



# Urban Pathways

FACTSHEET on  
Integrating the informal  
sector into Urban Mining  
2018



Authors/Contributors:  
Stefan Werland  
Patricia Guena Trottenberg

Editor: Kain Glensor  
Layout/Design: Barbara Lah

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## In brief

Population growth, urbanisation, rising income and the emergence of a middle class in developing countries will, increase the demand for new buildings, infrastructures and products and thus boost the use of raw materials, while at the same time these trends will increase waste generation.

Urban mining refers to (re-)using material already present in the urban environment, i.e. materials embedded in obsolete buildings, infrastructure, products, or even landfills, as input for socioeconomic activities. SDG 12 aims to establish sustainable consumption and production patterns. This includes the environmentally sound management of all waste and substantially reduced waste generation through prevention, reduction, recycling and reuse. This will be measured through the indicators recycling rates and amount of material recycled.

Increasing the use of recycled material and closing material loops can greatly lower GHG emissions from mining, land-use for biotic materials, and emissions from waste disposal. Open landfills and unsorted waste disposal are major sources of GHG emissions, notably methane. Urban mining requires efficient delivery of urban services such as the collection, segregation and safe disposal of waste. In India, for example, only 35% of households have access to solid waste management services and less than 40% of solid waste is segregated (Janaagraha Centre for Citizenship and Democracy and Jana Urban Space Foundation 2016: 10).

Cities and city administrations can influence the organisation of waste collection, recycling, and disposal – either via municipal utilities or as contracting authority for private service providers. In many cases, however, waste collection and recycling is organised informally, with a large number of people making their living by collecting, sorting and selling materials for recycling. Often, the informal sector is very efficient in segregating and collecting specific easy-to-recycle waste such as plastics, paper, or bulk metals. The recovery of other materials (e.g. metals from e-waste), however, requires more sophisticated technologies and thus a higher degree of equipment and organisation.

Most importantly, waste treatment practices in the informal sector are often carried out under hazardous circumstances that are harmful to the health of work

ers and local communities. Against this backdrop, many cities will have to find ways to combine informal and formal arrangements in waste management in order to cope with increasing demand for raw materials and rising waste volumes.

## Examples/measures

In the context of sustainable urban governance, attempts have been made to incorporate informal waste pickers and their cooperatives into the official waste management system. The City of Sao Paulo developed several policies to promote integration of waste picker cooperatives (WPCs) into the municipal recyclable waste management system.

## Results

- Strengthening social protection for informal workers and contributing to more decent working conditions.
- Creating formal and healthy job opportunities in the city.
- Positive health effects for urban dwellers and workers (unsanitary conditions).
- Significantly reducing landfill waste, avoiding land use for landfills.
- Avoiding water and soil pollution.
- Securing raw materials for urban development.
- Closing local and regional material loops.



## Technical and financial considerations

Implementing urban mining systems requires

- Infrastructure for waste management (from collection vehicles to recycling plants)
- Staff salaries (financed for example via waste fees or landfill taxes)
- Enforcement of existing social and environmental legislation

## Policy/legislation

A range of policy measures at national level can be employed to encourage the recycling of waste:

- Landfill taxes (gate fees) for unsorted waste.
- Banning sending untreated waste to landfill.
- Extending manufacturers' responsibility for products until end-of life to encourage recyclability (for certain product categories, e.g. the WEEE Directive).
- Banning certain hazardous materials in products to facilitate recycling (e.g. the RoHS Directive).
- Taxes and levies on the exploitation of new raw materials.

## Institutions

- Lead agency: the city's administration is usually responsible for the organisation of waste collection, treatment and disposal. These activities via its own utilities or contracted private companies.
- Urban planning: location of treatment & collection facilities.
- National Ministries (Environment, Development, etc.): provision of favourable political framework conditions (see Policy/legislation).

## Transferability

The feasibility of urban mining depends on a range of factors that differ from region to region and from country to country. Examples are the composition of urban waste streams, the demand for secondary materials, the access to local and global markets for secondary materials, the organisation of urban services and their degree of formality, the level of technology available, labour costs, waste management and environmental legislation – including the degree of enforcement, government subsidies, or disposal cost. The inclusion of waste pickers into the municipal waste management system requires the existence of organisational structures such as cooperatives.





**Case study:**  
**São Paulo, Brazil: incorporation of waste picker cooperatives into the municipal system**

**Context**

A brief background of the city and related to the measure. According to São Paulo municipality, in 2017 the city produced almost 20 thousand tonnes of waste per day, totalling 7.3 million tonnes per year, with household waste accounting for 60% of it. It is estimated that 35% of household solid waste consists of recyclable materials, and yet São Paulo recycles only 1.6% of the total waste volume. With approximately 12 million inhabitants and a low recycling rate, since 2002, the city's management developed several policies to promote integration of waste picker cooperatives (WPCs) into the municipal recyclable waste management system.

**In action**

In 2014, São Paulo municipality formulated its Integrated Solid Waste Management Plan (2) following the concepts established by the National Solid Waste Policy 3 (2010), which prioritise the integration

of WPCs into the official recyclable management system. In that year, the city management planned to invest R\$2.01 billion (4) in solid waste management, and still only 1.34% of which was designated to support recyclable waste pickers. The most effective policy was implemented at the end of 2016: the 'Porta a Porta Program', which integrated 15 WPCs, provided adequate infrastructure and a monthly payment for the collection service. Currently, the selective collection is made in all districts with compactor trucks from contracted concessionaires (Loga (5) and Ecurbis (6) or "cage trucks" (7), operated by WPCs associated with the program Porta a Porta. The program represents a major advance in the recognition of WPCs' work, as it is the first policy to promote WPC payment and to recognise the service they already performed. For each WPC involved the municipality provided a truck with one driver, IPE (Individual Protection Equipment), and a monthly payment – theoretically used to pay two members' salaries to participate





in the collection, but the cooperatives have autonomy in how to spend it. The program divided the districts between the interested WPCs and established routes for them in the city. The criterion for distributing the districts was to maintain the WPC collection in their locality. Following a change in city government in early 2017, however, continuation of the program is threatened since it is not a priority for the incoming management.

## Results

Experience has shown that WPCs are more sustainable when integrated into the municipal system. However, that does not mean this integration is problem-free. As the process in São Paulo is relatively recent, there is still room for improvement in legislation and government programs. The integration of waste pickers into the municipal recyclable waste management system so far is limited to the formation of cooperatives. Taking into account that currently more than 80% of the pickers in the city are not organised in cooperatives one can conclude that the largest share of this class was not included, and therefore has very little access to social security and rights.

Despite this limited number, society and the media have begun valuing “being a picker”, making everyone who works in a WPC feel part of the category and improving workers’ self-esteem. As a policy, the integration of WPCs into municipal waste management system has brought sustainability and social inclusion benefits, even if, as a relatively new partnership experience, many points must still be adjusted.

Further cooperation between governmental bodies to improve the relationship between WPCs and the National Movement of Recyclable Waste Pickers, (MNCR)<sup>8</sup> should be kept independent of party issues. Also, it would be beneficial to sever the program’s dependence on political will and party-associated policies, in order to guarantee the implementation of pro-WPCs policies and actions.



## Footnotes

- 1 Cooperativa de Catadores Autônomos de Papel, Papelão, Aparas e Materiais Reaproveitáveis, (in English: Cooperative of Autonomous Collectors of Paper, Cardboard and Reusable Materials)
- 2 Translated by the author, in the original: Plano de Gestão Integrada de Resíduos Sólidos 2014
- 3 Translated by the author, in the original: Política Nacional de Resíduos Sólidos 2010
- 4 The value correspond to approximately US\$ 900 million on 2014.
- 5 LOGA Logística Ambiental de São Paulo
- 6 Ecourbis Ambiental
- 7 Term translated by the author. In original: “Caminhão gaiola”. It is a truck with the back structured like a cage.

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