Urban solid waste in southern countries: from a blurred object to common pool resources

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A long neglected issue

- « The orphan child of sanitary engineering » (Melosi 2000)
- In developing countries: priority to brown agenda
  - A growing problem
  - Imported solutions
  - White elephants...
The SWM sector « modernization »

- Dumping sites are banned and sanitary landfills imposed
- Threatens the informal recovery and recycling sector → Waste Pickers!

- The type of economic service that MSWM represents is unclear: *is it a public service? is it a market economy activity?*

- The introduction of separate collections reinforces the blurred economic nature of the SWM service

=> what is the impact of the introduction of separate collections schemes in the MSWM service?
Two case-studies in emerging countries

Coimbatore – TN - India

Vitória – ES - Brazil

Formal comparison of the agglomerations

<table>
<thead>
<tr>
<th></th>
<th>Population</th>
<th>Waste production</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>tons per day</td>
<td>Kg / capita / year</td>
</tr>
<tr>
<td>Vitória ¹</td>
<td>1 484 800</td>
<td>1 111 271</td>
</tr>
<tr>
<td>Coimbatore</td>
<td>1 482 000</td>
<td>882 217</td>
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</tbody>
</table>

¹ Population: 1 484 800
  Waste production: 1 111 271

2 Population: 1 482 000
  Waste production: 882 217
SWM in Vitória: tax, gift, purchase
SWM in Coimbatore: tax, gift, purchase
To whom does the *res derelictae* belong?

- In both cities, different kinds of interactions coexist around the waste deposit: tax / gift / purchase
  → the sense of the exchange is unclear

- Waste appears as a blurred object:
  
  *where does the product end?*
  
  *where does trash begin?*

- Every device aims at appropriating the inhabitants’ valuable dry waste.
  
  No one has clear *property rights* over these materials
  As a matter of fact, waste is what has been abandoned,
  i.e. *res derelictae*

  => Political economy of this « *contested management* »
The appropriation conflicts’ determinants

- An unquestionable economic issue at stake
  - part of the MSW deposit is seen as resources

- The spatial dimension: as close to the source as possible!
  The centralized municipal service is short-cut by more flexible devices
  ➔ Creaming-off effect

- When the dry items sale is lucrative, it becomes almost impossible to suppress short-cut recovery diversions
  ➔ As exclusion is impossible, the MSW deposit can be economically characterized as a common good
The urban SW deposit as a common good

Types of goods and services in economical theory

<table>
<thead>
<tr>
<th>Exclusion possible</th>
<th>Exclusion impossible</th>
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</thead>
<tbody>
<tr>
<td>Private good</td>
<td>Common good</td>
</tr>
<tr>
<td>Rivalry</td>
<td>fishery</td>
</tr>
<tr>
<td>a car</td>
<td></td>
</tr>
<tr>
<td>Toll good</td>
<td>Public good</td>
</tr>
<tr>
<td>Non-rivalry</td>
<td></td>
</tr>
<tr>
<td>Cable TV</td>
<td>Air, National defense</td>
</tr>
</tbody>
</table>
Informal recovery is influenced by market prices

(source: F. Baptista 2001)
Global raw materials quotations have an impact on local dry items resale tariffs

(source: Cavé 2011)
Urban mining industrial strategies

- ITC’s *Wealth Out of Waste* scheme is a national programme
  - implemented in all major South-Indian cities
  - behind a CSR discourse, lies an industrial strategy

- In Coimbatore, the cement manufacturer ACC intends to recover mixed plastic waste in order to use it for co-incineration
  - *Alternative Fuels and Raw Materials* strategy
  - A National “Geocycle” program (GIZ)
**Conclusion (I)**

- The income heterogeneity in urban areas from Southern countries constitutes a decisive key to understanding.

- The present situation of recovery is fundamentally different from the historical context of *ragpicking* in Northern cities in the late XIX\(^{th}\) century.

- The SW valorization sector is becoming highly strategic.
  - Solid waste is, worldwide, the only (secondary) raw material deposit which is expanding.
Conclusion (II)

- Overcome dichotomies
  - industrial ecology,
  - livelihood and
  - public service delivery issues unfold in urban areas

- Property rights over garbage are still uncertain!

- The urban SW deposit has common goods characteristics
  - Valorization cannot happen without a proper disposal facility
  - garbage burying must be compensated for and mitigated by valorization alternatives

  => The deposit should be considered and managed as common pool resources (Ostrom 1990)
Grazie!

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