

Preface

“Solid wastes are the discarded leftovers of our advanced consumer society. This growing mountain of garbage and trash represents not only an attitude of indifference toward valuable natural resources, but also a serious economic and public health problem”

—Jimmy Carter

Waste Management is a mammoth task in India, which stands complicated with the increase in urbanization, changing lifestyles, and increase in consumer behavior. The current practice of uncontrolled dumping of waste in open areas of towns/cities have created serious environmental and public health problems. Financial constraints, institutional weaknesses, insufficient manpower and collection systems, improper choice of technology, and public apathy toward Municipal Solid Waste (MSW) have contributed to making the situation worse. Annual increase in waste generation is around 5 % each year. India produces 42.0 million tons of municipal solid waste annually at present. However, the collection efficiency is between 50 % and 90 % of solid waste generated.

The Government of India has brought in the movement of Swachh Bharat—Clean India Mission to clean the cities and villages and to improve hygiene, yet waste is strewn around in cities and lack of personnel to collect and discard waste is evident. Beyond the dumping of solid waste into streets and gutters is the problem of open defecation, adding to more disease spread and unsanitary conditions in India. Although more NGOs have come forward to clean up the discarded wastes through routine management, scheduled collection, proper segregation and disposal, the rate of waste generation is ever increasing, adding to more problems in the collection schedules. Sensitization programs on sanitation and hygiene show a positive response, however, if these schemes are coupled with methods for management of household waste, it would be a boon to India.

In recent years, there has been outstanding research work seeking the right approach to waste minimization and appropriate management using several techniques. This book is an outcome of research contribution from several authors, delivering results to manage the present-day waste accumulation. The approaches include bioremediation, microbial degradation, environmental friendly waste disposal, facing health challenges due to waste accumulation, economic reasoning, and energy recovery from waste. Much more work is to be done and explored and more

efforts have to be put forth into bringing these technologies for common use of the public and to create awareness among them. Future cities or smart cities should focus on zero waste discharge through recycling of waste and to derive energy from the waste.

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Marimuthu Prashanthi
Rajakumar Sundaram

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