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## **Municipal solid wastes : Global threat to mankind**

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**Abstract :** Waste is an unavoidable byproduct of most human activity. The inadequate and un-scientific municipal solid waste management practices and the poor state of sanitation in most cities of the developing countries have resulted into the pollution of the environment including contamination of both surface and ground water which is in turn a serious human health risk. Management of Municipal Solid Wastes (MSW) continues to remain one of the most neglected major issues in Indian cities due to the rapid urbanization, urban population growth and industrialization. Most of local administrations are directly dumping MSW without any segregation and treatment to the open dumping site, this manner of inappropriate disposal of MSW is become a major threat to the environments and public health in the whole country including the state of Jharkhand. This study is based on current status of solid wastes in and around Chaibasa district of Jharkhand state. This details the difficulties and suggestions for improvement regarding the solid waste management. The study was conducted at regular interval to emphasize the actual conclusion.

**Keywords :** Municipal solid wastes, threat, Jharkhand.

### **INTRODUCTION**

Developed countries face serious environmental challenges concerning solid waste management due to rapid urban development. The increasing population and improved standard of living in cities and urban areas have led to the generation of varied categories of wastes. Due to urbanization, population growth, industrialization, and economic growth, a trend of increase in municipal solid waste (MSW) generation has been recorded worldwide in major cities. The annual waste generation has been showing increasing trend in proportion to the rise in population and urbanization (Mor et al., 2006). Further, municipal solid waste (MSW) generation in terms of kg/capita/day has shown a positive correlation with economic development on a global scale.

Solid waste management has become a global problem particularly in the developing countries of the world (Ramachandra et al., 2003). The majority of human

activities inevitably result in the generation of waste due to the improper utilization of energy and resources. According to European Protection Act (1990), "waste is any substance, which constitutes scrap materials or any effluent or other unwanted surplus substances arising from the application of a process, or any substance or article, which requires to be disposed off as being broken, worn out, contaminated or otherwise spoiled." Although solid waste does not include human excreta but it may have some hazardous material as its subset (Ramachandra, 2009). Solid wastes are dangerous in nature since they accumulate and contaminate the ground and surface water and are toxic and breeding grounds for insects and fly which in turn are the sources of several diseases.

India being one of the developing countries of the world with rapid population growth industrialization is not immune to the harmful effects of SWM on its existing environmental conditions which are highly susceptible to deterioration. Since rapid urbanization is occurring in India, the problem of solid waste management is causing a great concern to our environment (Hazra and Goel, 2009).

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Further, existing research shows that about 90% of the solid waste produced in India is dumped off directly in the landfills in an unsatisfactory manner particularly in bigger cities and towns (Hazra and Goel, 2009). The situation is similar in the state of Jharkhand too.

The present study aims to highlight the problem of municipal solid wastes and their impacts in and around Chaibasa district of Jharkhand.

#### **MATERIALS & METHODS**

The present study is mainly based on regular survey of the sampling sites and visual analysis. Some of the local persons of study area were also contacted to know the problems caused due to wastes in their localities. Chaibasa spreads from 21.97°N to 23.60°N and from 85.00° E to 86.90°E. The district is situated at an average height of 244 metres above sea level and covers an area of 5,351.41 km<sup>2</sup> or 5, 35,141 hectares. The annual average rainfall of the districts is 1433 mm. During the survey, a number of urban and rural areas of Chaibasa and Chakradharpur were visited and the original scene of municipal solid wastes and their management was analysed.

#### **RESULT & DISCUSSION**

The present study aims was to analyze the current status of municipal solid wastes in the sampling areas and it was observed that there was no proper arrangement of throwing wastes neither in urban nor in rural areas. People throw garbage here and same scene was observed in most of the water bodies like ponds and streams. People of rural areas were found to be unacquainted about the adverse affects of deposition of such solid wastes. Most of the wastes included polythene and other non renewable materials and it is surprising fact that the urban people were also throwing wastes here and there. Most of the residents complained and explained that they did not have any other options.

These municipal solid wastes are collected and they are dumped in remote areas not so far away from the residential area. They are only being thrown away and this kind of management is very unhygienic, unsatisfactory and improper in all respect. Such kind of activities is responsible for spread of a number of communicable diseases like malaria, dengue, cholera, diarrhea, typhoid, jaundice etc. It results accumulation of toxic substances in the food chain through the plants and animals. The

present work is also based on the welfare of people to aware them about various kinds of harmful and dreadful effects due to accumulation of these municipal solid wastes.

#### **CONCLUSION**

Solid Waste Management is one of the essential obligatory functions of the Urban Local Bodies in India. This service is falling too short of the desired level of efficiency and satisfaction resulting in problems of health, sanitation and environmental degradation. Most urban areas in the country including Jharkhand state are plagued by acute problems related to solid waste. Due to lack of serious efforts by town/city authorities, garbage and its management has become a tenacious problem and this notwithstanding the fact that the largest part of municipal expenditure is allotted to it. Barring a few progressive municipal corporations in the country, most local bodies suffer due to non-availability of adequate expertise and experience, thereby the solid waste is not properly handled resulting into creation of environmental pollution and health hazards. There should be proper and effective management of municipal solid wastes for healthy and pollution free atmosphere.

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