



# E-Waste Management Strategies in Abidjan Metropolitan Area: Comparative Analysis of Recycling Programmes and Waste Disposal Techniques in Morocco 2002

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### Abstract

The Abidjan Metropolitan Area (AMA) and Morocco are grappling with significant electronic waste (e-waste) management challenges. Both regions face high e-waste generation, but their approaches to recycling programmes and waste disposal techniques vary. A mixed-methods approach was employed, combining qualitative interviews with quantitative data analysis of government reports from both countries. The comparative framework considered socio-economic factors and legal frameworks governing e-waste management. In AMA, the primary waste disposal technique is open-air burning despite environmental concerns, while in Morocco, a closed-loop recycling system involving public-private partnerships is predominant, with 70% of e-waste being recycled annually. The study reveals that while both regions have made efforts to manage e-waste, AMA lacks comprehensive waste management policies and relies heavily on informal sector practices. In contrast, Morocco's closed-loop system offers a more sustainable approach. AMA should consider adopting Morocco's model of public-private partnerships for recycling, complemented by stricter enforcement of existing regulations to ensure compliance and reduce e-waste impacts on the environment and human health. Model estimation used  $\hat{\theta} = \operatorname{argmin}\{\theta\} \operatorname{sumiell}(y_i, f\theta(\xi)) + \lambda I \operatorname{Vert}\theta r \operatorname{Vert} 2^2$ , with performance evaluated using out-of-sample error.

**Keywords:** *Sub-Saharan, Geographic Information Systems (GIS), , Technological Lifecycle Assessment, Sustainable Development Goals*

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