

Investigating the Strategies for Managing On-plot Sanitation Systems' Faecal Waste in Developing Regions: The Case of Ogun State, Nigeria

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Abstract : A large chunk of global population are not yet connected to water borne faecal management systems that rely on flush mechanisms and sewers networks that are linked with a central treatment plant. Only about 10% of sub-Saharan African countries are connected to central sewage systems. In Nigeria, majority of the population do not only depend on on-plot sanitation systems, a huge chunk do not also have access to safe and improved toilets. Apart from the organizational challenges and technical capacity, the other major factors that account for why faecal waste management is yet unimproved in developing countries are faulty planning frameworks that fail to maintain balance between urbanization dynamics and infrastructures, and misconceptions about what modern sanitation is all about. In most cases, the quest to implement developmental patterns that integrate modern sewers based sanitation systems have huge financial and political costs. Faecal waste management in poor countries largely lacks the needed political attention and budgetary prioritization. Yet, the on-plot sanitation systems being mainly relied upon the need to be managed in a manner that is sustainable and healthy, pending when development would embrace a more sustainable off-site central sewage system. This study is aimed at investigating existing strategies for managing on-plot sanitation systems' faecal waste in Ogun state, Nigeria, with the aim of recommending sustainable sanitation management systems. The study adopted the convergent parallel variant of the mixed-mode technique, which involves the adoption of both quantitative and qualitative method of data collection. Adopting a four-level multi-stage approach, which is inclusive of all political divisions in the study area, a total of 330 questionnaires were respectively administered in the study area. Moreover, the qualitative data adopted the purposive approach in scoping down to 33 key informants. SPSS software (Version 22.0) was employed for descriptively analysis. The study shows that about 52% of households adopt the non-recovery management (NRM) means of burying their latrines with sand sludge shrinkage with chemicals such as carbides. The dominance of the non-recovery management means seriously constrains the quest for faecal resource recovery. Essentially, the management techniques adopted by households depend largely on the technology of their sanitary containments, emptying means available, the ability of households to pay for the cost of emptying, and the social acceptability of the reusability of faecal waste, which determines faecal resource recoverability. The study suggests that there is a need for municipal authorities in the study area to urgently intervene in the sanitation sector and consider it a key element of the planning process. There is a need for a comprehensive plan that would ensure a seamless transition to the adoption of a modern sanitation management system.

Keywords : faecal, management, planning, waste, sanitation, sustainability

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