

60. Evaluation of Excreta Management across Sanitation Service Chain using Shit Flow Diagram in Kericho Town, Kenya

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Abstract

With over half of the global population residing in urban areas as of 2020 and an estimated 70% projected by 2050, ensuring adequate sanitation services, especially in low- and middle-income countries, remains a significant challenge. Poor sanitation practices in these areas contribute to the spread of diseases, emphasizing the necessity for innovative approaches. Shit Flow Diagram (SFD) emerges as a valuable tool for mapping sanitation service chains and assessing safety, offering insights into bottlenecks and opportunities for improvement. The study focused on Kericho town in Kenya, where Kericho town is facing a notable sanitation challenge characterized by dilapidated sewer system and inadequate sanitation facilities. The study aimed at estimating the proportions of excreta that is safely or unsafely managed and develop a SFD of excreta pathways for Kericho. Descriptive study design was adopted. A sample size of 409 households was utilized to comprehend the Faecal Sludge Management (FSM) patterns of Kericho town, employing both qualitative and quantitative data collection methods alongside the SFD data analysis tool. Purposive Sampling technique was used to select the key informant interviewers (KII). Findings revealed that only 59% of excreta in Kericho is adequately managed, whereas 41% was not safely managed posing environmental and public health risks. Urgent interventions are needed to address faecal sludge management practices, including rehabilitating wastewater treatment plants. Policymakers should emphasize the importance of adherence to National Environmental Management Authority (NEMA) water quality standards to ensure the integrity of data and findings. Additionally, there is a need to strengthen regulatory frameworks and enhance monitoring and enforcement mechanisms to prevent illegal discharge of wastewater into water bodies.

Keywords: *Safely managed, sanitation technologies, shit flow diagram, urbanization, faecal sludge*