

Comparison of household sewage disposal systems of a rural and an urban Grama Niladhari Divisions with standards: A case study from North-Western Province of Sri Lanka

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Abstract

Recent urbanization and globalization at national and international level have caused improvements in standards of sewage disposal systems. However, a majority of Sri Lankans still use soakage pits and septic tanks which are onsite sewage disposal systems. Sewage disposal systems which are not up to standards can cause public health hazards and environmental pollution. This research was done to evaluate whether the standards of selecting and constructing proper sewage disposal systems were utilized and to evaluate the sanitation practices of selected rural and urban Grama Niladhari (GN) areas. Other objectives were to find out the percentage use of septic tanks and soakage pits separately, to evaluate and compare the capacity of sewage disposal tanks and to evaluate the sanitation practices of rural and urban communities. Out of the Pannala Pradeshiya Sabha Division, Makandura-South and Pannala GN divisions were selected as rural and urban areas. Fifty households were randomly selected, each from the two divisions. A questionnaire was developed for the chief occupants of the selected households and a field survey was conducted. Out of the households selected for the study, 90% still used soakage pits and only a 10% used septic tanks. More than 90% of the selected households have constructed their sewage disposal systems over 18 m distance from the nearest water source. More than 50% of the houses in the rural area have cisterns of which tank capacity exceeds the required capacity, causing a higher desludging interval. However, in urban areas, over 50% households have a lower tank capacity than the required capacity, causing frequent desludging. Majority of the households in the selected GN areas are not complying with the standards, regardless their education level and economic level. However households in both GN areas practice good hygiene practices.

Keywords: Sewage disposal systems, soakage pits, septic tanks, desludging