

SOLID WASTE MANAGEMENT REMAINS A NIGHTMARE FOR MERU COUNTY AUTHORITIES

Solid Waste Management is a major problem world-over and in Kenya, it offers several challenges from clogged drainage and sewers, waterborne diseases like typhoid, cholera and diarrhoea, increased upper respiratory diseases from burning of garbage to malaria. Of all the elements involved in solid waste management, disposal is the most important element as it includes planning, administrative set up, finance, technology support and their interdisciplinary relationships. To dispose waste in an efficient way, knowledge, technology, trained human resource, appropriate infrastructure and availability of land is required. The commonly used methods of solid waste disposal are open dumps, landfills, sanitary landfills and incineration plants.

Meru town is a fast growing town, located close to the eastern slopes of Mt. Kenya, one of the five major water catchments (watersheds) of the country. Rapid urbanization and rapidly growing human population accelerate the generation of Municipal Solid Waste. The increasing human population directly influences the Solid waste generated in the municipality and the surrounding areas. The socio-economic profile of the population and their consumption patterns govern the characteristics of the waste generated in the town. For a long time solid waste has been a major challenge to Meru Municipal Council especially in terms of cost involved in the management. In August, 2012 Meru town mayor Mr. John Mwalimu said that the amount of garbage in town had become enormous and the council needed help in collecting, recycling and disposing it.

Meru Municipal Council has been using the cheapest and the oldest easy method of Municipal Solid Waste disposal and that is 'open dumping' whereby the waste is collected using 2 trucks and 2 tractors and dumped in the Upper Imenti Forest of Mt. Kenya National Reserve near Nkuuga sacred lake and levelled by bulldozers from time to time. The garbage dumping has been going on for over 20 years. Currently, there are about seven tonnes of solid wastes deposited on this site everyday that can be segregated into polythene papers, garments, papers, worn out shoes, plastics, metals, glasses, sisal threads, clinical waste and easily biodegradable materials such as potatoes and banana peelings, fruit and food remains among others. The biodegradable materials forms the bulk of the solid waste composition forming 60% of all solid wastes generated in town of which the largest quantity is collected from Gakoromone open air market. The second in composition is polythene papers and other

papers forming 30% while the other types of solid waste including plastics, metals and glasses collected comprise 10%. This has greatly interfered with the ecological and socio-economic values derived from this section of the forest. There are also undesignated dumping sites within the town and the surroundings such as on the riparian land of Kanyuru stream that have been significantly degraded.



Undesignated dumping site on the riparian land of Kanyuru stream in Meru town.

Open dumping is not a scientific way of waste disposal. Open dumps refer to an uncovered site used for disposal of waste without environmental controls. The waste is untreated, uncovered, and not segregated. In spite of its simplicity in execution, there are various negative environmental and socio-economic impacts associated with it. The financial involvement for this traditional method of waste management has been quite high. Uncontrolled, open dumps are not a sound practice. Open dumps are exposed to flies, birds menace and rodents. It also generates foul smell and unsightly appearance. Loose waste is dispersed by the action of wind. Drainage from dumps contributes to pollution of surface and ground water and also the rainwater run-off from these dumps contaminates nearby land and water thereby spreading diseases to the residents of Meru town and its environs. In addition, the waste-dump gas (methane) generated during solid waste decomposition is a green house gas that contribute to climate change.

A World Health Organization (WHO) Expert Committee (1967) condemned dumping as “a most unsanitary method that creates public health hazards, a nuisance, and severe pollution of

the environment. Dumping should be outlawed and replaced by sound procedures". Quantity and characteristics of the Municipal Solid Waste are two major factors, which are to be considered as the basis for the design of efficient, cost effective and environmentally compatible disposal method. Improper and unscientific techniques adopted for Municipal Solid Waste disposal are economically non-viable and socially unacceptable. This calls for the selection of appropriate waste disposal methods which are economically viable and environmentally friendly. In the current day and age, garbage/trash is treasure as it can be recycled into a range of high quality/demand products for sale.

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