

Challenges of Private-Public Waste Partnership in Solid Waste Management: A Case Study of Accra Metropolitan Area (AMA)

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ABSTRACT

This study examined the scope of private-public partnership for solid waste management and the viability of integrated solid waste management for improved public health. Past studies looked into the problems of solid waste management mainly from the institutional perspectives. The author aimed at interrogating the problem of the~ institutional arrangements for solid waste management under the fee-based service.

This study was conducted in 2012 and the secondary data were collected from key stakeholders including the Ghana Tourism Authority, Environmental Protection Agency, contractors and the Accra Metropolitan Assembly. Field visits were conducted to find solid waste management practices while observations were captured via camera. Questionnaires were administered on both the service beneficiaries and contractors. The questionnaire was administered via hand-delivery and on-site filling, this study targeted 260 respondents drawn from three economic zones. They were selected through random sampling techniques. The questions centered on the various solid waste management practices. The interviews were recorded with video camera while focus-group discussion was also conducted to generate data on residents who stay close to the dumpsites. The results revealed that solid waste management remained inadequate due to several factors including inappropriate regulations, lack of monitoring, funding and staff capacity.

The study further examined the properties of sample of leachate taken from sites identified with the support of Geographic Positioning Systems at 20 meter intervals. The leachate was analyzed

for heavy metals with atomic absorption spectroscopy, pH and Electrical Conductivity (EC) with pH/EC meter. These results revealed that the average totals for lead (0.344 mg/L), chromium (0.778 mg/L), nickel (0.667 mg/L) and EC values (43.92 μ S/cm) were higher than EPA limits. The pH values were within EPA limits with major deviations (3.52 and 5.14) at Sarbah Dumpsite. Contamination and Enrichment Factor (*CEF*) were calculated for the heavy metals. The results showed that CF values were low in concentration, with EC indicating non-human origin. This study provides a useful lesson on private-public partnership and re-echoes the need to appreciate solid waste problems from the management level.

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