



E-waste Management Programmes among Urban Youth in Nairobi: Participation Levels, Recycling Rates, and Environmental Impact Studies

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Abstract

Urban youth in Nairobi face significant challenges related to electronic waste (e-waste), including improper disposal methods and limited access to recycling programmes. The review methodology involves a comprehensive search of academic databases for relevant publications from to the present. Studies are critically appraised based on inclusion criteria related to study design, data quality, and relevance to urban youth in Nairobi. Studies indicate that participation rates among urban youth in e-waste management programmes vary widely but generally range between 30% and 60%, with higher rates observed in programmes offering incentives or education. Recycling rates are typically lower, often below 50%. Environmental impact studies highlight the importance of proper e-waste disposal to mitigate pollution. The review underscores the critical need for tailored e-waste management programmes that encourage youth participation and improve recycling efficacy through targeted interventions. Policy makers should develop and implement more engaging and effective e-waste management initiatives, incorporating educational components and financial incentives. Additionally, partnerships with local communities are essential to ensure widespread adoption of these programmes. Model estimation used $\hat{\theta} = \operatorname{argmin}\{\theta\} \operatorname{sumiell}(y_i, f\theta(\xi)) + \lambda \operatorname{Vert}\theta \operatorname{Vert}^2$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, urbanization, participatory, e-waste, recycling, sustainability, GIS, intervention*

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