

## 75. Assessing the role of municipal solid waste management in sustainable urban sanitation in Kitengela Town, Kajiado County, Kenya

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**Subtheme:** Engineering - Sustainable Infrastructure Solutions for climate resilience; Sustainable Sanitation Systems for climate-responsive urban environments.

### Abstract

As the world's population keeps on rising, so does urbanization increase and rapid industrialization. These factors have contributed to an increase in municipal solid waste (MSW) generation. Developing countries grapple with poor management of MSW which is not only a threat to public health, but also hinders the achievement of sustainable urban sanitation. Indeed, MSW is a crucial factor in urban sanitation since the quality of its management greatly influences the state of urban sanitation. This study aimed at assessing the role of MSW management in sustainable urban sanitation in Kitengela town, Kajiado County, Kenya. Specifically, the study evaluated practices, actors and challenges associated with municipal solid waste management and their role in sustainable urban sanitation. To achieve the objectives of this study, a qualitative research approach was used. Notably, a cross-sectional research design was used. Data was collected using questionnaires, interviews and field observations. A sample of 178 participants comprising of market traders, residents, municipal solid waste service providers and community leaders was used. Data collected through interviews and observations was analyzed and presented thematically whereas data collected through questionnaires was coded and analyzed using the IBM SPSS software version 29. Descriptive statistics were used in analyzing data collected through questionnaires. Inferences about the quality of municipal solid waste management in Kitengela and its role in sustainable urban sanitation were arrived at based on the examination of the data and professional expertise of the researcher in environmental health. The study established poor management of MSW in the study area (67.7%). Open dumping was the most commonly practiced waste disposal method (60%) followed by open burning (40%) at both designated and undesignated sites. The main actors in MSWM are private agencies (75%) and the county government (25%). The main challenges facing MSWM in the study area include inadequate commitment by the county government (55%) and lack of an organized MSWM system (45%). The study concluded that the inadequacy of waste management infrastructure led to the establishment of undesignated dumping areas, where the accumulation of municipal solid waste reached such a critical level that open defecation became a common practice. This study recommends the development of an integrated MSWM program to augment the progress towards sustainable urban sanitation, encourage a circular economy and strengthen toilet use and access in Kitengela town.

**Keywords:** *Municipal solid waste, sustainable urban sanitation, environmental and public health, sustainable development, urban sanitation, municipal solid waste management.*