

The Analysis of Management of Domestic Waste in Urban Areas

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ABSTRACT

This research analyses the management of domestic waste in urban areas by interviewing people in different localities to understand their views, perceptions, and information on various elements of waste management. This is important to understand, in view of the large amount of waste being generated in urban areas resulting in pollution affecting human health and biodiversity.

1. Introduction

In the city the urban activities provide employment to a large number of people who come and settle in the city to earn their livelihood. This results in high population density and a larger consumption of variety of goods for the satisfaction of multiple needs. In the process of using the goods, all non-usable portions are thrown away as garbage and there is faster waste generated. The waste generated is of multiple kinds, the bio-degradable kitchen wastes and the non-degradable solid wastes like plastic bags, plastic bottles and other plastic materials, e-waste, expired medicines, and batteries. The waste generated in cities has been dumped on landfill sites and over the years they have become mountains of waste becoming prone to catching fire due to anaerobic decomposition of the organic matter in the dumps and formation of methane gas besides after rainfall all pollutants from these landfill sites are washed into groundwater and polluting them.

Of the total waste that is collected, only 20% of this collected waste is further processed and the remaining 80% is dumped in the landfill sites. (Srivastava, 2019). In the case of the city of Delhi, solid waste amounting to 8360 tonnes is generated per day (Mukherji, Sekiyama, Mino and Chaturvedi, 2016). The dumping of solid waste results in the pollution of land and water and reduces the availability of these resources. Furthermore, burning of the generated waste further results in contributing to add pollutants in the air and negatively affects human health and biodiversity.

This present research work tries to understand the reason for poor management of the domestic wastes in the households in urban areas.

2. Literature Review

Mukherji, Sekiyama, Mino and Chaturvedi (2016) analysed both the knowledge and will of people in Delhi to involve themselves in managing generated waste. It was found understanding of degradable and non-degradable waste was extremely low and a very less percentage of people attempts to segregate waste. The majority of the households served by

them reported to have the services of a door-to-door waste collector service and also sold waste to waste-buyers.

Kwatra, Pandey, and Sharma (2014) studied understanding about e-waste in Delhi through a survey and found that while that many in the middle class did not have awareness of this problem, nevertheless they were quick to understand about it on getting information. They noted that people believed that there was a need for generating greater awareness among people and the presence of units to recycle such waste and were open to equitable sharing of cost between customers and producers.

Wadehra and Mishra (2018) noted that segregation of waste in Delhi continues to be less and by conducting field experiments they observed that measures that may help promote segregation include building awareness and giving economic incentives. They also note that those responsible for garbage collection play a very important part and they need to be provided the requisite knowledge for an effective segregation program.

3. Methodology

The study was done by interviewing people in five randomly selected localities of Urban Delhi and the total number of people interviewed was 100. The people were given a structured questionnaire through the RWA who distributed the questionnaire to twenty randomly selected households in their locality.

4. Findings

First of all the people surveyed were asked if they considered poor solid waste management as a major environmental problem in cities. 80% person of people said poor solid waste management is a major environmental problem while 20% felt it is a problem but not a major one.

The people were asked if they know where the garbage is taken after it has been collected from their home and 40% of the people were unaware of where the garbage goes while

60% said they knew that it was being taken to a collection centre and finally to landfill site for dumping.

The people were asked to list out the type of daily household waste generated in terms of a rough percentage. The daily waste generated were degradable kitchen wastes, paper, cardboard boxes (60%), non-degradable plastic packets, bottles and another packaging (30%), and expired medicines, batteries, empty containers of household cleaners (10%).

Around 40% percent of the people said that they make compost out of the kitchen waste and use it as manure in their pots and garden. In addition, 95% also said they sell certain recyclable waste such as old newspapers, books, bottles, etc. for scrap and get money in return.

The people were asked if they have done anything to reduce the amount of wastes generated at their home and for this, they said that they reuse the containers and packaging material several times before disposing of it.

On being asked as to how many would like if segregation of waste at their household level is made mandatory, only 50% said they will like this rule while the rest 50% felt it was not their duty to do segregation and that this had to be done by the civic authorities after collecting waste from their homes.

The people were asked the procedure by which they dispose of the waste, through garbage bags, polythene bags, or buckets. 50% said they used polythene bags, 35% used buckets, and 15% used garbage bags to dispose of garbage, and for 75% of the people, this work was done by their house helper. The people also said that the garbage is picked by a

person who collects garbage daily from their homes in a cycle cart.

The people were asked to give their suggestions as to how domestic waste management can be done effectively. 80% said that the RWA should take a proactive stand in educating the residents to recycle kitchen waste and use it as manure for their plants and 20% said that the use of plastic bags, plastic bottles, and other disposable items should be reduced.

Some suggested that stringent penalties imposed on people throwing wastes into streets would adhere the people from doing so.

About e-waste, 20% of the people said that the manufacturer should make rules to take back these commodities and dispose of them in an environment-friendly manner.

5. Conclusion

Improper disposal of domestic waste is a burning problem and needs to be addressed by the people and the authorities. In Delhi, the landfill sites have become mountains of garbage and not only polluting the land but also resulting in air pollution, water pollution, and increasing water-borne and vector-borne diseases. The people surveyed showed that they are aware of the need for proper disposal of domestic waste but feel that they are helpless until the government makes mandatory rules for segregation of waste at the household level and rules for proper collection and disposal.

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