

04 waste management

reduce, reuse & recycle and
integrated approach for management

A campaign for minimizing waste called the 3Rs (Reduce, Recycle and Reuse) was undertaken by the Government with active participation of citizens through over 2000 Resident Welfare Associations and 2000 Eco Clubs in schools and colleges of the city. A large number of Resident Welfare Associations have taken up solid waste segregation and management in their colonies at a decentralized level.

THE METHANE GAS RECOVERY PROGRAM HAS BEEN IMPLEMENTED SUCCESSFULLY AND IT IS BEING USED AS A SOURCE OF ENERGY IN THE WASTE TREATMENT PLANTS.



Garbage has been used at large land filling sites to transform wastelands into parks and add to the city's green cover.



The city of Delhi generates over 8000 tonnes of municipal solid waste everyday, out of which 5700 tonnes are daily disposed through sanitary landfill sites. At present, the total quantity of 1000 tonnes per day of MSW is being treated to make compost. Two major projects of waste management are being implemented in Public- Private Partnership by the Municipal Corporation of Delhi. 1950 tonnes of solid waste will be treated and converted into 16 MW of power in a 15 acre site at Okhla in Delhi. Further, 1300 tonnes of solid waste is expected to generate 10-12 MW of power in another project at Ghazipur. If these two projects work well, they will be expanded to put all of Delhi's 8000 tonnes of solid waste into effective and productive use.

Several vermi-composting units have been established in schools & colleges. Further, through involvement of weaker section through a scheme, 8000 ragpickers had been trained for waste management and also provided with gloves, masks, aprons and shoes for a

healthy working environment for them. The methane gas recovery program has been implemented successfully and it is being used as a source of energy in the waste water treatment plants.

The World Bank has sanctioned a grant under Japan's Policy and Human Resources Development (PHRD) scheme for gas recovery and reuse, to the Municipal Corporation of Delhi. The project consists of landfill gas extraction testing, feasibility study and technical design of the project. It is expected that 3.0 million tonnes of equivalent of CO₂ will be reduced. This not only reduces the emission of greenhouse gases from the decomposition of waste, but also reduces the dependence of the system on external sources of power, thereby reducing energy consumption and subsequent pollution.

Integrated Waste Management

Plastic bags are a serious threat to the city's eco system and have been banned. The 'Say no to Plastic' campaign has been a huge success with all hotels, shopping

A Bio-Gas plant has been installed near Delhi Secretariat Canteen and natural cooking gas, produced from food waste is utilised in the canteen



malls and other establishments shifting to paper bags.

Resources like paper have been recycled within Government Offices. Over 200 Paper Recycling units have been set up in the city including one in the Delhi Secretariat, the seat of the City Government. Some of them have been installed in schools and demonstrate the value of recycling to the new generation. Together, these plants recycle the waste paper that emanates from government offices and schools, controlling pollution.

Treatment of biodegradable waste based on Bhabha Atomic Research Centre (BARC) technology which is a small, compact system for decentralized treatment of all types of organic waste and converts it into useful bio-fuel products that can replace fossil based products. As a pilot project, a Bio-Gas plant (BARC NISARGRUNA Technology) of capacity (500 kg/day) has been installed near Delhi Secretariat Canteen and natural cooking gas, produced from food waste

is utilised in Secretariat Canteen.

In order to promote decentralised waste management and for promoting conversion of Green Waste to fuel, Delhi Cabinet has approved for providing fiscal incentives to BARC developed NISARGRUNA Technology by extending subsidy to the tune of 33.3% for plants up to a capacity of 0.5 T/day, subject to a maximum subsidy of Rs. 500,000 for institutions/ Govt. offices/ Group Housing Societies/ Resident welfare Associations, hostels, canteens of educational institutions and non-profit organisations/ non-commercial institutes. For Commercial establishments, the minimum capacity of plant shall be above 0.5 T/Day just to encourage them to indicate such decentralised management system and also for replacing conventional fossil fuel, a subsidy to 33% of the total cost subject to a maximum subsidy of Rs 10 lakhs is provided. The fund is being given to such plants from Air Ambience Fund of Delhi Government.

Decentralized Treatment of Food Waste to Produce Bio-Fuels / Bio-Gas / Bio-Manure



E-waste Management

Detailed directions have been issued to all Government departments/Courts/Offices for proper disposal of E-waste through authorised recyclers. Public notice in this regard has also been given. About 65 E-waste collection bins have been provided in schools, colleges, Central and State Government offices etc. for E-waste collection and final disposal through authorised E-waste recyclers.