

## **Towards Sustainable Waste Management in Kenya: Profiling and Formalizing Waste Pickers at Mwakirunge Dumpsite in Mombasa County**

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### **Abstract:**

Kenya's Sustainable Waste Management Policy (2021) envisions a shift toward a circular economy and adoption of the zero-waste principle to enhance sustainability in urban waste systems. A key strategy in this policy is the formalization of the informal waste sector, particularly waste pickers who play a vital role in recycling and resource recovery. However, limited empirical data exists on their socio-economic and demographic profiles, willingness to be formalized. Therefore, the purpose of this study was to describe the social and demographic characteristics of the waste pickers at Mwakirunge dumpsite in Mombasa County, as well as assessing their willingness towards formalization.

A descriptive cross-sectional survey was conducted among 157 waste pickers in February 2025. Data were collected using structured and semi structured questionnaires. Descriptive statistics included frequencies, proportions, means, and standard deviations. Inferential statistics were conducted at a 95% confidence level, with p-values <0.05 considered statistically significant. Summary results were presented using tables, graphs and pie charts. Information obtained through qualitative survey was presented using participants' verbatims and description of the observations

The average age of waste pickers was 36 years, with males comprising 59% of respondents. Most had no formal education (38.22%), earned between KSH 250–500, worked individually (87.90%) and an average of 10 years of experience in waste picking, primarily due to the lack of alternative employment. Participants' income levels had no statistically significant associations their gender ( $p=0.339$ ), education level ( $p=0.075$ ), engaging in other occupations (0.128) and marital status ( $p=0.356$ ). However, age influenced participants income levels ( $n=132$ ,  $p=0.042$ ). Notably, 91% of respondents expressed willingness to be formally integrated into the waste management system. Their primary aspirations included improved

income, better working conditions, and increased recognition.

The socio-demographic characteristics of waste pickers at Mwakirunge reinforce the importance of tailoring formalization strategies to the specific needs of a youthful, economically vulnerable, and largely unorganized workforce. Formalization programs and/or approaches that are inclusive, context-specific, and prioritize social protections economic empowerment are more likely to be accepted and sustained in Mombasa County.

#### **Keywords:**

Formalization, Sustainable Solid Waste Management, Informal Waste Pickers, Mwakirunge Dumpsite, Mombasa.