

SOLID WASTE MANGEMNT IN RANEBENNUR CMC

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Abstract

Rapid industrialization and population explosion in India has led to the migration of people from villages to cities, which generate tones of MSW daily. The MSW amount is expected to increase significantly. The main objectives of this paper are: To study the methods of collection of solid waste in the Ranebennur City to promote prevention, preparing for reuse, recycling, other recovery and disposal in the study area and To promote waste reduction, recycling and reuse and recovery and create public awareness on the waste management recycling industry as well as environmental and industry concerns in the study area. The data have been collected from both primary as well as secondary sources, especially from Municipal Corporation of study area in order to analysis primary and secondary datas.

Key words: Solid waste, IEC activity.

Introduction

Rapid industrialization and population explosion in India has led to the migration of people from villages to cities, which generate tones of MSW daily. The MSW amount is expected to increase significantly in the near future as the country strives to attain an industrialized nation status by the year 2020 (Sharma and Shah, 2005; CPCB, 2004; Shekdar et al., 1992). Poor collection and inadequate transportation are responsible for the accumulation of MSW at every nook and corner. The management of MSW is going through a critical phase, due to the unavailability of suitable facilities to treat and dispose of the larger amount of MSW generated daily in cities. Unscientific disposal causes an adverse impact on all components of the environment and human health. Generally, MSW is disposed in low-lying areas without taking any precautions or operational controls. Therefore, MSWM is one of the major environmental problems of Indian cities. It involves activities associated with generation, storage, collection, transfer and transport, processing and disposal of solid wastes. But, in most cities, the MSWM system comprises only four activities, i.e., waste generation, collection, transportation, and disposal. The management of MSW requires proper infrastructure, maintenance and upgrade for all activities. This becomes increasingly expensive and complex due to the continuous and unplanned growth of urban centers. The difficulties in providing the desired level of public services in the urban centers are often attributed to the poor financial status of the managing municipal areas. The present paper attempts to deals with evaluate the current status and identify the problems of with the Municipal Solid Waste Management of Ranebennur City Municipal Corporation.

Objectives

The main objectives of this paper are: To study the methods of collection of solid waste in the Ranebennur City to promote prevention, preparing for reuse, recycling, other recovery and disposal in the study area and To promote waste reduction, recycling and reuse and recovery and create public awareness on the waste management recycling industry as well as environmental and industry concerns in the study area.

Data and Methodology

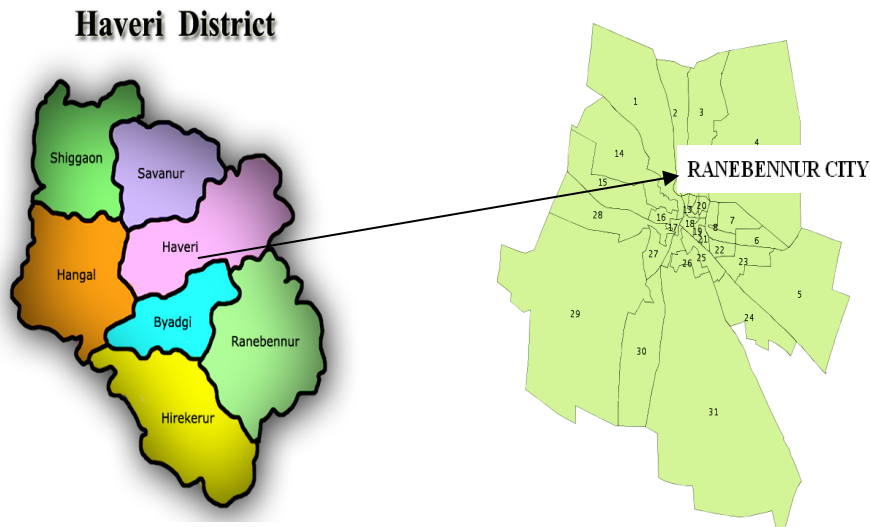
The data have been collected from both primary as well as secondary sources, especially from Municipal Corporation of study area in order to analysis primary and secondary datas. The literature has been collected from many reference book, journals papers articles and websites. Simple methods have been used to analyze the data. Apart from this field observation have been carried out from waste picking points in the study area. The simple statistical methods have been used for analysis data.

Study area

Ranebennur is the biggest city in the Haveri district of Karnataka. It is popularly known as the "Gate Way to North Karnataka". The Name of the city is derived from the term Ranebennuru literally meaning Queen's resting place. The study area is at geographical center of Karnataka. Intersecting 14°62' N Latitude and 75°62' E Longitude, it has an average elevation of 605 metres (1,985 ft).

Being on National Highway NH4, the city enjoys good bus service. It is a 1.5 hour drive from Hubli (105 km) and 5 hrs drive from Bengaluru (300 km). As of 2011 India census, the CMC has a population of 106,365. Males constitute 50.7% of the population and females 49.3%. It has a literacy rate of 60.98%, higher than the national average of 59.5%: male literacy is 60.16%, and female literacy is 61.8%. and 10.8% of the population is under 6 years of age

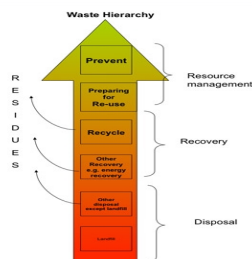
Figure 1. Location of ranebennur city



In the study area have been promoting waste reduction, reduction, recycling and reuse and create public awareness on the waste management and recycling industry as well as environment and recycling industry as well as environmental and industry concern. As per waste Hierarchy, highlights the need to move practices away from land fill disposal and to promote prevention, preparing for reuse, recycling other recovery and disposal.

The total quantity of waste generated in the city is 33 tons per day, the organic waste account is generated 16 tons/day and inorganic waste accounts for 14 tons/day, the recyclable waste represent 03 ton/day. The total population of Ranebennur city is 106,404.

- Prevention
- Preparing for Reuse
- Recycling
- Other Recovery
- Disposal



Fundamental to achieving these policy objectives are recognition and acceptance by all sections of society, as producers of waste, of their responsibility to support and adopt more sustainable waste management practices, both at home and at work. It is implicit therefore that the perception of waste as an unwanted but necessary by-product will need to change, with recognition of its potential as a resource.

Table 1. Quantity of Waste

Total quantity of waste generated in the city per day	Total quantity of waste collected (TPD)	No. of households where door to door collection started	Area of land fill site location
33	33	27000	28 Acres & 35 Guntas

Generated in the City

In study area waste has been generated from a variety of sources as discussed in the third chapter. The main waste generating sources in the city include households, markets veg and non-veg, hotels/resorts commercial complexes, hospitals, temples, kalian mantapa, industries etc. The composition of waste generated in study area is as follows (table 1)

Table 2. Composition of waste generated

Sl. No.	Type of waste	Quantity in tonnes/day
1	Organic waste	16
2	In-organic waste	14
3	Recyclables	03
	Total	33

Source: CMC RNR

The total quantity of waste generated in the city is 33 tonnes per day. The organic waste accounts for 16 tonnes per day, and the inorganic waste accounts for 14 tonnes per day. The recyclable waste represents 03 tonnes per day. The total population of Ranebennur city is 106,406 and the per capita generation of waste is 325 grams per day. The source wise estimation of waste generation in the city is as given in the above table.

Waste Management Activities Performed in Ranebennur City

This city has stretched across 43.32sq.kms and has 31 wards and approximately 27,000 house holds and a population count of about 1,06,365. Today the waste generated in the city is approximately 33 tons per day.

IEC activities held in Ranebennur

AS per the SWM norms and activities, in the city Municipal Council has also conducted IEC activities in the city namely: Door to Door campaign. Door to Door distribution of information Pamphlets regarding door to door collection. Fixing of advertisement Boards and Banner across the city regarding SWM. . Regularly Conducting competition for school and college students on the topic based on SWM and distributing the prizes for the winner.

SWM Equipment & Materials:

City Municipal Council has already purchased and has implemented the SWM materials & equipment as prescribed by the Directorate of Municipal Administration.

Following are the equipment & materials used for SWM Activities:

- ❖ 1Tractor engine with Trailor - 2 NOS
- ❖ Jetting and Sucking Machine - 1 No
- ❖ Long Handle brooms, Gamela, spade, blade plates
- ❖ Hanging Bins
- ❖ Litter Bins
- ❖ Dumper Placer Vehicles - 2 NOS
- ❖ Dumper placer Container - 80 NOS
- ❖ Mini Tipper - 1 NO
- ❖ JCB Vehicle with Front Dozzer& Back Hoe
- ❖ Push Carts
- ❖ Auto Tippers

Day to day work done under SWM regarding waste collection.

Processing and Disposal of Waste:

Treatment and Landfill Facilities, the CMC has acquired 28 acres 35 gunta land at R.S.No. 12 of Hullatti village which is just 5 kms from the city for landfilling operations. The infrastructure development at the landfill site was completed in 2008 which includes watchman shed, water supply, internal roads, compound wall construction. Two pits are constructed for land filling of waste, presently segregation of waste is being carried out. Plates showing dumping yards and segregation of waste in Ranebennur City

Conclusion

Disposal of waste and its management is a major task of governments and their agencies or organizations. The waste particularly in urban centers generates from a large number of sources such as domestic, agricultural construction sites, power stations, industries, nuclear installations, mining/quarrying, sewage sludge and biomedical wastes. In Ranebennur City 33 a tonne of waste generates everyday excluding the waste generating from industries and construction sites. With increase in population and urbanization on rise, the waste generation in the city has been increasing. The major contributor of waste in Ranebennur city is that of the domestic source or households. The city consists 26848 households which together release 30 tonnes (out of 33 TPD) of waste per day. Marketing activities are the second largest contributors of waste in study area city. The commercial activities are also generating a considerable amount of waste in the city. The present mode of waste collection

is through street sweeping and collection from community bins. There is practice of segregation of waste at the source level. To segregate the waste into wet and dry/recyclables. Many scholars and experts on solid waste management have suggested a large number of methods to overcome or minimize the problems of waste management. The researcher would like to suggest the following consolidated methods which help in treatment of waste and its management.



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