

70. The influence of social factors on the promotion of safe fecal management in flood-prone areas: a case of Nyando Sub-County, Kenya

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Subtheme: Engineering - Sustainable Infrastructure Solutions for climate resilience; Sustainable Sanitation Systems for climate-responsive urban environments.

Abstract

Sustainable Development Goal No. 6 target 2 aims to provide universal access to sanitation by the year 2030, including ending all forms of open defecation. The study aimed to investigate the influence of social factors on the promotion of safe fecal management in Nyando Sub-County. The area was selected due to prevalent flooding which led to the collapse of pit latrines stemming open defecation and reversal in sanitation access. The study employed a convergent methods approach that incorporated both quantitative and qualitative techniques. A sample size of 177 households was chosen as a representative of the 38,460 total households in the study area. Structured questionnaires and focus group discussions were used for data collection. SPSS version 26 was used to analyze quantitative data and the relationship between the variables was examined using Pearson's Product Moment correlation at a 5% significance level. Similarly, MAXQDA software was used to group coded data from qualitative methods into themes. From the results, social factors had a significance level of ($\beta = 1.155$, $p = .028$) and a correlation coefficient of ($r = .519^{**}$; $P \leq .014$) indicating a significant influence of the variable on the promotion of safe fecal management. Additionally, the study revealed that 18.4%, ($n = 30$) of the respondents did not have toilets and 55.2%, ($n = 90$) of the toilets were unimproved. In conclusion choosing the right materials that are acceptable while considering the aspects of accessibility, gender and user-friendliness may extend the lifespan of the facilities and increase usage during floods. Moreover, bridging the socio-economic gaps and sensitization of the community on the need for improved sanitation is key to solving the inherent sanitation disparities. Finally, further research on other factors affecting the promotion of safe fecal management in Nyando Sub-County and suitable sanitation solutions for floodable environments is recommended

Key words: *Community-Led total sanitation, adoption, latrine construction, latrine use, open defecation, pastoral communities, social factors, cultural factors.*