

Pathways to Sustainable Solid Waste Management in Delhi

Delhi generates 9000 Metric Ton (MT) of Municipal Solid Waste (MSW) per day, which is projected to grow to 17000 MT per day by 2024. The present system of MSW Management in Delhi is the outcome of several policy interventions that began in the mid 1990s. These interventions came together as Municipal Solid Waste (Management & Handling) Rules in 2000, which are applicable for all cities. Since 2000, several other policy pronouncements have also been made on MSW, many of which talk about new waste processing technologies, and require private sector participation. However, MSW Rules remains the bible of solid waste management in urban India.

Delhi has been at the forefront in adopting these new initiatives. Primary collection and transportation of waste has been privatised in 8 out of 12 zones in Delhi. One waste to energy plant is operational and two others are under construction. Clearly, from the government's perspective, the objective of these new initiatives is to achieve sustainable solid waste management in the city. But the question is: Are these strategies really able to achieve this objective? The answer is no. These solutions do not provide expected results. More than 50 percent of primary waste collection is still done by waste workers (informal rag pickers). This is because despite the waste to energy plant and other technological interventions, the waste processing capacity of the city has largely remained unchanged. Bulk of MSW is still going to the landfill sites which are already over accumulated. At the same time, these new initiatives have severe impact on the health of informal waste workers, and long-term environment health implications.

It has to be noted that the formal system of MSW management involves only primary collection and not segregation. Without actively involving informal waste workers, who at present play a key role in the entire chain of MSW management, sustainable solid waste management in Delhi would be a distant dream. There are around 3 lakh waste workers in Delhi who reduce 1500 MT load of waste disposal and recycling. They are involved in both primary collection (door to door collection) and segregation of 54 different kinds of recyclable waste, which further go in the chain of recycling trade and industry. Official data suggests that during 2002-03, waste trading added a social value of Rs. 358.7 crore.

Alongside the need for active involvement of waste workers in MSW management, there is also a need to give sufficient attention to the issue of occupational and environmental health (OEH). Issues of OEH are embedded in the entire chain of MSW management. While occupational health is mainly linked to primary collection and segregation of waste at *khatta* (local dumping site), environmental health is related to the process of recycling and disposal of waste in the landfill sites, specifically air and water pollution from waste. While the issue of occupational health has always been overlooked, as it is directly associated with informal waste workers, environmental health is reflected in the MSW Rules 2000, which outlines standards in both recycling and disposal of MSW. But it has been often observed that these standards are either violated or in some cases outdated, especially in the case of new waste processing technologies.

We believe that in order to achieve sustainable waste management in Delhi, there is a need to initiate a dialogue on different aspects of MSW management in a democratic manner by involving different actors such as waste workers, NGOs, government officials, academicians and common citizens. In the meantime, there are some issues that seek immediate attention:

- 1) Revision of MSW Rules 2000 from the perspective of informal waste workers, and occupational and environmental health.
- 2) Mechanisms to involve informal waste workers in the overall formal system of MSW management in Delhi.
- 3) Recognition of door to door (primary) collection and segregation as the domain of waste workers only and proper mechanisms for their involvement in this activity.
- 4) Provision of health and social security measures for waste workers, such as safety equipment for collection and segregation of waste, medical insurance, pension, free education for children, provision of housing near work place etc.
- 5) Provision of space for storage of segregated waste.
- 6) Inclusion of occupational and environmental health concerns in design and implementation of MSW processing project.