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STUDY OF MUNICIPAL SOLID WASTE MANAGEMENT PRACTICES AT AKOLA CITY

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Abstract — Waste generation of any municipal corporation primarily depends upon the population and standard of living of the people. Akola is rapidly growing city in various avenues thus generating huge amount of waste on daily basis, thus the job of corporation becoming challenging. On an average 130-135 M tons of waste is generated daily from various sources like market places, industrial area, hospitals, and schools, household and so on. Handling and management of this waste is the job of Municipal Corporation under the guidelines lay down by government. Then in addition, corporation takes hardly any efforts for waste mitigation but does dumping in open land. However, corporation lacks to fulfil the mandatory requirements. Paper is based on the study done on Solid Waste Management practises executed by Akola Municipal Corporation for Akola city. Sincere efforts are taken to highlight the present scenario of waste management practises and the issues related to it.

Keywords: waste, city, dumping, land.

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INTRODUCTION

Akola is third largest growing city in Vidarbha region with area of 28 sq.km. Moreover, estimated population about 4,40,459 in 2016 as Akola is becoming educational hub and strong market place has enforced additional floating population of 60 to 70 thousand. Thus, the waste generation and duty to manage this waste becoming tedious for the AMC. At present Akola city generates about 130 to 135 M ton of waste daily and corporation is striving hard to meet the standards laid by the government.

I. PRESENT PRACTISE

The strategy applied at present is very basic viz.

- i. Waste generation
- ii. Waste collection
- iii. Waste transportation
- iv. Waste dumping

WASTE GENERATION

Waste that is generated is expected to deal on daily basis but this is far from reality AMC lacks to cover the complete city and the waste remains laying on open site. City is divided into 36 Prabhags i.e 73 wards and for the SWM calculations done are on the ward basis. City produces about 130 -135 metric tons of waste daily.



Fig 1 Waste scattering in front of District Hospital



Fig 2 Waste lying in market area

WASTE COLLECTION

AMC has no provision of door-to-door waste collection but waste is dumped in bins or open sites, which is collected by various vehicles. AMC provides bins for waste collection from which waste collection is done. In addition to this AMC invests about 365 two wheeled barrow for 73 wards @ 5 barrows/ ward. Both permanent vehicles and vehicle that are hired on contract basis do this job. Presently there are 100 open spots where citizens dump their waste which is reduced from 450 in number. Norms suggest there should be 2.5 sweeper/ 1000 people for the purpose of sweeping i.e AMC needs 1101 ($440459/1000 \times 2.5$) sweepers. But AMC has 748 sweepers (400 Men + 348 Women) to sweep on daily basis. For this out of 73 wards 40 wards are provided permanent sweepers and 33 wards are swept by contract based sweepers

WASTE TRANSPORTATION

With the help of 22 tractors, working on contract basis and 36 Tata ace bought by AMC for the purpose are expected to make 3 trips/day/vehicle. The dumping area land is located at Naygaon in northern part of city at a distance of 5 km from city, which is 4 hectares in area.

WASTE WASTE DISPOSAL

The present state of landfill site is very poor irrespective of the 4 JCB available it has neither the provision of JCB machine nor any source of electricity. Houses and graveyard surround dumping site, moreover railway track of Central Railway is also in neighbourhood. Dumping done is unscientific in nature.



Fig 4 Open dumping at Naygan



Fig 3 Waste transport by Tata Ace

Poor kids were found scavenging the waste with no ounces of safety or precautionary measures.



Fig 5 Kids scavenging at site

SERVICES PROVIDED

AMC spent about two crores per annum for MSW management. Human scavenging is still practised in various parts of our nation and Akola is no different from this, but to lower it done AMC has engaged Vacuum Emptier for sludge suction from septic tanks at Rs 1000/trip within the city limits. Under the light of SWM 2000 Act AMC has designed Nuisance Detective Squat that keeps watch on people, public places that are prone to waste, and nuisance generation. The concept behind is to boost waste segregation, and reduce the polyethylene and non-degradable waste mixing with the degradable waste. In order to create awareness regarding cleanliness and solid waste mitigation and segregation AMC organised *Maha Swachata Rally* on the day before Republic Day.

PROPOSED WORKS FOR MSW

AMC is known to the fact that not only population but also waste generation will increase at high rate. For which land for dumping and further processing is propose at Bhol that is 15 km away from city in northern part of city. Planning is also in progress to restart the composting unit at dumping site that once failed due to lack of publicity and marketing. With land, the transportation of it is also important for

which similar Tata Ace 40 in number are under consideration. AMC is also searching for open spaces in various parts of city to develop them into waste collection depot. In order to achieve efficiency and speed up the waste management AMC is planning to collect waste house to house and dump it to the respective collection depot where the waste will be compacted and then will be further moved to landfill site for further processing.



Fig 6 AMC proposed plan

OBSERVATION

- i. It was found that AMC is lagging to provide required number of sweepers. AMC lacks to lift waste from complete city on daily basis
- ii. There are very few efforts taken in regards of public awareness.
- iii. On the other hand, citizens were found to scatter waste and throw waste other than in bins provided.
- iv. Irrespective to the available funds policies are far from implementation because of no coordination among the bureaucrats and local governing body

- v. Landfill area at present is almost choked up and is surrounded by houses making a great risk to lives of citizens.
- vi. Segregation of waste is not at all done , neither by the citizens nor by the AMC.

CONCLUSION

- i. It was found that AMC falls short to cope up the increasing demand of the city and does not have systematic approach towards this basic issue. AMC should incorporate the services on regular basis and the full coverage should be made possible.
- ii. Most of the workers and vehicles used are hired so this should undergo for rethinking for balancing the funds. The concept of waste collection and transportation would surely be fortified by rethinking on the present methodology.
- iii. There is no scientific method use waste disposal like vermicomposting or composting, but waste is left off irrespective of huge energy that could be harnessed from the waste.
- iv. AMC should work on public awareness and impose heavy fines that are found to create nuisance.
- v. At the same time, citizens should also come forward to support the AMC by paying taxes and building attitude towards waste management as teamwork. Citizens should help the AMC by at least segregating there respective waste at the source.

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