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ASSESSMENT OF SOLID WASTE GENERATION AND ITS MANAGEMENT IN SELECTED SCHOOL CAMPUSES IN PUDUCHERRY REGION, INDIA

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Abstract

Among all the significant contributors of municipal solid waste, schools have been chosen for the study since the solid waste generation rate and its corresponding composition has not been reported or has been underestimated in the schools of Puducherry region. Hence, the present paper is an attempt to fill up this gap in our knowledge. The existing waste management system in selected schools was disorganized and inadequate to meet the specific waste management objectives as specified in Municipal Solid Waste (Management & Handling) Rules 2000, India. The study found that in the school, average per capita waste generation rate was 0.092 (±0.025) kg/capita/day varying from a high of 0.117 (±0.021) kg/capita/day in higher secondary schools to a low of 0.059 (±0.020) kg/capita/day in primary schools. The mean composition of school waste is made up of 39% food waste; 33% paper; 11% silt, soil and mud (combined); 8% plastic; 2% wood, glass, metal and textile (combine); 2% clinical and sanitary wastes; 1% E-waste; 4% other wastes. Approximately, 70 - 80% of generated solid waste is openly dumped or burnt in the campus, 10 - 15% is collected by municipal authorities and the remaining 6 - 8% is recovered through informal recycling and composting facilities. Based on the findings, recommendations to develop efficient waste prevention and management practices were suggested. Establishing "waste avoidance, handling and recovery" policies and programs for food, paper, plastic and soil wastes could significantly influence the success of sustainable solid waste management system at the school level.

Key words: environmental education, recycling, resource recovery, solid waste audit, waste characterization

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