

Conference Proceedings Abstract

**MARKET DEMAND FOR END-PRODUCTS OF FAECAL SLUDGE TREATMENT IN
KAMPALA, ACCRA, AND DAKAR**

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Abstract

Sanitation systems throughout urban areas of Sub-Saharan Africa are characterized by poorly maintained on-site sanitation systems, dysfunctional faecal sludge (FS) collection and transport, and disposal of untreated or inadequately treated FS directly into the environment. The situation could be improved through the development and implementation of reuse-oriented value chains, changing FS management from a focus of disposal problems, to generators of valuable end-products. This model captures resources in FS, and can provide a profit motive for the on-going collection and transport to treatment facilities. The aim of this study was to identify the market demand for innovative end-products in Kampala (Uganda), Accra (Ghana) and Dakar (Senegal). An iterative method for selecting interview partners was chosen. This included the following approaches: i) focus group discussions, ii) open-ended, semi-structured interviews, and iii) spontaneous enquiries and visits of relevant enterprises/entrepreneurs.

The identified market demand in the three cities include: (i) dried FS as alternative fuel in industries; (ii) dewatered FS as a feed source for black soldier fly larvae to produce animal protein; (iii) FS as a feedstock for biogas production; and (iv) treated as soil conditioner in agriculture. Industrial use of FS as a fuel was most promising in Kampala, where 60% of industries are using solid fuels (e.g. burning wood), compared to Dakar and Accra where the majority of industries are using electricity and liquid fuels (e.g. diesel). The market for biogas in Dakar was negligible, but was more promising in Accra and Kampala, where an estimated 1.44 million m³ per year of biogas with a market value of USD 490,000 and 73,000m³ with a value of USD 36,000, respectively. Most of the farmers in the three cities were already using organic fertilizers and were positive towards the use of FS as a soil conditioner. In all the three cities, treated sludge is already utilized in some form; FS as a soil conditioner and sewage sludge as bio-digester feedstock in Dakar; FS as soil conditioner in Accra; and treated sewage sludge as a soil conditioner by farmers and landscapers in Kampala. The identified markets provide many promising opportunities for the future sale and resource recovery of FS treatment end-products.