



Solid Waste Management of Washim District.

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ABSTRACT

In this paper the study is done for Solid Waste Management of Washim District. Solid Waste can be defined as the garbage or refuse, sludge from water treatment plant or any other discarded materials, resulting from agricultural operations, construction activities, community gatherings, mining and industrial waste. Solid Waste is not only limited to wastes which are physically present Solids. Many solid wastes are semi-solid, liquids that are thrown by domestic, industrial and commercial sectors. As the solid waste has emerged as one of the serious problems faced by the urban centers all over the world. The waste generated has to be taken away from the city and has to be treated in a way which it may not affect the environment and cause any more problems. Therefore, the need of solid waste management arises. This paper includes all the information about the problems being faced due to solid waste. Waste Collection on daily basis is the main task of any Municipal Authority of the city. Today this contamination has affected the Groundwater on a large scale by causing water pollution.

Keywords: *Waste, Refuse, Solid Waste, Groundwater.*

1. Introduction

Solid Waste can be defined as the garbage or refuse, sludge from water treatment plant or any other discarded materials, resulting from agricultural operations, construction activities, community gatherings, mining and industrial waste. Solid Waste is not only limited to wastes which are physically present Solids. Many solid wastes are semi-solid, liquids that are thrown by domestic, industrial and commercial sectors.

Solid waste management is the process of controlling the generation, storage, collection, transfer, processing and disposal of Solid waste. India is the second largest populated country of 1,434,001,960 as of Tuesday, November 28, 2023 with an urban population of 37% who face a formidable challenge on the issue of solid waste. India generally generates 68.8 million tons of municipal solid waste (MSW) annually, with an average of 0.8 kg/person daily in metro cities. The average waste collection efficiency of MSW ranges from 22% to 60%.

Washim District is situated in the Middle East region of Maharashtra state. There are total seven tehsils in Akola district. Total area of Washim district is 5,150 sq.km.

India generated 62 million tons of waste each year, of which 70% ie around 43 million tons waste is collected, of which about 12 million tons are treated and 31 million tons are dumped in landfills. With changing consumption patterns and rapid growth, it is estimated that the urban municipal solid waste generation will increase to 165 million tons by 2030.

2. Methodology

There are mainly four method of waste management:

- a) Landfill.
- b) Bioremediation.
- c) Incineration.
- d) Other thermal methods.

A. Landfills

The main method used for solid waste disposal is dumping the waste in the landfills. It is commonly used in all the regions of Bharat. In this method the garbage is collected from various sites of the area and segregated in wet waste and dry waste. Then the dry waste is dumped in the pits at the site. This is most commonly used method for the disposal and it makes the site aesthetically bad. Still this method is adopted on a large scale. Now the use of landfills is under the surveillance of the authorities as it is harming the environment extensively.

B. Incineration

This technique involves the burning of the solid waste at very high temperatures till the waste is turned into ashes. Incinerator's recycle heat through boilers and chambers which portrays waste to energy plants. This techniques is being used on a large scale by the municipalities. The advantage of this technique is that it reduces the quantity of waste by 25 to 30 % of the total volume.

C. Bioremediation

It is a biological process that stimulate helpful microbes to use harmful microbes as to feed on the harmful contaminants and use it as their food and energy. Some microorganisms host on the harmful toxins and resulting in eliminating the harmful toxins and gases and changing their composition. This process is called as bio augmentation, and it is highly effective as long as the suitable environment is provided.

D. Other thermal methods

It refers to heat processes to treat the waste materials. Thermal methods of waste reduction aims in reducing the waste volume converting the waste into harmless materials and utilizing the energy of the waste. There are many thermal methods namely gasifier, pyrolysis, etc.

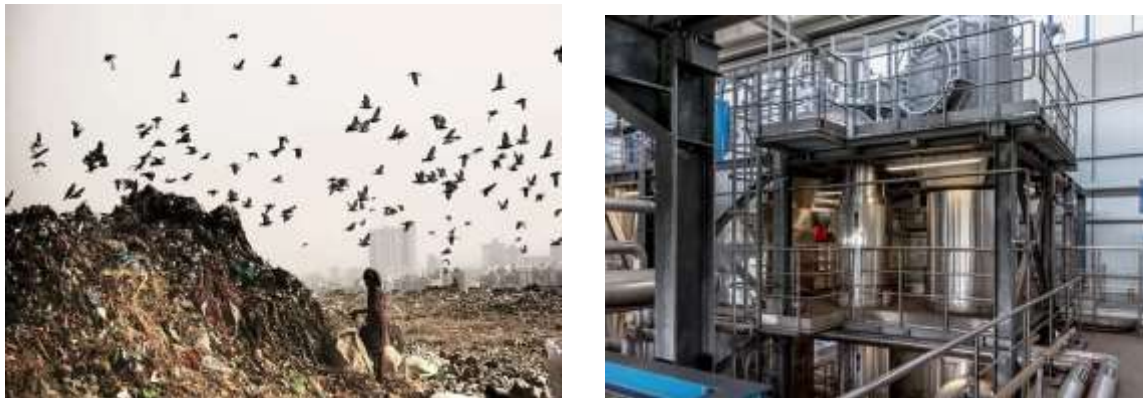


Fig. 1 - (a) Landfill ; (b) Incinirator.

3. Efforts by Washim Municipal Commission.

Washim Municipal Commission spends around three to four crores per annum for Municipal Solid Waste Management.

Under the solid waste management act 2000, WMC keeps a watch on the people and public places which are prone to waste, with the help of Nuisance Detective Squad. The main objective is to increase waste segregation and reduce the use polythene and non-reusable materials. To create awareness among the people WMC organises Maha Swachata Rally on the day before Republic Day.

WMC is well aware that as the population is increasing there will be a drastic increase in the waste generation. To tackle that WMC has started door to door collection of waste with the help of "kachra ghanta gaadi" which was under the scheme Swacha Bharat Abhiyan run by the Government of India.

WMC collects the waste from homes and segregate it into solid waste and wet waste then it is transported to the treatment plant which can be recycled and the other which cannot be treated is sent to the dumping ground, which is around 15 km away from the city.

4. Observation

- a) It was observed that the WMC is lacking in providing the proper environment to the people of some areas especially the people of Hingoli Naka, Sawangi, Lakhada, Jamrun etc; because of lack of sweepers.
- b) There are very minimum efforts taken by the corporation and the people living there for the cleanliness of environment.
- c) At some places it was observed that the people were responsible for the spreading of waste as the use of bins was just for portrayal.
- d) There is no coordination between the corporators and the government officials.
- e) As all the old landfills are fully occupied the new unconditional landfills are generated which are near the houses of the people which create a risk to life for the people residing in that vicinity.
- f) As the government is taking major steps for the waste management there are some positive changes which are acceptable; like people are getting aware about the waste segregation and they are already doing it and contributing in the initiative.

5. Conclusion

- a) It was found that WMC falls a bit short to fulfill the management of increasing demand of solid waste management.
- b) As the Municipal Corporation does not have the resources and manpower most of the workers and the vehicles used are hired, because of this the waste collection is affected by improper collection and dumping.
- c) There are no proper waste treatment techniques used like vermicomposting or closed burning but the waste is inappropriately dumped in the landfills.
- d) WMC should create awareness about the solid waste management and its effects if not done properly; if required they should impose fines on the people who are contributing in creating an unhealthy environment.

As we the people should take initiative in helping the WMC in spreading awareness or by just segregating the waste of our homes by ourselves. Acknowledgements and Reference heading should be left justified, bold, with the first letter capitalized but have no numbers. Text below continues as normal.

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