

A SNAPSHOT OF SOLID WASTE DISPOSAL SITE IN JORHAT TOWN (ASSAM)

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Abstract-The ever increasing population has resulted into rapid urbanisation, which has slowly reduced the gap between urban and rural areas, also changing the consumption patterns, and hence causing the problems of waste disposal. Every household no matter how small still produce some amount of waste. Local municipal organisations are doing very less to deal with these problems. According to the Central Pollution Control Board (CPCB) an average of about 490 gm of waste is produced per person per day in India.[1] So we can imagine the amount of waste produced even by a small town like Jorhat which has a population of about 2lakh. In the present paper we have tried to discuss the effects of the dumping of Municipal Solid Waste (MSW) nearby a stream and the effects that are seen visually. Also there is a water supply scheme nearby that area that is why we are more concerned about this site. The main intention is to find out the change in pattern of the area where the waste is dumped and to give any alternatives. This can be helpful to create awareness about waste disposal. If we could implement the alternate disposal such as decentralised waste management then a lot of environmental as well as economic aspects can be taken care of.

I. INTRODUCTION

Urban areas are facing an acute problem due to unmanaged solid waste. Waste management has become a serious problem due to lack of proper efforts by the local authorities. In this paper a snapshot of a waste disposal site is shown. The main intention of this paper is to find out the problems that the Jorhat town disposal site is facing and the alternatives to deal with them. We have visited the site and seen the changes that has occurred in the rivulet done to the area and then we have used Google

Maps to find out relatively the change in pattern of the stream over years of waste disposal.

II. WASTE DISPOSAL SITE

The disposal site is situated alongside Tocklai rivulet which falls in the Bhogdoiriver. The residents have raised serious concerns about the disposal site due to the foul odours and the menace of stray animals in the area.[3]



Fig1 :A snap form the disposal site

According to the Jorhat Municipal Board (JMB) about 48 MT of garbage is collected from Town Center, markets, suburbs and slum and disposed off in a landfill site 2.3 km away from the town centre.[4] But serious concerns has grown regarding this open land filling. There were instances of floods in that area which may have been due to the narrowing of the rivulet or the Bhogdoiriver. Here we have taken satellite images from Google Maps to see the changes in the area. As we can see there is the Tocklai rivulet right next to the land fill area and given below are the images from 2005, 2007, 2010. [5] We can see that the rivulet has been blocked over the years. There might be other factors involved with this but the waste falling into river may be one of the causes. This is of great concern as it will impact the environment in a very harmful manner.

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2005



2007



2010

III. ENVIRONMENTAL IMPACT OF SOLID WASTE DISPOSAL ON LAND

Solid waste if disposed off on land in open dumps or in improperly designed landfills, it causes the following impact on the environment.[6]

- (a) Ground water contamination by the leachate generated by the waste dump.
- (b) Surface water contamination by the run-off from the waste dump.
- (c) Bad odour, pests, rodents and wind-blown litter in and around the waste dump.
- (d) Generation of inflammable gas within the waste dump.
- (e) Bird menace above the waste dump which affects flight of aircraft.
- (f) Fires within the waste dump.
- (g) Erosion and stability problems relating to slopes of the waste dump.
- (h) Epidemics through stray animals.
- (i) Acidity of surrounding soil.
- (j) Release of green house gas.[6]

Moreover other than these environmental aspects in this particular site there is a Town water supply plant which collects water from surface source i.e. the Bhogdoi river and this rivulet meets the Bhogdoi river just about 100m downstream from the supply barge. There is a huge possibility of contaminants reaching the water supply from the disposal site and as a result end up in being distributed to the entire Jorhat Town.



A photo from the bridge where this rivulet meets Bhogdoi river.

This unhygienic environment is causing a severe problem to the nearby people and many have protested against this waste disposal. Since it is only a temporary solution to this permanent problem, once this site is filled up the site has to be changed and same problems will persist elsewhere also. But waste has to be managed so we have to look for alternatives and find out efficient ways of waste disposal.

IV. ALTERNATIVES OF WASTE DISPOSAL

The main formula for proper waste disposal will be to reduce waste in the first place. And after that comes the segregation. The waste generated should be segregated at source so that one can dispose accordingly. While segregating the waste can be divided into recyclable and non recyclable part and finally the part that cannot be recycled goes for the waste which can be further segregated into biodegradable and non biodegradable. [7]

Land filling shall be restricted to non-biodegradable, inert waste and other waste that are not suitable either for recycling or for biological processing. Land filling shall also be carried out for residues of waste processing facilities as well as pre-processing rejects from waste processing facilities. Land filling of mixed waste shall be avoided unless the same is found unsuitable for waste processing.

In order to reduce the burden on landfill Suitable technology or combination of such technologies to make use of wastes so as to minimize burden on landfill. The biodegradable wastes shall be processed by composting, vermicomposting, anaerobic digestion or any other appropriate biological processing for stabilization of wastes. Mixed waste containing recoverable resources shall follow the route of recycling. [8]

Nowadays anaerobic digestion is used for production of Methane through which we will be able to meet with the energy requirements.

V. CONCLUSION

The waste management by Jorhat Municipal Board (JMB) needs to be reviewed as there are many problems with the open disposal and land filling. As we have seen that the blockade of the rivulet maybe one of the visible effects at the disposal site there may be more to it from the chemical and bacteriological point of view. The presence of town water supply plant in the vicinity has added more concern to the proper waste management. With the new

technology and scientific progress the waste can not only be managed well but can also be used to procure bio fertilizer, energy etc. with good economical value.

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