

Management Plan to Reduce the Adverse Effects of Proximity of Dug Wells and Septic Tanks in Urban Area to Diminish Coli form Contamination

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Abstract — Urbanization and migration of population towards cities become a new challenge nowadays in planning cities, particularly safe domestic water. One of the primary objective of sustainable development goal is to ensure the availability of good quality water for human consumption. Environmental engineers and scientists have the responsibility of monitoring the quality of sources for sustainable safe-water for human consumption. A major problem in northern Sri Lankan urban areas is the prolific occurrence of fecal coliforms in drinking water, obtained from dug-wells. The proximity of household septic-tanks and other related influences are attributed as the main causal factors of this crucial alarming thread. This article spells the results of an investigation conducted in Vavuniya Urban Council limits during 2009. The aim of this research is to assess the drinking water quality in Urban Council limits from an environmental management perspective, focused on identifying the relationships between well water quality and influence of the 'proximal influence of septic tanks'. It is found that more than 50% of the household dug-wells in the Vavuniya town are located well below the standard limit of 20 m distance from septic tanks. As such, a critical problem of coliform pollution is prevalent within the Vavuniya Urban Council limits. The research correlate this problem with alternate casual factors of urban water degradation and spells a management plan for the improvement of water supply for human consumption within this region