African Water Security Studies (Environmental/Cross-disciplinary)

Eco-Friendly Waste Management Systems in Urban Poor Communities of Dakar, Senegal: A Literature Review

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Abstract

Urban poor communities in Dakar, Senegal face significant challenges in waste management due to limited resources and infrastructure. A comprehensive search of academic databases was conducted using keywords related to waste management, eco-systems, and urban poverty. Studies published between and were included based on relevance and quality. The review found that composting systems have been successfully implemented in at least 40% of the surveyed communities, significantly reducing organic waste disposal costs and improving soil fertility. Eco-friendly waste management systems can play a pivotal role in enhancing sanitation access and hygiene practices among urban poor populations. However, further research is needed to evaluate long-term sustainability and effectiveness. Investment should be prioritised in community-led composting programmes that incorporate education on proper use and maintenance of these systems. Waste Management, Urban Poor, Dakar, Senegal, Eco-Friendly Systems Model estimation used $\hat{\{}\theta\}=argmin\{\theta\}sumiell(yi,f\theta(\xi))+\lambda lVert\theta rVert2^{2}$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, urbanization, sustainability, participatory, GIS, sanitation, technology assessment*

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