

Citizen Training and the Urban Waste Footprint

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Abstract :

Waste management is key to the Sustainable Development Goal of making cities and human settlements inclusive, safe, resilient, and sustainable. Untreated waste contributes to methane emissions, groundwater pollution, marine litter and public health and safety hazards, and is a growing problem in cities in developing countries. Segregation of waste at the source of generation has been proposed as a low-cost solution for reducing the amount of waste that needs to be landfilled. This paper examines the potential of segregation and recycling at source in improving waste management in the city of Patna in India. Citizen training in circular economy principles of segregation at source and reduction, reuse and recycling of waste was implemented. The intervention was staggered over time to clusters of urban residences on routes covered by municipal waste trucks, in collaboration with the city administration. Waste observations were undertaken to examine the impacts of the training programme on waste practices. Segregation rates increased substantially among households that received the intervention, based on pre-post differences and staggered difference-in-differences estimates. The findings suggest that decentralised waste management can provide a low-cost solution for developing countries to reduce their waste footprint.