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Cleaner Waste Systems

journal homepage: www.journals.elsevier.com/cleaner-waste-systems

Sustainability indicators applied to a local strategy context: Proposals to improve selective waste collection systems involving waste picker organizations



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ARTICLE INFO

Keywords:

Selective collection systems
Waste pickers
Sustainability indicators
Local strategies
Brazilian region

ABSTRACT

In low- and middle-income countries, urban governance structures integrated with waste picker organizations and cooperatives often have unsustainable selective waste collection systems. Thus, the objective of the present study was to identify the problems that reduce the sustainability of selective collection systems in 12 municipalities in the state of Rio de Janeiro, Brazil, in addition to proposing solutions to these problems. This will enable verifying if the problems identified in these systems (with 10 waste picker organizations) are also found in systems reported in other studies. Problems were identified by means of indicators and an overall index, which was calculated for each municipality. The overall index for the whole region was 0.393, which means that the municipalities' investments in their selective waste collection systems were still low as a result of low collection coverage and recyclable material recovery rates, high cost of selective waste collection, and insufficient number of partnerships and actions oriented toward environmental education and dissemination of selective waste collection. The indicator with the lowest score involved questions about waste pickers' health and safety. We found that the low performance of the municipalities was independent of the existence or not of contracts established with waste picker organizations. We also found that these problems occur in other Brazilian municipalities. In this scenario of urgently needed change, strategies for improving the systems were formulated and validated in a participatory way, for implementation within one year, forming the basis for the establishment of municipal public policies.