

## Solid Waste Management in Developing Countries

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Integrated solid waste management (SWM) in developing countries like Egypt has traditionally focused on organizational and technical concerns. However, this approach neglects the many activities and actors that waste management comprises. A new paradigm of SWM is needed which must extend the technical model to tackle a range of problems associated with waste management in order to achieve socially and environmentally responsible waste management.

Waste management in Egypt as all developing countries is a challenge, both behavior of citizens and the poor management of waste contribute to the issues of waste. A typical Egyptian city like Cairo generates around 11,450 tons of municipal solid waste (MSW) per day with 45% moisture content, 30% volatile matter and calorific value of 1500 Kcal/kg. Software model was run for various technologies. The primary purposes of solid waste management (SWM) strategies are to address the health, environmental, aesthetic, land-use, resource, and economic concerns associated with the improper disposal of waste.

Although many sophisticated models are available, but are of little use to developing countries like Egypt since it does not take into account typical developing countries, municipal solid waste characteristics such as high organic content, poor performance of formal sector, high activity of scavengers and waste pickers etc. So, there is a need to have a fresh look at parameters involved in the municipal solid waste (MSW) management and developing a model from the third world's perspective.

Strategic planning as a tool for accomplishing long-term objective has been utilized on the level of both organizational and on the level of countries or cities. Governments should employ this to achieve a sustainable waste management process in cities and countries.

In regards of municipal solid waste management (MSWM), it is a

process which needs the participation of citizens as the first generator of waste who can facilitate much by supporting and contributing to the strategy of waste management that formulated by government. Previous authors have given insights for approaches and strategies regarding waste management in Egypt as well as all developing countries, the majority focused on technical solution which are very important for sure, little have focused on the role of active participation and coordination of all stakeholders through all phases of waste management especially participation of citizens which is not less importance.

In addition to technical arrangements of waste management (storage, collection and disposal), the public participation should be considered. Government will need to develop the long-term vision, communicate it to the public, and coordinate with different stakeholders to increase the awareness to make people recognize the importance and the value will be gained behind an effective waste management process. Citizens also should realize the significance of their role and understand well that it is critical for the success of the waste management in the country.

It is a combination between the effort done by government through providing the legislation and the facilities, and on the same level of importance, the contribution of the citizens by demonstrating the appropriate behaviors and actions regarding the country to accomplish the aimed goal of a cleaner country.

A participatory strategic planning process for waste management might be needed to effectively obtain the commitment of all stakeholders toward this challenging process from waste generation till waste disposal.

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