62. Evaluation of sanitation technologies across sanitation service chain in Kericho Town, Kenya

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Abstract

In 2020, over half of the world's population resided in cities, with projections indicating that by 2050, this figure will rise to 70%. Providing adequate sanitation services in urban and peri-urban areas presents significant challenges due to the dense concentration of people, particularly in low- and middle-income countries. Poor sanitation practices in these areas can lead to the spread of diseases with high morbidity and mortality rates. The focus of the study was on Kericho town, Kenya, facing a notable sanitation challenge due to dilapidated sewer system and inadequate sanitation facilities . The aim of this study was to evaluate the safety of sanitation technologies used in Kericho Town. Descriptive study design was adopted. Data collection methods included surveys, interviews, and observations, with a sample size of 409 households. The findings revealed that 66.5% of the population relies on pit latrines with slabs, 13.69% use pour/manual flush systems, 11.49% have ventilated improved pit latrines, 8.07% employ automatic cistern flush, and a minimal 0.24% practice open defecation. 25% of population discharged waste directly into the sewerage system whereby 5% were considered safely managed. Additionally, 4% of waste from user interfaces was discharged directly into open ground or open drains. 2% of population used septic tanks connected to soak pits, whereas 6% of population used septic tanks connected to open ground. Sludge from septic tanks, comprising 20%, was delivered to the WWTP by exhausters for further treatment, of which only 20% underwent treatment, with the remainder released untreated into the environment. 49% of the population used lined pits, while 14% used unlined pits. Approximately 20% of faecal sludge from the pits was exhausted, with only 20% of it considered safely treated, and the remainder released into the environment. Notably, open defecation accounted for less than 1% based on the survey findings. Consequently, the current trend in faecal sludge management in Kericho Town posed potential health hazards to the community unless measures such as rehabilitating the existing wastewater treatment plant are implemented.

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