



Microbiological Stability Assessment of Water Quality in Urban Slums Affected by Sewage Treatment Plants in Lagos, Nigeria, 2000s

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Abstract

Urban slums in Lagos, Nigeria, are frequently affected by inadequate sewage treatment leading to poor water quality. Water samples were collected from various slum locations, including those near STPs. Microbiological parameters such as total coliforms and *E. coli* were analysed using standard methods. Total coliform counts ranged between 150 to 800 CFU/100mL in samples from affected areas, indicating significant bacterial contamination. Microbial stability was compromised by the presence of STPs, posing potential health risks to residents. Enhanced monitoring and improved STP infrastructure are recommended to reduce microbiological hazards. The empirical specification follows $Y = \beta_{0+\beta} X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: African Urbanism, Lagos, Microbial Ecology, Sewage Treatment, Water Quality Assessment, Environmental Microbiology, Epidemiology

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