



Solid Waste Management-A Case Study of Haryana State

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Abstract: The main components of waste management include recycling, composting, proper disposal methods. Improper waste management can cause health issues and degradation of environment. This paper focusses on the perception of people of Haryana State of India towards solid waste management. It briefly discusses the utilization of government facilities provided towards household waste management. It also highlights the suggestive measures to be adopted by government for proper collection, segregation and disposal of household waste.

Key Words: *Solid waste management, Biodegradable, Non-Biodegradable waste, Haryana*

Introduction: Waste management involves the collection, transportation, processing, recycling and disposal of waste materials. The main target of effective waste management is to conserve resources and to minimize impacts on environment. The main components of waste management include (a) Recycling, (b) Composting, (c) Proper disposal methods. Due to urbanization, population explosion etc., India is facing issues in waste management. The improper disposal of waste leads to environmental pollution as well as contamination of water bodies and landfills. Waste can be categorised in some common categories like Municipal solid waste (MSW), Industrial waste, Hazardous waste, Biodegradable waste, non-biodegradable waste, Recyclable waste, electronic waste(E-waste), agricultural waste, construction and demolition (C&D) waste etc. Improper waste management leads to pollution, health risks (like respiratory diseases, waterborne diseases etc.), contamination of water bodies, Environmental degradation (deforestation, soil erosion, climate change, habitat destruction etc.), Aesthetic and Social impacts etc. Some merits of waste management include

- (a) Protection of environment by preventing pollution like soil, water, air pollution and protecting ecosystems.
- (b) Conservation of resources- Recycling and reusing material lowers the requirement of raw materials which leads to natural resources conservation and energy conservation.
- (c)Economic Benefits-Many recruitments can be generated in waste treatment industries contributing to the growth in economy.
- (d) Improvement in public health- Risks of diseases due to contamination can be reduced by proper waste disposal.
- (e) Sustainable development - Minimisation of environmental degradation and promotion of resources are supported by waste management practices.

The demerits of waste management include cost for establishment and maintenance of infrastructure for waste management, limitations of waste management technologies on environment etc.

Objectives:

- To know the perception of people of Haryana state towards solid waste management.
- To know different routes adopted by people to dispose household waste.

Materials and Methods

Study Area

The area of research involves Haryana State of India. Haryana state includes 22 districts. According to Census report 2011 for Haryana, the population of Haryana is approximately 25.35 million people having gender ratio of 879 females for every 1,000 males. The literacy rate is around 75.55% in 2011. Haryana is located between 27°39' to 30°35' N latitude and between 74°28' and 77°36' E longitude.

Sampling and Data Collection

Primary data collection is done through questionnaire including general information of respondents like occupation, age group, district and management of solid waste by household. The data of 148 households from different districts of Haryana has been obtained.

Results and Discussion

Figure 1 represents the perception of people towards the practices of solid waste. When people are asked about restricting open dumping yards, 77.71% support, 9.45% undecided and 12.84% oppose. So, from the information collected, it is observed that 77.71% accepted restriction of open dumping yards. The opposition of restriction of open dumping yards is due to the lack of government services provided for handling household waste. On increasing penalty for violation of rules of corporation, 78.37% people support, 15.54% undecided and 6.08% oppose. On safe disposal of solid waste, 92.57% respondents support, 2.03% oppose and 5.40% undecided. When opinions of respondents are analysed on waste segregation process, then 82.4% support, 4.73% oppose and 12.84% undecided. The undecided/ oppose opinions are due to the lack of awareness on segregation mechanism.

Figure 1: Perception of people towards the practices of solid waste management.

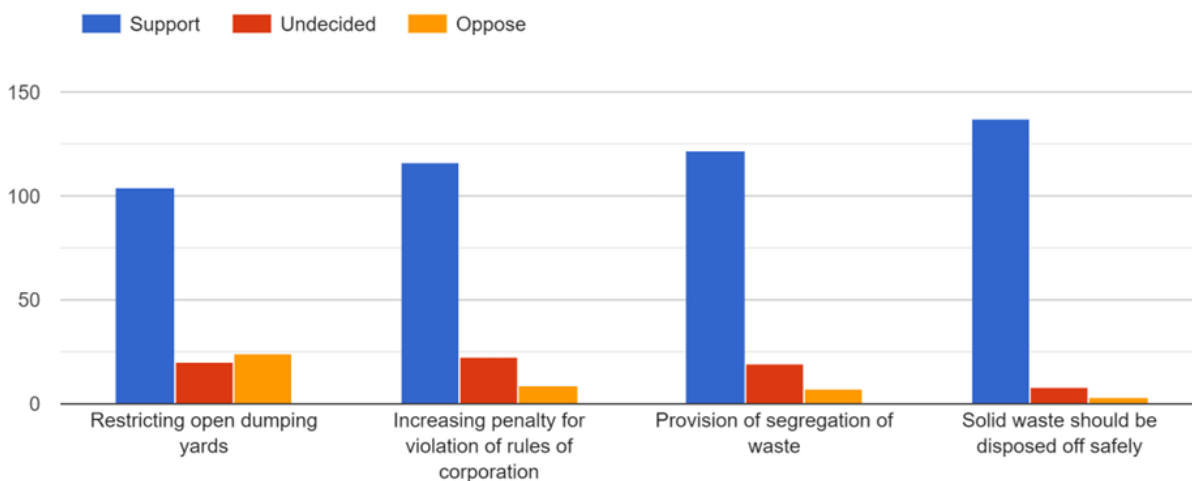


Figure 2 shows the different routes adopted by people to dispose household waste. 63.5% respondents' household waste is collected by MCD workers to dispose off.

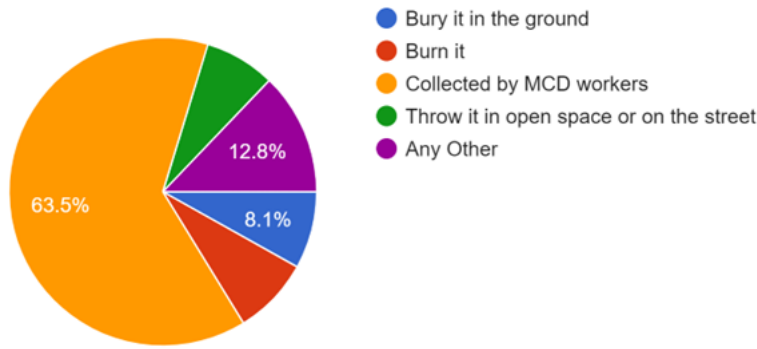


Figure 2: The different routes adopted by people to dispose household waste

The waste that cannot be decomposed easily is categorised as biodegradable waste. 50.7% have separate systems or receptacles for non-biodegradable and biodegradable household solid waste generated as shown in figure 3.

45.3% respondents are not getting sufficient services for collection of solid waste as well as disposal of solid waste (represented in figure 4).

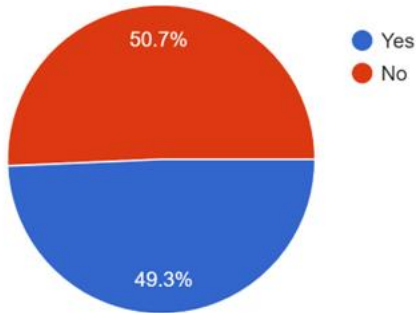


Figure 3: Availability of separate receptacles for non-biodegradable and biodegradable household solid waste generated.

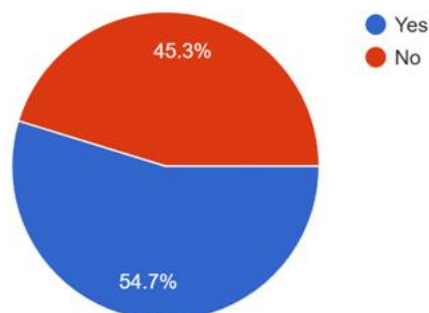


Figure 4: Services received from Government regarding collection and disposal of solid waste.

Conclusion and Suggestions

The results represent that people are showing positive response towards solid waste management. Lack of sufficient facilities like composting, recycling, services provided by government etc. are the root cause of imbalance of solid waste management. Campaigns regarding segregation of solid household waste must be carried out by government to spread awareness among people. Awareness Programs like seminars, surveys etc. should be conducted for people to control environmental degradation and health related issues.

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