

Real data composition of municipal solid waste (MSW) generated in Balakong, Selangor, Malaysia.

ABSTRACT

Increasing population and rapid urbanisation growth and other factors influence directly the municipal solid waste (MSW) generation in Malaysia. As generally the large quantity of MSW generation, particularly in Peninsular Malaysia, has increased from 16,200 tonnes per day in 2001 to 19,100 tonnes per day in 2005 or an average of 0.8 kg/capita/day. The rate of waste generation in Malaysia is increasing it covers community activities such as commercial, institutional, industrial and markets. Therefore human activities as among of reason why quantity of waste generated increase together with the complexity of waste where plastic and other mixed waste became a very significant portion in the waste stream. It is also related to the economic level of different sectors in the community such as unlawful resident, low, medium and high class residential area. This paper deals with case study of solid waste composition in Balakong, Selangor. The composition of solid waste was studied by segregating it into different components such as paper, glass, plastics, metal, organic waste and others. It was observed that Balakong area produced around 48.07% organic waste which was the highest component compared to other waste, followed by paper, plastic, others, glass, and metal with the value of 29.53%, 16.69%, 2.65%, 1.90% and 1.16% respectively. The areas covered in this study include 8 residential areas, 2 industrial areas, and 1 hypermarket. The study was conducted for 1 month as well as everyday and the data collected was presented in the form of pie chart and table. Thus, the waste generation rate comparison of solid waste generation in Balakong area in 10 days intervals was estimated to 31536.09 kg/day. The current management system is inefficient and recommendation are given to improve the current situation such as to use expert system or others appropriate technology in Malaysia.

Keyword: Municipal solid waste, composition & generation, expert system