

Solid Waste Management in Wattala-Mabole Urban Council

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Solid waste is a growing problem in urban areas in Sri Lanka. Waste generations due to urbanization and economic development have had adverse effects on the environment and socio-economic development. This study examined the status of solid waste management at the Wattala-Mabole urban council in the Gampaha district. A questionnaire and published statistical information were used to carry out the research. 68 Questionnaires were issued based on a random sampling method with a 90% confidence level and 10% margin of error. The study covered six Grama Niladari (GN) divisions of the study area. The urban council collects both household and industrial waste. As per the survey, 56.66% population of the study area, including Wattala, Galvetiya, Mabola, and Welikadamulla grama niladhari divisions have access to regular waste collection with a perfect routine of waste collection. Thelangapatha and Averiwatta GN division used to skip regular waste collection because of the local authority's lack of machinery and labor facility. 70% of people of the area categorize waste into organic, plastic, and paper. However, 30% of the people do not categorize the waste for disposal. The surveys revealed that improper waste disposal practices cause social impacts such as odour, breeding of pests, and loss of property values. Another main issue is dumping waste into drainage lines creating major blocks in water flow. These problems can be overcome through public awareness about waste reduction methods and proper waste categorization practice in their daily routine. However, the government has the responsibility to provide the requirements of the local authority, including the labor force and machinery to carry out an efficient solid waste management process. In addition, the collected waste can be either recycle or reduced to ashes to minimize contaminants, and the Plasma gasification method can be used to break the bonds of elemental components of waste to improve solid waste management.

Keywords: Solid waste, Waste management, Urbanization, Plasma gasification