

# Assessment of Waste Management and Sanitation Services at Local (Municipal) Level— Case Study in the Mining Communities of Tarkwa, Ghana

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**Key words:** Access to land; Cartography; Implementation of plans; Land distribution; Land management; Security of tenure; Spatial planning; Waste Management, Disposal, Sanitation and Dumping Sites; Spatial Analysis, Survey and Mapping; Intervention Efforts and Methods; Local Conditions and Factors, Land Tenure, Distribution and Assessment.

## SUMMARY

One of the major waste management and sanitation challenges facing developing countries is achieving the universal goals of replacing unacceptable disposal practices (such as open dumping and burning at unsafe sites) with internationally acceptable methods (such as engineered landfilling and recycling) and climbing up on the waste management ladder for improvement. A number of intervention efforts towards achieving this have not yielded the needed results at the local levels and these have been attributed to sustainability problems regarding funding, technological and political support. However, prevailing local conditions can have significant influence on success or otherwise of intervention efforts and methods. There is therefore the need to periodically assess intervention efforts and methods against prevailing local conditions to ascertain modifications that may be necessary to help achieve intended objectives. This paper discusses the methods and results of an example of such assessment and the lessons that can be learnt from it, using a case study approach at the mining areas of Tarkwa, Ghana. Field surveying and mapping, interviews, and documentary analysis were employed to gather relevant data for the study. The data was processed and analysed using GIS, statistics and graphs to provide sanitation maps and other useful information on the distribution of dumping sites, waste collection and disposal, environmental sanitation services, the inter-relationships among these factors, and how these influence interventions efforts in the area. Local land tenure system, spatial distribution of existing disposal sites, uneven distribution of facilities and services, nimby and other negative attitudes by land holders and residence are among the major factors found to be influencing waste management efforts in the area. The paper recommends that the effects of these and other local factors on waste management efforts should be assessed to ascertain necessary modifications prior to or during their implementation, using spatial-based methods as demonstrated in this study.

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FIG Working Week 2019

Geospatial information for a smarter life and environmental resilience

Hanoi, Vietnam, April 22–26, 2019