

STATUS OF SOLID WASTE MANAGEMENT IN MALVIYA NAGAR OF JAIPUR CITY

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Abstract—Management of Municipal solid waste is amongst the main environmental problems of Indian towns and cities. Wrong management of municipal solid waste makes environment unhealthy to inhabitants. Many researches show that about 90 percent of municipal solid waste is disposed off without treating in landfills and dumping sites, which creates problems to public health and environment. In this study, an attempt has been made to layout a comprehensive review of the characteristics, generation, transportation, and collection, disposal, and treatment technologies of MSW practiced in Jaipur City. The study about Municipal Solid Waste Management for Gaurav Tower Area of Malviya Nagar has been done to evaluate the current scenario and identify the major problems.

1. INTRODUCTION

As of 2011, Jaipur city's population of 3.1 million, that is the tenth most populous city in the country. There are 91 wards, and an elected member represents each ward. Jaipur Development Authority is the zonal government agency responsible for the planning and development of Jaipur. Jaipur and Jaipur rural are the two parliamentary constituencies.

Malviya Nagar area is a dense region in south Jaipur of Rajasthan state and is closer to Durgapura, Jawahar Nagar, and Sanganer. It is also the constituencies of Jaipur District. The region is a main commercial center with many industrial and commercial areas. The place has its importance of excellent schools, colleges, hospitals and malls which cater to the whole city. WORLD TRADE PARK, GAURAV TOWER are the major commercial hub of the area. These two affect the major commercial and economic activities of the whole Malviya Nagar.

2. NEED OF STUDY

Solid waste has always been a perennial problem, and its management is one of the big questions which is often left unattended or which is not dealing properly with concern authorities in the respective area. At present, the total amount of waste that generated worldwide is more than 4 billion ton annually out of which municipal solid waste is around 1.6 ton to 2.0 ton. As the population rises the amount of waste generated also increases so there many ways by which the

management issues, planning issues and governance issues of solid waste management can be resolved.

The most noticeably awful influenced urban administration in the Jaipur city is the management of solid waste. Most noticeably bad part about Jaipur's solid waste management is its open dump of solid waste. The uncontrolled and general dumping of these wastes has achieved an increasing number of episodes of perils to human wellbeing. The city isn't following strict tenets and controls for isolation and transfer of these waste dumps. The more genuine hazard to human wellbeing happens because of spoiling of surface and groundwater. The problem of management of solid waste additionally exists all through the urban condition of Jaipur and need changes. A proper waste management system is an urgent necessity for the following reasons:

- To have control over pollution types, i.e., soil pollution, air pollution, water pollution, etc.

- To reduce the risk of spreading diseases.

- To conserve all our environmental resources, including minerals, forest, water, etc. To recycling of hazardous wastes for further production.

3. SITE INTRODUCTION

The study area includes World Trade Park and Gaurav Tower Marg which governs the total area of solid waste generation, the quantity of solid waste and its proper management. WORLD TRADE PARK and GAURAV TOWER are the major economic drivers of the area; they include shopping centers, multiplexes, food, fantasy world, trade fair, hotel, offices, entertainment, auditorium, etc. Due to all such activities the area surrounding them is very much affected regarding their socio-economic conditions. Thus these two bodies are the major governors of areas economic activities, social activities, infrastructure, settlement pattern, total solid waste generation, activity pattern etc. Malviya Nagar region in under ward number 53 of Jaipur Municipal Corporation.

Gaurav Tower area of Malviya Nagar is situated along JLN Marg which is to be studied (Fig.1).



Figure 1.-Malviya Nagar, Jaipur

4. LITERATURE REVIEW

Solid waste management is characterized as the use of strategies to guarantee a precise execution of the different elements of accumulation, transport, treatment, preparing, and transfer of strong waste (Robinson, 1986)[4]. It goes for a general waste administration framework which is the best earth, monetarily manageable for a specific range and socially worthy (World Resource Foundation, 1996; McDougall et al.2001)[1][2]. Solid Waste Categories Based on their source of generation:

Solid waste can also be classified into different types of waste according to their generation type:

- Household waste can be classified as municipal waste
 - Industrial waste as hazardous waste
 - Hospital waste or Biomedical waste as infectious waste
- Municipal solid waste (MSW), which is commonly known as garbage or trash is a waste type consisting of everyday items we consume and discard. Municipal solid waste has household waste, sanitation residue waste, construction waste and demolition waste and waste from streets of the city. Main source of generation of solid waste is residential and commercial areas.

It chiefly contains nourishment wastes, yard squanders, tins and item bundling, and various sorts of inorganic squanders from private, business, institutional, and mechanical zone.

- Barely any cases of inorganic wastes are machines, paper wastes, apparel, nourishment wastes, cardboard boxes, expendable flatware, office and classroom.
- Paper, furniture, wood peels, elastic tires, and cafeteria wastes..
- Municipal strong waste does exclude mechanical wastes, agrarian wastes, and sewage slop.
- The accumulation performed by the district inside a given zone. They are in either strong or semisolid shape.
- Leftover waste means wastes left from family unit sources which has materials that have not been isolated out or should be reprocessed.

Scenario of Solid waste management in Jaipur

Jaipur Nagar Nigam is in charge of strong waste administration in Jaipur. As indicated by JAIPUR NAGAR NIGAM 1040 MTD, According to RUIDP 1239 MTD[3]. According to CPCB 904 MTD solid waste produced, so there is conflicting information accessibility which prompts the shameful arranging of administrations. The waste is gathered from open dustbins and waste stops and transported through trucks, compactors, tractors, dumpers, and so on and dumped beyond all detectable inhibitions landfill destinations with no logical preparing or treatment, this influences nature and general wellbeing. The waste gathered from the refuse containers and the open waste stops in trucks, tractors, compactors and dumper placers and the entire amount of waste that gathered goes to landfill locales where open dumping of the loss with no preparing or further corruption was finished. This was the most negative and customary routine with regards to taking care of strong waste which has extensive variety of unfriendly consequences for the earth and general wellbeing. As per Jaipur Municipal Corporation, around 1200-1300 tonnes per day strong waste is gathered every day which is very nearly 85% of the aggregate waste created. Along these lines the computed amount of waste produced in the whole city comes around 1500-1600 tonnes per day. While the computed amount of waste created in 2001 was approximately 1100 tonnes per day (source, JMC)[5] and 80% of that waste was carried out every day which contained new and additionally old misuse of overabundance. The existing locations of solid waste collection points are indicated in figure 2.



Fig. 2: Solid waste collection points in study area of Malaviya Nagar.

Current Scenario

Open dumping on the ground is a common issue in the residential area.

Open dumping on the ground can be seen along the railway line on Gaurav Tower marg and along the drain.

Dustbins are also located in the residential area for garbage dumping although some of them are overfilled and spilled out.

5. PROPOSAL

Whole area is covered with hexagonal planning with a community bins of certain hierarchy at different levels.

Similarly, the drain has 7 cu.m bins which are used to dump the waste alongside the drain.

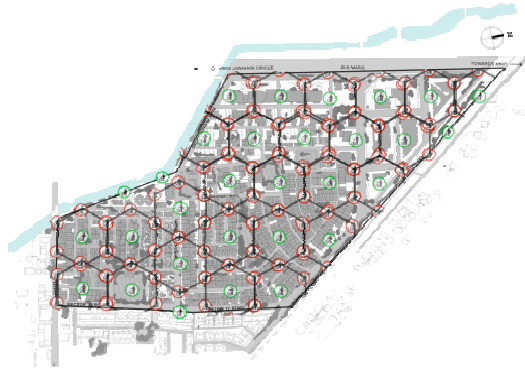


Fig. 3: Proposal for Solid waste collection points.

6. INFERENCES

PPP projects are helpful in decreasing the capacity of solid waste generated which is the responsibility of municipality of the city. If Private contractors are relaxed from taxes on loans on investments made on business operations, it can help to increase the business initiatives. Informal sector also helps in increasing the efficiency and the distance it covers for waste management.

Waste dumped to landfill site should be regulated and checked before dumping into the landfills. Segregations and treatment process should be carried out before dumping the final waste to the landfill site.

Public dustbins should be placed at community level which also encourage people in participating in the reduction of Solid waste management of community. Colored dustbins are also used to segregate the type of waste according to the nature of waste.

7. CONCLUSION

This paper contains review of the current state of solid waste management in the Malviya nagar area. The main issue in the area was open dumping of waste in residential as well as at commercial areas. Due to opendumping of waste various issues related to the waste are discussed and some solutions are given to resolve them.

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