangcun Village in Xiaokunshan Town were successfully designated as city-level demonstration sites.

Figure 30 Autumn Scenery of Huayinggang River ②

- **Implement the "agriculture, forestry, and water" integrated plan**

Songjiang District has consistently synchronized watershed management with the pilot construction of small towns. By implementing the "agriculture, forestry, and water" integrated plan, the district aims to restructure a river network system that is connected,

① Source: Songjiang: Entering a New Stage of Water Management, Exploring the Development Path of Eco-clean Watersheds, https://m.jfdaily.com/sgh/detail?id=1162219

② Image source: Shanghai Eco-clean Watershed Demonstration Case Series - Modern Agricultural Demonstration Watershed in Xiaokunshan Town, Songjiang District, https://new.qq.com/rain/a/20230101A03KIT00

accessible, smooth, and vibrant. High-standard farmland is being planned and developed, with the implementation of green agricultural practices, effectively controlling agricultural non-point source pollution. In addition, through projects such as the "Four Good Rural Roads" and agricultural protective forest networks, the district has reorganized its mountains, waters, forests, fields, roads, and villages, bringing about a revitalization of the region. This approach has paved the way for an innovative path toward promoting the ecological recovery of rivers and lakes.

Case 29 Maogang Town Huangqiao Village Eco-clean Watershed Demonstration Site

The Huangqiao Village watershed is located in Maogang Town, Songjiang District, within the upper reaches of the Huangpu River water resource protection zone, covering a total area of 3.29 square kilometers. The area includes 12 sections of rivers, with a total length of 13.24 kilometers. Through the construction of eco-clean watersheds, combined with features such as rural homestead relocation and ecological riverbank protection, the area has formed a harmonious relationship between people and water, with clear rivers, smooth waterways, green banks, and beautiful landscapes. This has effectively enhanced the overall function of the eco-clean watershed and achieved significant ecological, economic, and social benefits, writing a new chapter in rural revitalization.

Huangqiao Village has completed the water quality improvement and agricultural non-point source pollution control project for the Pujiangyuan River, restoring five rivers and installing 2,330 biological bed water quality improvement devices. These were supplemented with regular micron-level aeration & oxygenation equipment, biological floating islands, and biofilm colonization measures. In total, 1.21 kilometers of near-shore emergent plant zones and 4,660 square meters of underwater forest were built. At the same time, the construction of an agricultural ecological drainage system significantly reduced non-point source pollution emissions in the area, leading to a noticeable improvement in the overall environmental quality of the agricultural fields and water systems.

In line with the construction of the model villages for rural revitalization, a series of water system, greening, and landscape enhancement projects were carried out. The main materials used for ecological riverbank and slope protection included ecological blocks, wooden piles, imitation wooden piles, and sloped greening, resulting in a 2.7-kilometer riverbank and slope comprehensive improvement project. This effectively enhanced the ability to prevent soil erosion and control water and soil loss in the river and lake systems. Dredging of the Beishierqin River and Beishibaqin River was carried out, removing 8,339.57 cubic meters of silt. Based on sediment tests, the soil was returned to fields or forests, achieving resource recycling by reusing the water and soil lost due to surface erosion, thus reducing net soil loss.

At the same time, relying on high-quality water sources and leveraging mechanized production and smart management, Maogang Town has focused on developing the "Songjiang Rice" core production area. This initiative achieved full certification for green rice in Huangqiao Village. The rice also won a state-recognized gold award in the national evaluation of rice taste and quality. At the end of 2020, Huangqiao Village became the first village in Shanghai to implement the "collective construction land entering the market" policy. In collaboration with Lingang Songjiang Science and Technology Town, they established the Caohejing Development Zone Huangqiao Science Park, which generated tax revenue of 35 million yuan.

Figure 31 Water Ecosystem Restoration of Pujiangyuan River

(3) Push forward comprehensive management of river and lake environments

- **Advance dredging and governance of medium and small rivers**

Songjiang District primarily focuses on water ecosystem restoration through dredging and ecological restoration of small and medium rivers. In Sijing Town, the urban river water quality enhancement and water ecosystem restoration project was implemented. This project uses LID (Low Impact Development) ecological dams with multi-stage filtration and purification facilities to intercept pollution sources, and further adsorb, degrade, and filter contaminants. Additionally, it enhances the riverbank landscape by adding near-shore plant zones, biological nesting and emergent plant zones, and ecological floating islands. Other subdistricts and towns in the district also adopted different water purification solutions based on the characteristics of each river. The primary approach for river management in these areas includes riverbank restoration and railing repairs. These efforts aim to ensure the prevention of soil erosion and safeguard the safety of riverbanks.

Case 30 Dianpu River Takes on a New Look with Clear Water and Green Banks [①]

The Diannpu River begins in Dianshan Lake to the west and flows eastward to the Huangpu River. It is a backbone river in the Jiuting Town of Songjiang District. The river crosses the town from west to east, like a green ribbon embedded in the city. Quietly weaving through towering

① Source: Songjiang: Multiple Measures to Strengthen Governance, Clear Waters and Green Banks Revitalize Diannpu River, https://www.thepaper.cn/newsDetail_forward_26946046

buildings and bustling streets, it brings a sense of tranquility and vitality to the busy Jiuting area.

Figure 32 The Banks of Dianpu River

The Diannpu River has undergone multiple phases of development, from its initial segmented dredging to its final excavation and completion. In 1958, the planning and management of the Puhuitang (now Diannpu River) was initiated, with water being discharged eastward into the Huangpu River. In November 1958, workers from Qingpu, Songjiang, and Shanghai counties were organized to oversee the construction in their respective river sections. During the winter of that year, Qingpu County began the planning and dredging of Puhuitang, covering a distance of 17.8 kilometers. In December 1971, Qingpu County conducted a second round of dredging on the Diannpu River, with the dredging area stretching from Beigan Mountain in the west to Datieqiao in the east. In October 1976, the river was dredged again, and the joint manual excavation was completed by 1977, marking the successful opening of the entire river section.

In 2017, Songjiang District initiated the Diannpu River Channel Renovation (Phase I) project, which led to the creation of the Diannpu River waterfront green landscape zone in Jiuting Town. A 20-li-long (10,000-meter-long) landscape fitness and cycling path was built along the riverbanks, offering residents a chance to enjoy a healthy and quality life with green banks, clear waters, and opportunities for fitness and leisure. In 2023, the Diannpu River Channel Renovation (Phase II) project was completed, continuing and optimizing the Phase I plan. A new pedestrian walkway and a cycling path were constructed on both sides of the river, ensuring the separation of pedestrians and vehicles. The addition of landscape greening, railings, lighting, and recreational seating facilities created a distinctive ecological non-motorized system.

Today, willows line the riverbanks, their branches gently swaying in the breeze. The river's surface reflects the sky and surrounding buildings, creating picturesque scenes that resemble impressionistic paintings. Strolling along the river, one can feel the fresh air and the refreshing moisture. Removed from the hustle and bustle, this tranquil space seems to merge with nature. The transformation of the Diannpu River from its manual excavation days to the completion of the waterfront green landscape zone symbolizes the era of urban ecological civilization development in Jiuting, while also embodying the vibrant spirit of a city that continues to rise.

- **Implement the clear water protection program** [1]

Songjiang District continues to implement a "Red-Yellow-Green" tiered and categorized management approach for the health status of rivers and lakes, as well as key water control tasks. Relying on the work briefings of the River and Lake Chief System and water-related issue dispatch forms from the district's River Chief Office, the district strengthens progress reporting, rankings, and the clearance of action items to push forward key water control initiatives. Songjiang has optimized the "One Polder, One Plan" customized approach based on regional characteristics, achieving a shift from "treating poor water" to "preserving good water". A total of 84 rural polder areas in the district have achieved the smooth flow of water through "one tide connecting hundreds of rivers", and the control sections have maintained two consecutive years without inferior Class V water quality. The proportion of good water in the 1,646 river, pond, and harbor sections across the region has steadily increased. Songjiang further leverages the demonstration effect of its national ecological water conservancy scenic areas and steadily advances the improvement of waterfront spaces in areas such as Songjiang Shihe and Xiatang Historic Zone of Sijing Town, creating more appealing rivers and lakes that attract people from near and far, while continuously enhancing Songjiang's reputation for water management.

- **Renovate sewage discharge outlets in water source protection areas** [2]

Songjiang District actively promotes the investigation and remediation of river-bound sewage discharge outlets. In 2023, Songjiang took the lead in the city by completing the comprehensive investigation and traceability of all river-bound sewage discharge outlets. A total of over 52,000 outfalls were investigated, and the focus was on rectifying issues in water source protection areas. Within the water source protection areas, there are 6,339 river-bound outfalls, 1,197 of which were identified as problematic. By the end of 2023, 1,192 of these outfalls had been remediated, achieving a remediation rate of 99.6%. Remediation plans for the remaining outfalls, related to rural wastewater treatment facilities, have already been developed.

[1] Source: Shanghai Water Conservancy Development Trends - Series on Advanced Experiences | Songjiang: "Three-Pronged" Governance Model Drives Steady Progress in the Battle for Clear Water, https://new.qq.com/rain/a/20231030A085BF00

[2] Source: With Water Flowing from Water Sources, Songjiang Receives Excellent Results in the Assessment of Ecological Compensation for Water Sources Since the Beginning of the "14th Five-Year Plan" Period, https://www.songjiang.gov.cn/xwzx/001002/001002011/20240506/83c97fe8-fc93-4108-b22b-2bfc4fd79bb0.html

SDG16: Peace, Justice and Strong Institutions

SDG16

- SDG 16 Peace, Justice, and Strong Institutions focus on creating a peaceful and inclusive society to promote sustainable development, ensuring that everyone has access to justice, and establishing effective, accountable, and inclusive institutions at all levels. Through the implementation of this goal, basic rights for all residents can be further protected, fostering a fairer and more just social environment, where different groups receive full inclusion and respect.
- Under the strategic framework of deeply practicing the important concept of the People's City and accelerating the construction of a modernized new Songjiang characterized by science, innovation, culture, and ecology, Songjiang needs to further advance the modernization of urban governance, promote the creation of a community where everyone participates, takes responsibility, contributes, and shares in urban governance, and become the best practice ground for whole-process people's democracy.
- In alignment with SDG16, Songjiang has actively promoted the construction of a Safe Songjiang in recent years, focusing on reducing road traffic accidents, improving social fire safety, and enhancing safety production levels. Additionally, the district has promoted the construction of a law-based government, improved the local government system construction mechanism, elevated the standards of administrative law enforcement, and built a high-standard public legal service system. Furthermore, Songjiang has actively encouraged the development of social organizations and formulated a support policy system that matches the results of grade evaluations, thereby promoting the participation of social organizations in social governance.

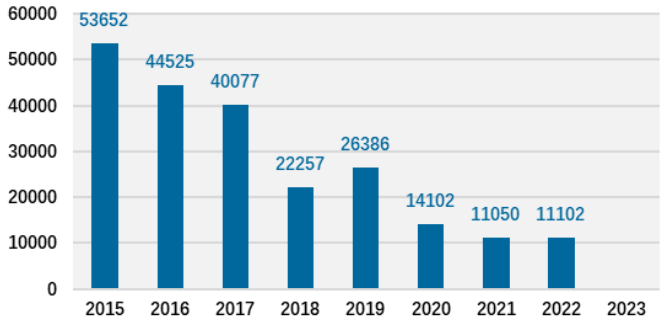
SDG16

Response Framework

Important Measures	Specific Practices	Typical Cases	Key Indicators	Response to SDG16
Safe Songjiang construction	Enhance the intelligent management of traffic law enforcement		► Number of public security cases handled by public security organs ► Number of criminal cases filed by public security organs ► Number of production safety fatalities ► Number of fatalities in production safety accidents per 100 million yuan of GDP ► Number of traffic accidents	SDG16.1
	Refine governance at accident-prone intersections	Refined Renovation of Wenxiang East Road (Lianyang Road)		
	Comprehensively improve the fire prevention system			
	Continuously carry out fundamental safety production improvement actions			
Build a law-based government	Improve the local government system construction mechanism		► Number of civil litigation cases handled by lawyers ► Number of civil disputes mediated by people's mediation	SDG16.3 SDG16.5 SDG16.6 SDG16.7 SDG16.8 SDG16.b
	Continue to elevate the standards of administrative law enforcement			
	Strengthen the restriction and supervision on administrative power			
	Advance the construction of a high-standard public legal service system	The Legal Service Digital Platform is launched at the Songjiang Flagship Store		
	Create a modern public legal service brand through resource aggregation	Industry Cluster + Legal Service: Empower Songjiang Enterprises with Legal Intelligence		
Social organization development	Promote social organization grade evaluations		► Number of social organizations at the end of the year	
	Support the development of social organizations			
	Promote the participation of social organizations in social governance			

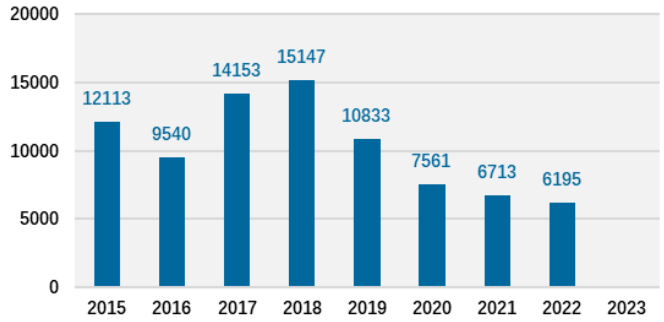
Key Indicators

Number of public security cases handled by public security organs



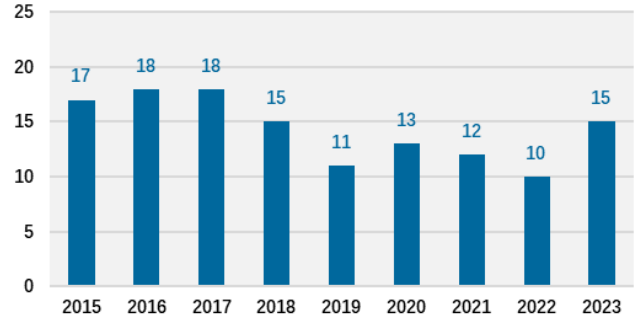
From 2015 to 2022, the number of public security cases handled by the public security organs decreased by **79.3%**.

Number of criminal cases filed by public security organs



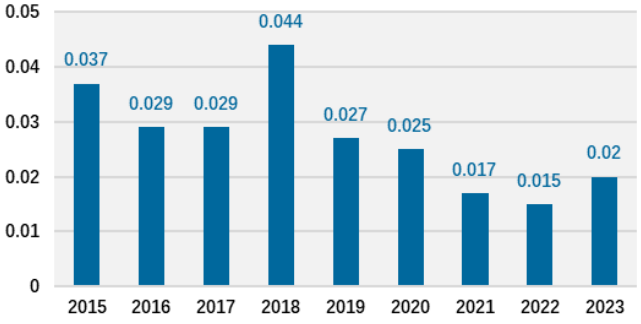
From 2015 to 2022, the number of criminal cases filed by the public security organs decreased by **48.9%**.

Number of production safety fatalities



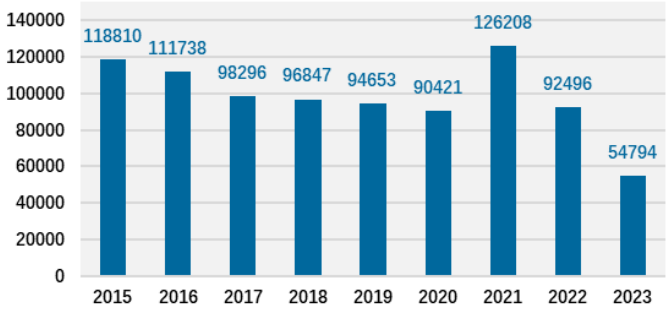
From 2015 to 2023, the number of production safety fatalities each year remained below **20**.

Number of fatalities in production safety accidents per 100 million yuan of GDP



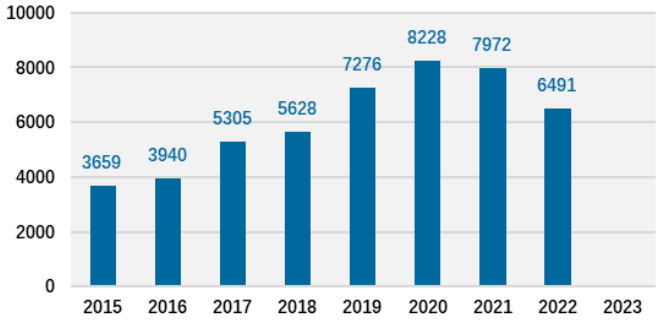
From 2015 to 2023, the number of fatalities in production safety accidents per 100 million yuan of GDP **decreased by 59.5%**.

Number of traffic accidents



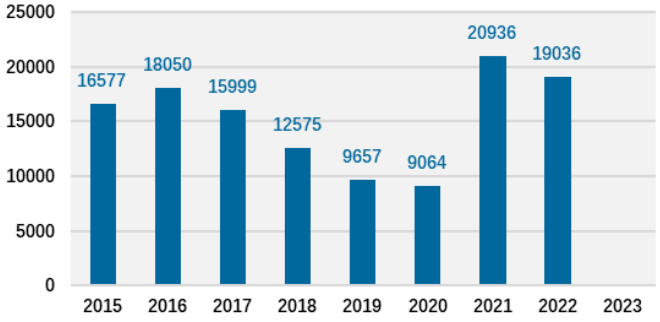
From 2015 to 2023, the number of traffic accidents decreased by **53.9%**.

Number of civil litigation cases handled by lawyers



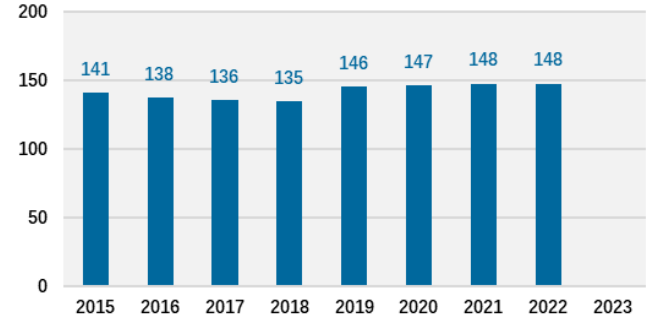
From 2015 to 2022, lawyers handled over **50,000** civil litigation cases.

Number of civil disputes mediated by people's mediation



From 2015 to 2022, over **120,000** civil disputes were mediated by people's mediation.

Number of social organizations at the end of the year



From 2015 to 2022, the number of social organizations increased from 141 to **148**.

Major Progress

Traffic Safety Sees Significant Improvement [1]

In recent years, through a series of effective measures, Songjiang District has significantly alleviated traffic congestion and parking difficulties in some new urban areas. The Shanghai Public Security Bureau Songjiang Branch has carried out special actions such as "reducing the number of accidents and preventing serious ones". In 2022, over 656,000 traffic violations were handled, and more than 430 people suspected of dangerous driving were apprehended. Focusing on the three main goals of safety, smoothness, and order, traffic safety hazards were further investigated and addressed. For instance, the right-turn warning zones at 34 intersections prone to pile-up collisions involving large cargo vehicles were optimized, and two accident-prone roads were addressed. Additionally, seven standardized intersections and nine reversible lanes were constructed. As a result, the number of traffic accidents that caused fatalities and the number of fatalities in traffic accidents across the district decreased by 22.68% and 29%, respectively, compared to 2022. The traffic organization and management in the urban area have significantly improved. In a survey, 51.7% of citizens believed that the traffic conditions on roads in Songjiang New City were continuously improving, while 32.6% thought they had improved somewhat.

Social Security Environment Continues to Improve [2]

In terms of social security management, the Shanghai Public Security Bureau Songjiang Branch has implemented the "Preventive Policing" approach, taking proactive actions, intervening in advance, and dynamically addressing issues, further advancing the construction of the social security and prevention system. It has assessed the public security situation through multiple dimensions, referencing the requirement of instant handling within 5 minutes. In addition, 21 key patrol points were added to areas of focus, including 9 subway stations, major commercial areas, and scenic spots. Furthermore, 19 areas with complex security situations were put under special management, with more than 220 joint inspections organized. Over 430 cases were solved, and more than 510 criminal suspects were arrested, leading to significant improvements in order and security. These issues have been delisted as scheduled. According to a report from the Shanghai Public Security Bureau Population Management Office at the end of December 2022, Songjiang District ranked first in the city with a real population registration rate of 99.34%, and second in the city with an accuracy rate of 97.87%. Moreover, significant results were achieved in the prevention and control of telecom network fraud, with a 5.9% year-on-year decrease in reported fraud cases. The related strategies and practices have been promoted

[1] Source: Research Report by the Standing Committee of the Songjiang District People's Congress on Improving Traffic Organization and Management in Songjiang New City, https://qrd.songjiang.gov.cn/contents/33/1585.html

[2] Source: The Shanghai Public Security Bureau Songjiang Branch Delivers an Impressive Annual "Report Card", https://www.songjiang.gov.cn/ztzl/005019/005019001/20230111/3e4426ee-105c-4ae5-bd52-f9e1cb34af48.html

citywide.

- **The Safety Production Situation Remains Stable and Controllable** [1]

Songjiang District adheres to the principle of "people first, life first" and continues to carry out safety hazard investigations and rectifications. The district's safety production governance capabilities and levels have significantly improved, and the overall safety production situation is stable and controllable. The safety responsibility system has been continuously perfected. The district has made full use of the district's safety production committee and specialized committee, improving the "three managements and three musts" safety responsibility supervision system. A safety supervision responsibility list for 12 new industries and emerging business formats, as well as areas with unclear responsibilities, has been clarified, and efforts to ensure the implementation of corporate safety responsibilities have been continuously promoted. The rectification of safety hazards has been steadily advancing. From 2015 to 2023, over 1.12 million safety production hazards were rectified. Since 2023, special efforts have been made to address major accident hazards. As of now, 291 major accident hazards have been rectified, and the district's risk prevention capabilities have been significantly enhanced.

- **Fire Safety Shows Overall Improvement** [2]

Songjiang District has continuously increased its investment in grassroots fire prevention, firefighting and rescue, and public fire safety facilities. The district currently has 15 standardized fire stations, with 3 more under construction. There are 8 subdistrict, town, and corporate fire brigades, 682 micro fire stations, over 40,000 sets of firefighting equipment, and more than 30,000 fire safety volunteers. The fire safety environment has been consistently improved. The district has continued to carry out special governance in areas such as crowded places, self-built rural houses, factory warehouses, cold chain logistics, electric bicycles, and fire escape routes. In 2022, Songjiang District identified 2,667 fire hazards during inspections and urged the rectification of 2,625 of these hazards, achieving a rectification rate of 98.43%. The rectification of key fire risks, such as at Songyun Shuiyuan, is progressing in an orderly manner. Additionally, residents' fire safety awareness has been continually enhanced. Fire safety awareness campaigns, such as the "119" Fire Safety Month, have been extensively promoted. Over 200,000 people participate in fire evacuation drills each year. Through the placement of public service advertisements and the sending of reminder text messages, fire safety notifications have been widely covered across the district.

[1] Source: Shanghai Songjiang District People's Congress, https://qrd.songjiang.gov.cn/contents/27/12047.html

[2] Source: Shanghai Songjiang District People's Congress, https://qrd.songjiang.gov.cn/contents/128/12290.html

Three Norms in Government Governance Continue to Improve

In recent years, the level of standardization, proceduralization, and rule of law in government governance in Songjiang District has continuously improved. The management of normative documents has become stricter and more orderly. The mechanisms for legality review and filing supervision have been strengthened and perfected. The evaluation and cleanup of normative documents are progressing steadily, leading to improved document quality. The drafting process for these documents is lawful, with precise language and no contradictions with higher-level laws, effectively adapting to the new requirements and tasks of the rule-of-law construction. The decision-making mechanism is lawfully sound. The district government's functions have expanded and deepened, forming a strong synergy in areas such as multi-level supervision, strict accountability, performance evaluation, and rule-of-law inspections. The institutionalization of major administrative decision-making processes is yielding results, ensuring that decision-making risks are manageable and the overall quality of decision-making continues to improve.

Restriction and Supervision of Administrative Power are Scientific and Effective

In recent years, Songjiang District has continuously improved the quality and effectiveness of government transparency. The district has integrated government transparency into its overall work plan, adhering to the principle of "transparency is the norm, and secrecy is the exception". The government's official website now has a dedicated column for disclosing government information, which is regularly updated to ensure smooth communication between the government and the public. The standardization of administrative review processes has been steadily advanced. The administrative review system has been further deepened and improved, with efforts actively aimed at resolving administrative disputes substantively. Various departments have shown an increased focus on administrative reviews and the resolution of administrative disputes. The level of administrative litigation has also been enhanced. The attendance rate of administrative heads in court increased from 85.71% in 2021 to 100%, with the rate of attendance in court rising each year. The rate of losing administrative lawsuits decreased from 18.6% in 2021 to 2.05% in 2023, reflecting a consistent reduction in the rate of losses over the years.

The Public Legal Service System Continues to Improve

Songjiang District has fully laid out its public legal service system. In terms of platform development, the district has established and put into operation the Yangtze River Delta G60 S&T Innovation Valley Public Legal Service Center, which provides "Legal+" services for the entire lifecycle of businesses, empowering the high-quality development of the real economy. Additionally, a legal service window focusing on business-related issues has been added to the district's public legal service center, continuously strengthening the foundation of grassroots public legal service platforms. In terms of team development, legal service teams have made significant progress. Lawyers have been encouraged to play

a leading role in public legal services, with the establishment of four "Lawyer Lecture Halls". The district also pioneered the coordinated use and system-building for public-sector lawyers, enhancing their role. At the grassroots level, the district has deepened and promoted the "three offices working together" approach, creating a diversified dispute resolution mechanism ("1+3+N") to advance the construction of judicial offices in the new era.

- **Social Public Organizations are Thriving**

As the reform and development of social organizations enter a new era, Songjiang has continuously promoted the healthy, orderly, and high-quality development of social organizations across the district. The evaluation of social organizations, as a key tool for government departments to strengthen supervision and promote the healthy development of these organizations, has played a positive role in optimizing organizational structures, stimulating capabilities, and advancing broader service goals. By the end of 2023, there were 830 social organizations registered in Songjiang District, with 273 of them having received evaluation grades, resulting in an evaluation rate of 33%. Among these, 136 organizations received a rating of 3A or higher, accounting for 16.4% of the total. This indicates steady progress, with an overall upward and positive trend in the growth of these organizations.

Important Measures

(1) Safe Songjiang construction

- **Enhance the intelligent management of traffic law enforcement** [1]

Songjiang District has adopted information technology and refined measures to promote a new law enforcement management concept and strengthen comprehensive road traffic governance. First, the district actively advanced a three-year plan for building an intelligent traffic signal system, enabling remote integrated control of traffic lights, real-time traffic monitoring, and real-time sharing of public parking resource information. This system is now fully operational. Second, the district has enhanced the "electronic police" system to capture evidence, improving the accuracy of automatic identification of traffic violations and expanding the use of high-definition checkpoints and security monitoring. Third, new pedestrian crossing warning systems have been installed at key intersections to capture pedestrians running red lights. This system is now operational at 9 intersections, ensuring traffic order at these key points. Fourth, at major intersections with high traffic volumes of passenger and freight vehicles, new "Right Turn Must Stop" signs and markings have been added, along with the implementation of the "electronic police"

[1] Source: Shanghai Songjiang District People's Congress, https://qrd.songjiang.gov.cn/contents/33/11585.html

system for remote law enforcement, effectively improving traffic safety at these junctions. Fifth, following the Regulations on the Safety Management of Non-Motorized Vehicles in Shanghai, electronic plates have been issued to delivery riders using electric bicycles, with a 100% equipment rate.

- **Refine governance at accident-prone intersections** [1]

Songjiang District has further improved the cityscape and travel quality by implementing refined renovations of urban roads. First, over 100 pedestrian crossings in the district have been marked with "Yield to Pedestrians" reminders, and 30 intersections have been painted with "Pedestrian Waiting Area" instructions, complemented by additional police management. This has effectively alleviated the conflict between pedestrian and vehicle traffic. Second, nearly 500 fixed parking spots on roads have been removed, including those on Zhongshan East Road, Songhui Middle Road, and Fangta North Road, with two additional vehicle lanes added, effectively easing congestion in these areas. Third, measures such as "reversible lanes" and "one-way streets" have been introduced. Tidal lanes have been set up on Guangxing Road and Fanhua Road, where the traffic tidal flow phenomenon is particularly significant during rush hours, and reversible lanes have been added to 28 intersections, including Tongbo Sixian and Chenta Sixian. Certain sections of Nanqing Road and Beicui Road have been designated as one-way streets, improving the traffic flow and circulation on regional roads. Fourth, intersections and road sections have been meticulously redesigned to optimize facility management. Measures have been taken including moving pedestrian crosswalk lines forward, improving intersection channelization, and reducing signal lights at certain sections, to further the development and utilization of road resources. In recent years, 18 intersections have been channelized, and 33 intersections prone to traffic accidents involving large freight vehicles have been improved.

Case 31 Refined Renovation of Wenxiang East Road (Lianyang Road)

Wenxiang East Road (Lianyang Road), from Husong Highway to Rongle East Road, is located in the eastern part of Songjiang Industrial Zone. During rush hours, commuter vehicles combined with vehicles entering and exiting the G60 Hukun Expressway Songjiang East Toll Station cause the traffic at four intersections along this road to be nearly at saturation, leading to constant congestion. The average congestion index for this section is 1.78, with peak congestion reaching as high as 4.1. The main issues identified include significant traffic tidal flow patterns on road sections, limited traffic capacity at intersections, mismatched lane configurations and traffic volumes at intersections, irregular intersection alignments, and major safety hazards for non-motorized vehicles.

Over two years, Songjiang has phased in the optimization of road infrastructure and traffic facilities at four intersections along this road. The specific measures include:

1. Setting up tidal and reversible lanes. Two tidal lanes have been set up between Zhongkai Road and Rongle East Road on Wenxiang East Road (Lianyang Road), aligning the number of lanes with traffic flow in different directions at different times of the day, thereby improving overall traffic

[1] Source: Shanghai Songjiang District People's Congress, https://qrd.songjiang.gov.cn/contents/33/11585.html

efficiency. Additionally, green wave bands have been established west-to-east during the morning peak, east-to-west during the evening peak, and bi-directional during off-peak periods in the section west of Wenxiang East Road/Husong Highway, making the flow of tidal traffic smoother and avoiding congestion at the entry and exit points of the tidal lanes.

2. Adding channelized intersection lanes. At the intersection of Rongle East Road and Lianyang Road, which serves as the entry and exit point of the tidal lanes, a new lane has been added, and the lanes have been re-channelized. Left-turn signals for north-south directions and left-turn waiting areas have been set up to improve traffic efficiency at intersections and ensure the safety of left-turning non-motorized vehicles. Additionally, at the southbound entry of the intersection of Wenxiang East Road and Husong Highway, a new lane has been added, and the lanes have been re-channelized. This significantly improves the traffic efficiency for vehicles making a south-to-east right turn from Husong Highway onto Wenxiang East Road, heading towards the G60 Hukun Expressway Songjiang East Toll Station.

3. Reconfiguring intersection lanes. In response to mismatched lane configurations and traffic volumes, traffic flow measurements were conducted for each lane. As a result, the lane distributions at intersections have been reconfigured to match the actual traffic demands. Additionally, guiding lines have been painted at two intersections to standardize vehicle trajectories at irregular intersections and intersections with two left (right) turn lanes, preventing vehicle collisions.

4. Setting up "Right Turn Must Stop" signs and non-motorized vehicle facilities. At the intersections of Wenxiang East Road/Husong Highway and Lianyang Road/Rongle East Road, "Right Turn Must Stop" signs and markings have been installed for large vehicles. At the intersection of Lianyang Road and Jiangtian East Road, a right-turn warning zone for large vehicles has been set up, effectively preventing pile-up collisions. At the intersection of Lianyang Road and Jiangtian East Road, where left-turn signals are not installed, a non-motorized vehicle waiting area has been delineated with protective barriers to ensure the safety of non-motorized vehicles and reduce conflicts at the intersection.

5. Optimizing traffic signal timing at intersections. Based on the changing traffic volume at each intersection along the road and in line with the comprehensive renovation of road administration facilities, the traffic signal timing plans at these intersections are continuously refined with meticulous attention to detail, much like the craftsmanship of embroidery. This ongoing optimization further enhances the overall traffic efficiency of the road segment. At the intersection of Wenxiang East Road and Zhongkai Road, where significant traffic flow convergence occurs, phase coordination is used to allow east-to-west straight-through and east-to-south left-turn vehicles to move simultaneously. This further improves the efficiency of vehicle flow at the tidal endpoint during evening peak hours.

Following the gradual implementation of the optimization and renovation measures, the traffic congestion on Wenxiang East Road (Lianyang Road) from Husong Highway to Rongle East Road has significantly improved. During peak hours, the congestion index has decreased to 1.59, a 10.7% reduction compared to pre-renovation levels. In particular, the traffic volume at the intersections of Wenxiang East Road/Husong Highway and Wenxiang East Road/Zhongkai Road has increased by 18% and 25% respectively. Meanwhile, after guiding lines were painted at the intersection of Wenxiang East Road and Husong Highway, accidents caused by lane changes at the intersection significantly decreased. The average weekly number of accidents at the intersection dropped to 1.7, a reduction of over 30% compared to previous figures. Additionally, after comprehensive

optimization and renovation, the number of traffic accidents and reported traffic order incidents in the area decreased by 18.7% and 25% respectively, and no fatal traffic accidents have occurred to date. The lane configurations and signal timing at four intersections along the road section have generally met the daily traffic needs, effectively eliminating vehicle congestion at these intersections. Overall, traffic order and flow are smooth.

Figure 33 Example of Refined Renovation of an Intersection

- **Comprehensively improve the fire prevention system** ①

Songjiang District has taken fire hazard rectification as a "starting point", refining and quantifying work indicators and tasks at every level. Special attention is given to densely populated areas, flammable and explosive material locations, large urban complexes, factories and warehouses, high-rise buildings, and rented residential houses. A combination of targeted and comprehensive special rectification actions is being carried out to prevent the resurgence of fire hazards. Using joint prevention and mass control as the "basic point", active large-scale inspections and rectifications of fire safety are being conducted. Step by step, phase by phase, and with a focus on key areas, grid units in each subdistrict and town are mobilized to carry out comprehensive fire safety inspections and self-inspections in primary and secondary schools, kindergartens, religious sites, high-rise buildings, and residential compounds. Fire hazards are thoroughly identified, rectification lists are established, and concentrated special rectification actions are undertaken. Using "micro fire stations" as key support, existing resources, including security personnel, key position employees, property management staff, joint security team members, and fire control room duty personnel, have been integrated. Responsibilities have been clearly defined, and regular activities such as hazard inspections, initial fire response drills, and

① Source: Shanghai Songjiang District Fire Department's Focused Efforts to Build and Improve the Summer Fire Prevention System, https://www.sohu.com/a/322902727_120083999

fire safety publicity have been carried out. Using publicity and education as "highlights", activities such as campus fire safety campaigns and large-scale fire safety training sessions for industry systems have been conducted. The focus is on providing fire safety knowledge training to students, fire safety responsible persons, and managers in various organizations. Fire safety updates have been broadcasted through television stations, newspapers, and radio. Fire safety knowledge has also been disseminated using various media such as outdoor videos, building televisions, and large electronic displays.

- **Continuously carry out fundamental safety production improvement actions**

From 2017 to 2020, Songjiang District developed a comprehensive annual hazard inspection and rectification work plan at the beginning of each year. This plan specified the key areas for inspection and rectification throughout the year. A list-based, hierarchical, and categorized management approach was adopted for addressing hazards, with ongoing tracking of rectification progress to reinforce closed-loop management. In 2020, following the directives from the State Council and the city's safety production committee, a three-year special safety production rectification action plan was launched. In 2023, a major safety hazard investigation and rectification action was carried out. Starting in 2024, a three-year action plan for addressing the root causes of safety production issues will be implemented, gradually enhancing the depth and intensity of safety hazard inspections each year. At the same time, special rectification campaigns focused on areas such as dust explosion hazards, ammonia refrigeration, confined spaces, hazardous chemicals, and flammable and explosive materials have been carried out to strengthen safety supervision and hazard remediation in key industries and sectors. Alongside government oversight, the district has widely promoted the use of the "Safety Production Accident Hazard Investigation and Rectification Information System" developed by the city's emergency management bureau. This initiative encourages enterprises to fulfill their primary responsibility for safety production, urging them to report self-inspections and corrective actions on safety hazards. Through this, enterprises are encouraged to improve their safety hazard inspection and rectification systems and records, enhance their safety management capabilities, and raise safety production awareness.

(2) Strengthen the rule of law in Songjiang

- **Improve the local government system construction mechanism**

Songjiang District has enhanced the management of administrative normative documents. It has implemented a public consultation mechanism, widely soliciting opinions from various groups, and a legality review mechanism, making full use of the professional advantages of legal advisors and public official lawyers. This forms a team-based review process to ensure the quality of reviews. The district has also established a filing review mechanism, requiring that within 15 business days from the publication of a normative document, complete and thorough filing materials are submitted to the relevant

departments for review. Songjiang District has made significant progress in advancing major administrative decision-making processes. It has strengthened top-level design, clarified responsibilities, specified the scope of major administrative decisions, outlined decision-making procedures, and refined the scope of decision-making matters. The district emphasizes scientific, democratic, and legal decision-making. The district encourages the responsible departments to solicit public opinions through multiple channels and diverse methods, such as website-based opinion collection, written feedback, seminars, field research, and surveys for major administrative decisions. Additionally, risk assessments are conducted, and experts from relevant fields, public official lawyers, and legal advisors are invited to evaluate the feasibility, necessity, and scientific basis of the matters.

- **Continue to elevate the standards of administrative law enforcement**

Songjiang District actively promotes the reform of the comprehensive grassroots administrative law enforcement system. It has established comprehensive administrative law enforcement teams at the subdistrict and town levels. Based on two batches of 434 items listed in the municipal government's subdistrict and town administrative law enforcement directory, these teams now exercise law enforcement responsibilities under the name of the subdistrict or town, effectively achieving a unified "one team handling all law enforcement" approach. Songjiang District has also advanced the implementation of inclusive and prudent supervision. It pioneered the use of the "Cloud Monitoring Code" to implement the "two randomizations, one public disclosure" supervision mechanism, and was the first in the city to establish a law enforcement and supervision system that integrates the list of minor violations exempted from penalties, the list of situations where administrative enforcement measures are not to be implemented, and the list of cases not to be filed, creating a "three lists" model for law enforcement. Additionally, Songjiang District has made significant progress in building an index system to evaluate law enforcement credibility. Centered around "strict, standardized, impartial, and civilized law enforcement", this system includes six primary indicators, 17 secondary indicators, and 25 tertiary indicators. The district also conducts third-party evaluations of law enforcement credibility. Songjiang District places a strong emphasis on the categorized, hierarchical, and tiered training of administrative law enforcement personnel. It strictly enforces the qualification management and certification system for law enforcement officers. Each year, the district organizes basic law training and online exams for newly appointed administrative law enforcement personnel, continuously carries out a review of administrative law enforcement certificates, and accelerates the implementation of the Suishenban (Shanghai's one-stop mobile service platform) electronic administrative law enforcement certificate.

- **Strengthen the restriction and supervision on administrative power**

Songjiang District vigorously promotes government transparency by increasing the scope of information disclosure, actively accepting public supervision, and further

strengthening the restriction on administrative power. It adheres to the principle of proactively disclosing legally mandated content in accordance with the law and provides additional relevant information upon request. Key district government documents and district government office files are made publicly available on the official website, ensuring the public has timely access to information regarding government decisions and actions. Public representatives are invited to attend district government executive meetings, allowing direct participation in the decision-making process where they can offer valuable opinions and suggestions. In addition, the district holds meetings to analyze and assess government information disclosure requests, carefully reviewing and responding to public requests in a timely manner, ensuring the public's right to be informed is fully protected. The Songjiang District People's Government Bulletin is compiled and published to enhance governmental transparency and safeguard the public's rights to know, participate, and supervise. Furthermore, Songjiang District is focusing on the effective implementation of the reconsideration and litigation supervision mechanism. The district strengthens the financial and material support for those seeking reconsideration and continues to develop a high-quality team of administrative reconsideration professionals. A comprehensive administrative reconsideration office is established, integrating consultation, reception, case filing, mediation, hearings, and trial functions. Administrative reconsideration cases are handled prudently in accordance with the law, and the processes and approval procedures for handling administrative reconsideration cases are standardized, effectively enhancing the supervision of administrative actions and promoting the development of a rule-of-law government.

- **Advance the construction of a high-standard public legal service system**

Songjiang District continuously expands the reach of public legal services. Focusing on diverse legal needs at the grassroots level, more than 10 specialized public service stations have been established in areas such as relocation and resettlement zones, commercial areas, and new employment groups. The district actively integrates legal services into the "15-minute community service circle" by incorporating public service elements into non-judicial administrative public platforms. The "12348" public legal service hotline provides legal consultation services 24 hours a day, 365 days a year. Additionally, various government services in the judicial administration field have been fully launched online through the "Unified Online Government Service" reform, with integrated development of physical platforms, hotline platforms, and online platforms.

Songjiang District continually expands the diverse supply of public legal services. It focuses on serving various types of business entities by offering "concierge-style" legal services, developing service packages for businesses, and providing legal service time reduction vouchers. The district has launched the "Serving the Real Economy, Lawyers and Enterprises Partnering Up" campaign to meet the legal service needs of key enterprises, providing them with customized legal service packages. For private enterprises in the district, the district offers legal health checks to enhance their ability to resist legal risks. It also customizes legal services for agricultural economic entities, offering a range of legal safeguards for agriculture-related businesses. The district continues to promote public

legal education through activities such as the "Who Enforces the Law, Who Promotes Legal Education" campaign, and "100 Legal Lectures for Enterprises", enhancing businesses' awareness of lawful operation. Furthermore, Songjiang is exploring the establishment of private commercial mediation organizations to provide market entities with professional, efficient, and convenient commercial services, optimizing the legal business environment. Two commercial mediation organizations have already been established.

Songjiang District continues to enrich the content of public legal services. It hosts events such as the "Small City Cup" Public Welfare Star Creative Litigation Competition, the "Rule-of-Law Songjiang" Public Service Advertisement Contest, and the Shanghai Rule-of-Law Couplets Collection and Evaluation activity. The district is also upgrading and creating legal cultural spaces, such as the Rule-of-Law Wenhui Road and the Fangta Rule-of-Law Park, to further enhance legal culture in the community.

Case 32 The Legal Service Digital Platform is launched at the Songjiang Flagship Store

Building upon the Visualized Lawyer Services introduced earlier, the Songjiang Bureau of Justice has focused on the deep integration of online and offline government services. This effort culminated in the launch of the Digital Legal Service Platform, which combines query, utilization, public legal education, and advocacy functions. Available through the "Suishenban - Songjiang Flagship Store" mobile app, the platform integrates four key services: Ask Anytime, Use Anytime, Watch Anytime, and Search Anytime. It is designed to provide citizens and businesses with instant, accessible, and reliable legal services, all without leaving their homes.

Section 1: Ask Anytime. This feature provides legal consultation for users' legal queries. It links to the Visualized Lawyer Service consultation portal and incorporates offline information such as administrative review, administrative approval, legal aid, notarization, and people's mediation services offered by the district's Bureau of Justice, making it easier for users to access reliable legal assistance.

Section 2: Use Anytime. This feature allows businesses and citizens to view and download legal documents. It archives more than 40 common queries, frequently used contract templates, and routine legal document samples, making it convenient for users to obtain legal documents as needed.

Section 3: Watch Anytime. This feature offers access to legal education videos. The platform includes various public legal education videos produced by the district's Bureau of Justice, making it easy for users to watch and learn about the law at their convenience.

Section 4: Search Anytime. This feature enables users to search for local legal service institutions and legal regulations. It aggregates all legal service institutions in the district, including their addresses, phone numbers, and service hours. It also provides basic information about legal cultural bases and links to Party regulations and the Shanghai urban regulations database, allowing users to quickly find available legal resources in their area.

- **Create a modern public legal service brand through resource aggregation**

Songjiang District focuses on the integration of professional legal resources, making full use of legal services such as lawyers, mediation, arbitration, litigation, and specialized services in areas like business taxation, intellectual property, and investment financing.

The district has successfully established the public legal service center of the Yangtze River Delta G60 S&T Innovation Valley as an "efficient, high-level, embedded, and precise" one-stop legal service model. Songjiang also prioritizes the sharing of judicial and administrative resources across nine cities, successfully hosting legal service ecosystem seminars and joint meetings with judicial bureaus from nine cities. These initiatives aim to comprehensively improve the legal service capabilities and standards within the Yangtze River Delta region. They have signed "one agreement and three initiatives" to explore and form an integrated public legal service model. In addition, Songjiang focuses on "Law + Technology" empowerment by creating a comprehensive digital legal service platform that offers instant, accessible, and reliable services to both businesses and citizens. The district is advancing the construction of the "Internet + Dispute Resolution" platform, which explores remote mediation capabilities. It is also developing a "One-Thing Service" for dispute resolution, creating digitally empowered people's mediation. Furthermore, the digitalization of notarial legal services has expanded, with the "One-Time Visit" program growing to include 200 services, and "No Visits Required" services reaching 120, significantly improving the convenience and efficiency of legal processes.

Case 33 Industry Cluster + Legal Service: Empower Songjiang Enterprises with Legal Intelligence

To guide key industries and enterprises in the district to enhance their compliance systems and effectively mitigate legal risks, while helping them achieve high-quality development in a complex and ever-changing market environment, the Songjiang Bureau of Justice, in collaboration with the School of Public Legal Services of East China University of Political Science and Law, formed a legal service team. This team visited key industrial parks such as the TUS-Caohejing (Zhongshan) Science Park and the Haier Zhigu Industrial Park, providing pro bono compliance diagnostics for over 20 intelligent manufacturing enterprises. Through the Public Legal Services to Parks Initiative, the team empowered enterprises and supported their development.

The legal service lawyers were divided into groups and engaged in interactive discussions with the responsible persons of each company. They explored seven major aspects of the enterprises' operations: main business, financial and tax affairs, human resources, material resources, operational mechanisms, intangible assets, and litigation matters. They analyzed the types of disputes and the risk probabilities in the production and business processes. For both existing and potential legal risks, they offered suggestions and tips on aspects such as system construction, standardized documentation, rigorous processes, and employee awareness, allowing enterprises to take proactive measures to prevent and manage risks, thus ensuring stable operations.

The TUS-Caohejing (Zhongshan) Science Park, which opened in May 2016, serves as a "model for innovation" along the Yangtze River Delta G60 S&T Innovation Valley. The park focuses on the intelligent manufacturing industry, with special emphasis on information technology, high-end equipment, biomedicine, and scientific instruments. Haier Zhigu, a key project in Shanghai, is a 340,000-square-meter garden-style ecological office and intelligent technology headquarters park. It integrates industrial internet R&D, intelligent manufacturing, and smart operation platforms within its industrial base.

The event was actively organized by the Industrial Park Management Committee of Zhongshan Sub-district, Songjiang District, and attracted over 20 intelligent equipment enterprises,

including POVOS, Bangbang Robot, and KAISEN Fluid Technology. Each enterprise also received a personalized Legal Affairs Analysis Report generated by the legal technology system, further supporting their efforts to understand and address potential legal challenges.

(3) Social organization development

- **Promote social organization grade evaluations**

Songjiang places great emphasis on the evaluation of social organizations. Each year, the district develops an implementation plan, defines evaluation requirements, publishes guiding manuals, and organizes capacity-building training to continually optimize the evaluation process. The hierarchical structure of social organization evaluations in Songjiang, ranging from 1A to 5A, is becoming increasingly solid, thanks to the construction of a leveled, classified training system for social organizations and ongoing improvements in evaluation quality. The district's social organization service center has reached a 5A level, while the subdistrict and town service centers have achieved over 3A coverage. Among the various types of social organizations, a group of highly competitive, representative, high-level social organizations has emerged, setting an example and leading the way for others in the district. These organizations are driving a culture of healthy competition, exploration, improvement, and excellence across the district. Songjiang conducts multi-tiered evaluations and training sessions, organizing specialized evaluation training sessions for the autonomy offices and social organization service centers in subdistricts and towns. It also offers diversified evaluation guidance by setting up consultation windows and providing one-on-one coaching for social organizations applying for higher grades of evaluation. It has essentially established an evaluation guidance mechanism that integrates both online communication and offline visits. To enhance the evaluation quality from multiple angles, Songjiang has established expert evaluation teams and carefully organizes each evaluation. It adheres to a five-category indicator system, maintaining transparency, fairness, and justice throughout the evaluation process. The evaluation results are rigorously reviewed, ensuring the credibility and value of the outcomes.

- **Support the development of social organizations**

Songjiang District strengthens its support for social organizations through special funding. It provides various amounts of evaluation rewards to newly rated 1A-5A social organizations and rewards those that undergo re-evaluations and achieve higher ratings, thus encouraging more organizations to participate in the evaluation process. The district also actively updates its recommended directory, including 3A or above social organizations with strong overall capabilities, standardized operations, and rich experience in implementing branded projects. These organizations are then recommended to be included in the Shanghai Municipal Government's service procurement directory. In 2022, 18 social organizations and their projects were incorporated. Additionally, priority

is given to these organizations when engaging in government service procurement, community welfare projects, new-era civilization practice projects, and foundation projects.

- **Promote the participation of social organizations in social governance**

Songjiang District encourages rated social organizations, particularly those with high ratings, to take on leadership roles by participating in social governance and community development. These organizations are expected to set an example in specialized fields and for the broader community, contributing to the development of the Songjiang New City. Over the past five years, Songjiang has launched more than 70 public welfare service projects, utilizing nearly 3.5 million yuan in project funds. These initiatives have made significant progress in areas such as neighborhood mutual aid, community consultation and co-governance, environmental optimization for community harmony, meeting public service needs, and enhancing the value of civilized creation. In 2022, the district held the "Together for Good Deeds" online social organization image exhibition, showcasing social organizations' contributions to social governance, public welfare, and community development across multiple platforms, from different perspectives, and through various channels. This exhibition highlighted successful cases and advanced experiences, emphasizing the role of social organizations as battlefronts and vanguards in these efforts and spreading their positive impact. The district also strengthens its role as a model and leader. It actively participates in city-level and above social organization brand-building initiatives. It encourages and guides organizations to participate in competitions to spark energy and creativity. Exemplary organizations such as the Caring Sister Volunteer Service Center and Yexie Community Yanjing Elderly Care Home have received national recognition, further establishing Songjiang as a model for social organization development.

5. Prospects

This report, based on the sustainable agenda framework, has constructed a logical framework for Songjiang's urban strategic goals and the SDGs (Sustainable Development Goals) system and outlined key measures for achieving the 17 SDGs in Songjiang. According to the review results, Songjiang has made significant progress in advancing the principles of sustainable development, particularly in areas such as SDG2 Zero Hunger, SDG5 Gender Equality, SDG6 Clean Water and Sanitation, SDG9 Industry, Innovation, and Infrastructure, SDG11 Sustainable Cities and Communities, SDG13 Climate Action, SDG14 Life Below Water, and SDG16 Peace, Justice, and Strong Institutions. The district has implemented these principles more effectively and accumulated rich practical experience.

Looking ahead, Songjiang will continue to drive high-quality development under the concept of sustainable development. It will focus on building a city of technological innovation and cutting-edge industries, leading the way in the science and technology sector. It will also work to create a city where the rich historical heritage and the values of modern civilization shine together, fostering a culture that bridges the old and new. Additionally, Songjiang will aim to build an ecological city that promotes the harmonious coexistence of people and nature, thus better fulfilling the aspirations of its people for a better life. Building upon this report, Songjiang will further promote the integration of sustainable development strategies into local development policies and implementation, ensuring that the principles of sustainability are not only realized in strategy but are also deeply embedded in the district's future development plans.

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