



The Implementation of 2030 Agenda by Canal Cities —Yangzhou Sustainable Development Report (2021)

United Nations Development Programme

World Historic and Cultural Canal Cities Cooperation Organization

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This report was authored during 2021 and used data up to 2020 from official sources.

Executive Summary

With less than eight years remaining to achieve the Sustainable Development Goals (SDGs), it is imperative for all stakeholders to act with a sense of urgency to protect people and the planet. From national governments to local municipalities, each have vital roles to play, as two-thirds of the SDG targets will not be reached without their support¹. Cities - which power GDP growth, foster academia and innovation, and are home to the majority of the global population - are emerging as economic and social drivers for sustainable development.

By taking action to end poverty, reduce inequality and protect the environment, cities can bring positive impact well beyond their metropolitan borders. Moreover, by monitoring, evaluating and reporting the progress made, local governments can assist their counterparts by sharing the blueprint for success.


While each city is different, with varying development contexts and challenges, it is crucial to share the successful implementation of policies and interventions that have led to significant achievements towards sustainability, so that others may adopt best practices that suit their own development needs. In this regard, this report can serve as not only a local review of the city of Yangzhou, but also as a guide for cities with similar contexts, in particular canal cities, both within China and abroad.

This report adopts the methodology used in previous United Nations Development Programme (UNDP) assessments of the sustainable development across cities in China, generating a Canal City SDGs Assessment Index (CCSAI). The methodology is based on the 5P categorization of the SDGs, namely People, Planet, Prosperity, Peace and Partnerships.

The report evaluates Yangzhou's sustainable development progress between 2000 and 2020, based on 87 indicators, 56 of which are quantifiable. It also identifies implementation gaps, intending to provide a comprehensive assessment of sustainable development in Yangzhou.

Overall, Yangzhou has made solid progress towards the SDGs, at 92.2 percent overall. People, Prosperity, Planet, Peace and Partnership-based indicators have reached about 83.2 percent, 84.1 percent, 99.1 percent, 100 percent and 94.9 percent of their targets respectively. Among a subset that defines 33 core indicators, 26 achieved better progress than expected.

¹ <https://sdg.iisd.org/news/un-habitat-new-york-city-report-on-vlr-movement/>



However, advancement was slower than anticipated for the number of patents per 10,000 people, the comprehensive use of general industrial solid waste, public libraries per capita, R&D spending as a proportion of GDP, disposable incomes, per capita GDP and the student-teacher ratio in primary schools. Related to cross-cutting themes, such as gender and gender equality, some progress has been recorded. The assessment, for example, shows that Yangzhou has implemented legal frameworks to promote, practice and monitor equality and the elimination of gender discrimination. On the other hand, the lack of disaggregated data at the local level remains a key hurdle for deeper understanding of opportunities and gaps in progressing towards SDG 5.

Given the importance of these areas, conducive to the comprehensive and high-quality realization of the 2030 SDGs targets, enhanced effort to speed progress is needed. Special plans alongside an efficient implementation mechanism, as well as a monitoring and supporting system to execute such plans would key steps towards accelerating SDG progress.

By analysing the practices, progress and experience of sustainable development in Yangzhou, this report seeks to enable more balanced, high-quality development. It aims to offer valuable lessons on sustainable development prospects and challenges in urban settings beyond Yangzhou, and a reference for canal cities working towards the SDGs globally.

BOX – Report's limitations:

1. The lack of available data is a key challenge in progress assessment, particularly at the city level. This resulted in a relatively small number of feasible indicators, limiting the breadth of the analysis.
2. The selection criteria for the 2000 benchmarks and 2030 targets, also constrained by data and benchmark availability, may skew the assessment results towards a higher score.
3. Comparison with other cities indices is limited by the lack of a standardised methodology and data comparability.
4. The socio-economic impact of COVID-19 may not be fully captured in the analysis as data refers to 2020 at the latest.

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CHAPTER 1



BACKGROUND

- 1.1 CANAL CITIES AND THEIR CONTRIBUTION TO SDGS ATTAINMENT



During the Summit on Sustainable Development in 2015, the United Nations formally adopted the outcome document of unprecedented scope and significance: Transforming Our World: The 2030 Agenda for Sustainable Development (2030 Agenda), mapping out the blueprint for global cooperation on sustainable development. The 17 Sustainable Development Goals (SDGs) and related 169 targets are at the heart of the 2030 Agenda. The Goals can be divided into five groups based on their content, corresponding to the 5Ps: People (Goals 1 to 7), Prosperity (Goals 8 to 12), Planet (Goals 13 to 15), Peace (Goal 16), and Partnership (Goal 17).

The SDGs reflect the complex interplay among social, environmental and economic systems and set the ambitions to end poverty and hunger in all their forms and dimensions, protect the planet from degradation, ensure prosperous and fulfilling lives for all, foster peaceful, just and inclusive societies, and strengthen global solidarity with the participation of all countries and all people.

Since 2015, multiple countries and regions, guided by the 2030 Agenda for Sustainable Development, have actively taken action to implement the Goals and the targets. In many countries, cities have core competencies for policy areas underlying the SDGs such as water, housing or climate change. Being the powerhouses of economic growth, and centers where energy, consumption, production and public services are concentrated, cities are vital to promote sustainable development. As important junctures of land and water, canal cities present unique advantages and distinctive contributions to the achievement of the SDGs.

This report focuses on sustainable development progress in canal cities, taking Yangzhou as a case study. Canal cities not only enjoy the development foundation like other cities do, but also have unique and strong capacity and potential to ensure food security, strengthen regional cooperation, and address climate change. Therefore, the assessment of SDGs in canal cities can help identify the strengths and weaknesses of sustainable development of these cities and provide guidance for the realization of the SDGs. Meanwhile, it can also form an applicable and replicable model, which can provide practical experience for similar cities at home and abroad to implement the 2030 Agenda for Sustainable Development.

The report was co-authored by the United Nations Development Programme (UNDP), the Research Center for Sustainable Development, Chinese Academy of Social Sciences (RCSD) and the World Historic and Cultural Canal Cities Cooperation Organization (WCCO). It is part of an ongoing work to promote progress assessments at the city level in China. The first report introduced the methodology and looked at SDG progress in 90 cities²; the second report focused on Shenzhen³. In the rest of this chapter, key features of canal cities are presented as well as their potential contributions to SDG attainment. Chapter 2 focuses on Yangzhou and the actions taken to support sustainable development, while chapter 3 describes the results from the SDG progress assessment in the city.

²UNDP China, June 2021. The SDGs in Chinese Cities: Progress Assessment Report 2020

³UNDP China, June 2021. Shenzhen Sustainable Development Report 2021

1.1 Canal cities and their contribution to SDGs attainment

According to the Dictionary of World Canals⁴, there are more than 1,100 canals and canalized rivers around the world: the Netherlands, the United States and France recording the most. With 40 canals, China takes the seventh place, with its Grand Canal being one of the 48 heritage canals in the world. As the longest and oldest canal in the world, the Grand Canal of China has been defined “the greatest masterpiece of hydraulic engineering in the history of mankind, because of its very ancient origins and its vast scale, along with its continuous development and its adaptation to circumstances down the ages”⁵. Its vast waterway system stretches almost 3,200 kilometers and connects five major river systems of North and South China, passing through 35 cities. In ancient China, the Grand Canal was a central pillar for grain transportation, commercial traffic, and military resources deployment. It also furthered the clustering of population and served as the economic lifeline of local trades, helping many towns along its route developing into central cities in the region.

In general, canals play important role in waterway transportation, water transmission and supply, irrigation, and flood control and drainage. They are also important sources of biodiversity and through their historic relevance they are often important centers of cultural heritage benefitting cities along their course in multiple ways, relating to different SDGs⁶.

Box 1.1 - Key functions of canals in cities development

- 1. Waterway transportation function. Canals open for navigation have largely increased freight traffic volume and speed, while reducing freight costs, leading to the rapid clustering of industries and commerce along their course. Such cluster support development trades, cooperation and cultural exchanges among canal cities.
- 2. Water transmission and supply function: Urban rivers are vital for cities’ water supply⁷. For instance, the Grand Canal serves as an important source for water for residential and industrial use. At the same time, some of its sections also supply water to the north of China.
- 3. Irrigation function: Historically, irrigation has been an important purpose behind canals’ constructions. The irrigation network of the Grand Canal, for example, allowed for the widespread cultivation of cash crops and the development of a commercial agricultural economy supporting regional food security⁸.

⁴According to the World Canal Dictionary, there are 1088 entries in the category of “canals”. Since the number of canal entries provided by the WCCO Secretariat and relevant experts has not been exhausted and will not be for the time being, the statistics in this dictionary are only for comparative reference.

⁵UNESCO, <https://whc.unesco.org/en/list/1443/#:~:text=The%20Grand%20Canal%20forms%20a,Zhejiang%20Province%20in%20the%20south.>

⁶Wang Ankun. Analysis of the functions and attributes of the Grand Canal [J]. Yellow River. Loess. Yellow Race, 2020(20):27-31.

⁷Yan Maowen, Liu Deling, Li Zhenqing, et al. The function of the urban section of the Beijing-Hangzhou Grand Canal [J]. Shandong Water Conservancy Science and Technology Forum, 2007(00):305-308.

⁸An Zuozhang. The prosperity of the Grand Canal in China[J]. Chinese Cultural Heritage, 2006(01):10-18+6.

- 4.Flood control and drainage function, thanks to the reservoir capacity of canals’ large water bodies as well as their infiltration capacity of their riverbanks and floodplains that can slow down the peak flow of the flood, safeguarding not only the canal itself but also human life, property and cultural heritage along its shores⁹.
- 5.Canals’ rich ecosystem: The Grand Canal is granted with a unique and complex ecosystem¹⁰, with its micro-climate, landscape diversity, capacity to recharge groundwater and enrich biodiversity. Canals can improve cities’ ability to resist and adapt to climate-related disasters and natural hazards.
- 6.Canals’ cultural heritage, through enhanced exchanges: Over the centuries, as local and foreign cultures have collided and mingled with each other, the unique cultural characteristics of the canal cities have come into being. The canal culture covers many types of tangible and intangible cultural heritage, such as water conservancy projects and ancient sites as well as handicrafts, folk legends and stories, customs and arts. As of the end of 2020, regions along the route of the Grand Canal are home to more than 1,200 tangible cultural heritage and 450 intangible cultural heritage¹¹.

⁹Yan Mowen, Liu Deling, Li Zhenqing, et al. The function of the urban section of the Beijing-Hangzhou Grand Canal [J]. Shandong Water Conservancy Science and Technology Forum,2007(00):305-308.

¹⁰Yu Kongjian, Li Dihua, Li Wei. The complete values of the Beijing-Hangzhou Grand Canal[J]. Advances in Geographical Sciences,2008(02):1-9.

¹¹CPC Yangzhou Municipal Committee, Yangzhou Municipal People’ s Government. Yangzhou City Grand Canal Cultural Protection and Heritage Utilization Implementation Plan [R]. Yangzhou, Jiangsu, 2020-12-31.

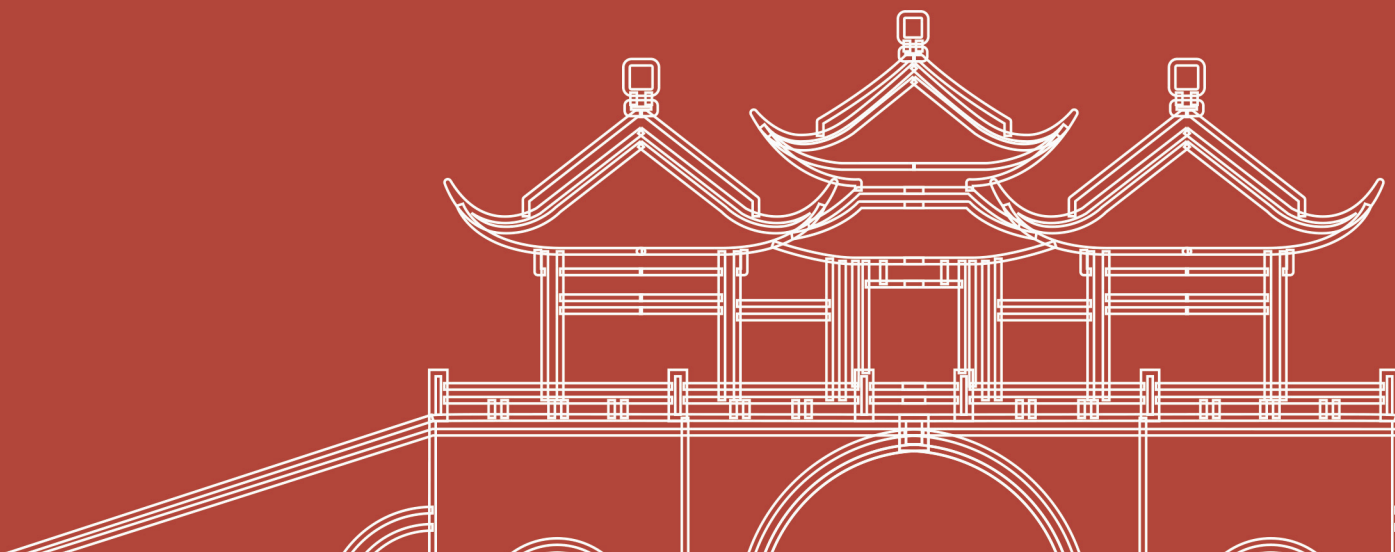
TWO

CHAPTER 2



YANGZHOU' S PRACTICES AND EXPERIENCES FOR IMPLEMENTING THE SDGS

- 2.1 YANGZHOU' S UNIQUENESS AND ITS SUSTAINABLE DEVELOPMENT PLAN
- 2.2 YANGZHOU' S SUSTAINABLE DEVELOPMENT STRATEGIES AND IMPLEMENTATION PROGRESS BY 5PS



2.1 Yangzhou’ s uniqueness and its Sustainable Development Plan

Historically, Yangzhou is the starting point of the Grand Canal. Its section of the Grand Canal stretches around 150 kilometers. It is one of the first canals constructed in China that is still operating¹², as well as a key river in the Eastern Route of South-to-North Water Diversion Project. The city has accumulated rich experience in canal heritage protection and development and utilization of canal resources. It was also the leading city for the Grand Canal’ s nomination as an UNESCO World Heritage Site.

Since 2015, Yangzhou has released and is implementing a series of plans, policies and actions aimed at promoting sustainable development, aligning its development strategy to the SDGs aiming for balanced and high-quality development. The city is committed to developing a sustainable development model that can be applied, replicated, and promoted, thus providing experience for canal cities to implement the 2030 Agenda for Sustainable Development.

BOX 2.1 - Yangzhou’ s Development Goals

By 2025, Yangzhou aims to become an international leading city for sustainable development among canal cities globally, further improving its low-carbon and green development model, and constantly enhancing the internal impetus for economic growth, and scientific and technological advancement. The main development goals by 2025 are as follows: (1) an efficient and resilient city governance system; (2) a liveable and business-friendly environment.

By 2030, Yangzhou aims to become a global model for implementing the SDGs, creating a series of sustainable development experiences that can be replicated among canal cities globally.

2.2 Yangzhou’ s sustainable development strategies and implementation progress by 5Ps¹³

2.2.1 People

Policy actions

Aimed at improving the level of social welfare and creating a dignified, equal, and healthy environment for the local population to fully realize their potentials, Yangzhou has introduced and promulgated guidance documents and policy documents Since2015, including (1) Implementation Plan for Promoting Healthy Yangzhou Construction in an All-round Way; (2) 13th Five-year Plan for Sanitation and Health Development of Yangzhou; (3) Opinions on Accelerating the Implementation of Education Modernization in Yangzhou City; (4) Yangzhou Municipal Government’ s Policy on the Establishment of Functional Zones for Grain Production and Important Agricultural Products Production Reserves; (5) Implementation Plan of Yangzhou Science Literacy Improvement Action Plan (2016-2020); (6) 13th Five-Year Plan for the Development of Disabled Persons in Yangzhou, and (7) Opinions on Further Strengthening the Management and Protection of Drinking Water Source Areas in the City.

¹²Yangzhou Municipal Committee, Yangzhou Municipal People’ s Government. Yangzhou City Grand Canal Cultural Protection and Heritage Utilization Implementation Plan [R]. Yangzhou, Jiangsu, 2020-12-31.

¹³The policies and data mentioned in this section mainly derived from the “Outline for the 14th Five-Year Plan for Economic and Social Development and Long-Range Objectives through the Year 2035 of Yangzhou City” and other policy documents released by the Yangzhou Municipal Government

Yangzhou' s results in improving the livelihood of its inhabitants

Equal economic benefits. As of the end of 2020, all registered low-income households in Yangzhou have been lifted out of poverty. The per capita disposable income of urban and rural residents reached CNY 47,202 and CNY 24,813 respectively, an increase of 43.3 percent and 49.3 percent respectively comparing to 2015. The income ratio of urban and rural residents has been reduced from 1.98 in 2015 to 1.90 in 2020.

Food security. In 2020, the grain area in Yangzhou has reached 5.82 million mu and the total grain output will reach 2.87 million ton. A total of 1.56 million mu of high-standard farmland have been built, with 75 percent of the agricultural products being green and high-quality¹⁴.

Social security. The minimum social security standards for residents was increased from CNY 390 to CNY 710 per person per month in 2015 . The coverage rate of urban and rural basic pension insurance and basic medical insurance reached 98 percent

Quality education. In 2020, 98.3 percent of Yangzhou' s compulsory education schools have met the standards issued by provincial authority, while 75.5 percent met higher quality standards of education issued by the Ministry of Education of China. In addition, Yangzhou hosts six provincial model vocational schools, two high quality special vocational schools, and various exemplary training schools.

Healthcare services for all. Yangzhou has achieved “full coverage of five major treatment centers” , including for chest pain, stroke and trauma at district and county level, while 18 rural medical and health centers have now equipped with upgraded medical facilities as Secondary Hospital. Furthermore, Yangzhou provides free annual cervical and breast cancer screening for nearly 140,000 urban and rural women aged 35-64, as part of its strategy to provide accessible and affordable healthcare to women. Yangzhou' s average life expectancy has been steadily increasing. The expectancy has reached 78.77 years old in 2020, 2.73 years longer comparing to that in 2010. In addition, the infant mortality rate and the mortality rate of children under 5 years old have dropped to 2.14 % and 3.53‰ in 2020 respectively.

Social services for women. In recent years, the Yangzhou Women's Federation has devoted to foster and support social organizations that provide high-quality and professional social services specifically for women, in areas such as mental health support, girl' s education, senior care, and women' s entrepreneurship. Since 2020, the Federation has supported 14 social organizations led by women and support women, and has raised support funds of CNY 1.36 million.

Good water quality. Yangzhou' s 10 centralized drinking water sources are 100 percent up to the national standard.

¹⁴This refers to agricultural products meeting the standards outlined in the Green Agricultural Products Label Management Measure issued by the Ministry of Agriculture. http://www.moa.gov.cn/govpublic/SCYJJXS/201006/t20100606_1532925.htm

¹⁵The minimum standard living system was established nationwide in 1993 for the relief of the population whose income is difficult to maintain their basic living needs, and was considered the basic safety net of China's social security system.

2.2.2 Prosperity

Policy actions

Aimed at achieving prosperous and fulfilling life for all and sustainable economic and social development, Yangzhou has introduced and promulgated guidance documents and policy documents since 2015, including: (1) Opinions on Accelerating the Construction of Emerging Cities with Advanced Science and Technology, (2) Thirteenth Five-Year Plan of Yangzhou Circular Economy Development Plan, (3) Implementation Opinions on Promoting the Integrated Development of Culture and Tourism Industry (2021-2023), (4) Cloud Yangzhou Action Plan (2017-2020), (5) Yangzhou Action Plan for Promoting Intelligent Manufacturing and High-end Equipment Industry Development (2017-2020), (6) Yangzhou Action Plan for Creating a Demonstration City of Modern Comprehensive Transportation System in the Province, (7) Yangzhou Vocational Skills Enhancement Action Plan (2019-2021), and (8) Implementation Plan for Establishing a More Effective New Mechanism for Regional Coordination and Development.

Results

Accelerated economic transformation. In 2020, the per capita GDP of Yangzhou exceeded CNY 130,000, ranking 14th among all Chinese cities. The added value of the service industry as a proportion of GDP was 3.8 percent points higher than that of 2015, the total annual revenue of tourism industry exceeded CNY 100 billion. Yangzhou's technology trading market size ranked 1st in Jiangsu Province for three consecutive years, with technology contract turnover jumping from CNY 2.17 billion in 2015 to more than CNY 10 billion in 2020.

Innovation-focused development. In 2020, the R&D expenditure counted 2.5 percent of Yangzhou's GDP, and the number of patents owned has reached 18/10,000 people. There are more than 1,600 high-tech enterprises in the city, with the output value of high-tech industry accounting for 48 percent of the output value of the industry, and the added value of strategic emerging industries accounting for 18 percent of GDP. Yangzhou has also built more than 6 million square meters of various science and technology industrial clusters, accommodating more than 5,000 enterprises and more than 50,000 innovative and entrepreneurial talents.

Establishing public cultural service system. As part of the provincial project of constructing "book cities", Yangzhou has built 1,325 cultural service centers in rural communities and 50 urban libraries that operate 24 hours, with 1.8 million visitors each year. Yangzhou now has more than 486 intangible cultural heritage sites, four national cultural industry bases (parks) and four provincial cultural industry bases (parks).

Modernizing the transportation system. A number of major traffic projects are under construction, including the Beijing-Shanghai Expressway expansion project, Wufeng Mountain river-crossing highway connection, Longtan river-crossing, the Beijing-Hangzhou Canal green shipping demonstration area, Yangtze International Airport expansion, etc. By the end of 2020, 1,600 km of roads, 400 bridges are newly built in rural areas to ensure rural communities' access to reliable public transportation.

2.2.3 Planet

Policy actions

Yangzhou has released a series of plans and documents since 2015 that provide the high-level design for promoting economic transformation and development, implementing measures for sustainable consumption and production, sustainable management of natural resources, and addressing climate change. Relevant guidance documents and policy documents include: (1) Implementation Plan of Yangzhou's Three-year Action Plan for Winning the Blue Sky Battle, (2) Opinions on the Implementation of "Coal Reduction" Work in Yangzhou City to Fight Pollution Prevention and Control, (3) Yangzhou Ecological River and Lake Action Plan (2018-2020), (4) Work Plan for Yangzhou Yangtze River Outfall Investigation and Improvement Special Action, (5) Implementation Plan of Yangzhou Yangtze River Protection and Restoration Action Plan; and (6) Plan for Prevention and Response to Low Temperature Rain and Snow Freezing Weather.

Results

Environmental governance. By the end of 2020, the city's chemical industrial areas were reduced from 22 square kilometers to 9 square kilometers, and a total of 501 highly polluted chemical enterprises were shut down. Compared with 2015, the PM2.5 concentration dropped by 34.5 percent and the share of good air quality days rose by 12.2 percentage points. Furthermore, Yangzhou has adopted the river chief and lake chief systems, supporting volunteer river chiefs as an important public force for water governance¹⁶. Yangzhou has also passed the national forest city assessment, with its forest coverage rate of 24 percent.

2.2.4 Peace

Policy actions

Yangzhou City has made efforts to modernize its social governance to create a peaceful, just, and inclusive society free from fear and violence. The guidance documents and policies including: (1) Yangzhou City Safety Development Action Plan (2018-2020), (2) the Implementation Opinions on Promoting Reform and Development in the Field of Safety and Health, (3) the Implementation Opinions on Strengthening the Construction of Safety Risk Control System in Primary and Secondary Schools and Kindergartens, and (4) 13th Five-Year Plan for the Construction of Emergency Response System in Yangzhou City.

Results

Yangzhou is regarded one of the safest cities in both Jiangsu province and China: the survey result concerning public security remained above 95 percent for 17 consecutive years¹⁷. The city was awarded with the "National Model City in Social Governance Advancement" by the central government, thanks to the solid steps it has taken on improving the rule of law. The city has also been modernizing its social governance system, connecting the city, county and community and villages to ensure a holistic urban and rural management system.

¹⁶This water resource management system establishes in 2016 assigns government heads to take charge of protecting waterways in their area with the aim of managing water pollution and improving water quality.

¹⁷Data derived from the "Outline for the 14th Five-Year Plan for Economic and Social Development and Long-Range Objectives through the Year 2035 of Yangzhou City". <http://www.yangzhou.gov.cn/yzsxxgk/zfb/202104/280828f9c9374bfe880ff504d9dbd842.shtml>

2.2.5 Partnership

■ Policy actions

Yangzhou has been actively implementing the 2030 Agenda, strengthen international exchange and cooperation in heritage protection and cultural tourism, pollution prevention, energy conservation and environmental protection. Yangzhou led the initiation of World Historic and Cultural Canal Cities Cooperation Organization (WCCO), aiming at strengthening the canal cultural heritage protection, expanding exchange and cooperation with other canal cities, and promoting canal culture to the world through World Canal Cities Forums and World Canal Conferences.

■ Results

Yangzhou has strengthened communication and exchange with countries across world in particular other canal cities. Yangzhou has signed friendship city agreements with 23 cities from 15 countries. Remarkably, WCCO was established in 2009 and is now participated by more than 60 canal cities around the world, and Yangzhou has hosted World Canal Cities Forum for 14 consecutive years and hosted World Canal Expo for two years.

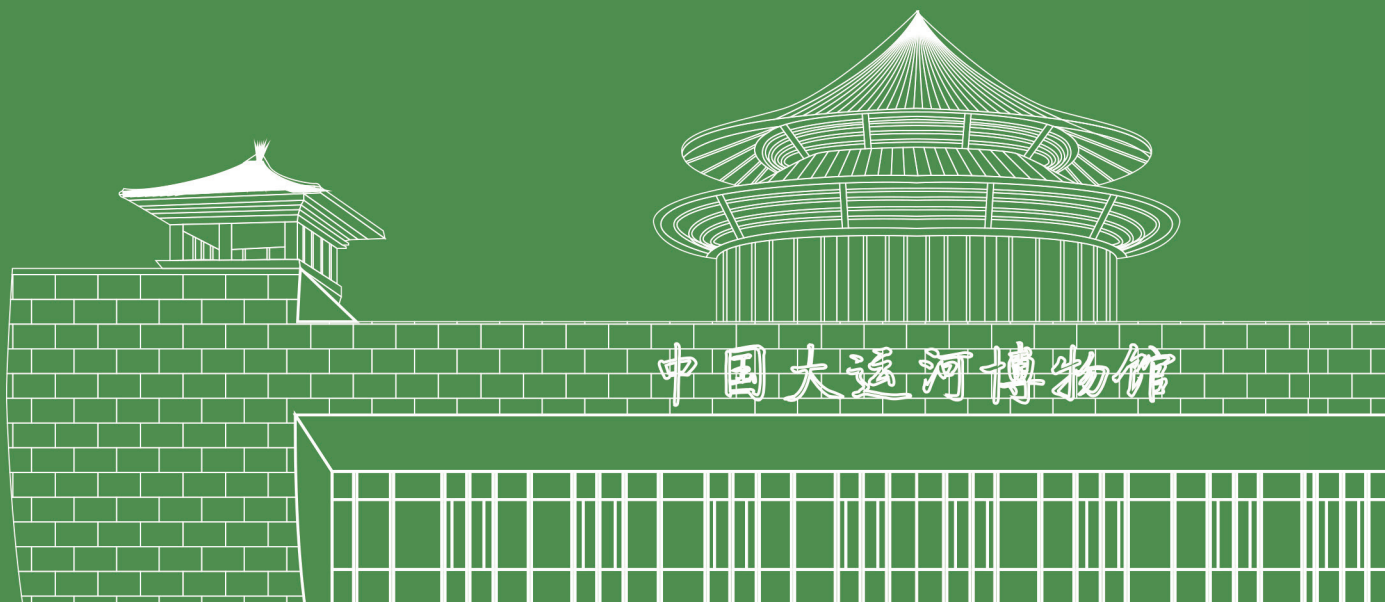
THREE

CHAPTER 3



SDGS IMPLEMENTATION PROGRESS ASSESSMENT IN YANGZHOU

- 3.1 OVERALL ASSESSMENT
- 3.2 ASSESSMENT OF 5PS INDICATORS





Cities are vital vehicles for human beings to develop civilizations and wealth, as they are where most economic and social activities take place. They are thus critical to effectively achieving the SDGs. As such, assessing implementation of the SDGs in canal cities is also of great value, shedding light on opportunities and challenges characteristics to them. Following the launch of the 2030 Agenda, the UN adopted the Sustainable Development Indicators Framework to monitor and review progress on the 17 Sustainable Development Goals and their 169 targets. Of the 232 SDGs' indicators included in the global framework, however, more than half lack corresponding data at the city-level, raising significant challenges regarding its applicability to assess SDGs progress in cities, as well as canal cities, and calling for a new methodology (for more details, please see Annex I).

Based on three selection criteria and the 5Ps concept as theoretical framework, this SDG progress assessment produced the Canal City SDG Assessment Index (CCSAI) for canal cities and used Yangzhou as an example for the first assessment. Of the 87 possible indicators identified as suitable for canal cities SDG progress assessment, 56 quantifiable indicators were used for Yangzhou: 21 for People, 23 for Prosperity, five for Planet, three for Peace and four for Partnership. Of these, 33 are defined as 'core' indicators, as considered more representative and more important than others given a specific time (development stage) and a specific knowledge background (cognition). The lack of available data is a key challenge in progress assessment, resulting in a relatively small number of feasible indicators and limiting the breadth of the analysis, in particular for Planet, Partnership and Peace or for cross-cutting themes, such as gender. We also note that the selection criteria for the 2000 benchmarks and 2030 targets, also constrained by data and benchmark availability, may skew CCSAI results towards a higher score. Finally, the report used data up to 2000, or most recent available data. Given the short time elapsed, the impact of COVID-19 may not be fully reflected in the analysis.

3.1 Overall Assessment

(1) Progress evaluation of the 2030 SDGs: the 5Ps

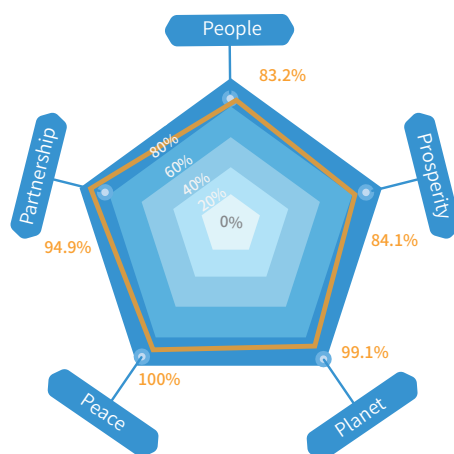


Figure 3-1 Assessment of the 5P dimensions in Yangzhou

Based on the CCSAI, Yangzhou has had good results in the overall completion of its 2030 targets towards the SDGs between 2000 and 2020, with an overall achievement rate of all targets at 92.2 percent. Targets in the Peace dimension have been achieved. The other sub-indices, People, Prosperity, Planet and Partnership have scored achievement rates of 83.2 percent, 84.1 percent, 99.1 percent and 94.9 percent respectively.

(2) Progress evaluation of the 2030 SDG: the core indicators

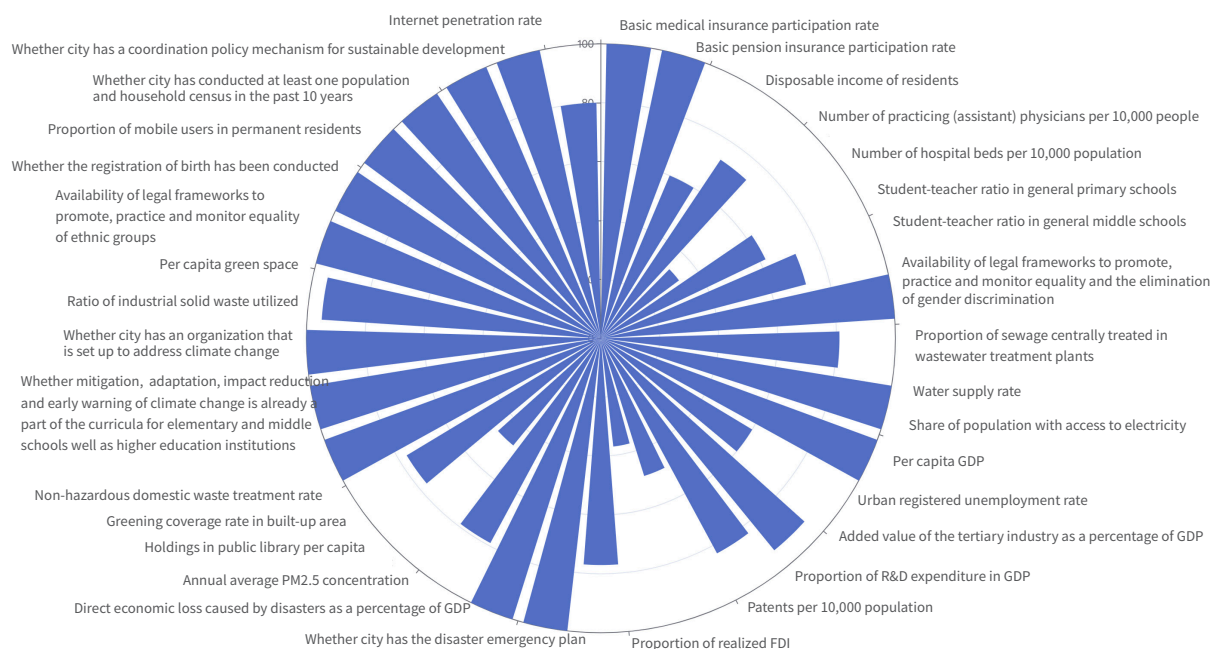


Figure 3-2 Implementation Progress Assessment of Core Indicators

Good progress was made for the core indicators, with an overall realization rate of 83.6 percent. Specifically:

- Core indicators that already met the targets in 2020: basic medical insurance participation rate, basic pension insurance participation rate, whether a city has formulated legal frameworks to promote, practice and monitor equality and the elimination of gender discrimination, water supply rate, share of population with access to electricity, whether city has the disaster emergency plan, direct economic loss caused by disasters as a percentage of GDP, non-hazardous domestic waste treatment rate, whether mitigation, adaptation, impact reduction and early warning of climate change is already a part of the curricula for elementary and middle schools well as higher education institutions, whether city has an organization that is set up to address climate change, per capita green space, whether a city has formulated legal frameworks to promote, practice and monitor equality of ethnic groups, whether the registration of birth has been conducted, whether city has conducted at least one population and household census in the past 10 years, whether city has a coordination policy mechanism for sustainable development, and proportion of mobile users in permanent residents.

- Core indicators that have met 90 percent of their targets: urban registered unemployment rate and ratio of industrial solid waste utilized.
- Core indicators with relatively slow progress: disposable income of residents, number of hospital beds per 10,000 populations, student-teacher ratio in general primary schools, per capita GDP, proportion of R&D expenditure in GDP, patents per capita, holdings in public library per capita, all of which have achieved less than 67 percent of their targets.

3.2 Assessment of 5Ps Indicators

3.2.1 Assessment of the People Indicators

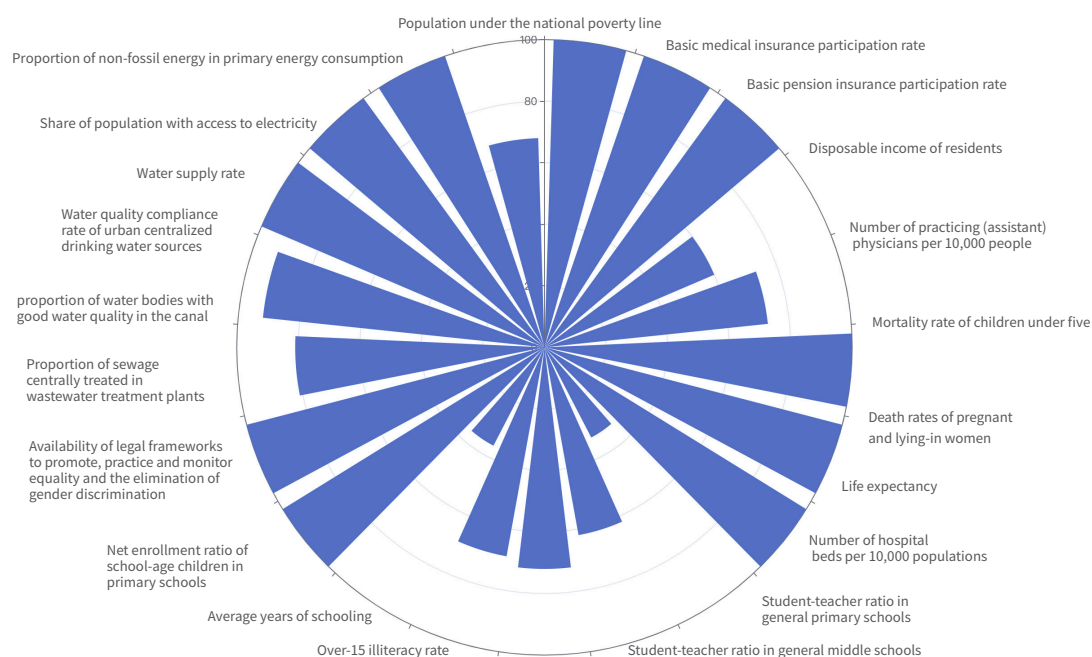


Figure 3-3 Implementation Progress Assessment of the People Indicators

Good progress was made towards the People indicators, despite the overall realization rate of 83.2 percent being the lowest among the 5Ps. Specifically:

- Indicators that had already met their global targets in 2020: population under the national poverty line, basic medical insurance participation rate, basic pension insurance participation rate, mortality rate of children under five, death rates of pregnant and lying-in women, life expectancy, net enrolment ratio of school-age children in primary schools, whether a city has formulated legal frameworks to promote, practice and monitor equality and the elimination of gender discrimination, compliance rate of urban centralized drinking water sources, water supply rate, and share of population with access to electricity.
- Indicators that have met 90 percent of their targets: proportion of water bodies with good water quality in the canal
- Indicators with relatively slow progress: disposable income of residents, number of hospital beds per 10,000 populations, student-teacher ratio in general primary schools, and average years of schooling, all of which record a completion rate of less than 67 percent.

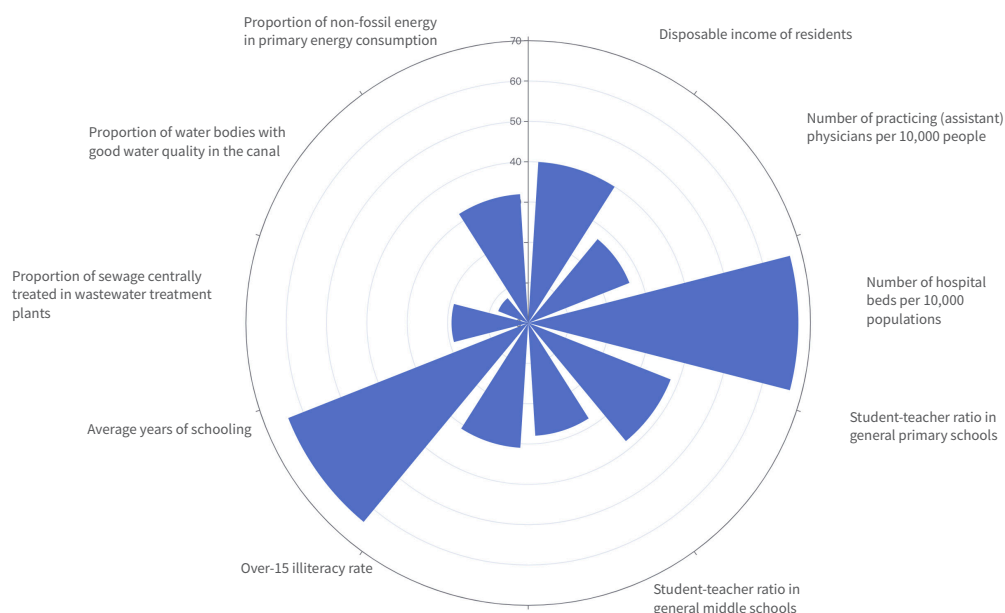


Figure 3-4 Implementation Gap Assessment of the People Indicators

3.2.2 Assessment of the Prosperity Indicators

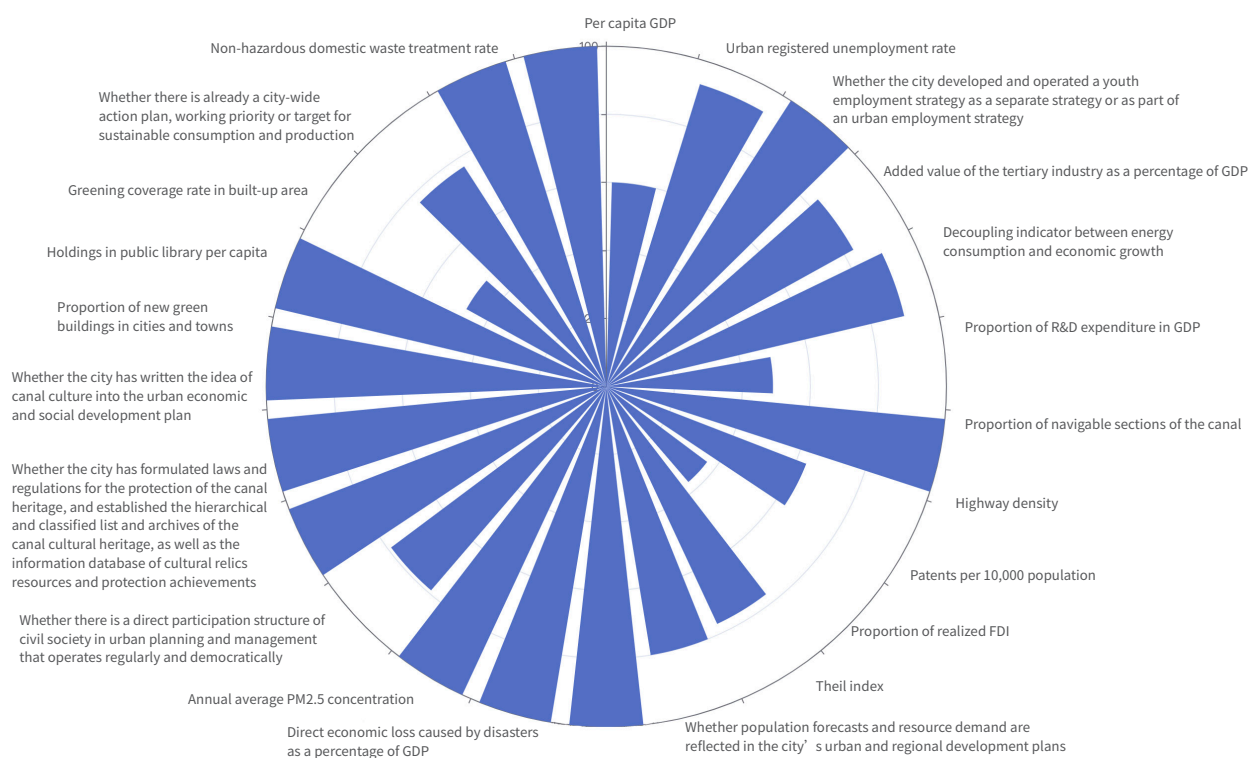


Figure 3-5 Implementation Progress Assessment of the Prosperity Indicators

Yangzhou has made relatively rapid and balanced progress towards the Prosperity indicator targets with an overall realization rate of 84.1 percent. Specifically:

- Indicators that had already met their global targets in 2020: whether the city developed and operated a youth employment strategy as a separate strategy or as part of an urban employment strategy, proportion of navigable sections of the canal, whether city has the disaster emergency plan, whether population forecasts and resource demand are reflected in the city's urban and regional development plans, direct economic loss caused by disasters as a percentage of GDP, whether there is a direct participation structure of civil society in urban planning and management that operates regularly and democratically, whether the city has formulated laws and regulations for the protection of the canal heritage, and established the hierarchical and classified list and archives of the canal cultural heritage, as well as the information database of cultural relics resources and protection achievements, whether the city has written the idea of canal culture into the urban economic and social development plan, proportion of new green buildings in cities and towns, whether there is already a city-wide action plan produced or target set up for practicing sustainable consumption and production, and non-hazardous domestic waste treatment rate.
- Indicators that have met 90% of their targets: urban registered unemployment rate, and decoupling indicator between energy consumption and economic growth.
- Indicators with relatively slow progress: highway density, per capita GDP, proportion of R&D expenditure in GDP, patents per capita, and holdings in public library per capita, all of which record a completion rate of less than 67 percent.

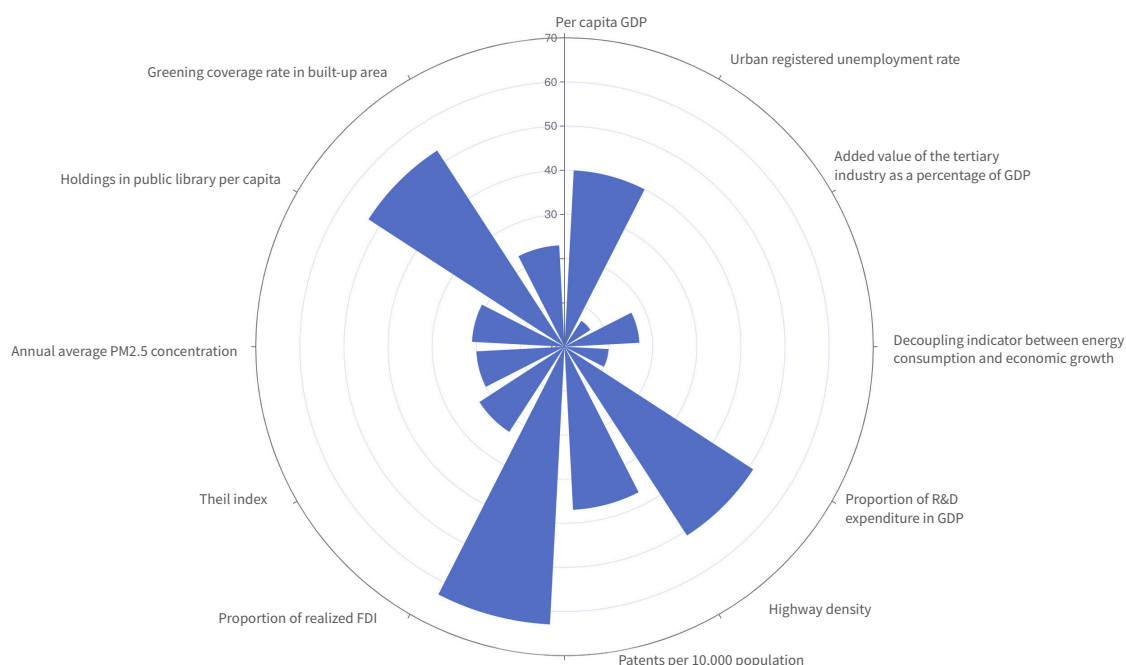


Figure 3-6 Implementation Gap Assessment of the Prosperity Indicators

3.2.3 Assessment of the Planet Indicators

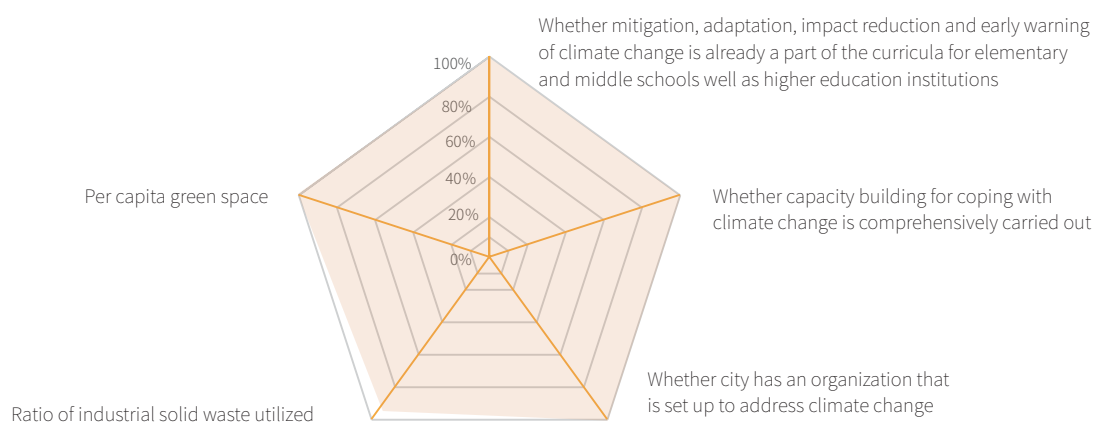


Figure 3-7 Implementation Progress Assessment of the Planet Indicators

Overall implementation of the Planet indicators has been good, with an overall realization rate reaching 99.1%.

- Indicators that had already met their global targets in 2020: whether mitigation, adaptation, impact reduction and early warning of climate change is already a part of the curricula for elementary and middle schools as well as higher education institutions, whether capacity building for coping with climate change is comprehensively carried out, whether city has an organization that is set up to address climate change, and per capita green space.
- Indicators with relatively slow progress: ratio of industrial solid waste utilized.

3.2.4 Assessment of the Peace Indicators

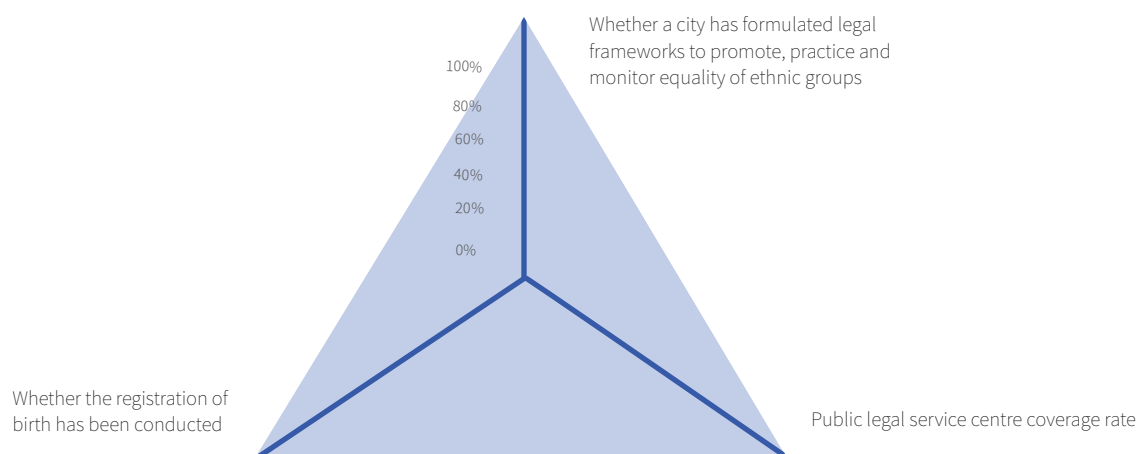


Figure 3-8 Implementation Progress Assessment of Peace-based Indicators

For the Peace indicators the overall realization rate was 100%, with all three indicators – whether a city has formulated legal frameworks to promote, practice and monitor equality of ethnic groups, public legal service center coverage rate, and whether the registration of birth has been conducted - having all of them reached the 2030 target.

3.2.5 Assessment of the Partnership Indicators

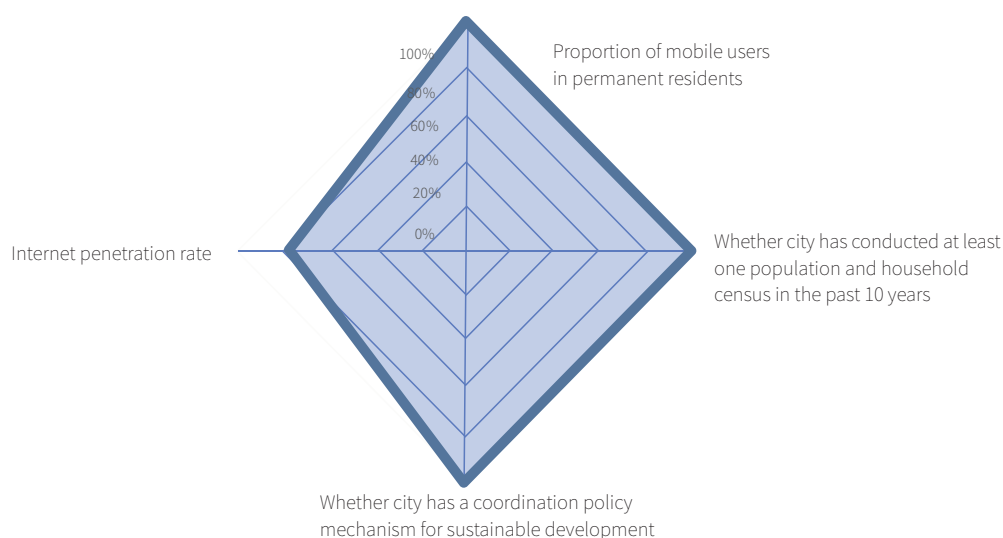
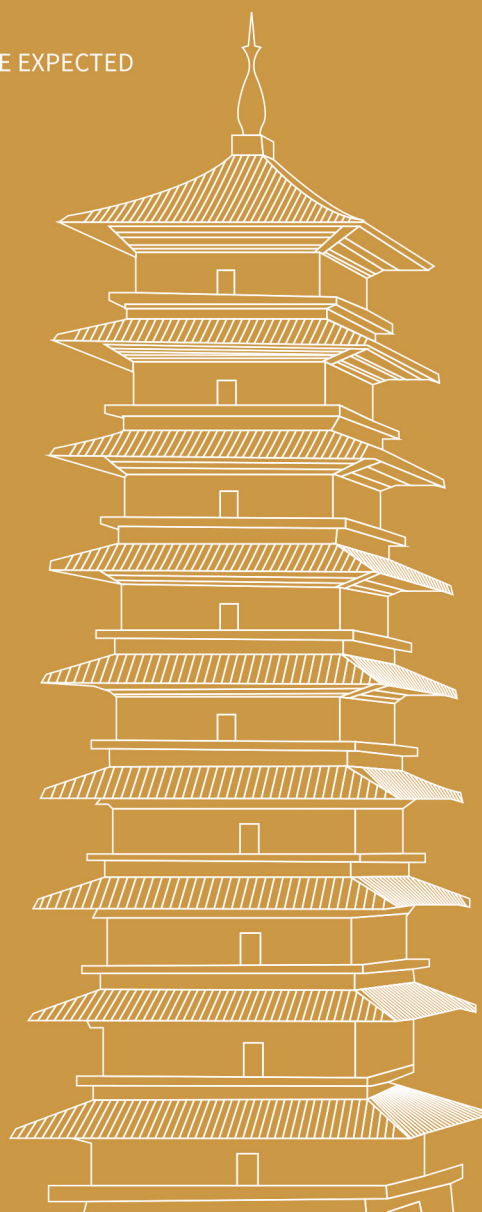


Figure 3-9 Implementation Progress Assessment of Partnership Indicators

Sound progress was made on the Partnership indicators, with an overall realization rate of 94.9 percent. Specifically, three of the four indicators – proportion of mobile users in permanent residents, whether the city has conducted at least one population and household census in the past 10 years, and whether city has a coordination policy mechanism for sustainable development – already achieved their 2030 target. The internet penetration rate has also reached 80% of its targets.

CHAPTER 4

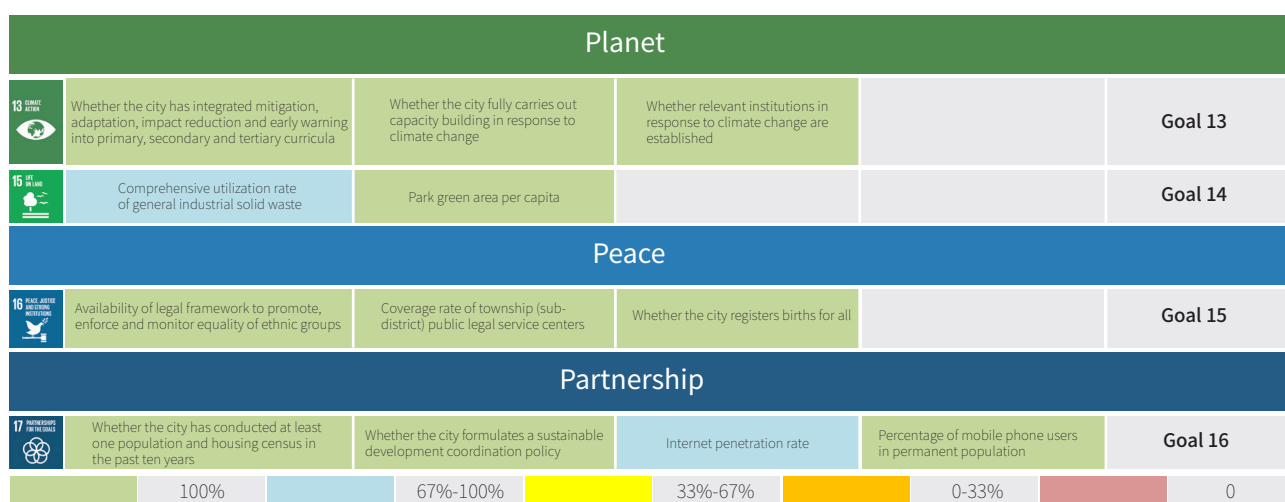
CONCLUSIONS AND IMPLICATIONS



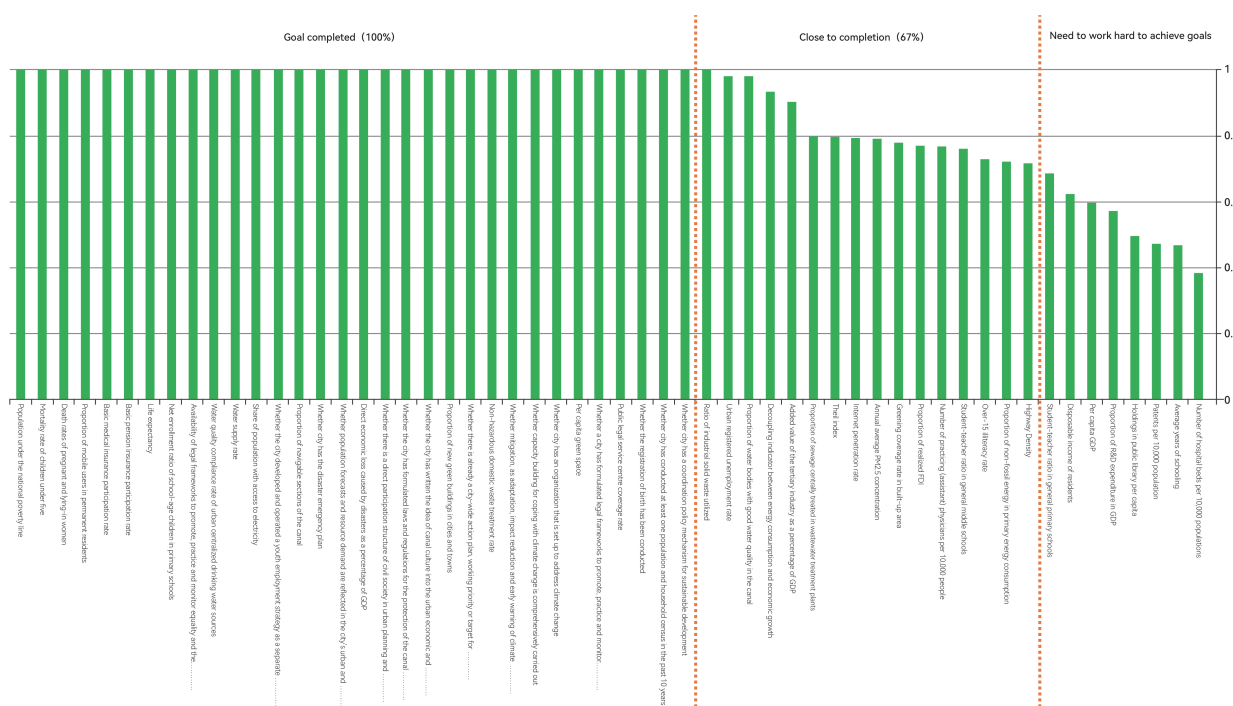
4.1 Overall progress for the CCSAI Indicators higher than expected

As described in Chapter 3, the overall realization of the 5P dimensions is as high as 92.2 percent, higher than the expected 67 percent completion rate set as an intermediary target to be reached by 2020. Indicators in the Peace category already achieved their 2030 targets. As for the other dimensions, the best performers were Planet, whose indicators recorded fulfilment rates of 99.1 percent.

People					
1 PEACE	Proportion of the population below the national poverty line	Basic medical insurance coverage	Urban and rural basic pension insurance coverage		Goal 1
2 WELL-BEING	Household disposable income				Goal 2
3 HEALTHY LIVES	Average life expectancy of the population	Number of professional (assistants) physicians per 10,000 people	Under-five mortality rate	Maternal mortality	Goal 3
	Number of hospital beds per 10,000 people				
4 QUALITY EDUCATION	Student-teacher ratio in general primary schools	Student-teacher ratio in general secondary schools	Over-15 illiteracy rate	Average years of schooling	Goal 4
	Net primary school enrollment rate				
5 GENDER EQUALITY	Availability of legal framework to promote, enforce and monitor the achievement of equality and non-sex-based discrimination				Goal 5
6 CLEAN WATER AND SANITATION	Centralized treatment rate of sewage treatment plants	Water supply penetration rate	Water quality compliance rate of urban centralized drinking water sources		Goal 6
	Proportion of water bodies in the canal with good water quality				
7 AFFORDABLE AND CLEAN ENERGY	Proportion of population with access to electricity	Proportion of non-fossil energy in primary energy consumption			Goal 7
Prosperity					
8 DECENT WORK AND ECONOMIC GROWTH	GDP per capita	Whether the city has developed and is operating a youth employment strategy, as a separate strategy or as part of the city's employment strategy expenditure	Urban registered unemployment rate	Share of added value of tertiary industry in GDP	Goal 8
	Energy consumption and economic growth decoupling index				
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	Patents per 10,000 population	Proportion of R&D expenditure	Proportion of the navigable reach of the canal	Highway Density	Goal 9
10 REDUCED INEQUALITIES	Theil Index	Proportion of realized FDI			Goal 10
11 SUSTAINABLE CITIES AND COMMUNITIES	Proportion of newly-built green buildings in the city	Disaster response plans	Implementation of urban and regional development plans that integrate population forecasts and resource needs	Direct economic loss caused by disasters as a percentage of GDP	Goal 11
	Annual average concentration of PM2.5	Establishment of an urban planning structure that operates regularly in a democratic way with the direct participation of civil society	Number of books per person	Whether the city formulated laws and regulations for the protection of the canal heritage, established a classified catalogue and archives of the canal cultural heritage, and a database of cultural relic resources and protection achievements	
	Whether the city incorporated the cultural dimension of the canal into the city's economic and social development plan	Green coverage rate in built-up area			
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	Whether the city has formulated an urban action plan for sustainable consumption and production or has incorporated sustainable consumption and production as a priority or goal into its urban policy	Harmless treatment rate of domestic garbage			Goal 12



4.2 57 percent of the Indicators reached their 2030 Targets; 84 percent have higher than the expected Implementation Progress



Note: Descending indicators are considered and adjusted.

4.3 Core Indicators' Implementation higher than the expected

In general, good progress was made in the 37 CCSAI core indicators, with an overall realization rate of 83.6 percent. Specifically, beyond the Peace dimension that has met all of the 2030 SDG targets considered in this CCSAI, Planet, Partnership, People and Prosperity and had realization rates of 98.9 percent, 94.9 percent, 80.1 percent, and 75.2 percent, respectively.

Among the 33 core indicators (Figure 4-3), 49 percent have already met the 2030 SDG targets, 30 percent of the rest have met more than 67 percent of targets. Together, 79 percent of core indicators have met more than 67 percent of the target. However, advancement was slower than anticipated for the number of hospital beds per 10,000 population, number of patents per 10,000 people, public libraries per capita, R&D spending as a proportion of GDP, disposable income, per capita GDP and the student-teacher ratio in primary schools.

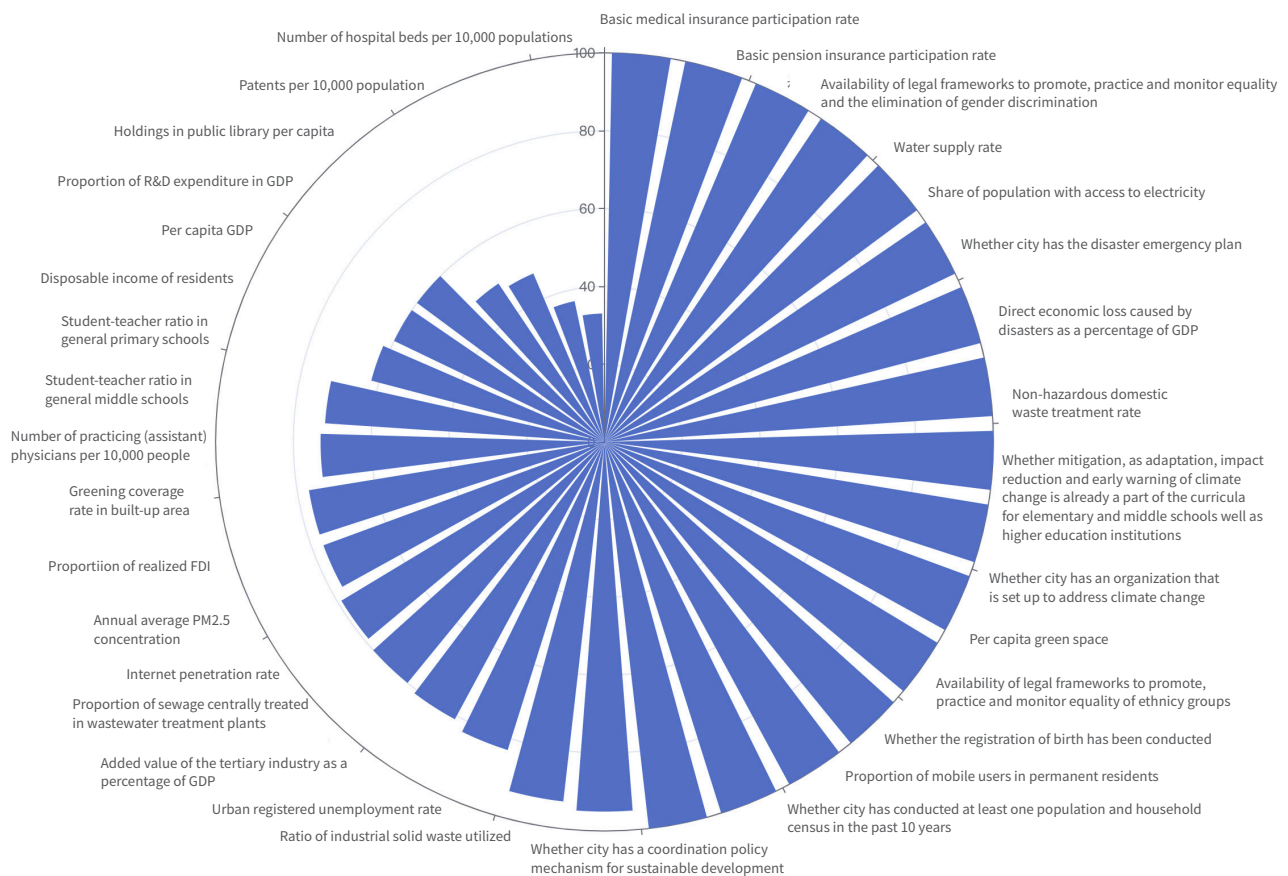


Figure 4-3 Implementation Progress of CCSAI Core Indicators

Given the importance of these areas, these core indicators indicate areas where more effort is needed to achieve these SDG targets. Related to cross-cutting themes, such as equality, some progress has been recorded. The assessment shows Yangzhou has implemented legal frameworks to promote, practice and monitor equality and the elimination of gender discrimination. On the other hand, the lack of disaggregated data at the local level remains a key hurdle for deeper understanding of opportunities and gaps in progressing towards SDG 5: gender equality. Special plans for different goals must be formulated to effectively work towards the 2030 targets. Actions should also be taken to establish an efficient implementation mechanism, as well as a monitoring and supporting system to execute such plans, which would be conducive to the comprehensive and high-quality realization of the 2030 SDGs targets.

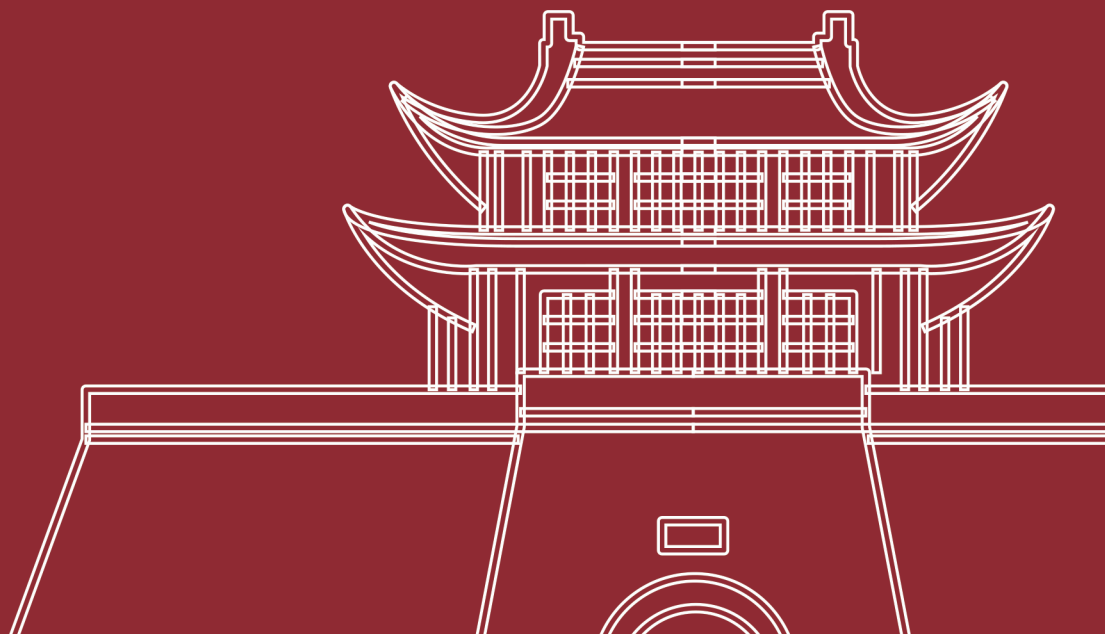
ANNEX

ANNEX I



METHODOLOGIES FOR ASSESSING THE IMPLEMENTATION SDGS IN CANAL CITIES

- 1 .CREATING A METHODOLOGY FOR ASSESSING SDG PROGRESS IN CANAL CITIES
- 2 .THE THEORETICAL FRAMEWORK: THE 5PS
- 3 .THE CANAL CITY SDG ASSESSMENT INDEX: THE METHODOLOGY



1. Creating a Methodology for Assessing SDG Progress in Canal Cities

The 1972 United Nations Conference on the Human Environment initiated a long process to define the concept of sustainable development. The World Commission on Environment and Development (WECD) concretised such concept in the report *Our Common Future* in 1987. The concept was then institutionalized at the 1992 Earth Summit in Rio de Janeiro. Since then, there has been no shortage of methodologies and indicator systems for assessing sustainable development. Given different understandings of sustainable development, there has been disagreement in choosing assessment methods, indicators and weightings, making it difficult to establish a globally recognized and universally applied methodology. The 2030 Agenda and subsequent assessment system made up of 232 indicators launched in 2016 helped establishing a standard system with unified evaluation methods and comparable evaluation results.

However, indicators selected and designed for assessing SDGs at the national level are not always applicable at the urban level. For example, indicators for assessing the proportion of renewable energy consumption out of the total energy consumption are difficult to manage at the city level, as the type and source of electricity provision is managed at the provincial or regional level. Furthermore, an indicator for assessing SDG progress in an urban area may not be a good indicator for assessing SDG progress in canal cities with unique characteristics. A new methodology is required for appropriately assessing SDGs in canal cities that is based on SDG indicator systems and takes into account urban characteristics.

2. The Theoretical Framework: The 5Ps

In the 2030 Sustainable Development Agenda the development of the 5P concept was an important innovation and key conceptual framework for sustainable development. The 5Ps are defined as follow:

“People” centers around the principle of “leave no one behind” . It does not refer to individuals or ethnic or other specific groups, nor to the public. The “People” concept focuses on human beings, including eliminating poverty and hunger in all forms, so that all people can fulfil their potential in a healthy environment, equally and with dignity.

“Planet” refers to the natural resources and habitat for human development. It addresses not only local environmental pollution, ecological degradation and resource exhaustion, but also emphasizes issues affecting the future survival of humanity, including climate change, a healthy marine environment and ecosystem biodiversity. This means maintaining a peaceful coexistence between humanity and nature, respecting planetary boundaries, pursuing sustainable consumption and production, effective management of natural resources, taking prompt action to address climate change and ensuring global climate security.

“Prosperity” goes beyond simple economic growth and enrichment of material assets, embracing sustainable, green, and inclusive development. It aims to promote economic transformation and progress, realizing sustainable prosperity so that everyone can live a prosperous and fulfilling life. It also seeks to achieve inclusive

economic, social and technological advancement, while coexisting peacefully with nature.

“Peace” is not a simple concept, or the opposite of “war”. It strives for social justice and harmony, focusing on creating a society free from fear and violence that is peaceful, fair and inclusive, respecting different cultures, ethnicities and belief systems, as well as supporting mutual tolerance between individuals and societies¹⁸.

“Partnership” emphasizes mutually beneficial cooperation between countries, as well as between countries and non-state actors in the international governance system. It aims to improve and promote cooperation between all stakeholders, increasing the participation of all individuals in efforts to meet the needs of the poorest and most vulnerable¹⁹.

3.The Canal City SDG Assessment Index: The Methodology

3.1 Selection of indicators

Indicators’ selection is critical for progress’ assessment. Based on specific research objectives, different indicator selection methods can be adopted. In this study, indicators are selected based on the following three criteria:

(1) Indicators applicable to urban SDG evaluation from the 232 SDG global indicators.

(2) Indicators selected from China’ s national five-year plans and Grand Canal planning documents and various urban planning processes. Promoting urban development via urban planning is a widely recognized practice. China’ s consecutive “five-year economic and social development plans” have provided road maps for urban growth and built a foundation for urban development data collection. The continuity of data from the five-year plans enables the evaluation of dynamics and trends in different areas. Besides the five-year plans, departments of local and municipal governments often conduct special planning in various areas, such as spatial structure, economic development, environmental protection, social welfare, etc. In addition, cities along the course of the Grand Canal often have canal-related planning documents to clarify the requirements on functions, protection and development specific to the Grand Canal. These special planning efforts offer another source of data and some of their indicators are included in the CCSAI for a more comprehensive overview of SDG progress.

(3) Other relevant indicators with commonly available data at Chinese municipal level. The CCSAI includes a third category of indicators reflecting the correlation between indicators, with high policy relevance to guide future urban development. Examples of such indicators include decoupling indicators that reflect the elasticity between economic/social development and environmental resource consumption, as well as landscape fragmentation indicators, measuring the level of segmentation of large habitats or smaller land areas following urbanisation, with significant impact on ecosystem conservation. Although the landscape fragmentation indicator has limited historical data for a robust analysis, evaluation data can still be obtained from remote-sensing image data at different stages.

¹⁸ Pan Jiahua, Chen Zi. A transformational agenda for sustainable development in 2030[M]. Social Sciences Literature Press: Beijing, 2016: 6-7

¹⁹ Ibid.

3.2 Canal city specific indicators

Based on the 5P concept and indicator selection criteria discussed, this study builds a generic Canal City SDG Assessment Index (CCSAI) consisting of five dimensions – the 5Ps – totalling 87 indicators (Figure I-1). The dimension of “People” contains 32 indicators, “Planet” contains 9 indicators, “Prosperity” contains 37 indicators, “Peace” contains 4 indicators and “Partnership” 5 indicators. These include a characteristic indicator system for assessing the sustainable development of canal cities, containing 19 canal specific indicators and 37 core indicators that can be used for horizontal comparison among canal cities and with other types of cities. The system is based on five canal-related dimensions: protection, research, inheritance, cultural promotion, and utilization. For details on the indicators’ list, see Annex II.

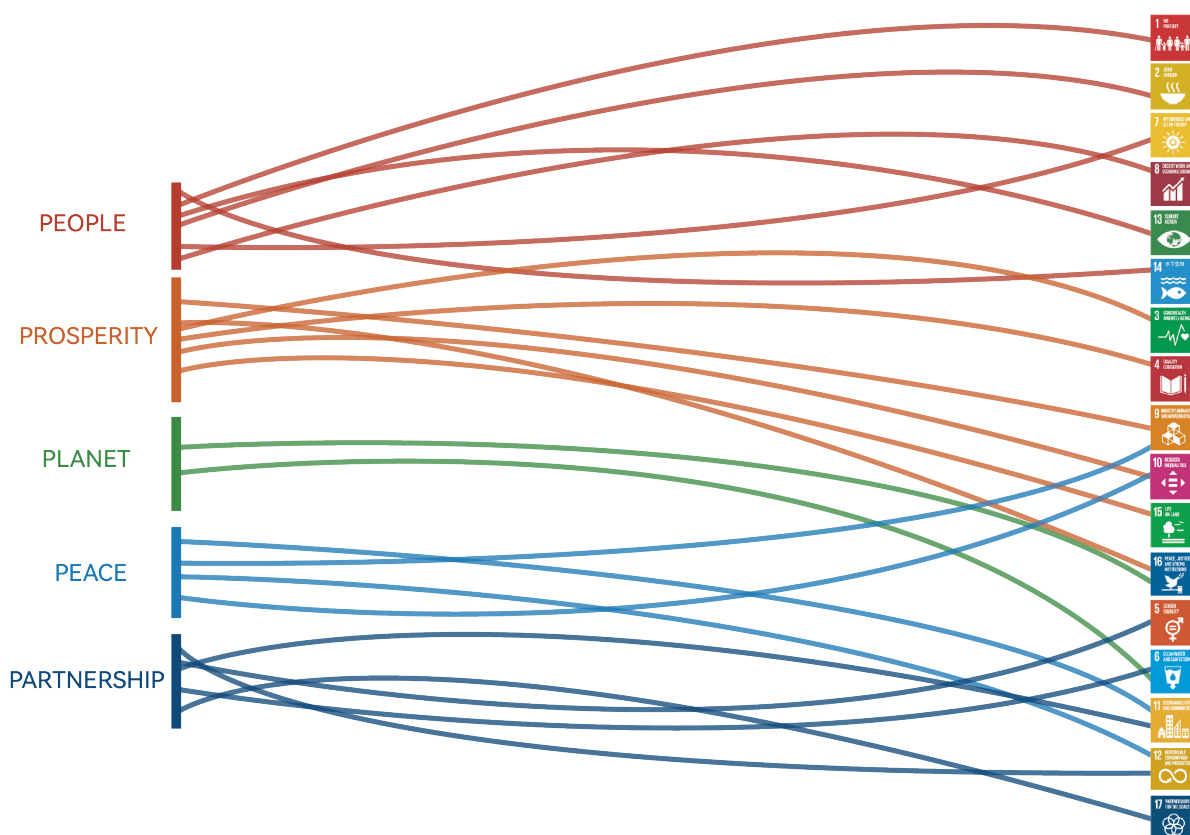


Figure I-1 5P-based urban SDG assessment indicator selection

3.3 Assessment Methodology for the Canal City SDG Assessment Index

(1) Implementation progress and gap assessment methodology

The assessment of urban sustainable development focuses on measuring the implementation progress and gaps to 2030 targets. Implementation progress assessment refers to differences between the current implementation status and the benchmark, the development made since the start of the assessment, fixed, in this study, to the year 2000. The target gap assessment refers to the difference between current progress and the target fixed for 2030. The

progress assessment, from an historical point of view, highlights areas where development and achievement of SDGs have been realised and to which degrees of success. The gap assessment points to areas with room for improvement, requiring more attention for future development.

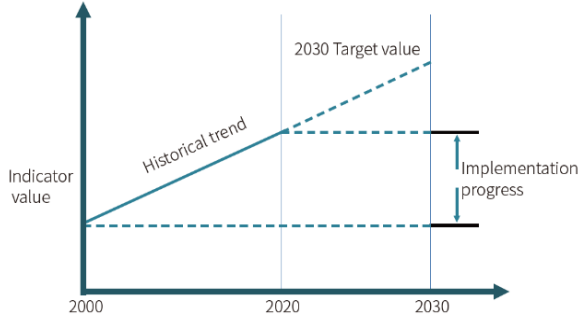


Figure I-2 Implementation Progress Assessment²⁰

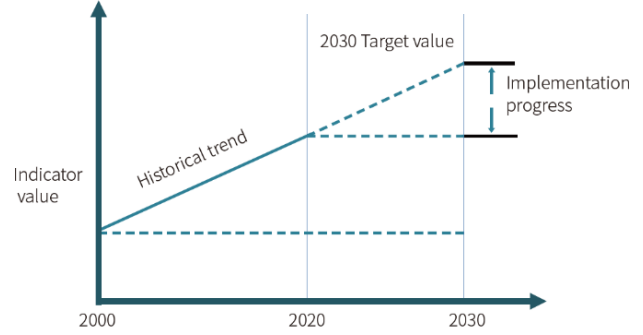


Figure I-3 The Target Gap Assessment

The implementation progress assessment formula is as follows:

$$PAI_i = \frac{IV_i^{2020} - IV_i^{2000}}{TG_i^{2030} - IV_i^{2000}} \times 100\% \quad (3.1)$$

Specifically, PAI_i represents the percentage of the implementation progress of indicator i ; and refer to the value of the indicator i ; IV_i^{2000} and IV_i^{2020} , refer to the value of the indicator i in 2000 and 2020, respectively; and TG_i^{2030} represents the target value of the indicator i in 2030²¹.

The target gap assessment formula is as follows:

$$TGA_i = \frac{IV_i^{2030} - IV_i^{2020}}{TG_i^{2030} - IV_i^{2000}} \times 100\% \quad (3.2)$$

Specifically, TGA_i Target Gap Assessment index, represents the percentage of the target gap of indicator i , IV_i^{2000} and IV_i^{2020} refer to the value of the city indicator i in 2000 and 2020, respectively; and TG_i^{2030} represents the target value of indicator in 2030.

CCSAI Core Indicators

The Canal City SDG Assessment Index (CCSAI) consists of multiple indicators. Although each indicator, representing the work done in one aspect, is equally important for a balanced implementation of the 2030 Agenda, some are considered more representative and more important than others given a specific time (development stage) and a specific knowledge background (cognition).

In order to identify these core indicators, this paper adopts the Delphi method, also known as the expert investigation method, to score and screen the core indicators under each P. The paper then assesses the implementation progress and gaps of these core indicators to detect future priorities.

²⁰ This graph only reflects the progress of indicators whose directions are positive. Indicators with reverse directions share the same principle.

²¹ With reference to the methodology of the 2020 Chinese Cities SDG Report, progress was calculated from scratch for indicators with missing 2000 data.

3.4 Setting the 2030 Target Value for the Indicators

The indicators' 2030 target value refers to the future level which each indicator is expected to achieve in 2030. The target value for each indicator is the basis for assessing implementation progress and gaps. The 2030 target value is determined in the following ways:

Firstly, for some indicators, the target value is clearly defined in the SDGs framework. Of the 232 SDG indicators, a few are assigned with specific target values. For example: one of the indicators in SDG 1 - No Poverty – is a 0 percent extreme poverty rate (indicator 1.1.1), in line with its target to “end poverty in all its forms everywhere”²². The 2030 target values for these types of indicators will be determined based on the SDG indicator description.

Secondly, for indicators whose target value is yet to be defined in the SDG targets, the 2030 target value will be determined by the following methods:

- The SDGs in Chinese Cities: Progress Assessment Report. In 2019, UNDP China conducted SDGs progress assessments for 90 Chinese cities and produced a report, setting the 2030 target value for indicators as the value of the 95th percentile city. It reflects the overall level of Chinese cities in certain target areas and avoids the impact of extreme outliers. These target values can continue to be used as 2030 target values for SDGs assessment of canal cities.
- Yangzhou Sustainable Development Plan (2017-2030). Some cities, such as Yangzhou, have already issued plans related to the 2030 Agenda that include development target values for 2030 for a broader range of indicators. These are used as a reference to determine the 2030 target values of the assessment indicators in our CCSAI.
- Various urban development plans, where some indicators' target values are generally set for the medium-and long-term development of a city. These target values are also measured in line with local development levels and trends, which can be used as 2030 target values, or as a starting point to derive values for the assessment indicators of the CCSAI calculated here.
- The average value of the performance of the five top-performing cities worldwide: for some indicators without a scientific basis to calculate and estimate the 2030 target value, the paper sets the 2030 target value of the indicator as the average of the top five cities globally in the selected development area.
- The average value of the performance of the top five OECD countries, when data of some indicators is difficult to obtain, as members of the Organization for Economic Cooperation and Development (OECD) have relatively comprehensive data collection. Also, their overall development is relatively high, and as such can represent the “advanced” level in many areas.

²² Ritchie, Roser, Mispy, Ortiz-Ospina, "Measuring progress towards the Sustainable Development Goals." SDG-Tracker.org, website, 2018. Available at [https://sdg-tracker.org/no-poverty#:~:text=Definition%3A%20Indicator%201.1.,location%20\(urban%20Frural\)%2.&text=Goal%3A%20By%202030%20eradicate%20extreme,less%20than%20%241.90%20a%20day%20](https://sdg-tracker.org/no-poverty#:~:text=Definition%3A%20Indicator%201.1.,location%20(urban%20Frural)%2.&text=Goal%3A%20By%202030%20eradicate%20extreme,less%20than%20%241.90%20a%20day%20)

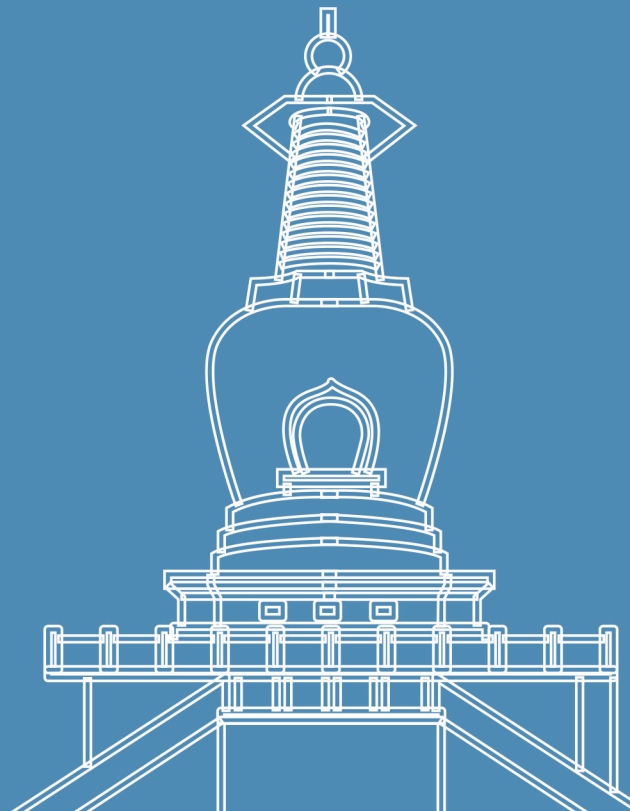
ANNEX

ANNEX II



GENERIC CANAL CITY SDG ASSESSMENT INDEX (CCSAI) LIST OF INDICATORS

- CANAL CITY SPECIFIC INDICATORS
- CANAL CITY SDGS ASSESSMENT INDEX SYSTEM
- THE YANGZHOU CCSAI INDICATORS LISTED ACCORDING TO THE 5PS INDICATOR



Canal City Specific Indicators

Dimension	Indicator	No.	SDGs
People	Proportion of water bodies with good water quality in the canal	PPL-C060203	Goal 6
	Per capita expenditure on preserving, protecting and conserving all cultural and natural heritages	PST-C110401	Goal 11
	Expenditure on preserving, protecting and conserving all cultural and natural heritages as a percentage of financial expenditure	PST-C110402	Goal 11
	Whether the city has formulated laws and regulations for the protection of the canal heritage, and established the hierarchical and classified list and archives of the canal cultural heritage, as well as the information database of cultural relics resources and protection achievements	PST-C110404	Goal 11
	Proportion of the area of the canal control and protection zone to the city's land area	PST-C110405	Goal 11
	Protection rate of natural wetlands	PLN-C150202	Goal 15
	Proportion of ecological canal banks	PLN-C150203	Goal 15
Research	Number of institutions and academic research institutes established to carry out canal protection and heritage utilization	PST-C090501	Goal 9
	Total number of published canal-related research results	PST-C110406	Goal 11
Inheritance	Number of canal-themed literary and artistic works	PPL-C040702	Goal 4
	Number of projects included in the representative list of national intangible cultural heritage	PST-C110407	Goal 11
	Total number of representative inheritors of intangible cultural heritage at the city-level or above	PST-C110409	Goal 11
Cultural promotion	Number of schools that have carried out education on canal culture	PPL-C040701	Goal 4
	Whether the city has written the idea of canal culture into the urban economic and social development plan	PST-C110410	Goal 11
	Number of canal-related international events as an organizer or co-organizer	PTS-T170602	Goal 17
Utilization	Added value of the tourism industry as a percentage of GDP	PST-C080901	Goal 8
	Added value of cultural and related industries as a percentage of GDP	PST-C080902	Goal 8
	Area of culture-tourism integration demonstration area	PST-C080903	Goal 8
	Proportion of navigable sections of the canal	PST-C090105	Goal 9

Canal City SDGs Assessment Index System

5P	SDGs	Indicators	No.
PEOPLE	Goal 1: End poverty in all its forms everywhere	Population under the national poverty line	PPL-C010101
		Basic medical insurance participation rate*	PPL-T010301
		Basic pension insurance participation rate*	PPL-T010302
	Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Disposable income of residents*	PPL-T020101
		Annual production of food crops per unit of sown area	PPL-T020301
	Goal 3: Ensure healthy lives and promote well-being for all at all ages	Number of practicing (assistant) physicians per 10,000 people*	PPL-C030101
		Mortality rate of children under five	PPL-C030102
		Death rates of pregnant and lying-in women	PPL-C030103
		Deaths from traffic accidents per 100,000 people	PPL-C030104
		Vaccination rate	PPL-C030105
		Infant mortality rate	PPL-C030201
		Life expectancy	PPL-G030001
		Number of hospital beds per 10,000 people*	PPL-T030801
	Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Student-teacher ratio in general primary schools*	PPL-C040101
		Student-teacher ratio in general secondary schools*	PPL-C040102
		Over-15 illiteracy rate	PPL-C040103
		Average years of schooling	PPL-C040104
		Net enrollment ratio of school-age children in primary schools	PPL-C040105
		Number of schools that have carried out education on canal culture	PPL-C040701
		Number of canal-themed literary and artistic works	PPL-C040702
		Share of education expenditure in GDP*	PPL-T040301
	Goal 5: Achieve gender equality and empower all women and girls	Whether a city has formulated legal frameworks to promote, practice and monitor equality and the elimination of gender discrimination*	PPL-C050101
		Share of women among the Municipal People Congress representatives	PPL-C060101
	Goal 6: Ensure availability and sustainable management of water and sanitation for all	Proportion of sewage centrally treated in wastewater treatment plants*	PPL-C040702
		Water consumption per unit of GDP*	PPL-C060102
		Proportion of water bodies with good environmental water quality	PPL-C060201
		Water quality compliance rate of urban centralized drinking water sources	PPL-C060202
		Proportion of water bodies with good water quality in the canal	PPL-C060203
		Water supply rate*	PPL-T060101

5P	SDGs	Indicators	No.
PEOPLE	Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all	Share of population with access to electricity*	PPL-C070101
		Proportion of non-fossil energy in primary energy consumption	PPL-C070201
		Energy consumption per unit of GDP*	PPL-T070301
PROSPERITY	Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Per capita GDP*	PST-C080101
		Urban registered unemployment rate*	PST-C080201
		Added value of the tourism industry as a percentage of GDP	PST-C080901
		Added value of cultural and related industries as a percentage of GDP	PST-C080902
		Area of culture-tourism integration demonstration zone	PST-C080903
		Whether the city developed and operated a youth employment strategy as a separate strategy or as part of an urban employment strategy	PST-T080101
		Added value of the tertiary industry as a percentage of GDP*	PST-T080301
		Decoupling indicator between energy consumption and economic growth	PST-T080401
	Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Proportion of R&D expenditure in GDP*	PST-C090101
		Proportion of navigable sections of the canal	PST-C090105
		Highway Density	PST-C090106
		Number of institutions and academic research institutes established to carry out canal protection and heritage utilization	PST-C090501
		Patents per capita*	PST-T090001
	Goal 10: Reduce inequality within and among countries	Per capita income ratio between urban and rural residents	PST-C100101
		Actual foreign capital utilization as a percentage of total foreign direct investment*	PST-T100001
		Theil index	PST-T100201
	Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable	Whether city has the disaster emergency plan*	PST-C110101
		Ratio of bus travel to vehicle travel during peak traffic	PST-C110102
		Whether population forecasts and resource demand are reflected in the city's urban and regional development plans	PST-C110103
		Direct economic loss caused by disasters as a percentage of GDP*	PST-C110201
		Annual average PM2.5 concentration*	PST-C110202
		Whether the city has established an urban planning structure that operates regularly and democratically with direct participation of civil society	PST-C110204
		Per capita expenditure on preserving, protecting and conserving all cultural and natural heritages	PST-C110401

5P	SDGs	Indicators	No.
PROSPERITY	Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable	Expenditure on preserving, protecting and conserving all cultural and natural heritages as a percentage of financial expenditure	PST-C110402
		Whether the city has formulated laws and regulations for the protection of the canal heritage, and established the hierarchical and classified list and archives of the canal cultural heritage, as well as the information database of cultural relics resources and protection achievements	PST-C110404
		Proportion of the area of the canal control and protection zone to the city's land area	PST-C110405
		Total number of published canal-related research results	PST-C110406
		Number of projects included in the representative list of national intangible cultural heritage	PST-C110407
		Total number of representative inheritors of intangible cultural heritage at the city-level or above	PST-C110409
		Whether the city has written the idea of canal culture into the urban economic and social development plan	PST-C110410
		GDP output per unit of built-up area	PST-T110001
		Proportion of new green buildings in cities and towns	PST-C090101
		Proportion of navigable sections of the canal	PST-T110002
		Urban road network density	PST-T110201
		Holdings in public library per capita *	PST-T110401
		Greening coverage rate in built-up area*	PST-T110601
	Goal 12: Ensure sustainable consumption and production patterns	Whether there is already a city-wide action plan, priority or target for practicing sustainable consumption and production	PST-C120101
		Non-hazardous domestic waste treatment rate*	PST-C120201
PLANET	Goal 13: Take urgent action to combat climate change and its impacts	Whether mitigation, adaptation, impact reduction and early warning of climate change is already a part of the curricula for elementary and middle schools well as higher education institutions*	PLN-C130101
		Whether capacity building for coping with climate change is comprehensively carried out	PLN-C130102
		Whether city has an organization that is set up to address climate change*	PLN-C130201
	Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Share of natural reserve in total land area	PLN-C150201
		Protection rate of natural wetlands	PLN-C150202
		Proportion of ecological canal banks	PLN-C150203
		Ratio of industrial solid waste utilized*	PLN-T150102

5P	SDGs	Indicators	No.
PLANET		Per capita green space*	PLN-T150501
PEACE	Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	Whether a city has formulated legal frameworks to promote, practice and monitor equality of ethnic groups*	PEC-T160001
		Criminal cases per 10,000 people*	PEC-T160101
		Coverage rate of township (street) public legal service centers	PEC-T160301
		Whether the registration of birth has been conducted*	PEC-T160901
PARTNERSHIP	Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development	Proportion of mobile users in permanent residents*	PTS-T170601
		Whether city has conducted at least one population and household census in the past 10 years*	PTS-C170001
		Whether city has a coordination policy mechanism for sustainable development*	PTS-C170101
		Share of internet users*	PTS-C170102
		Number of hosted/ co-hosted canal-related international events	PTS-T170602

Note: Indicators marked with * are core indicators.

The Yangzhou CCSAI indicators listed according to the 5Ps Indicator

People-based indicators	
Proportion of the population below the national poverty line Indicator No.: PPL-C010101 Indicator direction: Reverse Description: Percentage of the population below the national poverty line Unit: % 2000: 0 2020: 0 2030: 0 Source: official website of the Yangzhou Municipal People's Government	Basic medical insurance coverage Indicator No.: PPL-T010301 Indicator direction: Positive Description: Percentage of persons covered by basic health insurance in persons eligible for basic health insurance Unit: % 2000: — 2020: 98 2030: 95 Source: Yangzhou Fourteenth Five-Year Plan for National Economic and Social Development of Yangzhou City and Outline of Long-Term Goals for 2035, UNDP Assessment Report on the Progress of Chinese Cities

Urban and rural basic pension insurance coverage
Indicator No.: PPL-T010302
Indicator direction: Positive
Description: Percentage of persons covered by urban and rural basic pension insurance in persons eligible for urban and rural basic pension insurance
Unit: %
2000: —
2020: 98
2030: 95
Source: Yangzhou Fourteenth Five-Year Plan for National Economic and Social Development of Yangzhou City and Outline of Long-Term Goals for 2035, UNDP Assessment Report on the Progress of Chinese Cities

Household disposable income
Indicator No.: PPL-T020101
Indicator direction: Positive
Description: Sum of residents' wage income, net operating income, net property income and net transfer income
Unit: CNY
2000: 4628
2020: 38843
2030: 64479
Source: Statistical Yearbook of Jiangsu 2007, Statistical Communiqué on National Economic and Social Development of Yangzhou City 2020, Yangzhou Fourteenth Five-Year Plan for National Economic and Social Development of Yangzhou City and Outline of Long-Term Goals for 2035

Number of professional (assistants) physicians per 10,000 people
Indicator No.: PPL-C030101
Indicator direction: Positive
Description: Number of professional (assistants) physicians per 10,000 people
Unit: People
2000: 13.0
2020: 29.0
2030: 35.0
Source: Statistical Yearbook of Chinese Cities 2001, Yangzhou Fourteenth Five-Year Plan for National Economic and Social Development of Yangzhou City and Outline of Long-Term Goals for 2035, Implementation Plan of Comprehensively Promoting Healthy Yangzhou

Under-five mortality rate
Indicator No.: PPL-C030102
Indicator direction: Reverse
Description: Probability of a child (including infant) dying between birth and exactly 5 years of age, expressed per 1,000 live births
Unit: ‰
2000: —
2020: 2.8
2030: 5
Source: Implementation Plan of Comprehensively Promoting Healthy Yangzhou

Maternal mortality
Indicator No.: PPL-C030103
Indicator direction: Reverse
Description: Number of maternal deaths per 100,000 pregnancies. From the beginning of pregnancy to 42 days after delivery, maternal deaths due to various reasons (except accidents) are counted.
Unit: per 100,000
2000: —
2020: 0
2030: 5
Source: Implementation Plan of Comprehensively Promoting Healthy Yangzhou

Average life expectancy of the population
Indicator No.: PPL-G030001
Indicator direction: Positive
Description: Average number of years that people born in the same period can expect to survive if the current age-specific mortality rate remains unchanged.
Unit: age
2000: —
2020: 77.9
2030: 80
Source: Implementation Plan of Comprehensively Promoting Healthy Yangzhou

Number of hospital beds per 10,000 population

Indicator No.: PPL-T030801

Indicator direction: Positive

Description: Number of hospital beds per 10,000 people

Unit: bed per 10,000 people

2000: 23.3

2020: 41.3

2030: 77.4

Source: Statistical Yearbook of Chinese Cities 2001, Statistical Yearbook of Chinese Cities 2020, UNDP Assessment Report on the Progress of Chinese Cities

Student-teacher ratio in general primary schools

Indicator No.: PPL-C040101

Indicator direction: Reverse

Description: Ratio of students to teachers in ordinary primary schools

Unit: —

2000: 21.2

2020: 15.9

2030: 12.6

Source: Statistical Yearbook of Chinese Cities 2001, Statistical Yearbook of Jiangsu 2020, UNDP Assessment Report on the Progress of Chinese Cities

Student-teacher ratio in general secondary schools

Indicator No.: PPL-C040102

Indicator direction: Reverse

Description: Ratio of students to teachers in ordinary secondary schools

Unit: —

2000: 15.7

2020: 10.8 (in 2019)

2030: 8.8

Source: Statistical Yearbook of Chinese Cities 2001, Statistical Yearbook of Jiangsu 2020, UNDP Assessment Report on the Progress of Chinese Cities

Over-15 illiteracy rate

Indicator No.: PPL-C040103

Indicator direction: Reverse

Description: Ratio of the illiterate population over 15 years old to the total population over 15 years old

Unit: %

2000: 9.2

2020: 3.16

2030: 0.4

Source: Census Data by County 2000, Statistical Yearbook of Chinese Population and Employment 2020, average of top 5 countries in the International Statistical Yearbook 2018

Average years of schooling

Indicator No.: PPL-C040104

Indicator direction: Positive

Description: Average number of years that a certain population group received academic education (including adult academic education, excluding various academic training) in a certain period of time and in a certain area

Unit: year

2000: 7.7

2020: 9.7

2030: 13.4

Source: Census Data by County 2000, Data from the Seventh Census of Yangzhou City, average of top 5 countries published on the official website of the UNDP

Net primary school enrollment rate

Indicator No.: PPL-C040105

Indicator direction: Positive

Description: Number of children of official primary school age who are enrolled in primary education as a percentage of the total children of the official school age population

Unit: %

2000: 100 (in 2001)

2020: 100 (in 2008)

2030: 100

Source: Statistical Communiqué on National Economic and Social Development of Yangzhou City 2001, the official website of Jiangsu Provincial Bureau of Statistics

Availability of legal framework to promote, enforce and monitor the achievement of equality and non-sex-based discrimination

Indicator No.: PPL-C050101

Indicator direction: Positive

Description: Whether the city has developed a legal framework to promote, enforce and monitor the achievement of equality and non-sex-based discrimination (1 is “Yes”, 0 is “No”)

Unit: —

2000: 1

2020: 1

2030: 1

Source: Law of the People's Republic of China on the Protection of Rights and Interests of Women, Law of the People's Republic of China on the Protection of Rights and Interests of Women, UNDP Assessment Report on the Progress of Chinese Cities

Proportion of sewage centrally treated in wastewater treatment plants

Indicator No.: PPL-C060101

Indicator direction: Positive

Description: Proportion of treated domestic sewage and industrial wastewater in total sewage discharge

Unit: %

2000: 48.85

2020: 88.6

2030: 98.1

Source: Statistical Yearbook of Chinese City Construction 2006, Statistical Yearbook of Chinese Cities 2019, UNDP Assessment Report on the Progress of Chinese Cities

Proportion of water bodies in the canal with good water quality

Indicator No.: PPL-C060203

Indicator direction: Positive

Description: Proportion of national and provincial surface water examination sections of the Beijing-Hangzhou Grand Canal with water quality at grade I, II, III in the total national and provincial surface water examination sections of the Beijing-Hangzhou Grand Canal

Unit: %

2000: —

2020: 92.3

2030: 100

Source: Yangzhou Ecological Environment Bureau

Water quality compliance rate of urban centralized drinking water sources

Indicator No.: PPL-C060202

Indicator direction: Positive

Description: Percentage of qualified water in the total water withdrawn from a centralized water source supplying drinking water to an urban area

Unit: %

2000: —

2020: 100

2030: 100

Source: Yangzhou Ecological Environment Bureau

Water supply penetration rate

Indicator No.: PPL-T060101

Indicator direction: Positive

Description: Ratio of the population with access to water supply to the total population of the city

Unit: %

2000: 90.1

2020: 100

2030: 100

Source: Statistical Yearbook of Chinese City Construction 2006, Statistical Yearbook of Yangzhou 2019, UNDP Assessment Report on the Progress of Chinese Cities

Share of population with access to electricity

Indicator No.: PPL-C070101

Indicator direction: Positive

Description: Proportion of the population with access to electricity in the city

Unit: %

2000: —

2020: 100

2030: 100

Source: National Energy Administration, UNDP Assessment Report on the Progress of Chinese Cities

Proportion of non-fossil energy in primary energy consumption

Indicator No.: PPL-C070201

Indicator direction: Positive

Description: Proportion of non-fossil energy in primary energy consumption

Unit: %

2000: —

2020: 17

2030: 25.0

Source: Yangzhou Fourteenth Five-Year Plan for National Economic and Social Development of Yangzhou City and Outline of Long-Term Goals for 2035, Building on Past Achievements and Launching a New Journey for Global Climate Actions

Prosperity-based indicators

GDP per capita

Indicator No.: PST-C080101

Indicator direction: Positive

Description: Ratio of gross regional product to total population

Unit: Yuan

2000: 10515

2020: 132784

2030: 215000

Source: Statistical Yearbook of Yangzhou 2019, Yangzhou Development and Reform Commission

Urban registered unemployment rate

Indicator No.: PST-C080201

Indicator direction: Reverse

Description: It is the ratio between urban registered unemployed and the sum of all types of persons that is eligible for employment, that excludes retirees, people with disabilities, students and other groups of people who are defined ineligible for employment.

Unit: %

2000: 3.0

2020: 1.8

2030: 1.7

Source: Statistical Yearbook 2007 for the Yangtze and Pearl River Deltas and Hong Kong and Macao Special Administrative Regions, Statistical Communiqué on National Economic and Social Development of Yangzhou City 2020, UNDP Assessment Report on the Progress of Chinese Cities

Whether the city has developed and is operating a youth employment strategy, as a separate strategy or as part of the city's employment strategy

Indicator No.: PST-T080101

Indicator direction: Positive

Description: Whether the city has developed and is operating a youth employment strategy, as a separate strategy or as part of the city's employment strategy (1 is "Yes", 0 is "No")

Unit: —

2000: 0

2020: 1

2030: 1

Source: Yangzhou's 13th Five-Year Plan for Human Resources and Social Security Development, Yangzhou Municipal Government's Implementation Opinions on Implementing Employment Priority Policies and Further Stabilizing Employment

Share of added value of tertiary industry in GDP

Indicator No.: PST-T080301

Indicator direction: Positive

Description: Proportion of the added value of the tertiary industry in the gross regional product

Unit: %

2000: 33.5

2020: 48.9

2030: 52.0

Source: Statistical Yearbook of Yangzhou 2019, Statistical Communiqué on National Economic and Social Development of Yangzhou City 2020, Yangzhou Development and Reform Commission

Decoupling indicators between energy consumption and economic growth

Indicator No.: PST-T080401

Indicator direction: Reverse

Description: Decoupling of energy consumption growth from economic growth can be expressed as elasticity values where the percentage change of energy consumption is divided by the percentage change of GDP in a given time period. Decoupling index = (the percentage change of energy consumption)/(the percentage change of GDP)=(energy consumption growth rate)/(GDP growth rate)

Unit: —

2000: 1.78

2020: 0.17

2030: 0

Source: Calculation by the research team based on relevant data

Proportion of R&D expenditure

Indicator No.: PST-C090101

Indicator direction: Positive

Description: Proportion of R&D expenditure in the gross regional product

Unit: %

2000: 1.1

2020: 2.5

2030: 4.0

Source: Statistical Yearbook of Chinese Technology 2003, Yangzhou 13th Five-Year Economic and Social Development and Strategic Positioning of the 14th Five-Year Development, UNDP Assessment Report on the Progress of Chinese Cities

Proportion of the navigable reach of the canal

Indicator No.: PST-C090105

Indicator direction: Positive

Description: Proportion of navigable reaches to the total length of the canal within the city in a certain period of time

Unit: %

2000: —

2020: 100

2030: 100

Source: Transportation Bureau of Yangzhou

Highway Density

Indicator No.: PST-C090106

Indicator direction: Positive

Description: Year-end opening mileage of urban expressways and land in administrative areas land area ratio

Unit: kilometer / 100 square kilometers

2000: —

2020: 4.5

2030: 7.1

Source: estimation based on the data provided by the "China Urban Statistical Yearbook" and the Municipal Transportation Bureau, and the "2030 Target Value Basis" provides by the Municipal Transportation Bureau

Patents per 10,000 population

Indicator No.: PST-T090001

Indicator direction: Positive

Description: Number of invention patents granted per 10,000 population

Unit: patent per 10,000 population

2000: 0.01

2020: 3.28

2030: 8.82

Source: Statistical Yearbook of Jiangsu 2011, Statistical Communiqué on National Economic and Social Development of Yangzhou City 2020, UNDP Assessment Report on the Progress of Chinese Cities

Proportion of realized FDI

Indicator No.: PST-T100001

Indicator direction: Positive

Description: Proportion of realized FDI to the Gross Regional Domestic Product (GRDP) of the year

Unit: %

2000: 1.2

2020: 1.5

2030: 1.6

Source: Statistical Yearbook of Chinese Cities 2001, Statistical Yearbook of Jiangsu 2020, Yangzhou Development and Reform Commission

Theil Index
Indicator No.: PST-T100201
Indicator direction: Reverse
Description: A statistic used to measure the income gap between individuals and regions
Unit: —
2000: 0.128
2020: 0.032
2030: 0.008
Source: Calculation by the research team based on index formula, calculation by the research team based on index formula, average of top 5 countries

Whether a city has a disaster emergency plan
Indicator No.: PST-C110101
Indicator direction: Positive
Description: Whether the city formulates disaster response plans (1 is “Yes”, 0 is “No”)
Unit: —
2000: 1
2020: 1
2030: 1
Source: Law of the People's Republic of China on Flood Control, Emergency Plan for Natural Disaster Relief in Yangzhou City, UNDP Assessment Report on the Progress of Chinese Cities

Whether population forecasts and resource demand are reflected in the city's urban and regional development plans
Indicator No.: PST-C110103
Indicator direction: Positive
Description: Whether the city implements urban and regional development plans that integrate population forecasts and resource needs (1 is “Yes”, 0 is “No”)
Unit: —
2000: 1
2020: 1
2030: 1
Source: Yangzhou City Master Plan (2002-2020), Yangzhou City Master Plan (2011-2020)

Direct economic loss caused by disasters as a percentage of GDP
Indicator No.: PST-C110201
Indicator direction: Reverse
Description: Direct economic loss caused by disasters as a percentage of GDP
Unit: %
2000: 0.54
2020: 0.06
2030: 0.09
Source: Jiangsu statistical yearbooks over the years, UNDP Assessment Report on the Progress of Chinese Cities

Annual average concentration of PM2.5
Indicator No.: PST-C110202
Indicator direction: Reverse
Description: Annual average of the content of particulate matter with an aerodynamic diameter less than or equal to 2.5 microns per cubic meter of air, used to reflect the air quality status
Unit: Mg/m ³
2000: 70 (First monitoring data in 2013)
2020: 36
2030: 27
Source: Statistical Yearbook of Chinese Environment 2014, Statistical Communiqué on National Economic and Social Development of Yangzhou City 2020, UNDP Assessment Report on the Progress of Chinese Cities

Establishment of an urban planning structure that operates regularly in a democratic way with the direct participation of civil society
Indicator No.: PST-C110204
Indicator direction: Positive
Description: Whether the city has established an urban planning structure that operates regularly in a democratic way with the direct participation of civil society (1 is “Yes”, 0 is “No”)
Unit: —
2000: 0
2020: 1
2030: 1
Source: Measures for the Administration of Urban and Rural Planning in Yangzhou City, etc.

Whether the city has formulated laws and regulations for the protection of the canal heritage, and established the hierarchical and classified list and archives of the canal cultural heritage, as well as the information database of cultural relics resources and protection achievements

Indicator No.: PST-C110404

Indicator direction: Positive

Description: Whether the city formulated laws and regulations for the protection of the canal heritage, established a classified catalogue and archives of the canal cultural heritage, and a database of cultural relic resources and protection achievements (1 is "Yes", 0 is "No")

Unit: —

2000: 0

2020: 0

2030: 1

Source: Implementation Plan for the Protection, Inheritance and Utilization of the Grand Canal Culture in Yangzhou City

Whether the city has written the idea of canal culture into the urban economic and social development plan

Indicator No.: PST-C110410

Indicator direction: Positive

Description: Whether the city incorporated the cultural dimension of the canal into the city's economic and social development plan (1 is "Yes", 0 is "No")

Unit: —

2000: 0

2020: 1

2030: 1

Source: Yangzhou Fourteenth Five-Year Plan for National Economic and Social Development of Yangzhou City and Outline of Long-Term Goals for 2035

Proportion of new green buildings in cities and towns

Indicator No.: PST-T110002

Indicator direction: Positive

Description: Proportion of newly-built green buildings to newly-built civil buildings in the city

Unit: %

2000: —

2020: 99.8

2030: 100

Source: Housing and Urban-Rural Development Bureau of Yangzhou

Holdings in public library per capita

Indicator No.: PST-C110404

Indicator direction: Positive

Description: Number of books in public libraries per person

Unit: book per person

2000: 0.3

2020: 1.2

2030: 2.2

Source: Statistical Yearbook of Chinese Cities 2001, Statistical Yearbook of Jiangsu 2020, UNDP Assessment Report on the Progress of Chinese Cities

Green space in built-up areas

Indicator No.: PST-C110601

Indicator direction: Positive

Description: Ratio of the green coverage area to the total urban built-up area

Unit: %

2000: 35.9

2020: 44.0

2030: 46.4

Source: Statistical Yearbook of Chinese Cities 2001, Statistical Yearbook of Chinese Cities 2019, UNDP Assessment Report on the Progress of Chinese Cities

Whether there is already a city-wide action plan, working priority or target for sustainable consumption and production

Indicator No.: PST-C120101

Indicator direction: Positive

Description: Whether the city has formulated an urban action plan for sustainable consumption and production or has incorporated sustainable consumption and production as a priority or goal into its urban policy (1 is "Yes", 0 is "No")

Unit: %

2000: 0

2020: 1

2030: 1

Source: Yangzhou Energy Conservation 13th Five-Year Development Plan

Harmless treatment rate of domestic garbage

Indicator No.: PST-C120201

Indicator direction: Positive

Description: Percentage of the amount of garbage treated in a harmless manner to the total amount of domestic garbage

Unit: %

2000: 100

2020: 100

2030: 100

Source: Statistical Yearbook of Chinese Cities 2003, Statistical Yearbook of Chinese Cities 2019, UNDP Assessment Report on the Progress of Chinese Cities

Planet-based indicators

Whether mitigation, adaptation, impact reduction and early warning of climate change is already a part of the curricula for elementary and middle schools well as higher education institutions

Indicator No.: PLN-C130101

Indicator direction: Positive

Description: Whether the city has integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula (1 is "Yes", 0 is "No")

Unit: —

2000: 0

2020: 1

2030: 1

Source: National Disaster Reduction Day Activity Plan, UNDP Assessment Report on the Progress of Chinese Cities

Whether the city fully carries out capacity building in response to climate change

Indicator No.: PLN-C130102

Indicator direction: Positive

Description: Whether the city fully carries out capacity building in response to climate change (1 is "Yes", 0 is "No")

Unit: —

2000: 0

2020: 1

2030: 1

Source: Jiangsu Province Eco-Environmental System Capacity Building Training in Response to Climate Change held in Yangzhou

Whether relevant institutions in response to climate change are established

Indicator No.: PLN-C130201

Indicator direction: Positive

Description: Whether relevant institutions in response to climate change are established (1 is "Yes", 0 is "No")

Unit: —

2000: 0

2020: 1

2030: 1

Source: Notice of the Yangzhou Municipal People's Government on the Establishment of Yangzhou Leading Group for Climate Change Response, UNDP Assessment Report on the Progress of Chinese Cities

Comprehensive utilization rate of general industrial solid waste

Indicator No.: PLN-T150102

Indicator direction: Positive

Description: Percentage of general industrial solid waste comprehensive utilization in the sum of general solid waste production and comprehensive utilization storage volume in previous years

Unit: %

2000: 91.8

2020: 94.6

2030: 99.1

Source: Statistical Yearbook of Chinese Cities 2006, Yangzhou Ecological Environment Bureau, UNDP Assessment Report on the Progress of Chinese Cities

Per capita green space

Indicator No.: PLN-T150501

Indicator direction: Positive

Description: Per capita occupation of urban park green area

Unit: square meters per capita

2000: 15.87 (as in 2006)

2020: 19.6

2030: 19.5

Source: Statistical Yearbook of Chinese City Construction 2006, Statistical Communiqué on National Economic and Social Development of Yangzhou City 2020, UNDP Assessment Report on the Progress of Chinese Cities

Peace-based indicators

Availability of legal framework to promote, enforce and monitor equality of ethnic groups

Indicator No.: PEC-T160001

Indicator direction: Positive

Description: Whether a legal framework is developed to promote, enforce and monitor equality of ethnic groups (1 is "Yes", 0 is "No")

Unit: —

2000: 1

2020: 1

2030: 1

Source: Constitution of the People's Republic of China, etc., UNDP Assessment Report on the Progress of Chinese Cities

Coverage rate of township (sub-district) public legal service centers

Indicator No.: PEC-T160301

Indicator direction: Positive

Description: Ratio of the number of townships (sub-districts) with public legal service centers to the total number of townships (sub-districts) in the city

Unit: %

2000: —

2020: 100

2030: 100

Source: Official website of the Jiangsu Provincial People's Government

Whether the registration of birth has been conducted

Indicator No.: PEC-T160901

Indicator direction: Positive

Description: Whether the city registers births for all (1 is "Yes", 0 is "No")

Unit: —

2000: —

2020: 1

2030: 1

Source: Implementation Opinions of the General Office of Jiangsu Province on Addressing Household Registration for Unregistered Residents, UNDP Assessment Report on the Progress of Chinese Cities

Partnership-based indicators

<p>Percentage of mobile phone users in permanent population</p> <p>Indicator No.: PTS-T170601</p> <p>Indicator direction: Positive</p> <p>Description: Percentage of mobile phone users in total population</p> <p>Unit: %</p> <p>2000: 8.3</p> <p>2020: 100</p> <p>2030: 100</p> <p>Source: Statistical Yearbook 2005 for the Yangtze and Pearl River Deltas and Hong Kong and Macao Special Administrative Regions, Statistical Communiqué on National Economic and Social Development of Yangzhou City 2019, UNDP Assessment Report on the Progress of Chinese Cities</p>	<p>Whether the city has conducted at least one population and housing census in the past ten years</p> <p>Indicator No.: PTS-C170001</p> <p>Indicator direction: Positive</p> <p>Description: Whether the city has conducted at least one population and housing census in the past ten years (1 is “Yes”, 0 is “No”)</p> <p>Unit: —</p> <p>2000: 1</p> <p>2020: 1</p> <p>2030: 1</p> <p>Source: The Fifth National Census on November 1, 2000, the Seventh National Census carried out in 2020, UNDP Assessment Report on the Progress of Chinese Cities</p>
<p>Whether the city formulates a sustainable development coordination policy</p> <p>Indicator No.: PTS-C170101</p> <p>Indicator direction: Positive</p> <p>Description: Whether the city formulates a sustainable development coordination policy (1 is “Yes”, 0 is “No”)</p> <p>Unit: —</p> <p>2000: 0</p> <p>2020: 1</p> <p>2030: 1</p> <p>Source: Yangzhou City Master Plan (2011-2020), Yangzhou Ecological River and Lake Action Plan (2018-2020), UNDP Assessment Report on the Progress of Chinese Cities</p>	<p>Internet penetration rate</p> <p>Indicator No.: PTS-C170102</p> <p>Indicator direction: Positive</p> <p>Description: Number of Internet users in the city as a percentage of the city’s total permanent population</p> <p>Unit: %</p> <p>2000: 10.6</p> <p>2020: 77.6</p> <p>2030: 76.0</p> <p>Source: Informatization Research Department of State Information Center, Jiangsu Communications Administration, Digital In 2018</p>

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