



SÃO PAULO BRAZIL

MITIGATING METHANE AND BLACK CARBON FROM THE MUNICIPAL SOLID WASTE SECTOR

São Paulo is one of Brazil’s major economic and population centres. The city faces a number of solid waste management challenges, especially related to organic waste management. In late 2014 the municipality began working with the Climate and Clean Air Coalition Municipal Solid Waste Initiative (Waste Initiative) to address these challenges and improve solid waste management in general. Through this partnership the city is implementing several activities that will generate a range of environmental, economic, and public health benefits, including reduced emissions of short-lived climate pollutants (SLCPs), primarily methane and black carbon.

CHALLENGES AND OBJECTIVES

São Paulo has a very high waste collection rate, approximately 98%, and nearly all of the city’s waste is disposed of in sanitary landfills. However, approximately 47% of the city’s municipal solid waste is organic, and less than 2% of the waste is collected separately (most of the waste stream includes a mix of organic waste, recyclable materials, and unusable materials). As a result, a substantial quantity of organic waste was disposed of in the landfill. The city saw significant potential benefits from diverting organic or compostable waste from the waste stream. In addition to saving space in the landfill, diverting organic waste reduces methane emissions and can lead to numerous other economic and environmental benefits (e.g., reduced costs associated with trucking heavy organic waste to the landfill).

The city has also identified waste prevention as a priority, since reducing waste generation can lead to considerable methane and black carbon reductions (e.g., from reduced diesel vehicle emissions).

ACHIEVEMENTS TO DATE

With the help of the Waste Initiative and local partners, São Paulo developed a work plan that included seven activities to improve solid waste management and reduce SLCP emissions. Key implementing partners in São Paulo include the Waste Management Authority of São Paulo (AMLURB), the Brazilian Association of Public Cleaning and Waste Management Companies, and the International Solid Waste Association. Through their collaborative efforts, the city has made progress on six of the items as of early 2017:

CITY FACTS

Population:
≈ 12 million
Waste Generation Rate:
≈ 1.1 kg/person/day
Waste Collection Rate:
≈ 98%

The **Climate and Clean Air Coalition Municipal Solid Waste Initiative** unites national and local governments, international organizations, and other partners to reduce emissions of short-lived climate pollutants, such as methane and black carbon, from the municipal solid waste sector.



Diversion and Treatment: São Paulo developed a [Strategy for Organic Waste Diversion](#) and drafted the [Technical Guidance on Operation of Organic Waste Treatment Plants](#). These two documents align with São Paulo's 2014 Municipal Solid Waste Master Plan (Master Plan).

School Awareness: São Paulo created and maintains an [online platform for schools](#), drafted [A Handbook for Schools on Organic Waste Management](#), hosts monthly meetings, and is actively working with 45 members, 20 schools, and many stakeholders. The handbook shares techniques to start and maintain a composting initiative with community support; additionally, it helps schools estimate avoided methane emissions. Many of the schools continue to collaborate through the online platform and city exchanges in order to share information and strengthen their initiatives.

Diversion from Parks and Markets: São Paulo developed the [Evaluation and Recommendation Report for the Pilot Composting Plant in Lapa District](#) from the first year of operations at its small-scale composting plant. The effort was closely monitored and included a laboratory analysis of the first batch of compost. Currently, the plant collects about 60 tons of organic waste per week from 56 street markets and parks. It has spurred the municipality to start two additional plants in different areas of the city.

Household Source Separation: A [trial source separation and collection plan](#) was designed for one area of the city comprising 5,000 inhabitants and 2,000 households. The project design, delivered to the municipality for consideration, evaluated operational costs such as staffing and equipment needs, and a communication campaign for one year.

Citizen Awareness: The project team developed an [Environmental Communication Strategy](#) paper for source separation, recycling, and collection; and created a communication campaign involving 40 participants from 20 institutions at the federal, state, and municipal levels. The city invited an expert to evaluate the campaign and recommend improvements moving forward.

Build Capacity and Transfer Knowledge: São Paulo hosted a one-day training workshop on public communication for federal, state, and municipal stakeholders; and a two-day training workshop on organic waste management plant operation, including a site visit to a large-scale composting facility.

With ongoing support from the Waste Initiative, the City's Secretariat of Services, and AMLURB, São Paulo has made significant progress toward its objectives. In addition, the project has served as a catalyst to move forward with actions in the Master Plan. It also served to create a network among stakeholders. For example, activities under the Waste Initiative introduced many in the private sector to new opportunities. It also raised awareness among national government representatives.



Top: Schools representatives learn about small-scale composting.



Bottom: Waste Initiative stakeholders visit a large-scale composting facility.

ONGOING ACTIVITIES

In 2017, the project partners met with new city administration officials to discuss four ongoing activities. First, the partners offered support for the systematic implementation of organic waste management in schools, including assistance on how to plan, implement, and monitor composting activities. More than 1,500 schools in São Paulo could be engaged. Second, the partners offered assistance to replicate the small-scale composting plant for São Paulo's nearly 900 street markets. Third, the city and partners agreed to seek technical and financial assistance to implement the project for separate collection of organic waste from households. Fourth, the new administration is interested in guidance or technical assistance to achieve an economically sustainable waste management system.

ABOUT THE COALITION

The Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (Coalition) is a voluntary global partnership of governments, intergovernmental organizations, business, scientific institutions and civil society committed to catalysing concrete, substantial action to reduce SLCPs (including methane, black carbon and many hydrofluorocarbons). The Coalition works through collaborative initiatives to raise awareness, mobilise resources, and lead transformative actions in key emitting sectors.

MORE INFORMATION

www.waste.ccacoalition.org
www.waste.ccacoalition.org/participant/sao-paulo-brazil

@ ccac_secretariat@unep.org

@CCACoalition

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