जहाँ है वनस्पती ।
वहाँ है सुजलावली ॥

Ministry of Urban Development
Government of India

NIUA
रा न का स
Cities Alliance
Cities Without Slums

National Workshop on Sustainable Solid Waste Management in India

Workshop Proceedings

Organized By

Ministry of Urban Development, GoI
Ministry of Environment & Forest, GoI
National Institute of Urban Affairs (NIUA), New Delhi

18 January 2013

Contents

Technical Session III: PPP & Economic Models in SWM – Learning from Cities

This session focused on the overarching framework for PPPs in SWM being supported by the State Government. It discussed the legal and policy frameworks of the state & local governments, fiscal incentives available for PPPs, different models of PPPs being adopted across the SWM chain, the role of public and private sectors and critical issues in the design and implementation of PPP contracts.

The session was chaired by Dr. Isher Judge Ahluwalia, Chairperson, ICRIER. The session had five very important speakers from amongst the mission cities who shared lessons from their cities following project implementation.

Dr. Ahluwalia began the session by mentioning why solid waste management is critical to better urban management, and why better urban management is critical to national economic growth. She stated that solid waste management (SWM) and universal water supply are the two biggest challenges faced by urban India today. There is an emerging realization amongst the highest level of policy-makers that strong and performing urban local bodies are critical towards achieving sustained high level of national economic growth. It is important to learn from existing initiatives; the Kanpur model of solid waste model where the blue concord technology was used had a lot to offer and presented a lot to learn from. The ULB's need to learn from existing good practices and adapt, emulate and scale-up such activities. There is hope that change can manifest in the way we manage our urban areas.

Integrated SWM in Faridabad, UP

Dr. D. Suresh, Municipal Commissioner, Municipal Corporation of Faridabad

Dr. Suresh made a presentation on Municipal Corporation of Faridabad's (MCF) effort on improving SWM. His presentation talked of challenges faced by MCF in effective SWM. MCF manages SWM directly but in an unscientific manner; no segregation, processing or scientific disposal is followed. MCF has 3432 sanitary workers in employment currently against a requirement of 9810 workers, thus being thoroughly under-staffed. Roughly 75% of daily solid waste is collected thereby posing multiple risks including of contamination of ground water, air and water-borne health hazards, causing aesthetic and olfactory nuisances, etc. He outlined globalization, rapid urbanisation, economic growth, lack of adequate resources, lack of adequate land/space, waste prevention/minimization, and use of 3Rs (reduce, reuse and recycle) principle as key reasons for inefficient SWM. He then indicated that under JNNURM, MCF had developed a SWM project of Rs.76.54 Crore for procurement of machinery, construction of four transfer stations, and construction of integrated waste processing plant of 600 MT. He also presented in details features of the Integrated Waste Processing Unit comprising of a composting section and a Refuse Derived Fuel (RDF) section. In terms of progress, he indicated that private contractors are now undertaking door-to-door collection in parts of Faridabad, work of transfer station at Dabua Colony is completed and functional, while tenders for door-to-door collection for remaining parts of the city have recently been approved and work is to be initiated. The second transfer station at Ballabgarh is likely to be completed by end-February 2013.

Fig.4: The SWM Unit at MCF

Integrated SWM in Kanpur, UP

Mr. Udai Narain Tiwari, Additional Municipal Commissioner, Kanpur

Mr. Tiwari made a presentation on the Integrated Municipal Solid Waste Management project in Kanpur. He indicated that Kanpur Nagar Nigam (KNN) has 4900 Safai Karmcharis and 132 vehicles and an annual expenditure Rs. 35 crore is incurred on SWM by KNN. The Integrated Municipal Solid Waste Management Project was initiated under JNNURM by Kanpur Municipal Corporation. It looked at getting a private partner on-board i.e A2Z Infrastructure Ltd. on a Build Own Operate and Transfer (BOOT) basis covering the whole city. A performance guarantee was signed by KNN and the

private operator. A solid waste disposal plant with installed capacity of 1500 MT/day was constructed on a concession agreement with a concession period of 30 years; the project in totality provides employment to 2500 persons. The total project cost was Rs.94.23Cr of which KNN contributed Rs.56.23 Cr while the private partner contributed Rs.38 Cr. Savings to KNN in terms of yearly recurring cost are diverted to private partner to support sustainability of the initiative. A tipping fee for primary and secondary collection is paid out at rate of Rs.456/per metric ton (MT). In all, 1256 vehicles (primary and secondary) and 1835 are under use. The benefits of this approach are timely removal of municipal solid waste and recovery of resources leading to a clean Kanpur. A fixed user charges has been agreed with Rs.10 for the urban poor, Rs.30 for general population and Rs.40 for commercial properties.

He also mentioned that wastes were used to develop various marketable products including compost (brand name of Vasundhra was given) where the organic manure was enriched with six types of bacteria and sold at Rs.5 per kg. In addition, RDF interlocking concrete bricks, etc. were also developed. Eventually, only 8% of total waste collected is sent to the sanitary landfill, making the system almost self-sustainable. He also made a presentation on the legal and policy frameworks of the state and KNN, and outlined social impacts of the project. The practice won the best city award for improvement in SWM in 2011. In conclusion, he also outlined challenges such as poor efficiency in collection of user charges (only 30%). He mentioned that acceptance to pay in commercial and industrial community and in some cases residential areas is a problem. Professional skill for management of SWM projects, maintenance of vehicles, replacement of old equipment, adoption of cost cutting practices, non-availability of grants for information, education and communication (IEC) activities for continued and resident support were some of the other challenges identified by him.

Fig.5: the marketable products from compost at KNN