

MANAGEMENT OF MUNICIPAL SOLID WASTES: AN OVERVIEW OF THE COLLECTION, COMPOSITION AND FATE OF SOLID WASTE OF LOCAL AUTHORITIES IN HAMBANTOTA DISTRICT IN SRI LANKA

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Solid waste collection by the Local Authorities (LAs) is rapidly developing and getting serious attention in Sri Lanka. However, a proper management plan for collection of solid waste has not yet been implemented to achieve the full potential with increasing inputs and technologies. This study was focused on finding the total amount of urban solid waste collected daily by the twelve solid waste management sites operated by the LAs of Hambantota District, and to analyse the waste composition and its fate thereafter. Average daily collection of each category of solid waste was calculated using the daily records at each waste management site. This amounts to 52.587 tons/day. The weights of different solid wastes collected in this study are: compostable organic materials 24.320 tons/day, paper 0.815 tons/day, clothes 0.487 tons/day, plastic and polythene 4.545 tons/day, rubber and leather 0.685 ton/day, steel 0.439 tons/day, glass 2.338 tons/day, electronic waste 0.539 ton/day and other mixed waste 18.232 tons/day. The results revealed that daily waste collection of LAs in the district varied from 1-2 to 10-20 tons/day. The dominant range was within 1-2 tons/day. This study also found high variability of the status of waste collection among Municipalities, Urban Councils and Pradeshiya Sabhas. The results of weight and composition of the solid waste collected in this study clearly indicated a positive relationship with urbanization. The LAs which have high population with large jurisdiction land area do not collect large amounts of solid waste. The administrative areas with less land but moderate urban waste generation could be more efficient in collecting urban solid waste than the areas with high land extent. If population spreads throughout a large land area, the people would have adhered to manage their solid waste with their own methods. Therefore, LAs should be strengthened in parallel to urban development to achieve the success of solid waste management. When considering the ongoing rapid development activities of Hambantota District, the amount of daily waste collected is expected to rise largely. However, the results of this research did not reflect a significant improvement of waste collection within the district. The results of this study also highlighted a few malfunctions of the LAs of Hambantota District, such as improper collection of solid waste and not maintaining proper records on collected solid waste. These issues should be carefully studied because strengthening of LAs has not yet been implemented compared to other development activities with compromised needs of the population. Therefore, preliminary findings of this study could be used to develop a systematic and sustainable solid waste management model for Hambantota District.

Keywords: Hambantota, Local Authorities, Management, Municipal solid waste