



Eco-Friendly Toilet Design for Communal Use in Southern Nigerian Communities: Hygiene Outcomes and Practices Analysis

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Abstract

In Southern Nigeria, communal toilets are a critical aspect of public health infrastructure, yet they often suffer from poor hygiene and sanitation practices. A mixed-methods approach combining qualitative interviews with quantitative surveys to assess current toilet conditions and user behaviors. Communal toilets predominantly lack proper ventilation, leading to high levels of indoor air pollution (over 50%). Eco-friendly designs incorporating improved ventilation significantly improve hygiene outcomes and practices in these communities. Implement pilot projects with eco-friendly toilet designs in three selected villages to evaluate effectiveness before full-scale deployment.

Keywords: *Nigerian, Sanitation, Hygiene, Biogas, Participatory Design, Community Engagement, Behaviour Change, Waste Management*

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