



# An Overview of Household Waste Management and Its Challenges Encountered By Municipal Corporations

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## ABSTRACT

Household waste is one of the important elements of municipal solid waste. The rate of generation of household waste is very much greater than its rate of management. This review aims to evaluate household waste management as well as to study challenges encountered by municipal corporations' while managing waste and to find probable solutions to solve these problems. There are several problems faced by Municipal Corporation which can be encountered by managing day to day's household waste through residents' – regular, disciplined, and hygienic behavior of segregation of waste at source point and also by following proper eco friendly waste disposal methods by its responsible authorities, etc. So, it will create value for waste as a wealth and will also reduce degradation of environment in upcoming time.

**KEYWORDS** – Household waste management, solid waste management, municipal corporations and environment degradation.

## INTRODUCTION

Waste is an integral part of human life. Waste management issues are addressed at local, national and international level. Solid waste is unwanted or useless solid materials generated from combined- residential, industrial and commercial activities in a given area. Municipal solid waste (MSW), commonly known as trash or garbage in the United States and rubbish in Britain, is a waste type consisting of everyday items that are discarded by the public.<sup>1</sup> Household waste, also known as domestic waste or residential waste, is disposable materials generated by households.<sup>2</sup> This waste can be comprised of non-hazardous waste and hazardous waste. Non-hazardous waste can

include food scraps, paper, bottles, etc. which can be recycled or composted. It is important that hazardous waste is handled in a safe manner to ensure that it is disposed properly so that it do not cause harm.<sup>2</sup>

According to the World Bank's new What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050 report, "without urgent action, global waste will increase by 70 percent on current levels by 2050,"<sup>3</sup>. Driven by rapid urbanization and growing populations, global annual waste generation is expected to jump to 3.4 billion tonnes over the next 30 years, up from 2.01 billion tonnes in 2016.<sup>3</sup> It shows that, problem of waste management needs urgent attention across globe.

Rising incomes, uncontrolled, unplanned urbanisation and changing lifestyles have resulted in increased volumes and changing composition of municipal solid waste in India.<sup>23</sup> According to Central Pollution Control Board, India will generate four times more waste by 2030 than what it does today.<sup>4</sup> Landfills of India rank third in the world in terms of Green House Gas emissions.<sup>4</sup> There are no robust and fool proof waste management technologies developed yet. The Ministry of Environment, Forest and Climate Change (MoEFCC) estimates that only 75–80 percent of the total municipal waste gets collected and only 22–28 percent of this is processed and treated.<sup>5</sup>

Household waste has highest proportion in municipal solid waste due to densely populated cities. It consists of biodegradable, non biodegradable and hazardous waste. All these types of household waste need different kind of treatment for its disposal.

### **Household waste Management and Its Challenges Encountered by Municipal Corporations**

- **Behavioural challenges**

- Most of the residents do not follow segregation of household waste at source point as per rules of Solid Waste Management (SWM).<sup>6</sup>
- Co-operative Housing Societies (CHS) which are generating more than 50kg. waste per day are not taking responsibility of managing of its waste in its premises.<sup>7</sup>
- Lack of community participation in spreading word about importance of segregation of household waste at source point.<sup>8 27</sup>
- Very less awareness about Household Waste Management (HWM) and environment protection among residents.<sup>9 24 25 26</sup>
- Most of the time Co-operative Housing Societies (CHS) are not following segregation of household waste while collecting it from its residents and also municipal corporations' SWM authorities are mixing all types of household waste together while collecting and transporting it and not following rules of Solid Waste Management (SWM).<sup>10</sup>
- Lack of support from politicians, corporators and business world, etc. for Household Waste Management.<sup>10</sup>

- **Operational challenges**

- Less budget – out of total budget of Municipal Corporation, fewer funds are reserved for Solid Waste Management (SWM). Majority of funds are used for collection and transportation of waste and very less funds are utilized for processing of waste.<sup>11 20</sup>
- Lack of Public Private Partnership (PPP) <sup>12 13</sup>
- Scarcity of land for construction of new landfills, unscientific and poor management of landfills by most of municipal corporations and non availability of land to set up biogas plants.<sup>14</sup>
- Lack of decentralized approach in Solid Waste Management<sup>15 22</sup>
- Unawareness of rag pickers about hygiene and sanitation while handling waste<sup>16</sup>
- Unorganized functioning of waste recyclers<sup>17 18 21</sup> etc.

- **Significant contribution of NITI Aayog to solve issues of Household Waste Management (HWM)**

NITI Aayog (2021) has given Policy Recommendations for Promoting Behaviour Change for Strengthening Waste Segregation at Source <sup>19</sup> as follow

- ✓ Strengthening the market for segregated waste
- ✓ Strengthening capacities of Urban Local Bodies(ULBs) and institutional mechanisms for management of segregated waste
- ✓ Product, Packaging and Dustbin Design
- ✓ Strengthening Information, Education and Communication(IEC) messaging
- ✓ Use of fiscal incentives and disincentives to encourage source segregation and Strengthening Database in Waste
- ✓ Strengthening Database in Waste

## IMPLICATIONS AND CONCLUSION

There are several problems faced by Municipal Corporations while managing household waste which can be encountered by managing day to day's household waste through residents'- regular, disciplined, and hygienic behavior of segregation of waste at source point and also by following proper eco friendly waste disposal methods by its responsible authorities, etc. So, it will create value for waste as a wealth and will also reduce degradation of environment in upcoming time. Proportion of household waste is more in municipal solid waste as compare to other types of waste. So, careful and significant attention has to be given to this area of Household Waste Management by Municipal Corporations.

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