

Executive Summary

Rural Solid Waste Management (Tamil Nadu)

Background/ Initiatives Undertaken

- This is a **low cost and high impact solution for Solid Waste Management (SWM)** in rural areas.
- MGNREGS workers called as “**Thooimai Kaavalars**” (cleanliness guard) go **door to door for collection of waste**.
- **Segregation of biodegradable and non-biodegradable waste** is done.
- Biodegradable waste is dumped into compost pits and non-biodegradable, non-recyclable waste is dumped into landfill site.
- Three pits are created for each cluster and **one worker is engaged for every 150 households**.
- Post segregation, **bio-degradable waste is converted to manure** and **shredded waste plastic is used for laying BT Roads**.

Key Achievements/ Impact

- **1.16 lac metric ton (MT)** of garbage was disposed in **9,000 pits**.
- **2,835 MT** of recyclable plastic and other waste materials were sold generating a revenue of **INR 73.04 lac**.
- **Compost** produced from the bio-degradable waste were sold for **INR 57.33 lac**.
- **1,045 MT** of non-recyclable waste was sent to sanitary landfills.
- Shredded plastic waste of **615 MT** has been utilized in laying of **841 km length of BT roads**.
- The initiative enhanced health profile of the community and helped to prevent diseases and epidemics.



Rural Solid Waste Management (Tamil Nadu)

Background

The primary objective of Solid Waste Management (SWM) systems project in rural areas of Tamil Nadu, is to make the villages cleaner and greener. Till 2015, there was no established universal model for implementation of SWM in rural areas. The untreated waste and garbage dump yards were becoming a breeding ground for vector borne diseases. In order to overcome these challenges, the Govt. of Tamil Nadu decided to provide basic minimum infrastructure facilities in villages, which are cost-effective and necessary for safe collection and disposal of waste. For this purpose, Rs.110 crore were allocated for implementation in 2,000 Village Panchayats (VPs) during 2015.

Approach Adopted

Village Panchayat is the nodal unit for planning and implementation of this project. To overcome manpower issues, MGNREGS workers were engaged as *Thooimai Kaavalars* (TK)/(Protectors of Environment Clean Guards) at the rate of one worker per 150 households. They are involved in door to door collection, segregation and transportation of waste to dumping site. TKs are provided with Uniforms and tricycles/push-carts. In order to maintain clean and tidy streets, garbage collection bins are provided in the street junctions prone for garbage dumping.

Door to Door Collection



Segregation of Waste



Segregation of Waste

Solid waste is segregated into biodegradable and non-biodegradable waste categories before disposal. The final disposal of solid waste is processed without contaminating ground water, surface water and ambient air quality. This requires working space for segregation and storage of recyclable waste. Segregation cum storage sheds are provided at cluster level or near the disposal points. Weighing machine is kept in these sheds to measure the weight of waste collected per day per worker.

Processing of Waste

Two pits for composting and one pit for sanitary landfill are dug up under MGNREGS. A protective layer of plastic sheet is provided in the sanitary landfill pit to avoid risk of ground water pollution. Shredding and cleaning/sieving machines have been provided at block level for further processing of plastic waste. The shredded plastic is used in laying Bituminous (BT) roads.

Monitoring

A daily attendance sheet has been prescribed for each TK. The worker has to get the signature of 10 households from the street allotted and get it duly attested by Village Poverty Reduction Committee (VPRC) member. One among the MGNREGS workers has been nominated as worksite supervisor, for monitoring the daily attendance, weighing the garbage collected etc. Basic orientation training on SWM activities is given to block level officials and also the functionaries in VPs.

Awareness Generation

A detailed order for provision of budgetary support and convergence of various schemes at State level has been issued by the Government. To generate awareness, media campaigns, consultations with Government functionaries and general public were undertaken. TKs are integral part of village life now. While collection of waste, they blow their whistle. Young, old, men and women, everyone knows about them and their work.

Vermi-composting



Laying Bituminous roads



Impact

All the 12,524 Village Panchayats of Tamil Nadu are covered under this initiative. The initiative has led to creation of much cleaner and greener surroundings with consequential health benefits. Economic activities for SHGs include selling of vermi-compost, selling of scrap which are of economic value and selling of shredded plastic waste to District Rural Development Agencies (DRDA) for laying BT roads. The key outcomes of the project are highlighted below:

- 1.16 lakhs MT of garbage is disposed off in 9,000 VPs
- 2,835 MT of recyclable plastic and other waste materials were sold by VPs generating a revenue of Rs. 73.04 lakhs.
- Compost produced from the bio-degradable waste was sold for Rs. 57.33 lakhs.
- 1,045 MT of non-recyclable waste was sent to sanitary landfills.
- Shredded plastic waste of 615 MT has been utilized in laying of 841 km length of BT roads
- For collection, transportation and segregation of waste, employment is provided to over 65,000 MGNREGS workers.

Solid Waste Management (SWM) Systems in rural areas of Tamil Nadu is studied by 10 States involved in Clean Ganga Project. An advisory is issued by MoRD and MDWS to other States for replication of this model.

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