

An Assessment of Sustainable Solid Waste Management and Occupational Health in Lusaka, Zambia

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Background: Globally, around 1.3 billion tons of garbage is generated daily, translating into each city dweller generating about 1.2 kilograms per day. Sub-Saharan Africa generates approximately 62 million tons of garbage yearly. Similarly, the amount of waste is rising due to population increase, changes in lifestyle and increasing urbanization. The study investigated the challenges of sustainable Solid Waste Management (SWM) in Lusaka, Zambia's capital city. The problem of SWM became more complicated in recent years and required sustainable long-term strategies and solutions, as less than 20% of the collected solid waste in Lusaka was disposed of properly.

Methodology: Data collection comprised of naturalistic observations at the main dumpsite in Lusaka and one-on-one interviews with nine waste management companies engaged in waste collection. Interviews were also conducted with Lusaka City Council (LCC), the government institution mandated to supervise SWM activities in the city making a total sample of 10. Interview questions focused on understanding the current situation of sustainable SWM in place, particularly the treatment process after disposal.

Results: Several challenges affected an efficient sustainable SWM system; lack of waste separation at source, inadequate funds to sponsor SWM activities and lack of treatment equipment at the dumpsite. All companies indicated that their primary role in SWM was collection and disposal. Most of the companies were secondary waste collectors, whereas the majority of the Community Based Enterprises (CBEs) were primary collectors. Majority of the CBEs used the waste for other purposes, whilst companies did not. At the dumpsite, machinery was inoperative. Only one incinerator catered for the whole city and workers lacked proper Personal Protective Equipment (PPEs).

Discussion and Conclusion: LCC's role was to supervise SWM activities, conduct routine inspections of companies, and enforce SWM laws. Workers worked in poor conditions because they could not afford proper PPEs. Lack of equipment, resources to purchase new equipment and failure to repair broken down machinery both limited and made the treatment process unsustainable. The dumpsite only facilitated indiscriminate dumping rather than use of landfill method. This research recommends that more financial attention should be given to SWM activities and political will to enforce a proper revenue collection system.

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