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Household Preferences and Willingness to Pay for Improved Solid Waste Management Services in Colombo 15, Sri Lanka

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Abstract

Inefficient collection and improper disposal of household solid waste is a common issue in urban areas of developing countries. A major part of the municipal waste management budget is allocated to the collection of the waste. In order to encourage sustainable solid waste management the quantity of the waste produced must be reduced. The main objective of the study is therefore to estimate the quantity current household generation, to analyse the composition and to understand waste separation and waste disposal practices of households in the study area.

Colombo 15 was selected as the study area. A face to face questionnaire survey was conducted from August to September in year 2020 among 100 households and the waste quantification measurements were recorded for a week. The waste was measured using a scale before it was collected by the municipality. The questionnaire intended to collect information on socioeconomic data, current waste collection practices, willingness to pay for better service and their attitudes.

Results indicate that average daily waste generation was 2.319 kg per household and 0.584 kg per capita. According to the data 84.3% of the waste generated is organic waste, 6.2% is polythene and plastic and 5.6% is paper and cardboard. Among the practices observed in the study area the separation was up to the satisfactory level. Even though waste collection is a free service people in the study area are paying on average LKR 29.22 per month and willingness to pay for an improved waste collection was estimated as LKR 41 per month per person. Data also shows that around 85% of the residents are willing to pay more than LKR 100 for a better collection service. The determinants of the willingness to pay were income, quantity of waste, respondent's age and educational level.

Managing waste properly is essential for building sustainable and livable cities and it is important to design and implement efficient waste collection services taking into account household preferences.

Keywords: Household waste generation, Willingness to pay, Improved waste collection