

Current Status and a Forecasting Model of Community Household Waste Generation: A Case Study on Ward 24 (Nirala), Khulna, Bangladesh

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Abstract : The objective of the research is to determine the quantity of household waste generated and forecast the future condition of Ward No 24 (Nirala). For performing that, three core issues are focused: (i) the capacity and service area of the dumping stations; (ii) the present waste generation amount per capita per day; (iii) the responsibility of the local authority in the household waste collection. This research relied on field survey-based data collection from all stakeholders and GIS-based secondary analysis of waste collection points and their coverage. However, these studies are mostly based on the inherent forecasting approaches, cannot predict the amount of waste correctly. The findings of this study suggest that Nirala is a formal residential area introducing a better approach to the waste collection - self-controlled and collection system. Here, a forecasting model proposed for waste generation as $Y = -2250387 + 1146.1 * X$, where $X = \text{year}$.

Keywords : eco-friendly environment, household waste, linear regression, waste management

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