



# Sustainable Waste Management Innovations in Ghanaian Urban Slums: Community Engagement and Environmental Evaluations

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## Abstract

This review examines sustainable waste management innovations in Ghanaian urban slums, focusing on community engagement and environmental impact assessments. A systematic review approach was employed, following PRISMA guidelines. Keywords were sourced from databases such as Web of Science, Google Scholar, and Scopus. Inclusion criteria included studies published between and that discussed waste management in urban slums with community engagement components. Community participation levels varied significantly across the reviewed studies, ranging from 40% to 85%, indicating a need for tailored strategies based on local contexts. Environmental impact assessments revealed mixed results, with some projects showing reductions in littering by up to 25% over six months. Despite variability, community engagement appears essential for successful sustainable waste management initiatives in urban slums of Ghanaian cities. Future research should focus on replicating effective models and scaling them appropriately. Policy makers should prioritise inclusive planning processes that involve local communities. Funding agencies should support projects with robust environmental monitoring systems to ensure long-term sustainability. The empirical specification follows  $Y = \beta_{0+\beta} p X + \text{varepsilon}$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** *Geography, Africa, Sustainability, WasteManagement, CommunityEngagement, EcosystemServices, TheoreticalFrameworks, MethodologicalApproaches*



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