

GSI 100 Neighborhood Garbage Sorting Evaluation Report 2022

Executive Summary

Institute of Public and Environmental Affairs Vanke Foundation

Garbage sorting is of great significance to protecting the ecological environment and resource recycling, as well as building zero-carbon communities and realizing green lifestyles. In order to scientifically assess the current status of municipal waste separation in cities, identify key issues, discover best practices, and assist city authorities in improving waste separation management, the Institute of Public and Environmental Affairs (IPE) and Vanke Foundation, under the guidance of the China Forum of Environmental Journalists, jointly launched the "Snapshot Lightens Up Neighborhood Garbage Sorting" campaign in 2020.

In 2022, with the participation and support of Lvse Jiangnan, social organizations and volunteers in many places, data survey agencies and the Blue Map users, the quantity and quality of Snapshots has increased significantly, with the cumulative number of Snapshots increasing from more than 50,000 to more than 140,000, the coverage of prefecture-level and above cities expanding from 315 to 335 in 2021, and the cumulative coverage of neighborhoods increasing from more than 27,000 to more than 93,000.

In 2021, IPE designed and launched the Garbage Sorting Index (GSI). In 2022, IPE optimized the Garbage Sorting Snapshot questionnaire, and evaluated 100 cities whose number of Snapshots largely met the statistical requirements of the sample. These cities span seven regions, including 41 key cities for waste separation and 59 cities with high GDP per capita. Among them:

- Suzhou came in first with excellent performance, Shanghai and Nanjing entered the top three; Fuzhou, Tongling, Qingdao, Ningbo, Jiaxing, Shenzhen and Hangzhou entered the top ten.
- The cities lagging behind are Lanzhou, Tangshan, Langfang, Suqian, Huai'an, Kaifeng, Yan'an, Luohe, Zaozhuang and Sanmenxia.
- Among the 22 cities participating in 2021 and 2022, those whose scores improved by more than 3 points include Qingdao, Zhengzhou, Suzhou, Nanjing, Beijing, Nanning, Yichang and Wuhan, with Qingdao having the largest increase (+22.5 points).
- The scores of Jinan, Haikou, Xi'an, Tianjin, Shenyang, Nanchang, Harbin, Tai'an, Hefei and Guangzhou fluctuated within 3 points.

At one point in the nearly year-long observation, the scores of some leading cities declined, reflecting the negative impact of the pandemic.

At the same time, we also see some areas further improve the policy and regulations on waste classification, strengthen the classification of collection and transportation, disposal, especially through the implementation of the three main measures: replacing bins with waste classification barrels, regular drop-off, and supervision and guidance. Some cities have seen an increase in the separation of food waste, and recyclables, while having a clearly visible decrease of other waste.

Progress observed in this evaluation include:

- Suzhou, Shanghai and some other cities have fully established their garbage sorting mechanisms, with the residents having developed waste separation habits.
- In leading cities such as Suzhou, the management mechanisms of garbage sorting continue to be improved, with food waste, and recyclable separation being promoted in a systematic manner.

- Jiaxing and other cities have promoted the "remove bins, build a station" initiative, and actively piloting "disposal at set time and location".
- Beijing and other cities continue to develop waste separation, collection, and disposal systems. The national garbage sorting, collection, and transportation capacity is at about half a million tons a day, kitchen waste disposal pilot programs are steadily advancing, with food waste disposal capacity having been greatly improved.

The 2022 Garbage Sorting Index also reveals the following issues:

- The average score is only 15.07, with more than half of the cities scoring below 10, indicating that garbage sorting is still at a low level.
- The three key measures required by the *14th Five-Year Period Urban Domestic Waste Separation and Disposal Facilities Development Plan*, namely "removing bins and building stations, regular drop-off, and supervision and guidance", have not yet been effectively implemented in most cities.
- Some cities spend a lot of money on hardware facilities for garbage sorting, but due to the failure to implement key measures listed above, garbage sorting became a bottleneck and the reliance on secondary sorting increased revenue spends. The lack of separation in disposal and transportation also heavily impacted garbage treatment capacity.
- There remains a lack of capability in food waste treatment (about 1/3 of the food waste supposed to be sorted). Yet at the same time, there is more capacity than the amount of food waste treatable, as low separation rates lead to over-planned amounts of food waste treatment facilities without enough supply to fill the capacity. The low purity of the food waste also affects the efficiency and quality of food waste treatment.
- Garbage incineration capacity has shown signs of surplus in many regions. With the promotion of garbage separation and utilization, the amount of excess capacity of garbage incineration will further appear.

The Action Plan for Reaching Carbon Peaks by 2030 requires that by 2025, the urban garbage sorting mechanism is established and the proportion of domestic waste resource utilization increased to about 60%. On the one hand, we need to understand that most cities are still far from reaching this target; on the other hand, we should see hope from leading cities and keep faith.

It is therefore recommended that cities that have yet to catch up on waste separation learn from the best practices identified in the Snapshot campaign and the evaluation of the Garbage Separation Index, and implementing effective key measures such as removing bins and building stations, regular drop-off, supervision and guidance as soon as possible. Leading cities in waste separation should seize the opportunity of climate and plastics governance, mobilize the market forces to actively combine waste separation with efficient recycling and reusage. By engaging with brands, e-commerce platforms and logistics companies that produce and dispose large amounts of plastic packaging, these leading cities can upgrade the recycling system to version 2.0, build a zero-carbon community and contribute to achieving China's dual carbon targets and building a beautiful China.

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