

## **Garbage Disposal in Dharwad City: An Environmental Issue**

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### **Abstract**

Disposal of solid wastes is a stinging and widespread problem in both urban and rural areas in many developed and developing countries. Municipal solid waste (MSW) collection and disposal is one of the major problems of urban environment in most countries worldwide today. MSW management solutions must be financially sustainable, technically feasible, socially, legally acceptable and environmentally friendly. Solid waste management issue is the biggest challenge to the authorities of both small and large cities.

In India, the collection, transportation and disposal of Municipal solid waste are unscientific and chaotic. Uncontrolled dumping of wastes on outskirts of towns and cities has created overflowing landfills, which are not only impossible to reclaim because of the haphazard manner of dumping, but also have serious environmental implications in terms of ground water pollution and contribution to global warming. Burning of waste leads to air pollution in terms of increased emissions, which is equivalent to vehicular emissions at times.

In the absence of waste segregation practices, recycling has remained to be an informal sector working on outdated technology, but nevertheless thriving owing to waste material availability and market demand of cheaper recycled products. Paper and plastic recycling have been especially growing due to continuously increasing consumption levels of both the commodities.

Composting-aerobic and anaerobic, both the options are available to the country for scientific disposal of waste in future. However, country also needs something in terms of policy and guidelines to enable the municipal corporations to run the waste services efficiently.

**Keywords:** *Municipal solid waste; Disposal; Recycling; Plastic; India*

### **Introduction**

Solid waste management issue is the biggest challenge to the authorities of both small and large cities' in developing countries. This is mainly due to the increasing generation of such solid waste and the burden posed on the municipal budget. Everyday each person produces at least 500 gms of waste. In industrialized countries, the average output can be as high as four kilograms per person. This is a throwaway society. Every year nearly 400 million tonnes of

garbage is thrown away all over the world. It consists of different types of materials, like mounds of food, scrap, commercial junks, plastic bottles and bags, old tyres and household trash. We cannot feel CFC and acid rain but can touch, see and smell garbage. Garbage is threatening human health worldwide. Garbage can be categorized into four types, namely, combustibles, non-combustibles, recyclables and hazardous waste. One method of disposing of garbage is by dumping it in low-lying areas. Ideally, the rubbish is spread in layers of about two meters thick and is often covered with about 30 cms of soil. When carried out properly this technique can result in the reclaiming of useful land. But the dumping place may attract flies and rats and pollute the water and the surroundings. Plastic materials are not easily decomposed. Fifty different types of plastics are in use today. Many of them are made with a variety of toxic dyes and chemicals.

Solid wastes arise generally from the domestic functions which create garbage, from agricultural activities residues, pesticides and fertilizers, from construction sites debris and unused material, from power stations fly ash, from industry-toxic wastes such as pesticides, asbestos, polish, paints, fluorescent lights, oils and solvents etc, radioactive wastes from nuclear installations, mining and quarrying wastes, sewage sludge and bio-medical wastes etc. which have polluted air, water and land. The hazardous wastes are toxic to plant and animals, inflammable, explosive and corrosive or highly reactive chemically. The ecological effects of these solid waste on human life and other organisms has been felt in many ways particularly in urban centres. The disposal, treatment and proper management these wastes have become a greatest task for any government and other agencies.

### **Objectives**

The present study covers the following objectives;

- To know the quantity waste generation in Dharwad city.
- To Analyze the types of waste generation in Dharwad city.
- To Analyze the source of waste generation in Dharwad city.
- To Assess the waste disposal methods.
- To suggest some effective measures to manage the waste disposal.
- To suggest remedial measures.

### **Methodology**

The present work is carried out largely on the basis of collection of primary information in the field work as per the questionnaire prepared in this connection. The researcher had undertaken the survey/field work during March-May 2007. Interview

with the concerned officials of the agro-based industries and the farmers, shop owners was conducted, and the required information was collected.

The secondary data, and information was collected from the Government offices such as Statistical Office Dharwad, District Industrial Center, Dharwad. P.W.D. Office, Dharwad, and Municipal Corporation Dharwad.

Thus, the primary information and data is being supplemented with the secondary data. The data has been analyzed with the help of maps, charts diagrams, and simple statistical methods along with computer applications.

### **Location and Area of Study**

Dharwad city, the head quarter of the district located in Belgaum division. The city has also been widened in area with inclusion of new areas into corporation limits. The city has a total area of 49.60 sq.km. Hence the Dharwad city has been selected as study region.

### **Results and Discussion**

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.

#### **1. Minimum production of wastes:**

- Consumption patterns and waste production are linked as also the life style. If consumption is more (and unsustainable) production will increase resulting in increased waste production.
- Besides consumption patterns, the waste production can be minimized by adopting suitable technology in production process.
- A waste minimization policy should be formulated which is possible if there is mechanism to quantify the waste production.

#### **2. Maximizing waste reuse and recycling:**

Reuse of wastes has become very important not only in view of the fact that wastes pose a threat to environment but also due to the fact that waste disposal has become very expensive. Time now has come to formulate a national programme for waste reuse and recycling.

#### **3. Reusing:**

The reuse of product means using same product over and in its original form. Glass bottles or Cola bottles instead of cans are used again and again. Why not use glass material for beverages instead of containers of plastic material for beverages instead of cans or cardboard cartons. Similarly, it is good practice to carry lunch in steel boxes instead of containers of plastic material which is not biodegradable and reusable.

To encourage the use of recyclables, a system of refund/deposit be introduced. Human Resource Development efforts should be intensified to train the people in various organizations to reorient current waste management practices to include waste reuse and recycling.

#### **4. Promoting environmentally sound waste disposal:**

Despite the fact that waste production is minimized and wastes are reused and recycled, some wastes still remain. Even after treatment, wastes still remain and have impact on environment. Treatment of municipal wastes like garbage and fecal material should be given priority

Various options for waste disposal are:

- i) Recycling and reuse
- ii) Landfills.
- iii) Composting.
- iv) Incineration.

#### **5. Landfills:**

Earlier almost all the wastes were dumped at so called landfills and burnt releasing smoke and foul smell. These landfills are source of soil and water pollution. This dumping of waste in this way is not environment friendly.

Like other issues of environmental concerns, adverse effects of landfills on environment are the externalities that do not figure in our practice of costing. No monetary value is placed on these external costs. Market mechanism would therefore, will favor landfill use. To correct this market failure, economics favor the use of taxes on polluting activities of landfills as a means of ensuring that the polluter takes account of the external effects of their operations.

The sanitary landfills scientifically serve as large sites for decomposing biodegradable materials. They are managed in such a way that garbage and other wastes should be spread out evenly and covered with soil on daily basis. Ideally landfills should be constructed in such a way that they are covered with plastic sheets all around or semipermeable soil/clay/sand/gravel to prevent ground water pollution from leaching.

#### **6. Composting:**

Municipal solid wastes, garbage from kitchens, food processing industry and degradable wastes from slaughterhouse can be composted composing plants and sold as fertilizer. Household garbage can be composted at backyard to serve as useful nutrient material of vegetation.

#### **7. Incineration:**

Incineration is another method of disposal especially of garbage. It is disposal of waste through burning. It can reduce both the volume and the weight of the wastes. It can render toxic wastes into less toxic substances. The case of Japan using incinerators is mentioned above. Impacts of incineration include release of fumes and harmful substances unless it is carried out at very high temperatures and equipped with pollution control devices. People usually don't like incinerators near their homes unless they meet high standards of performance and maintenance.

As a result of incineration about 25% of waste residue is left as an ash and it is usually disposed off by depositing it in landfills. If the landfills are not sanitary landfills made in accordance with standard procedures, the residues of incinerators would cause soil and water pollution.

#### **8. Extending wastes services**

#### **9. Municipal solid wastes (management and handling) rules should be followed**

#### **10. Management of biomedical wastes**

### **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 Dharwad City 91 tons 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 Dharwad city has been increasing. The major contributor of waste in Dharwad city is that of the domestic source or households.

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