

# Solid Waste Management Systems through Social Inclusion: The case of Belo Horizonte, Brazil

## Context

Belo Horizonte is Brazil's third largest city and one of the largest in Latin America. Like many other urban centers in the country, it has experienced a sustained population growth from the 1960's to present day. This growth was accompanied by a substantial increase in solid waste and trash generation, which resulted in serious environmental and health problems for its residents. In 1990, the city produced approximately 0.2 kg of waste per capita and "landfilled" almost 1050 tons a day. This was projected to grow by 120 percent in the coming decade. To complicate matters further, a sizable number of poorer citizens depended on informal trash collection as a source of income and resisted attempts to regulate the sector. Leveraging a strong tradition of municipal planning as Brazil's first 'planned' city, Belo Horizonte recognized this problem and implemented inclusive policies designed to reduce overall landfill use and minimize the harmful consequences of waste.

## Development Challenge:

The challenge for the city of Belo Horizonte was reducing landfill waste and increasing recycling to improve human and environmental health.

## The Intervention

In 1993, the city of Belo Horizonte implemented the Environmental Recovery and Recycling of Civil Construction Waste program through its Public Cleansing Agency (or SLU, for its Portuguese acronym). The program aimed to promote environmental and public health while creating an innovative model of income generation for existing workers in the field. Crucial to the program was the inclusion of organized trash collectors as key partners in its implementation. Its overall objective was to enhance the efficiency of existing landfills, increase recycling rates, improve conditions for workers (sweepers and trash collectors), and integrate informal *catadores* (waste pickers) into the solid waste collection system. To do so, the city launched a consultation process with ASMARE, the first and largest cooperative of waste pickers in the city. During the consultations, it redefined its approach to consider the lessons from this group in the design of its program. The result was a mixed system that included a drop-off scheme, the creation of new sorting centers and the strong participation of *catadores* for selective waste collection. It included a formal partnership with ASMARE and other *catadores* associations that has garnered recognition as an innovative template for people-centered waste management policies. By 2012 over 95 percent of households were covered by the city's waste collection services and 93 percent of waste was disposed in environmentally sound landfills.

### PROJECT DATA

#### SECTOR:

Urban Development, Waste management

#### DEVELOPMENT CHALLENGE:

Reducing landfill waste and increasing recycling rates

#### DELIVERY CHALLENGES:

Informal and illegal markets for waste collection, lack of stakeholder engagement, weak legal framework

#### COUNTRY:

Brazil

#### PROJECT DURATION:

1990 to 2008

#### PROJECT AMOUNT:

US\$15 million

#### REGION:

Latin America

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## Delivery Challenges

This delivery note analyzes the key challenges the project faced during implementation and examines how they were overcome.

1. **Large informal and illegal markets for waste collection:** One of the biggest hurdles for the city of Belo Horizonte in the creation of its new waste management system, was a lack of buy-in from existing waste-picker workers. As a sizable group involved in the trade, many of them for decades, they had significant clout in the area. In the 1970's they orchestrated numerous protests against the creation of the city's first sanitized landfills. Throughout the 1980's they continued to organize and demand legal protection for their work. Many government officials and citizens viewed those involved in the trade in a negative light, as beggars or social outcasts, rather than potential partners in the process.
2. **Stakeholder engagement:** To successfully implement a new waste collection system, the city had to manage relations between many private operators, trash picker cooperatives, NGOs, and informal workers who would ultimately decide the conditions of waste removal on the ground. Relations between these groups were often tense or non-existent, with few communication channels or mechanisms for creating consensus on immediate actions to improve waste collection.
3. **Weak legal framework:** The task of reducing waste in the city was also complicated by a weak legal framework that lacked local or state level laws, ordinances, or decrees to underpin new waste management programs. Although the constitution stipulated municipalities are responsible for managing solid waste services, it did not provide guidance on roles for potential waste collection operators.

## Addressing Delivery Challenges:

1. The following steps were undertaken to mitigate the informal and illegal markets for waste collection:
  - The Public Cleansing Agency (SLU)—tasked with the management of Solid Waste in Belo Horizonte—also began to consider the role of waste picker as important stakeholders in the overall system (research has shown that informal workers may often achieve higher recycling rates than formal recycling systems in the developing world. [UN-Habitat 2010]). Made up by an inter-disciplinary staff of engineers, architects, doctors, sociologists, and environmental specialists, the SLU envisioned a new waste management system intricately tied to social inclusion of these existing groups.
  - In this process, the SLU reached out to ASMARE—the first association of waste pickers in the city—to design the best model for the city's waste management system and begin a process of formalization for these workers. This process was aided by a favorable political environment, as the party in power was familiar with the challenges faced by waste-picker associations and had committed to protecting the rights and obligations of all citizens, particularly those in the informal sector.
  - In 1993, the city commissioned a survey to order create a baseline of the informal trash picking market and gain a clear understanding the location of illegal landfill areas in the city. The survey identified over 500 workers working in the trade within downtown city limits. It also estimated the number to be higher based on data and consultation provided by existing waste picker associations.
  - A subsequent study of several *catadores* cooperatives in 2008 showed the average member earned US\$321 a month, which is 40 percent higher than national minimum wage of R\$880, or US\$228. Despite these impressive gains, it is worth noting that homelessness, a lack of education, and extreme poverty has complicated the participation of large segments of waste pickers who continue to work informally.
2. The following steps were undertaken to engage stakeholders around the creation of a new waste management system:
  - Building on their consultation with ASMARE, the SLU entered into a formal partnership with the cooperative, signing an agreement in 1993 that made them a preferred partner in the in the city's recycling scheme. This partnership was intended to encourage a shift away from informal trash collection and to solidify the active participation of these

groups in the planning and implementation of the program. It was also intended to build trust and reduce the long-standing tension between government officials and waste pickers, who were apprehensive of authorities.

- To build further trust between *catadores*, citizens, and other government agencies, the SLU also organized events to dispel negative stereotypes residents had of this group. Carnival parades, theatre, dance and music were used in awareness raising campaigns to highlight the positive contribution waste pickers had to environmental wellbeing of the city. These campaigns were also used to as educational campaigns to raise awareness of the new solid waste management programs, including social messages on the importance of recycling, trash sorting, and new drop-off sites.
- In 2003, the city created a Waste and Citizen Forum as a new participatory space where matters of solid waste management could be discussed. The forum was created with three goals in mind: (1) to assess the success of waste programs so far and propose new ideas for their renewal; (2) too improve coordination between metropolitan government agencies in waste management; and (3) to incorporate a larger number of cooperatives that had been formed throughout the 1990's.

### 3. The following actions were taken to fix a weak legal framework for waste management programs

- In 1990, the city of Belo Horizonte included an amendment to its municipal constitution that stated the collection and sale of recyclables should be performed by cooperatives. This law provided for the legal protection for waste pickers and was instrumental in bringing them to the negotiation table as partners for the implementation of its new waste management program.
- At the federal level, waste pickers were included as a professional occupation classification in 2001. The classification made it possible to begin tracking the occupation in surveys and labor databases, providing incentive for workers to join associations to gain access to basic social programs and even pension schemes in some states.

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