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## Solid waste management need & implementation in Raipur, Chhattisgarh

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### Abstract

The municipal government is generally the agency responsible for implementing municipal solid waste management programs and facilities, proactive communities often take an active role in solid waste management planning. Integrated Solid Waste Management (ISWM) is a comprehensive waste prevention, recycling, composting, and disposal program. An effective Integrated Solid Waste Management system considers how to prevent, recycle, and manage solid waste in ways that most effectively protect health and the environment.

**Keywords:** Solid Waste Management( SWM), Information Education & Communication ( IEC)

### INTRODUCTION

As per the 2001 data in India per capita waste generation had increased by 1.3% annually with urban population increasing between 3 – 3.5% per annum. Yearly increase in waste generation is around 5%. The municipal agencies spend 5-25% of their budget on SWM, which is Rs. 75-250 per capita per year (Kumar and Gaikwad, 2004). Normally a city of 1 million populations spends around Rs. 10 crores for this activity. Urban Local Bodies spend around Rs.500/- to Rs.1500/- per metric ton on solid waste management of which 60-70% of the amount is spent on collection alone, 20 - 30% on transportation.

Raipur Municipal Corporation signed an agreement of Rs. 110 crore with Kivar Environ, Bengaluru for Integrated Municipal Solid Waste Management Project in capital of Chhattisgarh, on Public Private Partnership basis. The Project tenure will be for 30 Years ,capable of handling 600 tons per day started with 57 wards the left 13 wards will be taken care by the municipal only. Setting up of waste transfer stations in the city for temporary deposition of waste ,56 acres of land already granted for setting up processing & landfill facility at Sakari village. The Project implemented under Design, Build, Operated, Finance and Transfer basis. The operations will also involve sustained Information, Education & Communication (IEC) drive wherein there will be door-to-door awareness and other educational drive on constituents of waste, segregation and benefits of handling waste effectively.



### MATERIAL AND METHOD

Kivar Environ has formed a special purpose vehicle named Raipur Waste Management Private Limited (RWMP) for implementing the Integrated City Sanitation and Municipal Solid Waste Management Project. The project will be capable of handling approx. 600 tons per day of municipal solid waste mounting @ 3% per annum. Company will establish a weighbridge where all the waste material will be measured and accordingly the municipal has to pay Rs.1972 per metric ton to the Kivar. The municipal will apply charges to the community who are availing the services are as under

User Charges	Residential Area	Commercial Area
Minimum Rate	Rs.10/-	Rs.100/-
Maximum Rate	Rs.50/-	Rs.10000/-

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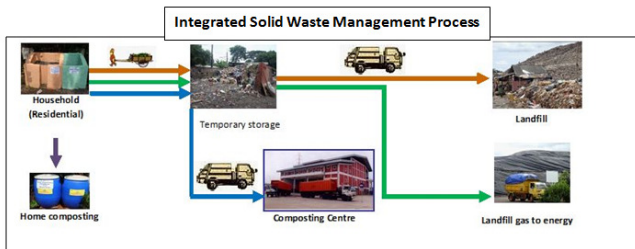
The Scope of Services of RWMPL

**First phase**

- City Sanitation comprising street sweeping, cleaning of drains, public toilets, ponds & Government office premises
- Primary and Secondary collection of waste including door-to-door collection
- Secondary transportation of waste to transfer stations & processing facility
- Comprehensive IEC activities covering all strata of the society for effective environment management

**Second phase**

- EIA & Preliminary investigations at the processing and disposal facility site
- Design, Engineering, Construction, Operation & Maintenance of waste processing facility with advanced technology
- Design, Engineering, Construction, Operation & Maintenance of scientifically engineered sanitary landfill facility
- Post closure monitoring of landfill



**RESULT AND DISCUSSION**

Management of municipal solid waste is one of the many challenges that face communities. While the overall quantities of waste are generally increasing, it is becoming increasingly difficult to site new facilities to manage these wastes. Sense of ownership and cooperation of the local community in the process is very vital and success can only be achieved with full participation of the public. The target groups will be briefed on segregation of waste, temporary storage of waste and also process for proper disposal of waste – like segregating wet waste from plastic and other wastes, handing over the degradable and non-degradable waste to the community workforce separately. Kivara is committed to make world a better place to live-in by pro-active conservation of water, a precious resource, and through effective management of waste in Raipur.

**CONCLUSION**

Solid waste management involves interplay of six functional

elements, namely generation of waste, storage, collection, transfer and transport, processing and recovery and disposal. It encompasses planning, organization, administration, financial, legal and technological aspects involving interdisciplinary relationships. Solid waste management includes all activities that seek to minimize the health, environmental and aesthetic impacts of solid wastes.

Raipur may still be lower in ranks in terms of per capita waste generation. The scenario can be changed only if the attitude of the people towards solid waste management changes. The Indian constitution has many laws and regulations for management of solid waste, but people are not aware of these. Awareness needs to be created at grass root level to improve the situation. These awareness programs should not be only linked with holding of seminars and workshops where similar people meet. Such programs should have active components of action taken while awareness gets created. Involvement with action will provide the sustainability to the MSW good practices. Good governance concepts will emerge from there.

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