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

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Abstract

Among all the prominent contributors of municipal solid waste (MSW), schools have been chosen for the study since the rate of solid waste generation and its respective composition has not been reported or rather 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 unsystematic and relatively scarce to meet the waste management objectives in precise manner as specified in Municipal Solid Waste Management Rules 2016, India. During the study it was found that the average per capita waste generation rate in the selected schools 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 was 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 was burnt or dumped openly in the premises, 10 - 15% collected by municipal authorities and the remaining 6 - 8% recovered through informal recycling and composting facilities. On the basis of the findings, recommendations for developing practices for preventing the wastes generation and efficient management of the generated wastes 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 institute level.

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

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