# A CRITICAL EVALUATION OF WASTEWATER DISPOSAL FACILITIES IN SELECTED UNDERSERVED SETTLEMENTS IN THE COLOMBO MUNICIPAL AREA AND RECOMMENDATIONS FOR IMPROVEMENTS

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## DECLARATION

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## ABSTRACT

Sanitation has become a problem in many developing countries. According to reports from WHO and UNICEF in 2012 about 2.6 billion people around the world lack this facility and that counts to half the developing world lack even simple improved latrine. An underserved settlement (USS) is where communities live lacking access to basic services. Half the Colombo city's population lives in the USSs. It is essential to provide better sanitation and improved wastewater (WW) disposal systems.

To assess the type of water supply available, prevailing wastewater disposal methods and the sanitation system and to identify the types of toilets, six USSs were selected considering the municipal districts and the different types of WW disposal systems prevailing in the Colombo Municipal area, and surveyed.

The results were evaluated against the standards provided by Joint Monitoring Programme of the WHO.

During the study period there were 371 households (HHs) in six selected USSs. About 90% of the HHs has individual water connection.

One for each 10 to 12 HHs that have individual septic tanks, and minimum one cluster of HHs that use a common septic tank, from each USS were chosen as representatives for detail study in the aspects of water usage and WW disposal. The results for satisfactory septic tanks are varying from 40% to 100%. Nevertheless none of the household has septic system and that results in diverting the septic tank effluent to the storm water drains ending up polluting the water bodies.





In the toilet usage, only in one USS all the HHs have access to the improved sanitation facility. Except one USS in the other five, 50% of the HH which have improved toilets are named using unimproved toilets, because sharing.

Only in two USSs less than 15% HHs directly dispose WW to the storm water drains.

It is commendable that approximately 75% of the HHs, which has permanent housing, is willing for sanitation improvements.

Based on these results recommendations are given to enhance the sanitation in the USSs.

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| Abbreviation | Description |
|---|---|
| CMC | Colombo Municipal Council |
| Code | Sri Lanka Standard 745: part 1:2004 |
| HH | Household |
| JMP | Joint Monitoring Programme |
| USS | Underserved Settlement |
| UNICEF | United Nations Children's Fund |
| WHO | World Health Organization |
| WW | Wastewater |

## List of Appendices