

Learning Resources

Part III: Waste – Integrating the informal sector into Urban Mining



**Urban
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Resources

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Sustainable Resource Management

Introduction

- 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.

What is Urban Mining?

- Urban mining refers to (re-)using material already present in the urban environment as input
- 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
- Urban mining requires efficient delivery of urban services such as the collection, segregation and safe disposal of waste

The Sustainable Development Goal 12 aims to establish sustainable consumption and production patterns, including the environmentally sound management of all waste and substantially reduced waste generation through prevention, reduction, recycling and reuse.


Measures: Incorporate informal waste pickers

- In the context of the 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 land ll waste, avoiding land use for landfills
- Avoiding water and soil pollution
- Securing raw materials for urban development
- Closing local and regional material loops





Technical/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
- 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
- Urban planning: location of treatment & collection facilities
- National Ministries (Environment, Development, etc.):
- provision of favourable political framework conditions

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



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

Context

- In 2017 the city produced almost 20 thousand tonnes of waste per day, totalling 7.3 million tonnes per year
- household waste accounting for 60% of it
- It is estimated that 35% of household solid waste consists of recyclable materials
- São Paulo recycles only 1.6% of the total waste
- 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
 - In that year, the city management planned to invest R\$2.01 billion 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 Programme', 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 Ecourbis or "cage trucks" operated by WPCs associated with the programme 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 performed
 - For each WPC involved the municipality provided a truck with one driver, IPE (Individual Protection Equipment), and a monthly payment
- 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 programme 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
- 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”,
- As a policy, the integration of WPCs into municipal waste management system has brought sustainability and social inclusion benefits
- Further cooperation between governmental bodies to improve the relationship between WPCs and the National Movement of Recyclable Waste Pickers
- Also, it would be beneficial to sever the programme’s dependence on political will and party-associated policies, in order to guarantee the implementation of pro-WPCs policies and actions



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