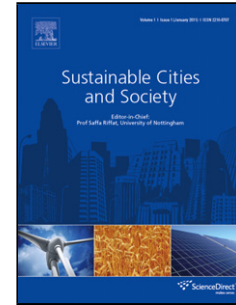


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Sustainable waste management policy in Bangladesh for reduction of greenhouse gas

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Highlights

- Almost 68 - 81% of urban waste in Bangladesh consists of organic matter.
- Volatile solids comprises of 56% such as dead animal matters, plants and synthetic organic compounds.
- 250.95 million CO₂ equivalent of CH₄ is generated from existing solid waste management practice.
- 1.29 million CO₂ equivalent greenhouse gas (GHG) is emitted annually due to composting.
- Existing environmental policy and regulatory framework is not adequate to address waste management.
- A policy matrix for waste management has been proposed with a time frame and responsible institution for implementation.

Abstract

The increased amount of waste generation resulting from urbanization, population growth and improved life-style is a major concern for many developing countries like Bangladesh. A major portion (68 to 81%) of the urban waste of Bangladesh is composed of food waste, which produce CH₄ as they decompose anaerobically. The trends of waste generation indicate a growing rate of 0.1343 million tonnes per year. This study estimates that greenhouse gas (GHG) of 1.29 million tonnes CO₂ equivalent (CO₂e) is emitted annually because of composting. This study also estimates that CH₄ generated from existing solid waste is 250.95 million tonnes CO₂e and 2.89 million USD could be saved as part of energy production through recovery of CH₄ from landfill. The existing waste management policy neither includes any waste to energy recovery targets, nor does it explain any recycling or reuse targets. Besides, there are no provisions for incentives for waste minimization. Hence, this study proposes to

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