

A review of the applicability of Environmental Management Systems in waste management in the medical sector of Zimbabwe

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Abstract

Environmental Management Systems (EMS) are currently the cornerstone of achieving sustainability globally. Nevertheless, the question is applicability of EMS in the medical sector. Hence, the review focused on applicability of EMS in medical waste management Zimbabwe. EMS involves overall processes that facilitate reduction of dire impacts of company's activities while increasing performance. EMS framework consists of environmental policy, planning, implementation, checking, review and improvement stages. To examine applicability of EMS in management of medical sector waste, published secondary sources with information related to the topic were utilised. Analysis of strengths and opportunities of EMS was used as a base to examine its applicability in medical waste management. Zimbabwean medical sector consist of hospitals and primary healthcare facilities. Medical waste includes pathological, pharmaceutical, cytotoxic, radioactive, chemical, sharp, infectious and general waste. However, twenty-first century witnessed expansion of medical institutions to accommodate COVID- 19 patients, resulting in generation of construction and demotion waste. Medical institutions in Zimbabwe are accountable for solid waste management at generation source although municipalities are responsible for conveying solid waste to landfills. Solid waste from medical sector is disposed through traditional strategies namely landfilling, incineration, open pits and open burning, resulting in water, air, and soil contamination. However, EMS can reduce quantity of solid waste disposed through waste reuse, recycle and recovery. Moreover, achievement of integrated approach, effective legislation, policies and inclusive participation in medical waste management is adopted through use of EMS. Therefore, EMS were utilised to develop an integrated sustainable medical waste management model to achieve sustainability.

Keywords

Environmental Management Systems · ISO 14001 · ISO 45001 · Medical sector · Medical waste · Management approaches