

PUNE'S SOLID WASTE MANAGEMENT

Mr. Rajendra Jagtap and Prof. Dr. Mahesh V Shitole

Research Scholar, Bharati Vidyapeeth University, Institute of
Management and Entrepreneurship Development, Pune
Professor and Director for UG Courses Bharati Vidyapeeth University, Institute of
Management and Entrepreneurship Development, Pune

Abstract : Pune is a speedy growing Industrial and Educational hub, and the second largest Urban Local Body (ULB) in Maharashtra. Similar to many imminent cities, Pune also faced a major shortfall in the demand and supply gap in its waste management services due to huge population escalation and small scale waste management services. Pune generates around 2000 TPD - 25000 TPD of waste which was earlier collected and transported to Urali-Devachi landfill site some 25 Km. away from the city. The waste was disposed off without any healing or processing which was polluting the environment around Urali-Devachi. The Pune ULB besides the local people oppositions was thereby incurring heavy cost on transportation as well as losing opportunity cost of the land in a prime location.

INTRODUCTION

Pune countered to its waste management challenges in a non-conventional approach. Pune accepted waste as a resource rather than a matter to dispose. Pune Municipal Corporation (PMC)'s approach towards waste management based on a comprehensive manner with careful selection and sustained application of appropriate technology, working conditions and establishment of a 'social license' between the community and other service providers. However, due to low priorities given by the politicians to passed o required amount of budget, PMC's waste management initiatives pedestal on the following four major premises were endured much.

- 1) Integrating informal sector for Municipal Solid Waste Management;
- 2) Refuse into resource through decentralized waste management system using Biomethanation techniques generating biogas for energy generation;
- 3) Waste to energy; and
- 4) Data collection for Management Information System (MIS) using Mobile SMS.

The 'Zero Garbage Ward – Kartaj Model' was amongst the key achievements of the city but now the same is vanished due huge population growth of Katraj

Objectives: - This Paper is mainly focused on knowing the unpleasant effects of open dumping of waste generated in Pune and its agreeable solutions for effective disposal .The solutions required needs huge funding ,depends upon political leadership in PMC.

Methodology: - based on secondary sources and experiences of the people in the field

Obnoxious Effect of open-dumping of Waste

An open dumping is a land disposal site at which solid wastes are disposed of in a manner that does not protect the environment, are susceptible to open burning, and are exposed to the elements, vectors, and scavengers. Open dumping can include solid waste disposal facilities or practices that pose a reasonable probability of adverse effects on health or the environment.

(i) Effect on Human health

- The health risks associated with open dumping are significant. Areas used for open dumping may

be easily accessible to people, especially children, who are vulnerable to the physical (protruding nails or sharp edges) and chemical (harmful fluids or dust) hazards posed by wastes.

- ◆ Rodents, insects, and other vermin attracted to open dump sites may also pose health risks. Dump sites with scrap tires provide an ideal breeding ground for mosquitoes, which can multiply 100 times faster than normal in the warm stagnant water standing in scrap tire causing several illnesses.
 - ◆ Poisoning and chemical burns resulting from contact with small amounts of hazardous, chemical waste mixed with general waste during collection & transportation.
 - ◆ Burns and other injuries can occur resulting from occupational accidents and methane gas exposure at waste disposal sites.
- (ii) Environment pollution
(iii) Air pollution :-Dust generated from on-site vehicle movements, and placement of waste and materials
(iv) Water pollution

Runoff from open dump sites containing chemicals may contaminate wells and surface water used as sources of drinking water open dumping can also impact proper drainage of runoff, making areas more susceptible to flooding when wastes block ravines, creeks, culverts, and drainage basins & also contamination of groundwater resources and surface water from leachate emissions.

(V) SOIL CONTAMINATION

PERMANENT OR TEMPORARY LOSS OF PRODUCTIVE LAND

WASTE MANAGEMENT SCENARIO IN 2009

About 2500 TPD waste collected 68% is domestic waste coming from residents, 11% from street sweeping and drain cleaning, 10% from hotel and restaurants, 5% from Construction and demolition Waste, 4% from market and commercial area, 2% from Fruit, vegetable, fish, meat market waste, Bio-medical waste etc. Thus it is seen that the residential, street sweeping and hotel -restaurant are the major waste generation sources. The PMC is responsible for collection, transportation and disposal of the above waste except untreated bio-medical waste.

In 2009, there were inadequate number of 6500 waste pickers mostly using manual methods of waste collection under the Solid Waste Collection and Handling (SWaCH) program. The SWaCH members used to work in tandem or without tandem with the municipal staff covering almost 3.8 Lakh households in 74 out of 76 prabhags of Pune. The SWaCH scheme alone had helped save Rs. 12 Crore per annum on waste handling in Pune. The waste pickers assisted in managing 20% of the total waste generation and helped in recycling almost 10% of the total waste. The city had adopted both centralized and decentralized waste treatment methods wherein 58 TPD of waste is treated through Biomethanation, generating 3300 kWh electricity which was used for street lighting, saving valuable energy charges to the tune of Rs. 72.3 Lakh per annum.

Now the case of 2009 is no more exists. Due to growing size of city, speedy increase in population and increasing lethargy from the residents to help in waste collection, the effects are worst today than what they were decade ago.

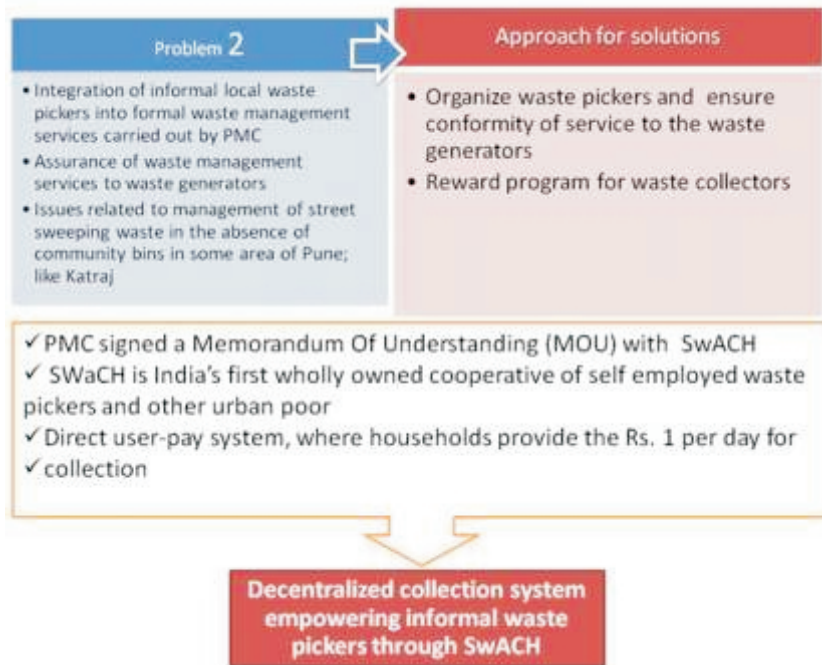
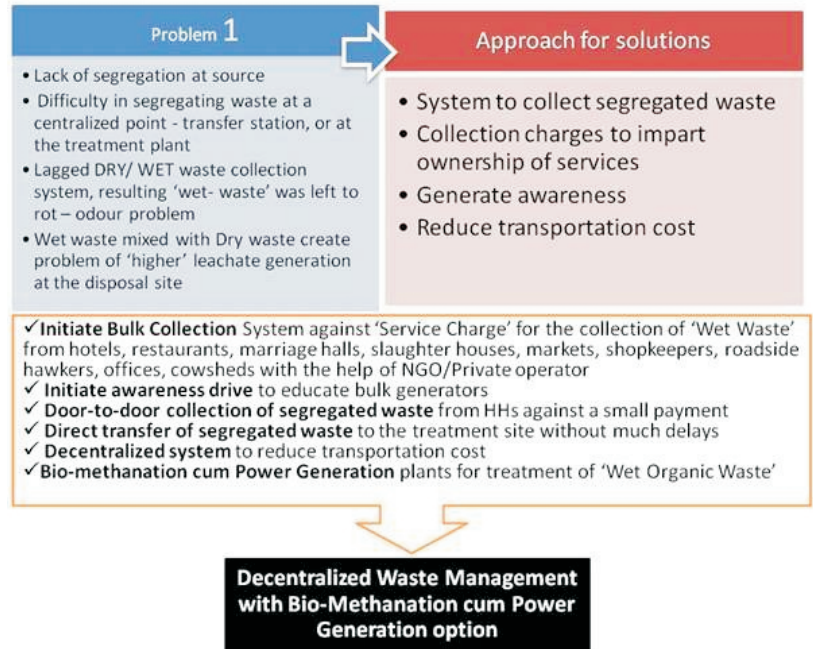
SOLVING THE WASTE MANAGEMENT TRIBULATIONS

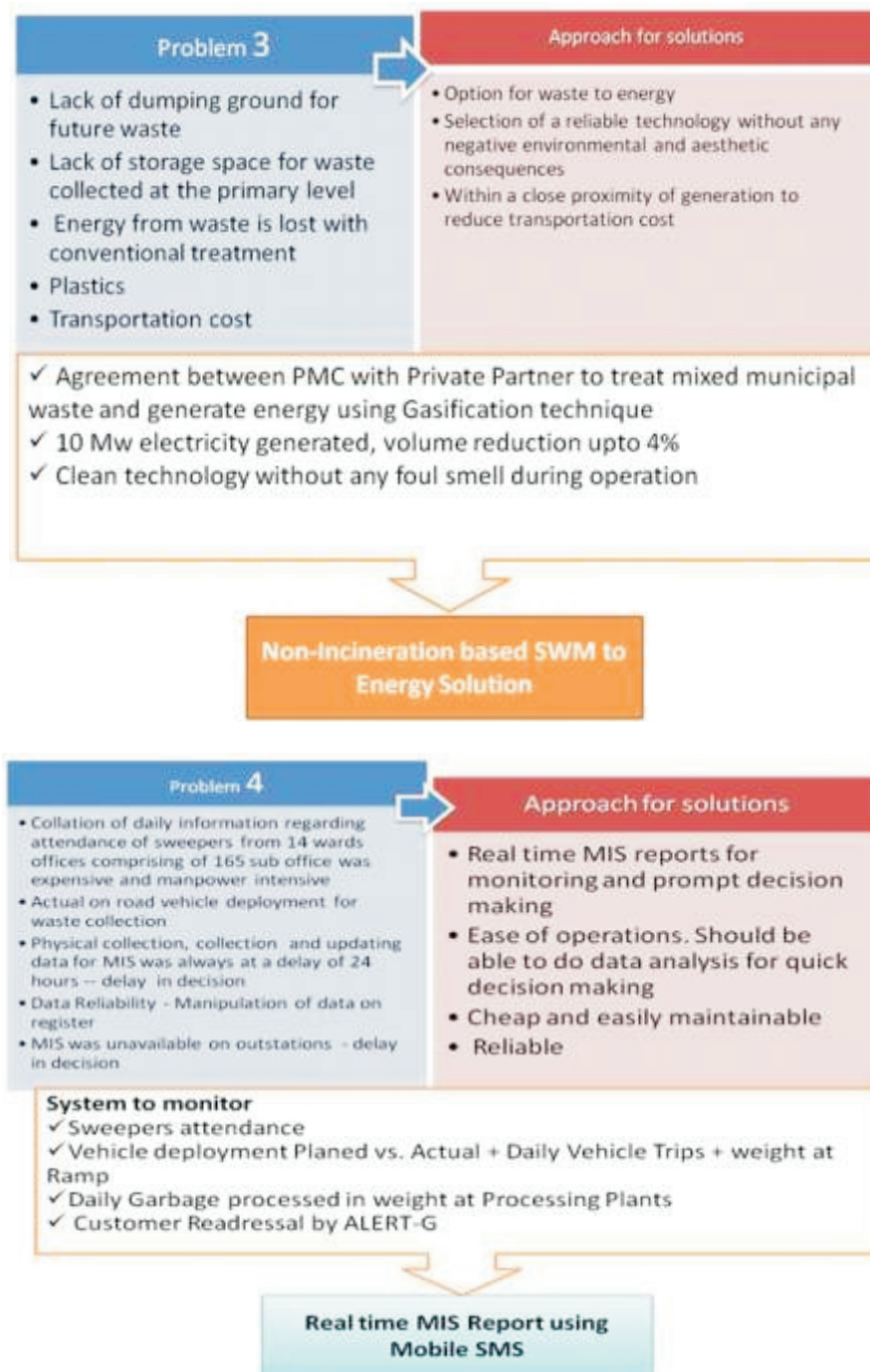
Pune, instead of looking through the touchstone approach of waste management in the country endeavoured waste as a resource and not a problem. To achieve this, PMC had to take up a very challenging task of 'paradigm shift' of the approach to manage its waste.

- ◆ PMC may have a comprehensive approach towards managing its waste with careful selection and sustained application of appropriate technologies, working conditions, and establishing a social license between the community and other services, and
- ◆ PMC may consider waste as a renewable resource with the potential to provide alternatives to problems including electricity shortages and resource recovery rather a matter worth disposing.

The PMC after diligently identifying and sorting out the critical issues, worked in a problem – solution model which may help PMC to achieve solutions to the waste management tribulations using a sustainable strategy. The following figure illustrates the problem solution matrix in brief.

Figure 1: Problem Solution Charts for waste management solutions in PMC





CONCLUSION :-

The paper brings out the ills of waste in Pune and its peripheries and suggests many solutions to the problems arising out of generated waste. If they are attended fittingly by spending a large funds sourced by Central & State Govt. and by PMC itself, the problem of waste disposal will be solved and it in the long run may fetch a revenue to PMC. If properly appealed, the private agencies and even some foreign countries may extend their help in developing waste management (skill) for Pune.

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