CITY CASE STUDY

COUNTRY	CITY	POPULATION	MITIGATION GOAL	EMISSIONS IN 2017
BRAZIL	SÃO PAULO	22,429,800	-50 % IN 2050 (2017 BASELINE)	15.42 $MTCO_2E$ (SCOPES 1 & 2)

São Paulo • A circular food system to reduce organic waste

As the most populated city in Brazil, São Paulo produces about 100,000 tonnes of organic waste every year from its hundreds of street markets, and almost 100,000 tonnes from the pruning of trees and plants, in addition to organic household waste. The waste sector accounted for 8% of the city's emissions in 2017. To address this problem, the city has adopted various strategies to divert this organic waste from landfills, notably towards decentralised composting yards and to integrate it into the city's award-winning circular agriculture programme "Connect the dots".

São Paulo's strategy for handling organic waste began with the idea of diverting it from landfills, where almost all of it was being sent (before the launch of the composting activities), causing methane emissions and the infiltration of contaminating liquid toxins into adjacent areas.

The diversion strategy has 4 main elements: separate collection and transportation of organic waste, treatment and recycling of this waste, communication regarding organic waste, and the deployment of economic incentives to encourage the diversion and treatment of organic waste, such as landfill fees. This strategy was drawn up in collaboration with the Climate and Clean Air Coalition and the International Solid Waste Association.

The sustainable markets and gardens policy

The sustainable markets and gardens policy was launched in 2015 to tackle this problem, by composting organic waste including produce waste from street markets and pruning waste: in particular tree trunks, branches, leaves and grass. These two types of waste can be easily separated and traced to their source. Shopkeepers, restaurants and businesses have agreements in place with the local government which make it easy to collect the waste from them. Additionally, waste from markets and pruning also have the advantage of complementing each other: fruit and vegetable waste is high in nitrogen, while gardening waste is drier and higher in carbon.

The decentralised composting yards

Work began in 2015 on five decentralised and semi-local composting yards, intended to receive organic waste from the whole city, thereby reducing the use of landfills, as well as the distance between the source of the waste and its treatment location.

By 2016, a composting pilot site was already receiving waste produced by 26 street markets and all pruning waste from the sub-prefecture of Lapa; a total of 170 tonnes were composted per year on this site. In 2020 on various sites, 10,000 tonnes of waste were composted, bringing the total since 2015 to 20,000 tonnes. Compared to sending this waste to landfills (which would emit about 819.1 kg of CO_2e per tonne of waste), composting it reduces GHG emissions by 87% (thereby emitting 110.3 kg of CO_2e per tonne).

These composting facilities use natural aeration and the "thermophilic compost method" – composting by heat-loving bacteria. The method creates piles of alternating layers of organic waste and straw/green waste from pruning, which are transformed into compost after 120 days.

Feeding back into the food system

The compost produced in these yards now serves two major purposes. First, it is used for landscaping and the environmental recovery of degraded areas, and in the city's urban gardens. Second, and primarily as part of the "Connect the dots" programme, the compost produced in the city is used for organic agriculture in the rural areas surrounding the city.

This programme provides technical assistance to help smallholder farmers employ agroecological practices that promote soil health, and works to improve their access to markets. Using compost from municipal waste as an agricultural input also makes it possible to reduce farmers' production costs.