

Chapter 24

Waste Management Initiatives in Rural India

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ABSTRACT

In this chapter, the author aims to present an overall view of the Waste Management practices employed in rural parts of India and their overall sustainability in terms of present scenario. It would discuss the successful models employed in some parts of the country and the reason, that why they are not prevalent or expand to the rest of the nation inspite of them being successful in their own territory. It would also discuss the various Initiatives taken by the government in this regard such as the Total Sanitary Campaign which aimed at bringing an improvement in the general quality of life by creating awareness on improving the sanitation facilities and providing health education in rural parts of the country. This chapter also suggests about the further improvements that can be done in the overall model by including other stakeholders like Local Gram Panchayats, NGOs and community people.

INTRODUCTION

The rural population in India exhibits unique waste management and resource utilization techniques in comparison to urban population. With the emerging concern on large quantity of the waste being produced both in the form of solid and liquid waste, the method and concept of waste management becomes one of the key focus of sustainable development principles. The need for genuine and organized initiatives in the rural waste management has been regularly voiced in India. The wastes produced from various sources are utilized effectively ranging from crop cultivation, rearing animals and liquid wastes produced domestically. In rural areas, compared to urban areas, land availability is not often a constraint.

Also, there are more options possible in rural areas for reuse of waste, such as composting of biodegradable material, which can be used in kitchen gardens, agricultural fields, and so on. With the increased number of Panchayats becoming open and free, necessity has risen to address the problems of solid and liquid waste management in rural communities in order to really make them clean and green. In Rural India Waste is a severe threat to the health and cleanliness to the people residing in villages and nearby

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remote areas. It is estimated that 1 in every 10 deaths in Indian villages, is linked to poor sanitation and hygiene which are directly the result of improper disposal of waste in rural parts of the country. As per the study done by Indian Sanitation Portal (2013), the generation of solid waste in Indian villages has been expected to grow with 1.3 percent annually. The estimated generation of waste in 2025 will be around 700 grams per capita per day. As the quantity of Waste produced by society is increasing the composition of the waste is also becoming more and more diverse. Around thirty years ago, the composition of the solid waste generated by the Indian Farmer consisted of one-fifth of non-biodegradable waste and four-fifth of biodegradable waste. Currently, this ratio is about to reverse and mere 40% of all solid waste is biodegradable while 60% is non-biodegradable.

As per the study conducted by Ministry of Rural Development, Govt. of India (2010) more than two-thirds of all Indians are still impoverished, surviving on less than 2 dollars per day and also close to 70% of the Indian Population still lives in the Rural Areas. Consumption of unsafe drinking water, improper environmental sanitation and lack of personal and food hygiene have been major causes of many diseases in developing countries. In addition to these, many problems still prevails in Indian Society like Caste System, Poverty, Illiteracy which leads to inequality in the society, especially in the rural parts of the country. Poor and marginalized people lack the resources needed to reduce the negative effects of a degraded environment. Prevailing High Infant Mortality Rate is also largely attributed to poor sanitation. At the same time, they are usually directly dependent on their close natural environment for their daily survival.

This paper will discuss in detail the various kinds of wastes produced in Villages and rural areas, different methods employed to dispose them, various policies in place by the government to address the issues and further suggestions and future implications.

LITERATURE REVIEW

Under this section we would discuss the previous researches done regarding rural waste management initiatives. A review of existing literature reveals that a great number of studies on Solid waste management have been undertaken. A study conducted by Hazra & Goel (2008) presented an overview on of current solid waste management practices in Kolkata, India and suggested solution to some of the problems. They stated that the collection process is deficient in terms of manpower and vehicle availability. Capacity of bins provided is adequate but locations were found to be inappropriate which contributed to the inefficiency in the process. Further, Hazra & Goel (2008) proved that there is no treatment was provided to the waste and it is dumped on land after collecting it. However, in order to improve these problems, authors provided some solutions for these problems. For instance, to improve collection and transportation at Kolkata city, PPPs can be a successful solution, with private agencies providing waste collection service at lower cost and greater efficiency (Hazra & Goel, 2008). It was proposed that it could also be replicated in other rural parts of the West Bengal once it shows results in Kolkata.

Niraj S. Topare et al. (2011) stated that users must concentrate their Sewage/Wastewater treatment process to ensure that it complies with regulatory guidelines. Sewage/Wastewater treatment operations are done by various methods in order to reduce its water and organic content, and the ultimate goal of wastewater management is the protection of the environment in a manner that commensurate with public health and socio-economic concerns. The paper discussed factors affecting selection and design of Sewage/Wastewater systems and also various techniques employed in many rural parts of India.

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