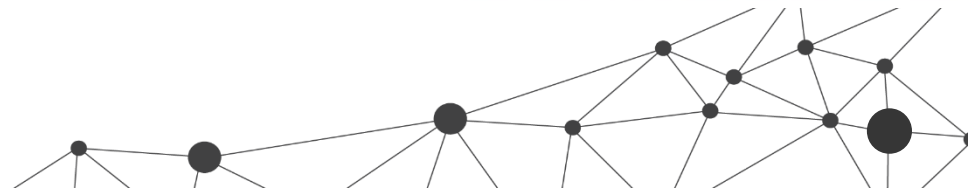




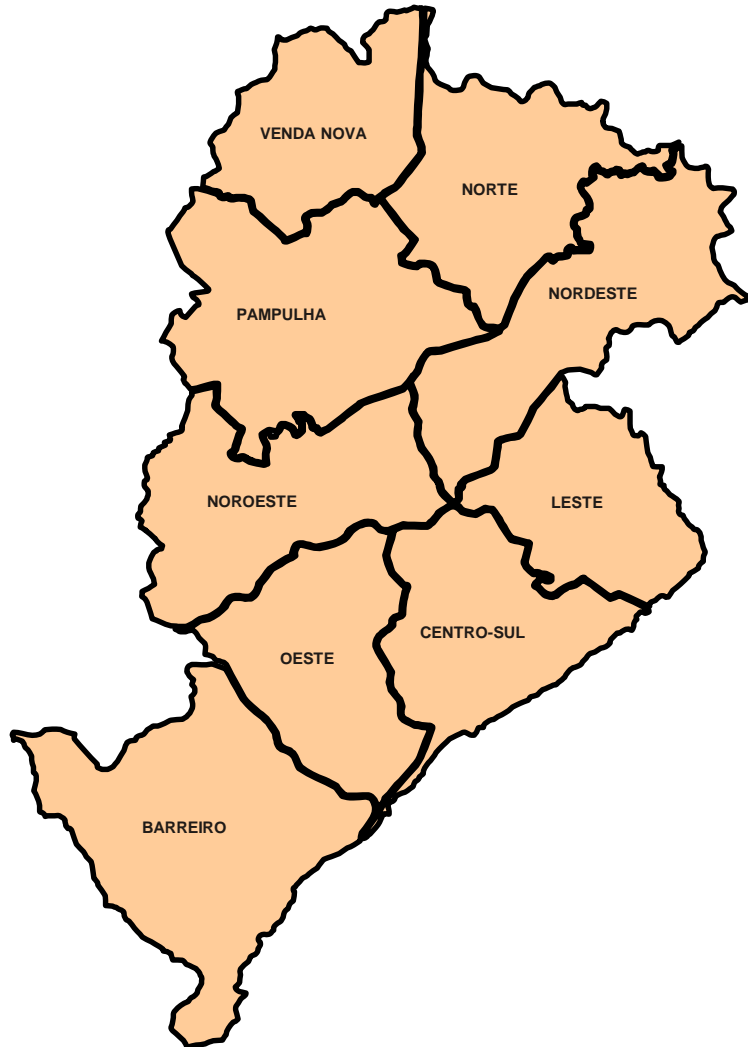
**Good Practice in Solid Waste  
Management and Working  
Together with the Informal Sector**

**Belo Horizonte, Brazil**

Foto aérea de Belo Horizonte



# Belo Horizonte - MG



**Population:** 2.521.564 inhabitants (IBGE/2020)

**Area:** 331 Km<sup>2</sup>

**Population of the Metropolitan Region:**

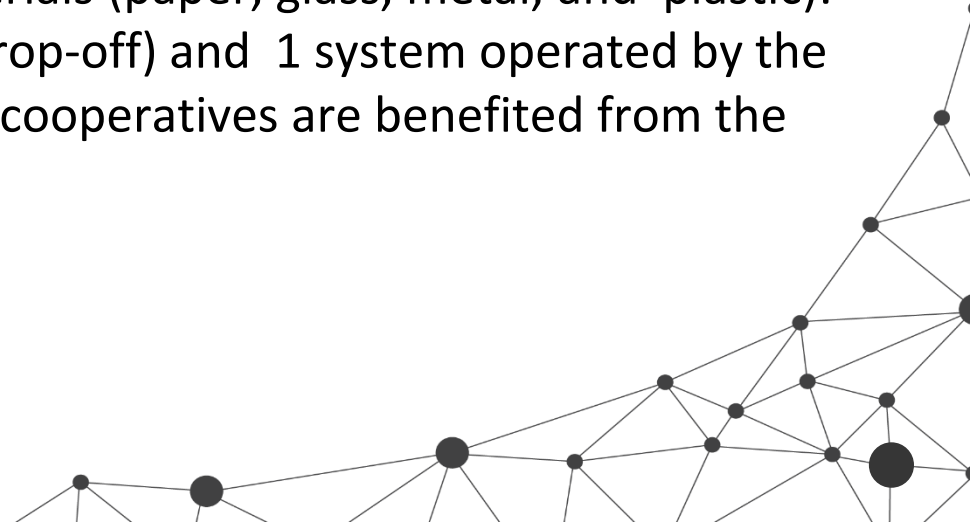
5.7 million inhabitants

**GDP:** US\$ 33 bi (2014)

**HDI:** 0.810

## **Solid Waste Management Model in Belo Horizonte focuses on the following waste streams:**

- Organic fraction collected from large generators: Composting unit
- Food that can still be consumed/without commercial value: Processed food programme
- Construction waste recycling: Combination of horse drawn cart collection system, voluntary delivery sites - URPVs and 2 construction waste recycling plants
- Used tires: Retrieval system involving tire distributors and manufacturers
- Selective collection of recyclable materials (paper, glass, metal, and plastic): 1 collection system operated by SLU (drop-off) and 1 system operated by the cooperatives (kerbside collection). The cooperatives are benefited from the commercialization.
- Others: Sanitary landfill.



# BH Recycling Programme

## Drop-off system



## New containers of drop-off system collection

# BH Recycling Programme

Kerbside collection system

Door to door collection by cooperatives



40 neighbourhoods

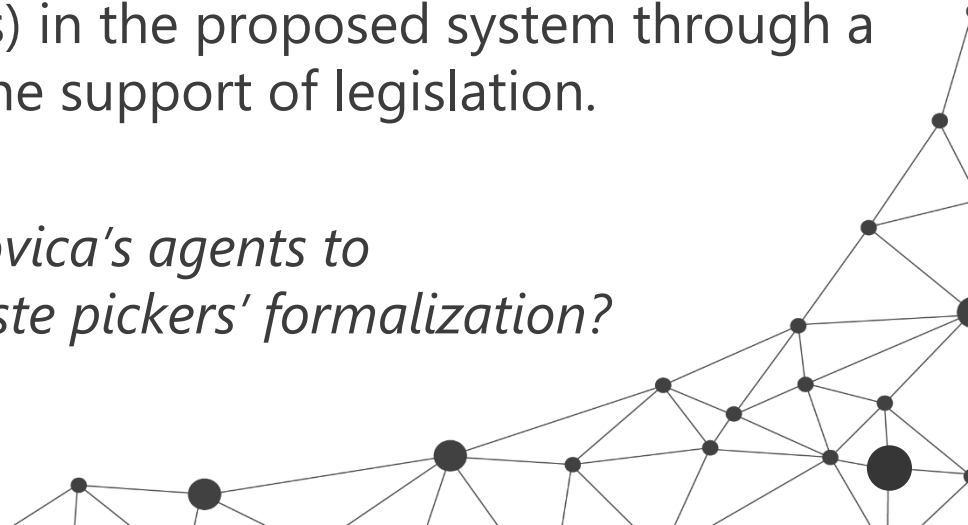
6 trucks

590 tonnes/month

# 1. Establish a local network.

- Creating a participative instance to discuss the steps into waste pickers' formalization, like as "Waste and Citizenship Forum" in Belo Horizonte.
- Assessing which possibilities are available to promote specific educational, health and welfare politics to informal waste pickers and how the chosen design can contribute towards formalization.
- Developing a framework of attributes for different agents (public sector, private sector and citizens) in the proposed system through a participative process, including the support of legislation.

**-?-** *What is the capacity of Mitrovica's agents to promote/accompany the waste pickers' formalization?*



## 2. Experience with the process of formalization.

- In the beginning of 90's, Belo Horizonte goes through a complete transformation.
- Previous scenario:
  - Recyclable materials sorting in the streets;
  - Conflictive relations between municipality and waste pickers;
  - Lack of recognition about the importance of waste pickers.



## 2. Experience with process of formalization.

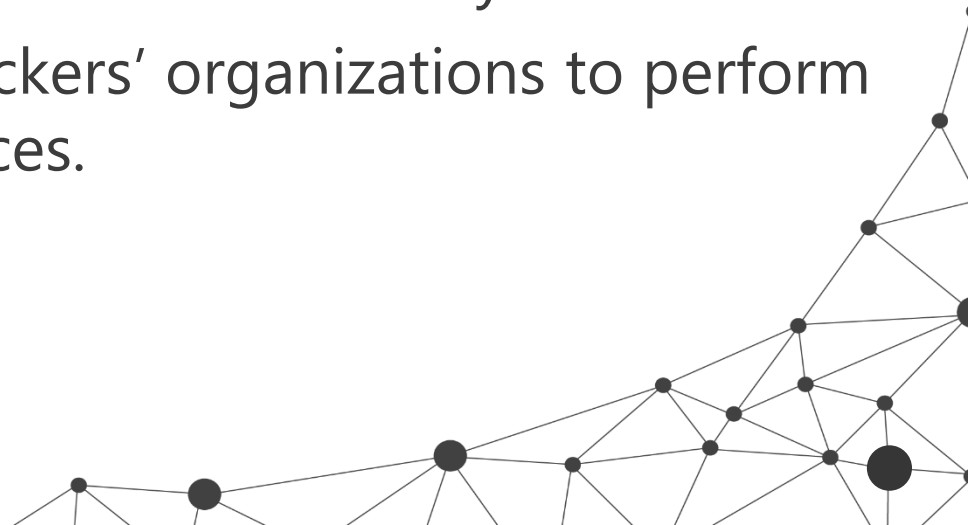


- ASMARE, supported by the NGO Pastoral de Rua, was the first cooperative of waste pickers.
- In 1993, it partnered with the City Hall for the implementation of the municipal recycling programme.

## 2. Experience with the process of formalization.

Some changes implemented:

- Municipal legislation amendments establishing the priority to waste pickers' organizations in selective waste system.
- Establishment of agreements to provide equipment, uniforms and warehouse rents.
- Implanting drop-off and kerbside collection systems.
- Recently, SLU hired waste pickers' organizations to perform the kerbside collection services.



# BH Recycling Programme

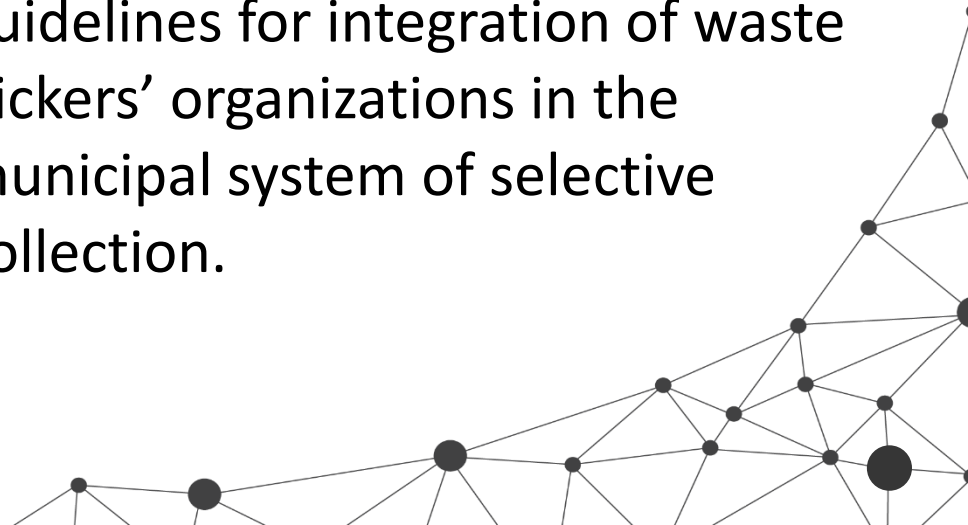
## Municipal Organic Law/1990:

“Selective collection in BH must be preferably done through the work of cooperatives”



## Waste and citizenship Forum (FMLC BH)/ 2003:

Public meeting place to discuss guidelines for integration of waste pickers' organizations in the municipal system of selective collection.



# Waste pickers Partners of BH Recycling Programme

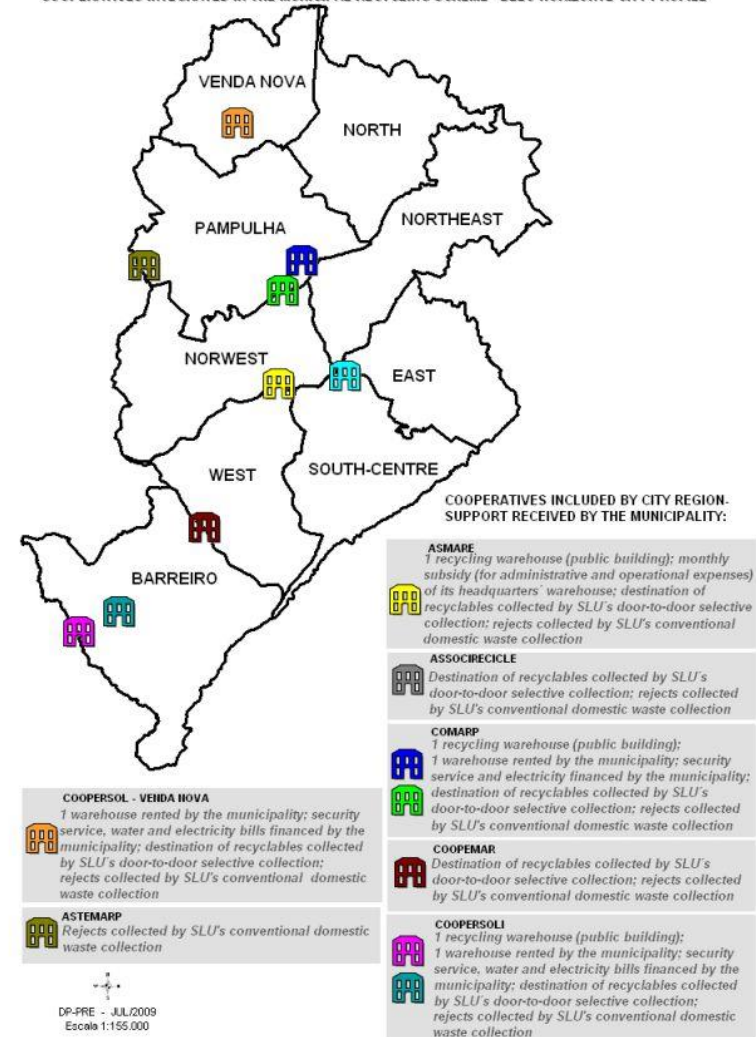


# Waste pickers Partners of BH Recycling Programme



SLU has integrated other waste pickers' organizations with varying degrees of support (covering infrastructure, equipment and a monthly subsidy).

COOPERATIVES INTEGRATED IN THE MUNICIPAL RECYCLING SCHEME - BELO HORIZONTE CITY PROFILE



# Public interventions in Waste pickers' warehouses



Expansion of Jatobá Warehouse (2009)  
30 workers per shift



# Public interventions in waste pickers' warehouses



Building of Granja de Freitas Warehouse  
(2009)  
50 workers per shift

# Public interventions in waste pickers' warehouses

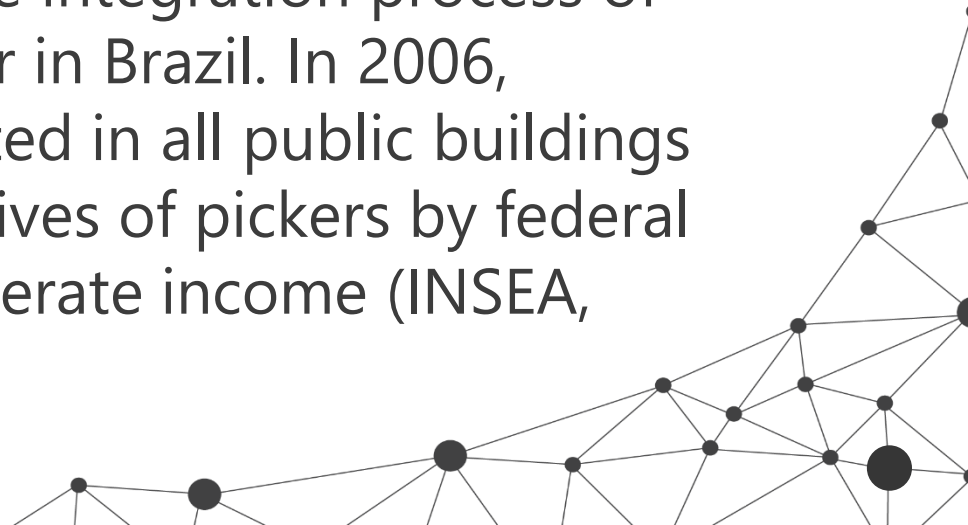


Acquisition of Ituiutaba Warehouse (2009)



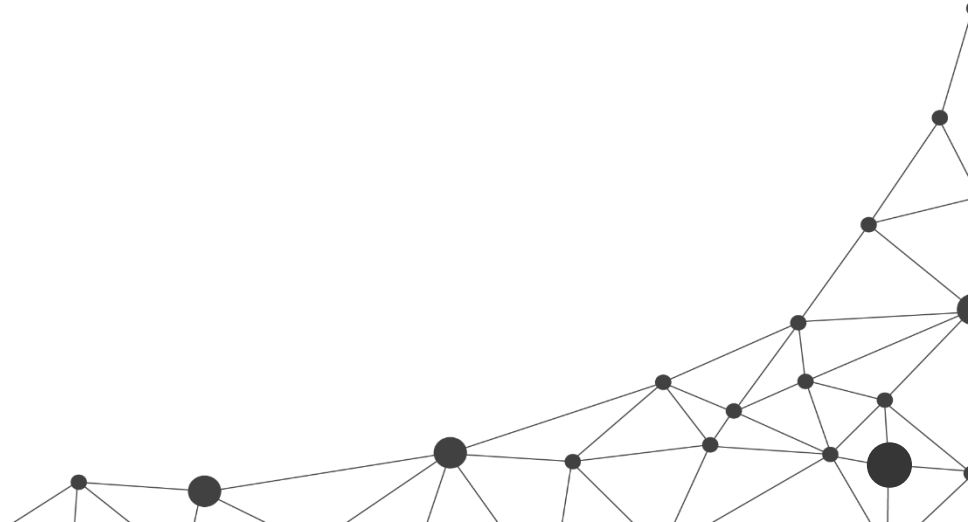
# History

Throughout the 2000s, social awareness in general increased in the Brazilian society with the establishment of many social movements, and gaining attention from the public sector. For the first time in 2002, the Brazilian Work Ministry recognized recyclable materials' picking as a profession, which marked the beginning of the integration process of the informal recycling sector in Brazil. In 2006, recyclable materials generated in all public buildings had to be sent to co-operatives of pickers by federal decree, in order to help generate income (INSEA, 2013; Spinosa, 2012)



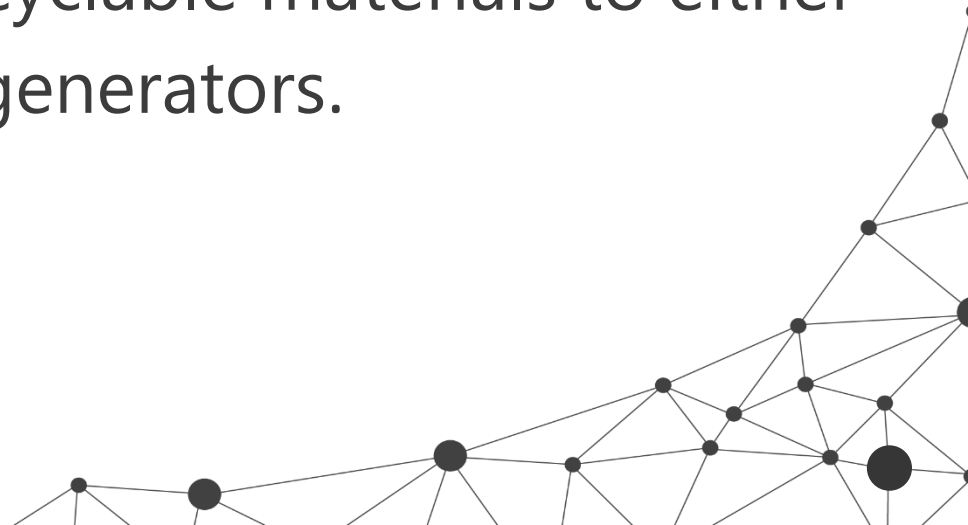
# National Sanitation Policy

In 2007, the National Sanitation Policy allowed municipalities to send recyclable materials from municipal solid waste collection to co-operatives of pickers, hiring them as Private Service Providers without the necessity of going through a public bidding process.



## National Solid Waste Policy

However, only after the National Solid Waste Policy and its decree were approved in 2010, municipalities were encouraged to legitimize organizations of pickers that could provide the services of collection, sorting and commercialization of recyclable materials to either public or private waste generators.



# LOCAL STAKEHOLDERS



# NATIONAL STAKEHOLDERS



## 2. Experience with the process of formalization.

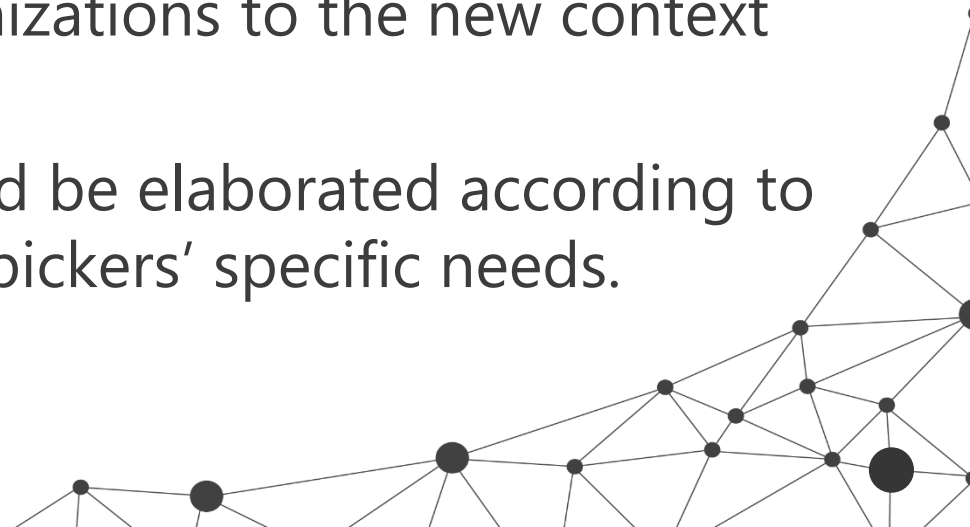


Garbage trucks loaned to Waste Pickers' Organization as part of an agreement. (2019).



### 3. Give support to designing training courses to waste pickers.

- In 2009, SLU trained 268 workers from the Associations and Cooperatives partners of BH Recycling Programme through the Technical Plan of Social Work (PTTS).
- The objective was to improve management and marketing capacity.
- In 2021, another PTTS will take place. The objective is to prepare the partner's organizations to the new context of the signed contract.
- Some training courses could be elaborated according to Mitrovica's informal waste pickers' specific needs.



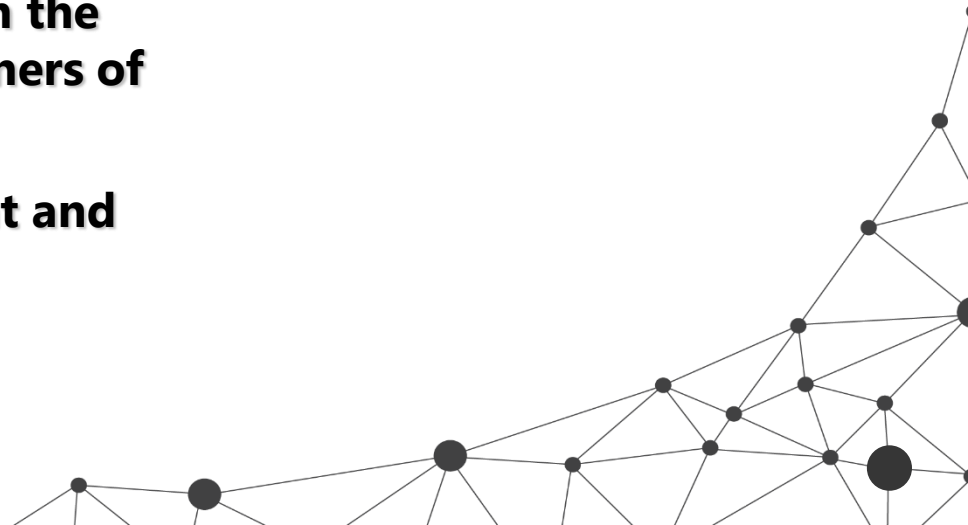
# Technical Plan of Social Work – PTTS



**Goal:** training of 268 workers from the Associations or Cooperatives partners of BH Recycling Programme.

**Objective:** Improving management and marketing capacity.

**Investment:** U\$ 150.000,00



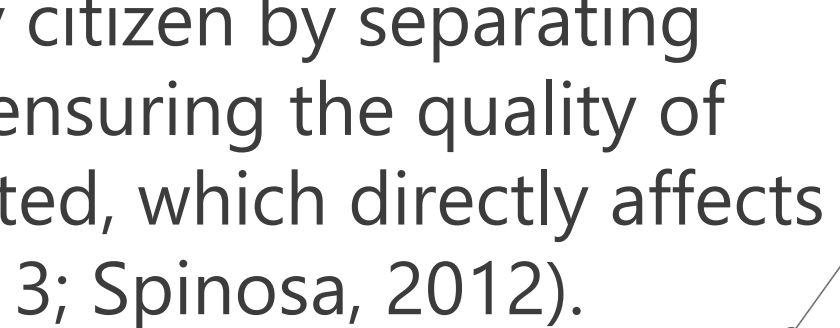
## 4. Develop an environmental education and social mobilization project with Mitrovica's citizens.

In BH this project aims:

- to enhance social participation in the waste management system;
- to educate citizens in the direction of environmentally educated citizenship;
- to resignify society's perception of informal waste pickers.



The National Policy instituted waste segregation at source, which **requires society to change its behavior**. This makes environmental education essential for the success of recycling and circular economy. In Brazil, awareness has been raised concerning the possibilities of income generation from waste for waste pickers and the importance of contribution from every citizen by separating their waste at the source, ensuring the quality of recyclable materials collected, which directly affects the value chain (Lükte, 2013; Spinosa, 2012).



4. Develop an environmental education and social mobilization project with Mitrovica's citizens.

**How?**

Theatrical Performances



# CULTURAL ACTIVITIES

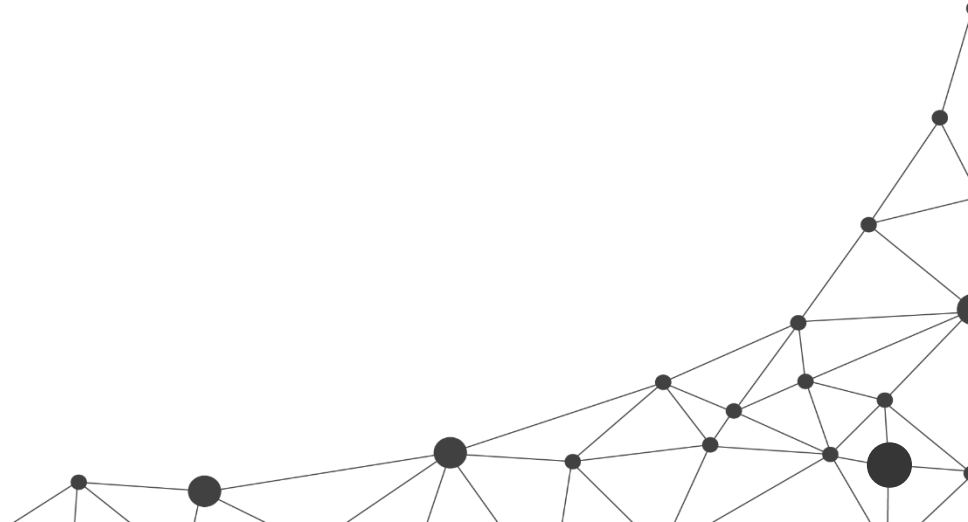
## EXHIBIT HISTORY OF PACKAGING



# TECHNICAL VISITS



# TRAININGS





# COURSES



# LECTURES



**COLETA SELETIVA** é o recolhimento de materiais previamente separados para ser reciclados.

**RECICLAGEM** é a utilização, como matéria-prima, de um produto que seria considerado lixo. Os principais materiais recicláveis são papel, metal, plástico e vidro.



**SUA PARTICIPAÇÃO PODE GARANTIR O FORTALECIMENTO DA REDETA SELETIVA**

A coleta seletiva só funciona com a sua participação. Separe o material reciclável em um saco plástico e coloque na coleta seletiva, que é realizada de 15 em 15 dias, na Rua da Paz, 100, no Centro da Prefeitura Municipal de Curitiba.

**Os materiais recicláveis podem ser colocados juntos em um único saco plástico.**



**VANTAGENS DA SUA PARTICIPAÇÃO NA REDETA SELETIVA**

- diminuição do desperdício;
- preservação ambiental;
- eliminação de vários transmissores de doenças;
- economia de energia e água (água potável, papel, metal, plástico, etc.);
- melhoria da limpeza da cidade;
- melhoria da qualidade de vida da população;
- inclusão social por meio de trabalho e renda;
- incentivo às indústrias de reciclagem e geração de novos empregos.

**REGRAS:** deixar a quantidade de lixo quando desativar o mesmo, com ou sem o recipiente, sem resíduo.

**INSTRUÇÕES:** dar uma utilidade a materiais que na maioria das vezes são considerados inúteis e jogados no lixo.

**PROIBIDO:** utilizar materiais como matéria-prima para a fabricação de novos produtos, ou seja, os descartados com os resíduos.



**PROIBIDO DE TER MONTAGEM DE REDETA SELETIVA**

- os materiais devem estar limpos e secos, para não gerar mau cheiro nem atrair animais e não poluir o ambiente;
- o papel, para ser reciclado, não pode estar sujo ou engordurado. É importante separar os envelopes e papéis. O ideal é jogá-los no lixo comum;
- o vidro, mesmo quebrado, deve ser separado em embalagem resistente (plástico ou embalagem de papelão), e os líquidos devem ser colocados em uma embalagem para dentro, para evitar vazamentos.



**VEDAR O USO DE MATERIAIS PERIGOSOS**

# EDUCATIONAL LEAFLETS

# SOCIAL MOBILIZATION



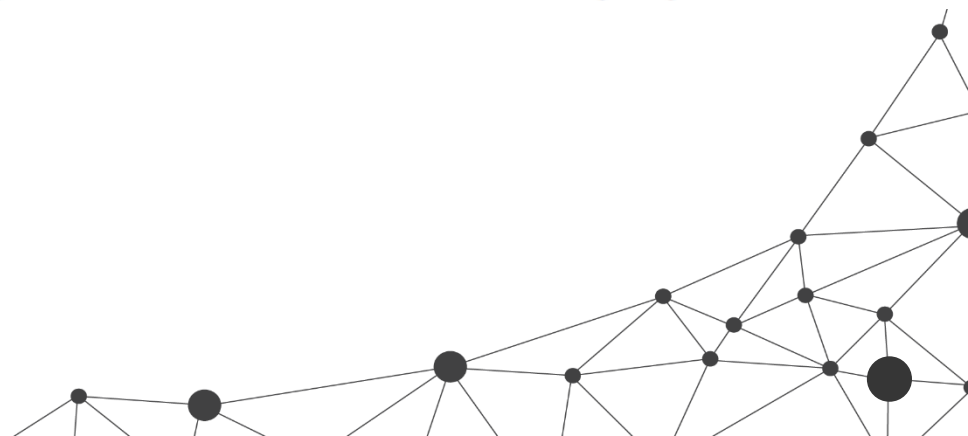
# TABELA 1

Silva de Souza Lima and Mancini

723

**Table 1.** General characteristics of pickers in Brazil.

| Category                  | Indicators  | Brazil                      | Reference                                     |
|---------------------------|---|-----------------------------|---|
| Social                    | Number of pickers   | Between 387,910 and 800,000 | IPEA (2013); MNCR (2008)                      |
|                           | Average age (years old)   | 39                          | IPEA (2013)                                   |
|                           | Women (%)   | 31                          | IPEA (2013)                                   |
|                           | African descendants (%)   | 66                          | IPEA (2013)                                   |
|                           | Urban residents (%)   | 93                          | IPEA (2013)                                   |
| Income                    | Average monthly income per picker at co-operatives (US\$/month) | US\$ 130                    | Programa Catação and Instituto Walmart (2013) |
|                           | Average monthly income per autonomous picker (US\$/month)       | US\$ 38 to US\$ 88          | Programa Catação and Instituto Walmart (2013) |
| Education                 | Illiteracy rate (%)   | 20.5                        | IPEA (2013)                                   |
|                           | Adults with completed primary school (%)                        | 24.6                        | IPEA (2013)                                   |
|                           | Adults with completed secondary school (%)                      | 11.4                        | IPEA (2013)                                   |
| Access to public services | Pickers whose children (0–3 years-old) go to day care (%)       | 22.7                        | IPEA (2013)                                   |
|                           | Electricity at home (%)   | 99                          | IPEA (2013)                                   |
|                           | Sewage collection service at home (%)                           | 49.8                        | IPEA (2013)                                   |
| Digital Inclusion         | Pickers who have computers (%)                                  | 17.7                        | IPEA (2013)                                   |



# Resignify society's perception of informal waste pickers



**WASTE PICKERS IN  
CARNIVAL (2020)**

# Challenges for the Municipality

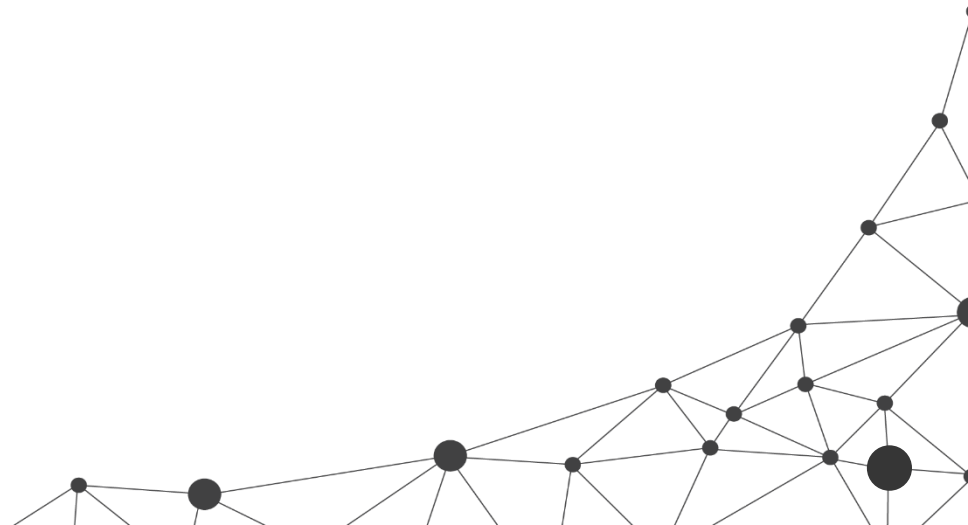
- “Shared management” of the sorting warehouses in order to increase waste pickers’ productivity;
- Improve selective collection coverage;
- Financial sustainability;
- Effective agreements and/or contracts;
- Waste pickers’ permanent training (National Decree 7.405/2010).



## Challenges:

The work of pickers is very important to Brazilian cities, although public participation is still low.

**The Brazilian authorities have acted in order to formalize pickers and include them in society. However, it has been done slowly and by bottom-up pressure from pickers.**

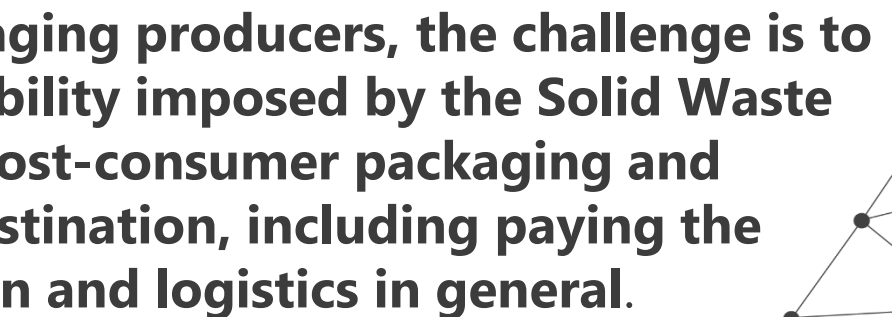


## Challenges:

For the public sector, the main challenge is to hire cooperatives all over Brazil.

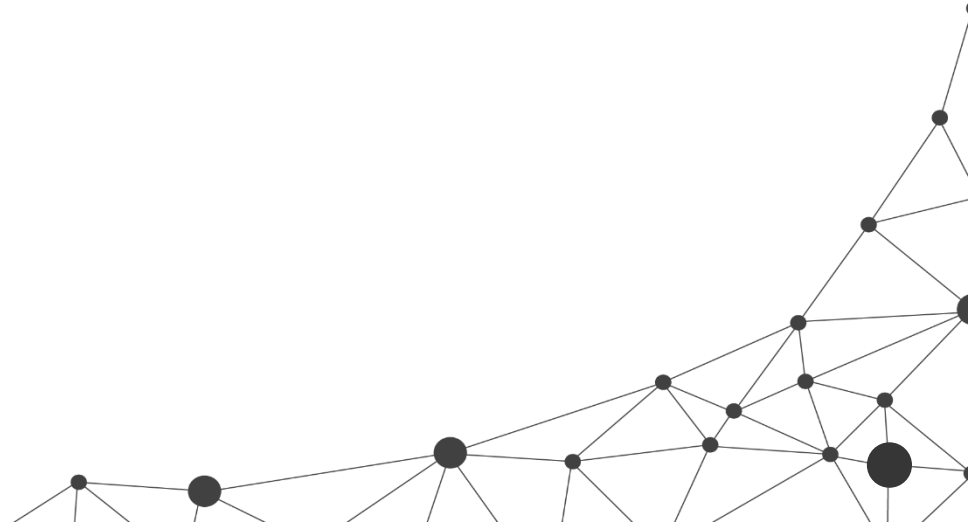
**Other challenges include to coordinate, holistically, the integration of informal actors of the recycling chain, because some are still being ignored by public policies;** to implement financial incentives to recycling; **to monitor results with trustworthy data collection** and to build capacity within public employees, concerning waste management service.

**For the private sector and packaging producers, the challenge is to take part in the shared responsibility imposed by the Solid Waste National Policy to ensure that post-consumer packaging and products reach the adequate destination, including paying the costs of infrastructure, education and logistics in general.**

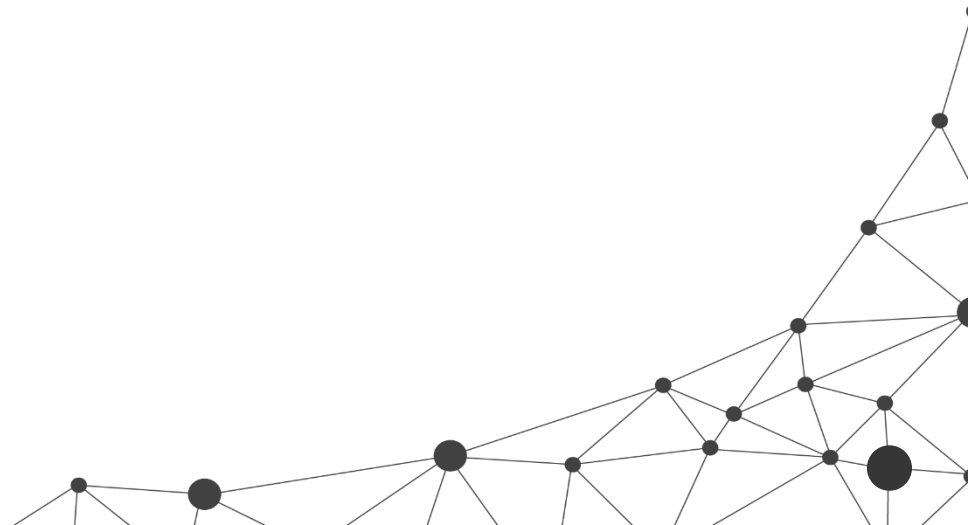
A decorative graphic in the bottom right corner consisting of a network of black dots of varying sizes connected by thin black lines, forming a complex web-like structure.

## Challenges:

For cooperatives, the challenges include integrating infrastructure, professionalization and external communication that affect their managerial sustainability, to reduce their dependency on other actors, such as municipalities, and to recruit autonomous pickers.

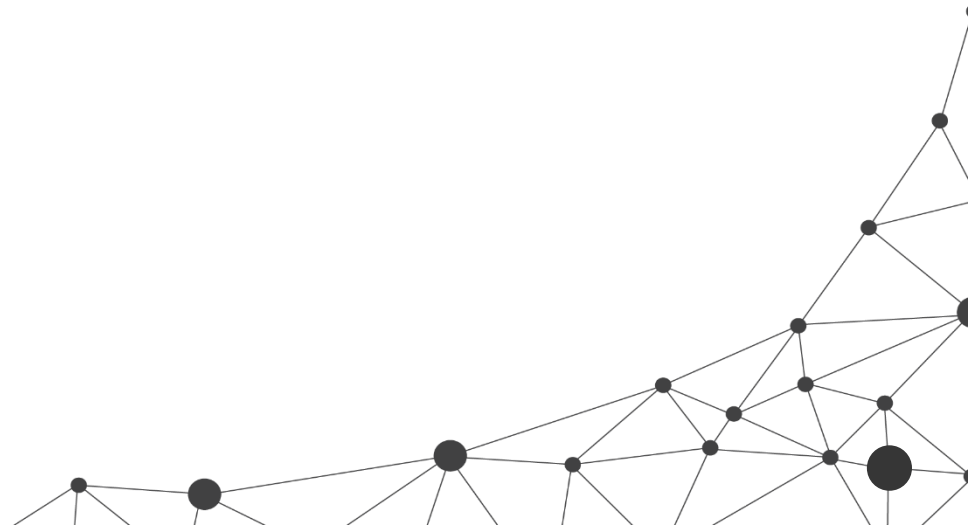


One suggestion is to implement the Municipal Plan for Recyclable Materials Selective Collection, including measures to overcome these challenges holistically and continue the process of integration of pickers.



"The SLU was of vital importance in the growth of ASMARE, not only because of the structure that we have, and which came from SLU, but also the people [...] the materials that contributed and the implementation of the selective collection that was all on account of the SLU."

*Picker Luiz Henrique*  
*Interview in 21/08/2001*



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