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Why every city needs universal waste collection and safe disposal as the foundation for sustainable waste management

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Establishing universal waste collection and safe disposal is the first step cities should take on the path to effective waste management. Cities lacking these systems face health risks from disease, contamination of ground and surface water, and the release of powerful greenhouse gases such as methane, among other problems. Established universal collection and disposal systems bring rapid, local benefits. This is why every city needs universal waste collection and safe disposal.

Cities lacking city-wide universal collection and disposal systems pay high hidden costs

The hidden costs of uncollected waste are higher than the costs of collection and disposal systems. The costs associated with collection and disposal in low- to middle-income countries are estimated at US \$30 to 115 /ton¹ of waste, while the cost of uncollected waste in the Philippines, for example, is estimated at US \$375 /ton when health and economic impacts are accounted for.² Often, these impacts disproportionately affect the most vulnerable population groups.

Waste in cities lacking **universal collection** typically ends up in illegal dump sites, sewers, and rivers, and waste generators often turn to open burning.³ This causes:

- **Air pollution.** Open burning has severe impacts for air quality. While this practice reduces waste

volumes, it releases air pollutants and particulate matter ($PM_{2.5}$), which has ~~severe~~
 English and
 climate impacts.

Plastic pollution in the oceans

Every year, 8 million tonnes of plastic end up in the ocean, of which more than 60% comes from uncollected waste. Cities with incomplete collection and disposal systems are increasingly recognised as major contributors to the global challenge posed by marine plastics.

- **Water pollution.** Polluted ground and surface water affects the health of people who come into contact with it, as well as local and downstream ecosystems, including the oceans (see box).
- **Higher risk of illnesses and health problems** such as salmonella, which causes food poisoning, typhoid fever, gastroenteritis and other major illnesses. This is caused by bacteria, insects, and vermin that thrive on uncollected waste.
- **Intensified urban flooding**, because drains are clogged by plastics bags and bottles.
- **Reduced land values** due to odour, litter, and uncertain land-use, particularly near to dump sites.

Uncollected waste is also a highly visible eyesore and public nuisance. It contributes to perceptions of ineffective government, and risks putting off potential investors.

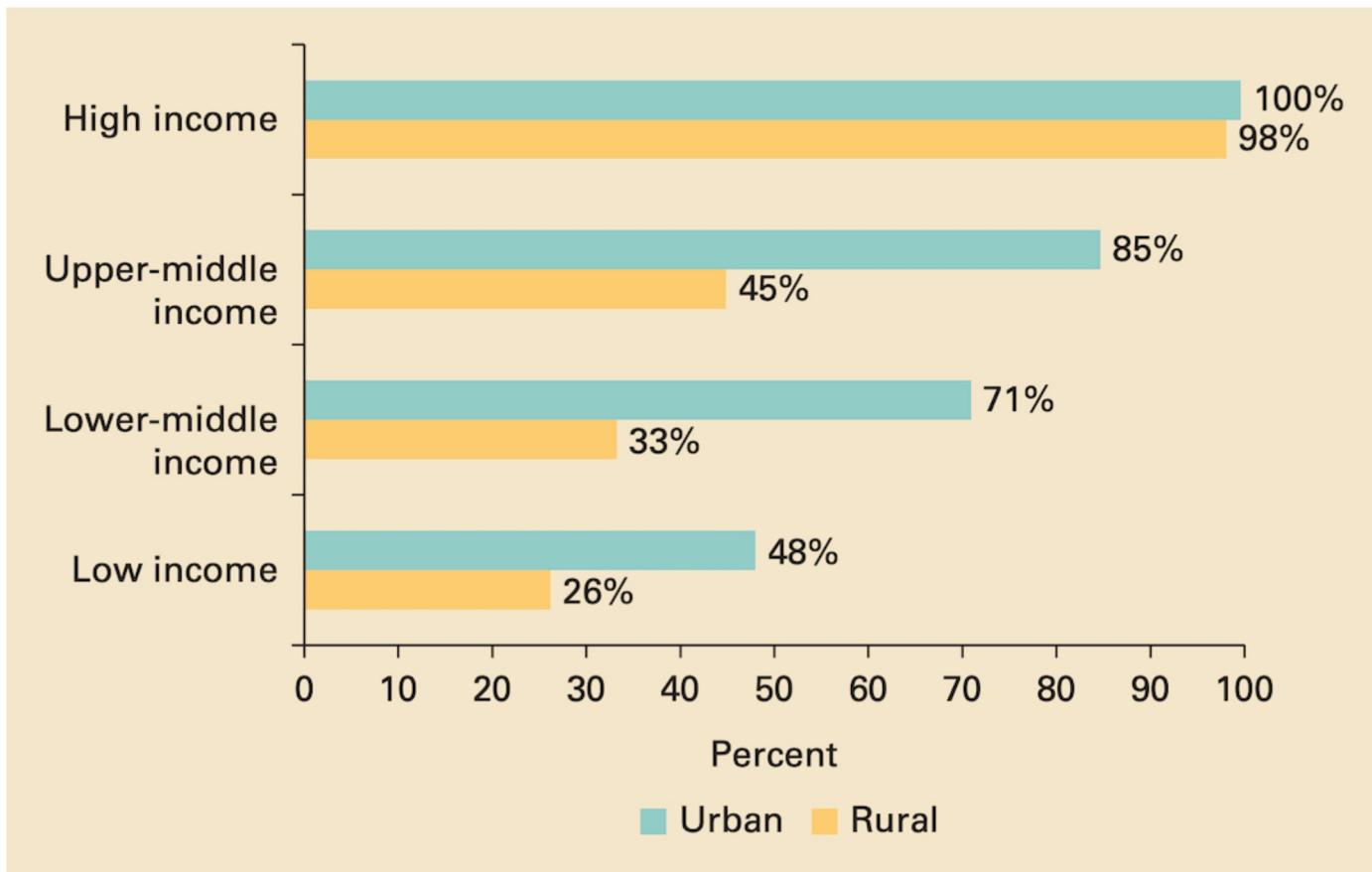
Cities that do collect waste but **lack systems for safe disposal** also face:

- Disposal site scavenging and associated health impacts.
- Risk of man-made hazards such as the sliding or movement of unstable waste.
- Fires created by unsuitable placement and poor management of waste.
- Opposition to waste collection improvements due to poor disposal options.

Waste generation in cities in the Global South is expected to grow threefold by 2050.⁴ Unless cities that currently lack universal collection and disposal systems establish them, these problems will only get worse.

Waste collection rates around the world

Waste collection is much higher in urban than rural areas globally, but universal (100%) collection is lacking in many lower income cities, as shown below. Global South cities that have 100% collection include Bogotá in Colombia, Atyrau in Kazakhstan, and Bangkok in Thailand.⁵

Urban and rural collection rates by income level⁶
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Universal collection and disposal systems cost less and are more reliable than informal or incomplete systems

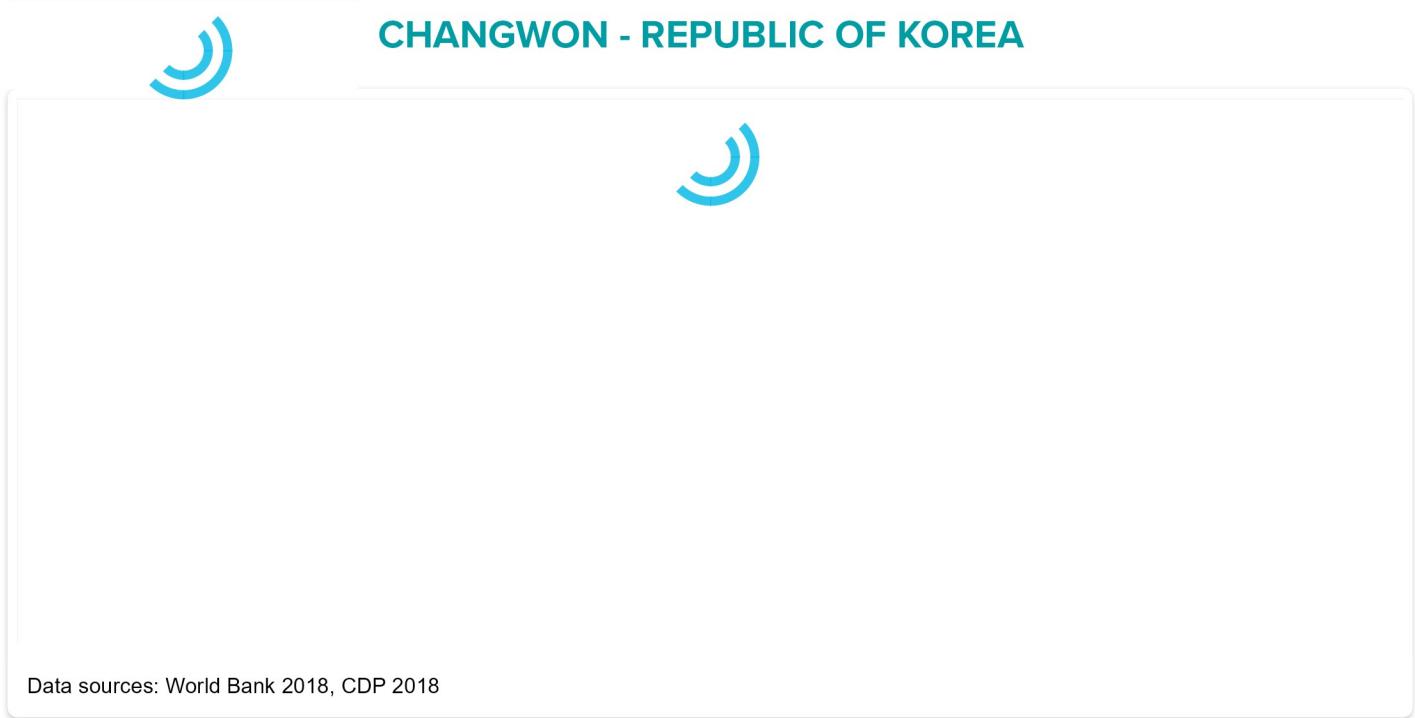
Cities with incomplete waste management systems, or which rely on a combination of formal and informal haulers, commonly face inefficiencies, poor quality and reliability of service, and corruption. Collection trucks from different haulers often duplicate service routes, leading to increased traffic congestion, pollution, and costs. It is also more difficult for cities to maintain municipal oversight and enforce mandated collection and disposal if there are multiple haulers operating in the city.

All cities should establish universal collection and safe disposal on the path to a sustainable waste system

Waste streams in the Global South are rich in organics, typically 50–80% of total waste, while growing prosperity is leading to increased quantities of packaging and other dry recyclables, including plastics. Established systems for universal collection and safe disposal are fundamental for cities seeking to manage – and earn revenue and other benefits from – food and organic waste, and increased recycling rates.

These systems must be in place for cities to advance toward sustainable waste-management systems, in which waste reduction and diversion are prioritised, ultimately aiming towards zero waste.

Find out how your city is currently disposing of and treating waste below:



Use the Waste Data Explorer to find out how much solid waste is generated in your city, its composition, the disposal and treatment approaches used, and the diversion rate from landfill and incineration.

The main opportunities to improve waste management are in collection, transport, disposal, and improved resourcing. Cities should optimise collection routes to eliminate duplicated routes, minimise the distance travelled to disposal (including by using transfer stations), ensure disposal to a sanitary landfill, and ensure waste management is adequately resourced, for instance. Read What a Waste 2.0 and Collection of Municipal Solid Waste in Developing Countries, for guidance on how to establish these systems.



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