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Managing of Solid Waste through Public Private Partnership Model

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Abstract

Solid waste management is fast becoming an insurmountable challenge across urban India, requiring urgent solutions, especially in view of rapid urbanization and inability of local urban authorities to tackle it. Saharanpur, a small city in Uttar Pradesh,represents a microcosm of most large cities and towns in India, grappling with similar challenges. With a decadal population growth of over 19% during 2001-2011, which is higher than the national growth, the city is confronted with the task of managing a rapid growth in solid waste.In order to come up with viable solutions to this problem ITC Limited, in collaboration with MuskanJyotiSamiti, an NGO, and the local municipal authority, initiated a pilot PPP project on solid waste management in the year 2006. With persistent focus on processing, recycling and user fee, this initiative has been able to surpass the national benchmark of 80% waste recovery set by the Ministry of Urban Development (MoUD). The cost of collection and processing is covered through revenue from user fees and compost sale.

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Keywords:Solid Waste Management, Municipal Waste, Public Private Partnership;

1. The Growing Challenge of Handling Urban Waste in India

Managing solid waste is going to be a major challenge faced by urban India in the current context of rapid urbanisation. The problem is bound to worsen going forward: the quantum of waste generation in 2025 is expected to be double the amount generated in 1997 (Vij, 2012). Moreover, lifestyle changes, poor planning, unavailability of infrastructure and apathy of local municipal bodies has exacerbated and added to the complexity of Solid Waste Management (SWM) in India.

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The proliferation of solid waste in urban areas posts several unique challenges to urban planners:

a) Several factors are responsible for the rapid and untrammeled growth of solid waste in urban India of whichurban population, growing by 3.35% annually, undoubtedly tops the list.

   The total population living in urban areas has grown from 17% in 1951 to 31% in 2011 (Census, 2011) and for the first time since independence, absolute increase in population in urban areas has exceeded the increase in rural areas during 2001-2011 (Vij, 2012). Diminishing livelihood opportunities in an already low-paying agriculture sector, is pushing people in large numbers to cities, which is expected to result in approximately 50% of the population living in urban areas by 2021 (Khurshid et. al. 2011). Further, rapid urbanization coupled with changes in consumption behavior patterns is contributing significantly to the explosion in the quantum of waste generation.[2]

b) With per capita waste generation in cities ranging from 0.2 to 0.6 kilograms[3], India generates about 1.5 lakh MT waste per day (MoUD, 2014). This may be relatively low compared to other countries, but the sheer size of our population leads to high quantum of waste generation in absolute terms. The nature of waste generated in Indian urban areas is very different from that of developed nations as it hasa higher proportion of biodegradable waste. Studies have observed that bio degradable waste generation goes down with rising income. But this does not seem to be borne out in India: while the proportion of recyclable non- biodegradable material increased from 13% to 27% between 1996 and 2005, the period witnessed a simultaneous increase in biodegradable waste from 42% to 48% (Chatri et.al. 2012). This indicates that there is an immense opportunity for recycling and composting of municipal waste in India, provided source segregation of waste is inculcated as a habit.

c) The Government of India introduced the “Municipal Solid Waste (Management & Handling) Rules, 2000”, which set the responsibility of waste management on Urban Local Bodies (ULBs). Despite the emphasis on “recycle before disposal” in the legislation (Zurbrugget,.al, 2004), it is estimated that 94 % of the total waste collected is disposed unscientifically, resulting in thepollution of surface water, ground water, as well as the air (Zhu et.al. 2008). Despite SWM being labor intensive, only 2-3 workers are deputed per 1,000 inhabitants for providing services andULBs spend in the range of Rs. 75-250 per capita per year, a pittance compared to the enormity of the problem (Kumar and Gaikwad, 2004). Since most municipal bodies are cash-strapped,partnerships with private & civil society organisationsfor providing SWM services would be worthy of consideration.

d) The Ministry of Urban Development (MoUD) has definedEight Service Level Benchmarks[4] (SLBs) for SWM. However, an assessment of the average performance of 28 ULBs revealed that none of these benchmarks are achieved except for complaints redressal. Against the benchmark of 100% household coverage and cost recovery, only 48% and 17% level is achieved respectively. Waste recovery has been as low as 32% against the desired benchmark of 80% andcollection of service charges from households stands at 31%, which is not even half of the desired benchmark of 90% (Chatri et.al,2012).

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[2]Municipal Solid waste “includes commercial and residential wastes generated in a municipal or notified areas in either solid or semi-solid form excluding industrial hazardous wastes but including treated bio-medical wastes"As per decomposability, solid waste is divided into two categories viz; Biodegradable and Non-Biodegradable. Non-biodegradable waste is further divided into recyclable and non-recyclable waste. (Source: http://upenvis.nic.in).

[3]This is relatively low compared to many developed countries of the world. United States with waste generation of 1.9 kg per day per person tops the list followed by the Netherlands (1.41) and Brazil (1.4) (Chatri et.al. 2012).

[4] Ministry of Urban Development, Government of India has developed performance indicators related to urban management and service delivery in four basic urban services viz., Water Supply, Sewage, Solid Waste Management and Storm Water Drainage. These indicators are termed as “Service Level Benchmarks”.