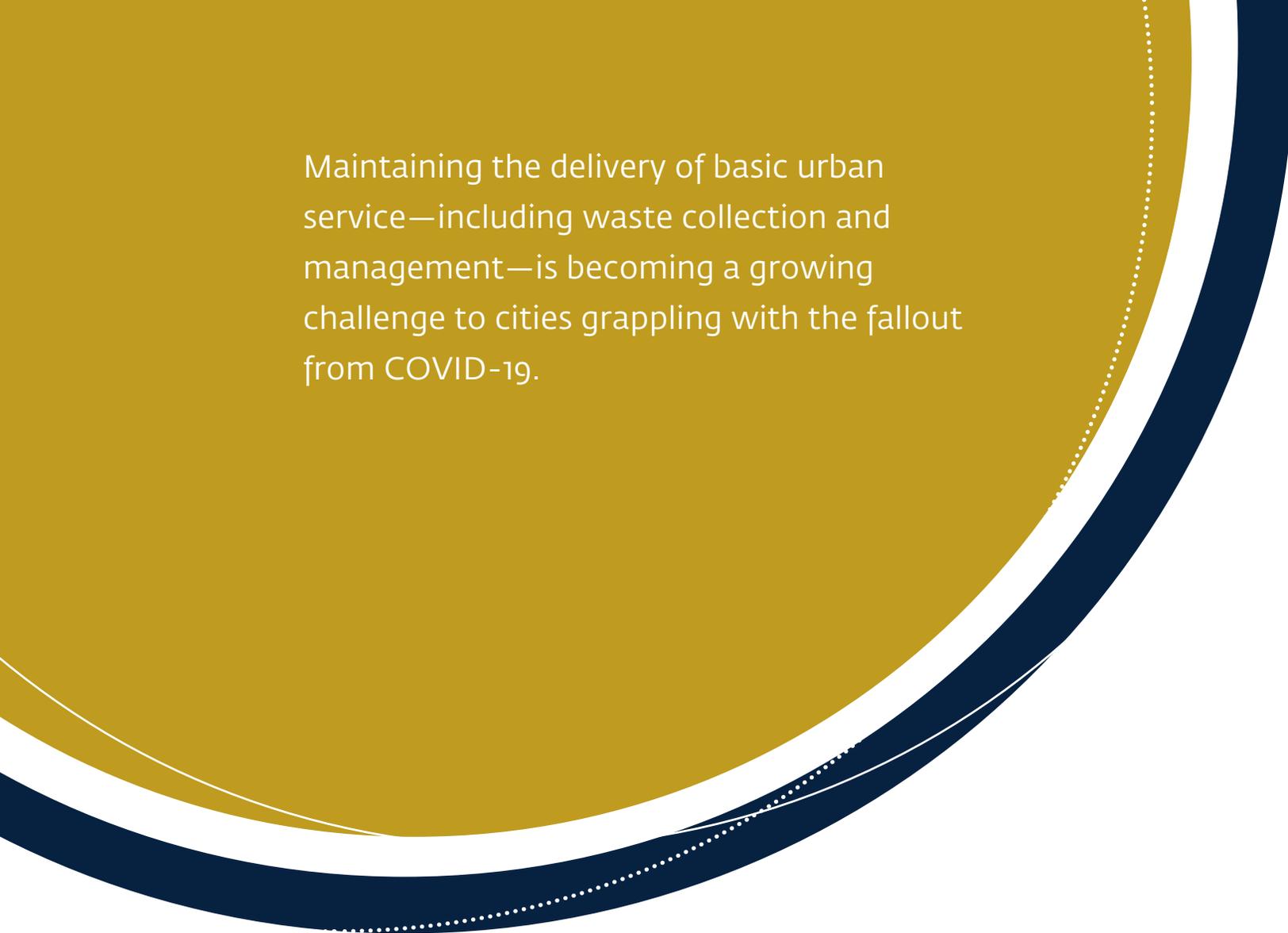




COVID-19's Impact on the Waste Sector



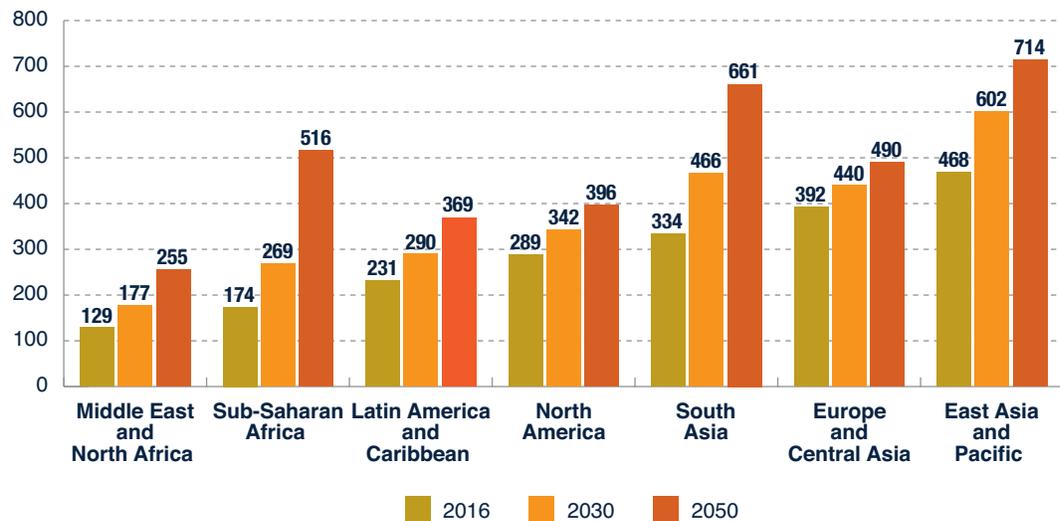
Maintaining the delivery of basic urban service—including waste collection and management—is becoming a growing challenge to cities grappling with the fallout from COVID-19.

Every year the world generates over 2 billion metric tons of municipal solid waste. [The World Bank estimates](#) that by 2050 annual waste generation will increase by 70 percent—to 3.4 billion metric tons. In low-income countries, the volume of waste is [expected to triple](#) by 2050, particularly in sub-Saharan Africa.

The rapid growth of waste generation presents serious challenges in emerging markets. When poorly managed, the waste sector has serious health, safety, and environmental impacts—especially in developing countries, where waste is often burned or discarded in unregulated dumps. Population growth, urbanization, and economic development all exacerbate these challenges.

Given the high costs of sustainable solid waste management (SWM), governments are increasingly partnering with the private sector through public-private partnerships to find sustainable solutions.

PROJECTED WASTE GENERATION, BY REGION (MILLIONS OF TONNES/YEAR)



Source: [World Bank](#).

SECTOR BACKGROUND

Solid waste management (SWM) practices in developing countries often suffer from inadequacies including poor collection, mismanaged dumpsites, and insufficient tariffs. [According to the World Bank](#), developing countries spend \$35 per ton on waste management compared to over \$100 per ton in high-income countries. The consequences are significant:

- **Health:** Inadequate waste management increases the risk of disease spread either directly—from uncollected or dumped waste—or the contamination of water and crops. Poor waste management practices are estimated to [result in between 400,000 and 1 million deaths annually](#) in developing countries; productivity loss due to illness would be many times this order of magnitude. The waste sector's health impacts in ordinary times are more devastating than that of COVID-19 to date. According to the World Health Organization, there have been 371,166 global fatalities attributed to COVID-19 as of June 1, 2020.
- **Climate:** The waste sector accounts for nearly 5 percent of global greenhouse gas (GHG) emissions (primarily methane from inadequately disposed waste). In 2016, the waste sector accounted for 1.6 billion metric tons of carbon dioxide (CO₂) equivalent. [The World Bank estimates](#) that these figures will increase to 2.6 billion metric tons by 2050.
- **Dependence on the informal sector:** In developing countries, the waste management sector depends on informal workers—typically society's poorest and most vulnerable who make a living from collecting and selling commodities to waste aggregators. It is estimated that [more than 15 million people globally fit this category](#), living in unhealthy conditions with no social protection.

COVID-19'S IMPACT ON THE WASTE SECTOR

Based on research to date, the [waste value chain does not appear to spread COVID-19](#). However, the SWM sector has felt impacts.

Safety of SWM workers. The livelihoods of informal workers who depend on the SWM sector have been heavily affected by the lockdown. The crisis has highlighted the highly unsafe conditions they work under—even during ordinary times.

Redistribution of waste production. Waste production has shifted from industry and commercial centers to residential areas.

- The volume of medical waste has increased by up to 40 percent.
- Industrial and commercial waste production has fallen drastically due to the slowdown in manufacturing activity.
- Hazardous waste production has grown with higher production from the pharmaceutical and medical sectors. Existing hazardous waste treatment capacity in developing countries is likely to be overwhelmed, leading to stockpiling and potentially inadequate disposal.
- Municipal waste has increased in volume, effectively overwhelming existing waste collection and disposal systems. A reduction in recycling activities has further compounded challenges in the collection and disposal of municipal waste.

Changes in waste treatment activity. Government focus has been on the collection and transport of waste away from population centers.

- Recycling of plastic and other products has slowed substantially. While the immediate driver for the slowdown is the perceived risk of COVID-19 transmission, other key factors include supply chain disruptions and reductions of manufacturing and commercial activity. There is a risk that the economic recession combined with low commodity prices may increase reliance on cheaper virgin raw material instead of recycled feedstock.
- Disposal at landfills has increased, in part because more recyclable material, such as plastics, are being sent to municipal waste channels. Most collected waste is transported to landfills or accumulates at temporary dumps.
- The use of single-use plastics (SUP) is increasing. The previously declining dependence on SUP has seen a resurgence, largely driven by increased use of plastic-based personal protective equipment (PPE), such as gloves, masks, and disinfectant bottles, as well as packaging material.

Increased generation of municipal waste has made it financially and physically challenging for municipalities to cope. Increased healthcare and social protection costs related to COVID-19 have strained municipal budgets at a time when municipal revenues are also substantially impacted. Containment measures to slow the spread of the virus have resulted in disruptions, resulting in job losses and financial deterioration across the public and private

sectors. Increased debt and competing demands for public funds, such as economic stimulus initiatives, will strain SWM initiatives, including contractual payments for waste PPPs.

Small and medium enterprises (SMEs) are being squeezed. Many waste collection and transport companies are SMEs. With a large portion of their costs deriving from hourly labor and fuel, most are unable to continue providing this critical service in the absence of continued payment.

RESPONSE TO THE CRISIS

Cities are responding to the immediate risks to the sector—worker health and the pile-up of uncollected waste.

Some cities are providing PPE and regular health monitoring to protect waste management workers. While this applies to formal waste sector workers, there are many informal workers engaged in the collection and transport value chain—mostly focused on recovering recyclables and items of value from the waste flow. Such informal workers do not have access to PPE or healthcare—and many have lost their jobs because of the COVID lockdown.

Cities are also making short-term arrangements to address the accumulation of waste—especially PPE disposal and hazardous materials. Special prioritization, storage, and disposal arrangements of hazardous waste are being made at landfills and with the efficient use of constrained capacity at existing hazardous waste treatment facilities.

GOING FORWARD

Because of the current pandemic, governments and their constituents are sensitive to downside risks from the health sector, including negative economic impacts and loss of life. Efforts to control COVID-19 infection have highlighted the critical need to sustainably manage the environmental impacts of human activity. The crisis has also highlighted the risk of contagion in an interconnected world and the need to focus on sustainable environmental management.

There is an opportunity to engage with governments, both national and municipal, to adopt more sustainable SWM practices. This requires (a) increased SWM sector funding and cost recovery from constituents, (b) participation from public, industry, and other waste producers in a comprehensive solution, and (c) development of monitoring and enforcement capacity. All parties—governments, householders, private sector, local communities, and development partners—need to participate.

International development institutions can engage with governments in a number of ways:

- **Financial Support:** Crowd-in financial support such as (a) international financing for GHG reduction through blended finance, grants, and carbon finance, (b) commercial financing from domestic and international sources, (c) gradually increasing user tariffs from waste producers, (d) increased budgetary support from national and provincial governments for the period of transition to sector viability, and (e) increased private participation in the waste sector—both to attract financing and improve implementation capacity.

- **Advisory Support and Financing Support For PPPs:** IFIs, including IFC, can help municipalities structure appropriate collection, transport, and disposal projects through PPPs and harness the financial, technical, and managerial resources of the private sector.
- **Support the Informal Sector:** Measures targeting vulnerable groups could also be put in place to minimize the disproportionate impact that inadequate waste services typically have on this group and potential recurrence of infections.
- **Public Awareness Campaigns:** Social media campaigns and other public marketing channels can harness public and civil society support for addressing challenges in the SWM sector, such as poor waste segregation or building capacity for enforcement of SWM regulations. Programs should also leverage and find workable solutions to integrate the informal sector into these plans, as they may already be active in source separation.
- **Create Formal Plastic Recycling Markets:** IFIs can work with plastic producers and municipal waste management departments to help increase the quantity of recycled plastic waste, which is in high demand by multinational players to meet their sustainability goals. The formalization of waste management jobs can also help strengthen the recycling value chain, improve local industrial competitiveness, reduce poverty, and decrease municipal spending on SWM and social services.

June 2020

This article was authored by **Rajesh Sinha** (Principal Investment Officer), **James D. Michelsen** (Senior Waste Specialist), **Elcin Akcura** (Senior Sector Economist), and **Lamin Njie** (Economist) at the [International Finance Corporation](https://www.ifc.org/) (IFC), a member of the World Bank Group. For more information, visit www.ifc.org/infrastructure.