



A survey report on solid waste management in Ranchi, Jharkhand

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Abstract:

A well-run, efficient waste management strategy improves the nation's environmental and public health. This survey looks at the state of solid waste management at the different source. It also looks at people's awareness of the health and environmental risks associated with improper solid waste management and their willingness to participate in an upgraded programme. The garbage gathered from residential neighbourhoods, business districts dispersed around the town, lodging facilities, retail establishments, etc. The percentage of biodegradable and non-biodegradable garbage. garbage gathered by Company A to Z, a non-governmental outfit. This study's main goal is to develop public understanding of the production, disposal, and use of trash as resources and riches that improve socioeconomic livelihood.

Keywords: door to door collection, Integrated solid waste management, Garbage, Biodegradable and Non- Biodegradable waste

I. INTRODUCTION

One of the primary and crucial services offered by local administrations in solid waste management. In the nation to maintain clean Jharkhand area. Managing solid waste has been long time major issue of cities all over the world. India and emerging nations experience the same things. In same area of our nation the even municipal governments are forces to make tough choices since free disposal facilities are full. (Maity. et al.2011). Solid waste disposal is becoming a bigger environmental issue. Waste that is municipal solid (MSW) include partially degradable (wood, cloth, food waste, straw, and yard trash), degradable (paper, textiles Disposable napkins, sludge, sanitary residues, and non-biodegradable materials (such as dust, electronic trash, leather, plastics, rubbers, metals, glass, and ash from burning fuels like coal, briquettes, or wood) (Jha A.K et.al 2011). The swift expansion of companies and agricultural units, along with urbanisation, has lead to a massive generation of garbage, encompassing rubbish from commercial, industrial, agricultural and municipal source. The source were increased due to one of the major problems that is closely related to world population growth and density is solid waste management. In order to identify the best way waste management solutions, decision support model are often created. (Dewi, O. C., et al 2010)

II. STUDY AREA

The location chosen to execute the current study covers Ranchi, the Indian state capital of Jharkhand, and the surrounding area, which has a geographical size of From 23°14'–23°29' N to 85°15'–85°29' E. The

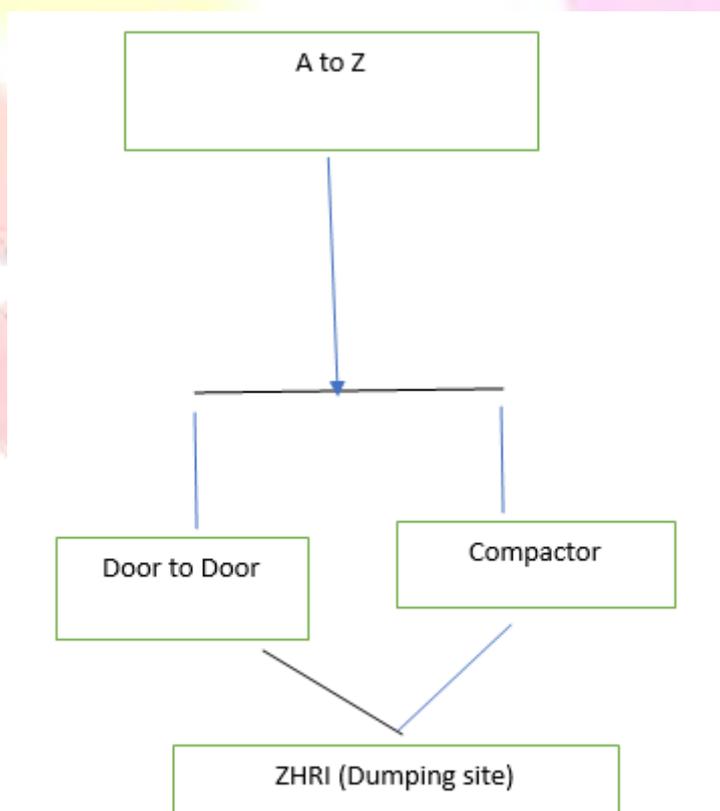
climate in the research region is subtropical. Summertime temperatures range from 20 to 37°C, while wintertime temperatures range from 3 to 22°C. The monsoonal rainfall pattern, with an average yearly rainfall of around 1530 mm, spans the months of mid-June through mid-October. The primary land cover categories that predominate in the region are built-up land, both vegetated and not, agricultural land, and Open and deep forests, thick shrubs, plantations, and water features, primarily lakes, rivers and their tributaries, reservoirs, and many ponds. (Kumar, P., et.al 2010)

III. METHODOLOGY

Ranchi city municipal solid waste is handled by Ranchi municipal cooperation by itself, with assistance and support from local NGO as part of its privatisation efforts. The following process are given below

- (A) Primary Collection of Waste: In Ranchi, the network of NGOs works in tandem with the municipal government to handle the majority of the rubbish collection. Safai Mistras collects waste from each residence at a set time each morning. After collected garbage is delivered to community bins, RMC takes over for the purpose of lifting, moving, and disposing of rubbish.
- (B) Transportation of MSW: Transportation's primary goal was to remove rubbish from the city and dispose of it at the designated location. The RMC is in charge of making sure the city is clean by using a fleet of vehicles that it maintains to move rubbish from various temporary storage locations to disposal sites.

Fig:1 Flow Chart of Chart Discharge Process





IV. RESULT

Solid Waste Generation in the City (Data Take Municipal Cooperation Ranchi Jharkhand 2013)

Year	2006 (by RMC)	2013 (by RMC)	2016 (Expected in Future)	2026 (Expected in future)
Population	1020988	1529993	1704856	2407922
Biodegradable Waste (TPD)	89	200	224	316
Non-Biodegradable Waste (TPD)	140	315	352	497
Recycle (TPD)	26	58	65	92
Total Solid Waste (TPD) TPD: Tonnes per day	255	573	641	905

Source: Data provide by Ranchi Municipal Cooperation Indicate that non-biodegradable waste

V. CONCLUSION:

This survey report concluded that non-biodegradable waste was generated more than biodegradable waste. Our goal is to reduce non-biodegradable waste.

Future plan of A-to-Z A non-governmental organization built a waste treatment plant at Zhiri itself within six months.

It will develop an eco-friendly method of waste treatment.

Integrated solid waste management plan should be followed.

Acknowledgment

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