

# EVALUATION OF BENEFITS AND OPPORTUNITIES OF MUNICIPAL SOLID WASTE MANAGEMENT USING GIS : A CASE STUDY OF THE KANDY MUNICIPAL COUNCIL, SRI LANKA

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Increasing trend of solid waste generation has become a critical challenge especially in developing countries during last few years. Sri Lanka has taken many initiatives to overcome this challenge. Assignment of the responsibility of solid waste management to local bodies in 1987 and the national policy on solid waste management in 2007 that places emphasis on addressing solid waste management problem. However, the implementation of these initiatives has been inadequate and the health and environmental problems associated with the improper waste management have become critical. By 2015, the total generation of municipal solid waste has reached 177 tons per day in the study area. A case study was selected based on its rapid increasing population and waste generation and its location on the central highlands of the country. Kandy municipal council is the third highest solid waste generator. It is expected to find suitable sites to locate recycling plants to facilitate present waste management strategy of the Kandy Municipal council. Furthermore, to find the most influencing factor using Analytic Hierarchy Process. The study proposes and estimates the potential environmental and socio-economic benefits through recycling. The results of the study can be a good reference for the effective application of integrated policies in Sri Lanka and an important tool for the decision making process for the betterment of the public.

Keywords: Waste generation, Recycling plants, Municipal solid waste