

**GOVERNMENT OF TAMILNADU**  
**MUNICIPAL ADMINISTRATION AND**  
**WATER SUPPLY DEPARTMENT**



**Tamil Nadu State Current Status on  
Management of Municipal Solid Waste**



[In compliance with Hon'ble National Green  
Tribunal Order Dated 5<sup>th</sup> February 2015 in the  
Matter of OA No.199 of 2014,

Almitra H. Patel & Anr. Vs Union of India &Ors.]

April 2015



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## 1. MSW GENERATION IN TAMIL NADU

Tamil Nadu is one of the most urbanized States in India with 48.40% of State population living in urban areas. The urban administration is handled by three heads of departments viz., Commissioner of Chennai Corporation, Director of Municipal Administration and the Director of Town Panchayats.

There are 664 urban local bodies in Tamil Nadu, consisting of 12 Corporations, 124 Municipalities and 528 Town Panchayats. The daily generation is about 15273 tonnes i.e., about 55.74 Lakh Metric tonnes per year. The Municipal solid waste being generated per day by Chennai Corporation, other Corporations and Municipalities, and Town Panchayats are 5000 T, 7579 T and 2676 T respectively.

Over the years, the quantum of waste generated by different category of waste producers (Households, Commercial centers, Institutions, Industries etc) has been increasing keeping pace with the increase in urbanization, population growth, change in life style, consumption pattern and associated activities. The characteristics of the waste generated have also been varying with the level of urbanization.

## 2. CURRENT STATUS OF MSW MANAGEMENT IN TAMILNADU

Component of Waste Management	During the year 2000	During the year 2014		
		Chennai Corporation	Other Corporation & Municipalities	Town Panchayats
Street Sweeping	68%	90%	89%	85%

Door to Door Collection	Nil	90%	80%	60%
Transportation of waste	32%	90%	86%	55%

### 3. PRACTICES ADOPTED FOR VARIOUS COMPONENTS OF SWM IN TAMIL NADU

#### 3.1 Primary Collection of MSW

- Providing adequate facility for the storage of solid waste to prevent street throwing or open dumping in the streets
- Ensuring segregation of waste at source with the community participation to minimize the mixing of recoverable and reusable waste with the compostable solid waste
- Providing adequate bins such as plastic containers, dumper placer bins, compactor bins, deep earth bins and hook loader bins for storage at frequent intervals in appropriate places as per requirement
- Providing adequate pushcarts, Tricycles Auto rickshaws, Mini Vans, etc., for the primary collection of segregated waste at door steps
- Authorizing the ULBs to go for outsourcing of workforce not exceeding one third of its sanctioned strength.
- Involving Members of Self Help Groups in the collection of segregated waste at source.





**Primary collection at Kovai Municipality**



**Primary collection at  
Udumalpettai Municipality**



**Primary collection at  
Kumbakonam Municipality**

### **3.1.1 SUNYA-Towards zero waste in Coimbatore Corporation:**

Realizing the challenges faced by the CCMC, a pilot project under “SUNYA-Towards zero waste in South Asia” is now being implemented which is aimed at introducing the concept of decentralized waste management by promoting source-segregation, 3R (Reduce, Reuse and Recycle) Principles of waste management and waste processing at the ward level itself. Under this pilot project, Ward No.23 in the West Zone has been selected as pilot area to ensure that the programme is successfully implemented. It was envisaged that once the community adapts to the strategy, they can act as ‘torch-bearers’ and help replicate the process in the remaining 99 wards.

### **3.1.2 SARVAM projects in Kumbakonam and Myladuthurai Municipalities:**

Similar to the “SUNYA” Project Kumbakonam and Myaladuthurai municipalities are implementing the “zero waste” project in the name of “SARVAM” (Total cleaning).

### **3.1.3 Deep Bin (State of the Art) waste collection system in Tambaram Municipality:**

An innovative initiative has been taken up by Tambaram Municipality to place Deep bin (colour coded three bin system) in five pilot areas to store the different types of waste. State Government had sanctioned a sum of Rs. 7.89 Crore to Tambaram Municipality for procuring 471 numbers of such bins.



### **3.2 Preventing mixing of Bio Medical waste with MSW**

- As per notified Bio-medical waste management and handling rules 2011, all the medical institutions have been fixed with responsibility to dispose the waste generated through the appropriate facility created by private agencies.
- Urban local bodies are strictly monitoring that Bio-medical waste generated by any institutions are not mixed with the domestic waste handed over to the ULBs.



### 3.3 Secondary Transportation of MSW

- Reducing the manual and multiple handling of solid waste
- Providing adequate vehicles and equipments for 100% collection and transportation of waste on the same day
- Providing higher capacity vehicles like tippers, hook loaders, dumper Placer vehicles, compactors, front end loaders, tractors and deep earth bin removing vehicles etc.,
- Providing Transfer stations in larger ULBs at appropriate locations to handle more quantity of waste. Providing larger capacity vehicles to transfer such waste to the processing yard so as to utilize more number of trips of the collection vehicles and to restrict their travel to processing yard. Four, Three and Two Transfer Stations are being operated in Chennai Corporation, Coimbatore Corporation and Tambaram – Pallavapuram Cluster respectively.
- About 25223 vehicles have been deployed in collection and transportation of MSW.



**Secondary collection at  
Udumalpettai Municipality**



**Secondary collection at  
Madurai Corporation**



**Secondary collection in different ULBs**



**Before**  
**Modern Transfer Stations at Peelamedu, Coimbatore**

### 3.4 Processing of MSW

- Ensuring and promoting the practice of segregate and collect the bio waste from bulk resources by establishing separate systems with designated vehicles and workforce. Planning to utilize such bio waste for manure production, vermi composting, Biomethanation plants, bio gas for cooking, bio gas as vehicle fuel, bio gas power plants for illumination of street lights.
- Urban local bodies are purchasing land at the rate of 1 acre for every 10000 population for meeting the requirement of next 25 years
- ULBs are developing basic infrastructure such as compound wall, green belt, windrow pad, covered shed for storage, weigh bridge, water supply, roads and drains, workers shelter, and rest room etc.,
- ULBs are establishing scientific processing facilities ULBs are preparing detailed project reports through the consultants and facilitating for resource mobilization
- Introducing Public Private Partnership (PPP) such as, Build Operate and Transfer (BOT), Build Operate Own and Transfer (BOOT) concepts etc., in the implementation of MSW activities
- Establishing dry resource centres (sorting and storage of different kinds of recyclables such as plastics, paper, glass, metal, e waste, rubber,) vermi composting units, plastic shredding units, small level biomining units, mini biogas units in a decentralized manner to restrict the quantum of waste coming to the processing yard.
- Promoting the segregation and collection of the construction and debris waste to the identified exclusive locations for reusing them and to prevent mixing with the compostable waste
- Establishing inoculums production centres using easily available cost effective ingredients and to make use them in the processing yards for spraying over the fresh bio waste to



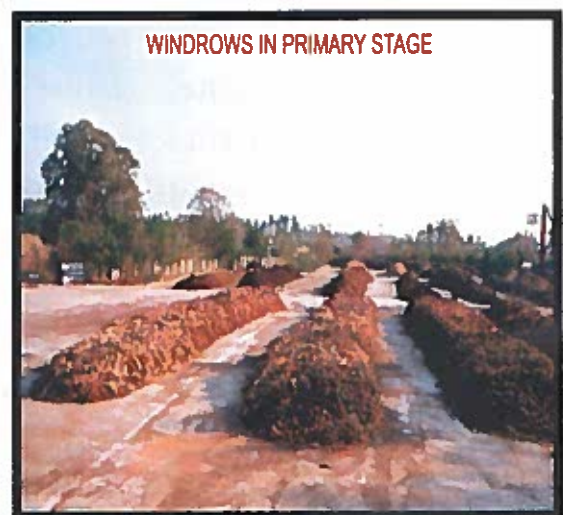
ensure control of odour and flies menace. This also speeds up the composting.

### **3.4.1 Composting and Vermi composting**

- Small Municipalities and Town Panchayats normally do Composting and Vermi composting thereby reducing the waste to the dumping yard. There are 36 ULBs which practice Windrow composting & Vermi composting and reduce 1387 MT of waste. Vermi composting is being done successfully in 50 Town Panchayats. The Vermi compost is being sold at Rs.5/-per Kg, and Bio-compost at Rs.3/-per Kg. Normally in Town Panchayats high end processing is not required hence by creating awareness on behavioral changes Reduce, Reuse, Refuse principle is encouraged and the volume of waste generated is reduced.
- During the year 2015-16 Integrated Solid Waste Management Projects from source segregation to vermi compost will be taken in 212 Town Panchayats at a cost of Rs.60 crore. The remaining Town Panchayats will be taken up during the year 2016-17.



**Thiruchengode Municipality**

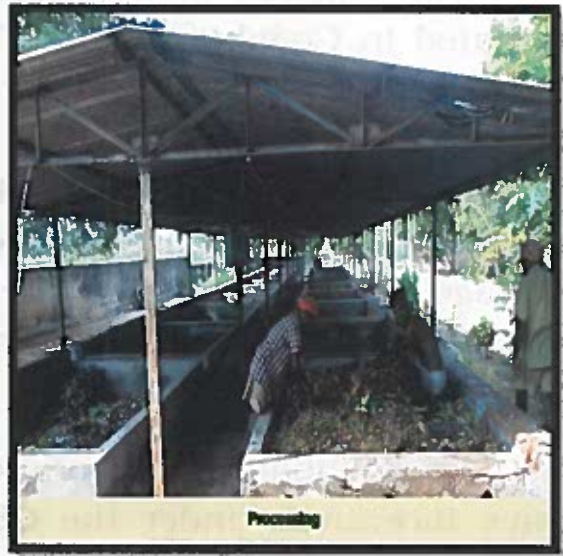


**Dharapuram Municipality**

### **Windrow Composting**



**Pammal Municipality**



**Perungalathur Town Panchayat**

### **Vermi Composting**

### **3.5 Rag pickers and Recovery of Recyclables**

Segregation of recyclable and reusable dry resources from the urban solid waste collection bins is being done by the rag pickers. These rag pickers deposit dry resources to the nearby vendors and get money. In Chennai, Coimbatore and Tiruchirappalli Corporation rag pickers recover the dry resources from dumping yard and sell to vendors resulting in re-use / recycling of waste. All the urban local bodies have enumerated the details of the Rag pickers and planning to involve them in the resource recovery activities through NGOs and outsourced agencies. Further eligible Rag pickers are being engaged through the outsourcing contract agencies. Further Chennai Corporation has initiated an innovative action plan to bring the Rag pickers from informal sector to formal sector.



### 3.6 Dry Resource Centres

⇒ ? The concept of Dry resource collection centres has been initiated in Coimbatore and Trichy Corporations and in various Municipalities. The Sanitary workers have been motivated to segregate and handover the collected dry resources such as plastics, tyres, metal and other waste to their respective ward offices. From such ward offices it will go to the nodal dry resource storage centre located in the various zones of the city. This practice has reduced the mixing of reusable, recyclable, and non-bio degradable waste.

In Coimbatore Corporation, a private company called **ITC** pays incentives under the **CSR** project to the workers on the basis of weight of dry resources collected and handed over by each. The payment is directly being credited through ECS method. This has encouraged the sanitary workers to go for segregation at source. Many **Town Panchayats have established resource recovery parks** for the sorting, storage and selling of recyclables.

In Trichy Corporation, a **private contractor** has been identified by a tender process and **authorized** to collect the dry resource on payment of agreed cost to the Corporation.

⇒ In Trichy Corporation, Women Self Help Group Members have also been trained to motivate the people to retain the dry resource wastes within their houses. Women Self Help Group Members will pay a consideration to the Households by the way of giving toothpaste, soaps, shampoo, etc. in lieu of the waste received from such people.

### 3.7 Plastic roads

✓ This Government has placed greater importance on the effective use of plastic waste to reduce environmental degradation. In order to ensure a plastic free environment in Corporations and Municipalities the black topping of roads have been done using waste shredded plastics. During the last four

years, 871 Metric Tonnes of plastic waste has been utilized in laying 684.77 kilo-meters length of roads in Municipalities and Corporations. To promote the collection, segregation and shredding of plastic waste, Self Help Groups (SHGs) have been given training and they were engaged in shredding the plastic waste into flakes for which 14 Plastic waste collection centres with 43 shredding machines have been set up during 2013-14.

From the year 2011-2012 to 2013-14, a sum of Rs.44.50 crore was allotted for laying 236.154 Km of plastic roads. 490 No of shredding machines being used for this purpose in Town Panchayats. In Chennai Corporation 45 No of shredding machines have been procured and put into use.

### **3.8 Providing assistance to manage existing dumpsites**

- Assisting ULBs with technical and financial assistance for establishing scientific closure of saturated old dumping yards by Bio capping method and to retrieve land parcels wherever feasible for further SWM activities
- Assisting ULBs in addressing the fire mitigation, leachate management and in relocating new processing yard
- The existing dump sites in 7 Municipalities and 77 Town Panchayat will be revamped with the bio-mining process, using active microorganism and Trammel in order to rehabilitate /recover land for the beneficial use and also to reduce environmental impact due to the existing dumping site.

### **3.9 Providing Land for Waste Processing and Disposal Facilities**

Land is the basic criteria for taking up processing activities. The details of lands available in Urban Local Bodies are furnished below:-

<b>ULB</b>	<b>No of ULBs having sufficient Land for the projected population of 2025</b>	<b>No of ULBs having insufficient Land and action is being taken to alienate additional land</b>	<b>Total</b>
Chennai Corporation	1	-	1
Corporations (except Chennai)	11	0	11
Municipalities	92	32	124
Town Panchayats	362	166	528
<b>Total</b>	<b>466</b>	<b>198</b>	<b>664</b>

All the Corporations are having adequate land for handling and processing the Municipal Solid Waste with various technologies. Cluster approach is being adopted to attach the 32 municipalities and 166 Town Panchayats. Moreover 343 acres of land has been procured for 21 municipalities out of the funds sanctioned for this purpose.

Action will be taken to form additional clusters or procure land to provide processing facilities for the 32 Municipalities and 166 Town Panchayats which have insufficient lands during 2015-16.

### **3.10 User charges for MSWM**

Many urban local bodies have framed byelaws and notified them to collect special cleaning charges from the commercial

waste generators to meet out the solid waste management operation and maintenance expenditure.

### **3.1.1 Workforce**

1. Tamil Nadu Government has fixed norms for engagement of workforce at 3 for every 250 households (or) for each 3 kms, length of road.
2. Similarly norms have also been fixed for the engagement of workers based on width and length of the road.
3. Government had issued clear orders to go for outsourcing of additional labour force (or) to go for the integrated SWM facility to meet the norms of MSW Rules.

## **4. MAJOR PROJECTS IMPLEMENTED AFTER MSW RULE**

Tamil Nadu is one of the pioneering states in the country in experimenting innovating methods in infrastructure projects implementation. To increase the efficiency of the SWM service with sustainable processing and disposal technologies, the following projects have been taken up with Public Private Partnership (PPP) mode. The following projects have been taken with the financial assistance under JNNURM

<b>Sl. No</b>	<b>ULBs</b>	<b>Est. Cost (Rs in Cr.)</b>	<b>Status of the project</b>
1	Coimbatore Corporation	96.51	Functional
2	Madurai Corporation	74.23	Functional
3	Namakkal Municipality	3.58	Functional

### **4.1 COIMBATORE**

Under JNNURM, the Government has sanctioned a sum of Rs.96.51 crore for the implementation of Integrated Municipal Solid Waste Management Project in the erstwhile Corporation area and the project was taken up in two parts.

- **Part-I** Under this part, procurement of vehicles and equipments for primary collection which include containerized push carts, seamless carts, 2,29,000 pairs of households segregation bins, smaller tippers, skip lifter lorries with containers, procurement of twin bin lifting dumper placer lorries, road sweeping machines etc., at a cost of **Rs.26.29 Crores.**
- **Part-II** Comprising of Construction of 4 Transfer Stations, Secondary Transportation, Construction of Processing Plant & Development of Sanitary Landfill at Vellore including Scientific Closure of Old and abandoned dumpsites at 3 locations (Ondipudur, Goundampalayam and the existing Vellore dumpsite) is being implemented through PPP mode at a cost of **Rs.68.93 Crores.**



**Processing Facility at Vellore**



**Scientific Sanitary Landfill at Vellore**



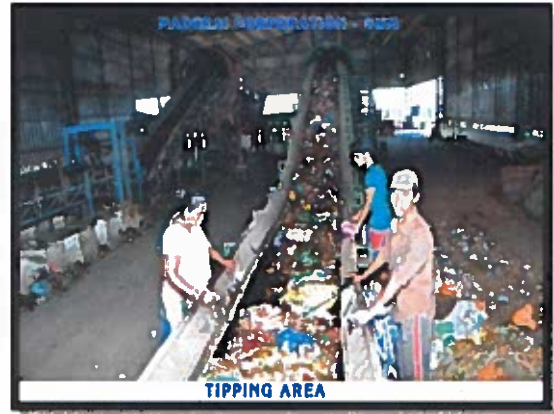


### **Scientific Closure at Goundampalyam ,Ondipudur**

#### **4.2 MADURAI**

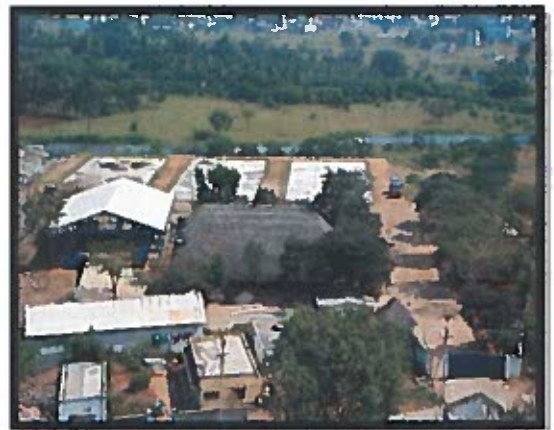
The Government has sanctioned a sum of Rs.74.23 crore under JNNURM for the implementation of Integrated Municipal Solid Waste Management Project. The project was taken up in two parts.

- **Part-I** Under this part, procurement of vehicles and equipments for primary collection and secondary transportation which include tricycles, household segregation bins, dumper bins, dumper placer vehicles, Mini Loaders, Compactors etc., at a cost of Rs.15.31 Crores.
- **Part-II** Comprising of Construction of Processing Plant & Development of Sanitary Landfill at Avaniyapuram Vellakkal including Scientific Closure of Old dumpsites at Avaniyapuram which is implemented through PPP mode at a cost of Rs.57.31 Cr.



### 4.3 NAMAKKAL

- Under this PPP mode project, the Namakkal Municipality has identified a private partner for construction of processing plant at Kosavampatti and development of scientific sanitary landfill at Lathuvadi.



Processing facility at Namakkal





### Landfill developed at Salem and Namakkal

#### 4.4 Other ULBs

Processing facilities under Build, Operate, Own, and Transfer (BOOT) mode is under operational in **Salem, Erode, Trichy, Corporations and in Pollachi, Coonoor, Udumalpet, and Mettupalayam Municipalities**

##### 4.4.1 SALEM

- 5 Total Population - 83131038
- 6 Waste Generated -350 TPD
- 7 Site - Chettichavadi
- 8 Area of the Site - 100 Acres

9 Proposed Capacity - 350 TPD

10 The project commenced its operation in Feb, 2011.



Pre-Processing Section

##### 4.4.2 ERODE

- Total Population -151274 (2001)
- Waste Generated -110-135 TPD
- Site -Vendipalayam
- Area of the Site -4 Acres
- Proposed Capacity - 120 TPD



The project commenced its operation in **Pre-Processing Section** May, 2009. So far we have handled 194089.4 tonnes of garbage.

#### 4.4.3 TRICHY

- Total Population - 2418366 (2001)
- Waste Generated - 350 TPD
- Area of the Site - 7 Acres
- Site - Ariyamangalam
- Plant Capacity - 300 TPD



Manual Sorting

The project commenced its operation in Oct 2013. So far we have handled 105880 tonnes of garbage.

#### 4.4.4 METTUPALAYAM

- Total Population -66487 (2001)
- Waste Generated -50 TPD
- Site -Chikkadasampalayam
- Area of the Site -2 Acres
- Installed Capacity -35 TPD



The project commenced its operation in April,2009. So far have handled 57434.5 tonnes of garbage.

#### 4.4.5 UDUMALPET

- Total Population - 59639 (2001)
- Waste Generated - 27 TPD
- Area of the Site - 6.8 Acres
- Plant Capacity - 30 TPD

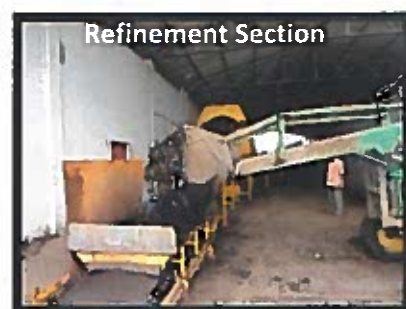


Turning of Heaps

The Project commenced its operation in April, 2009. So far we have handled 44218 tonnes of garbage.

#### 4.4.6 POLLACHI

- Total Population - 88303 (2001)
- Waste Generated - 70 TPD
- Area of the Site - 20 Acres
- Plant Capacity - 60 TP



The Project commenced its operation in May, 2010. So far we have handled 74423.3 tonnes of garbage.

#### 4.4.7 COONOOR

- Total Population - 50079 (2001)
- Waste Generated - 10 TPD
- Site - Vasampallam
- Area of the Site - 2 Acres
- Project capacity - 20 TPD



The project commenced its operation in April, 2009. So far we have handled 18476.7 tonnes of garbage.

We have processed 494522 tonnes of garbage totally. The above six projects are registered under UNFCCC for carbon emission on Jan 17, 2010 project No: 2867.

#### 4.5 CHENNAI

Technical Proposals were received from the bidders for setting up processing facilities in Chennai Corporation. Further tender processing is going on and work for the processing facilities will be awarded in three months. At present the garbage is dumped as open dumping. This open dumping practice was going on for a very long time. These dumping grounds are in use for more than 30 years even before the notification of MSW rules. At the time of starting of garbage dumping operations in these places not much habitation clusters were there. However, in order to improve the condition of the garbage dumping ground at Kodungaiyur and Perungudi the Corporation of Chennai has taken various steps as follows:

- Compound Wall around the periphery of the Dumping Ground has been constructed at a cost of Rs.2 crores.
- Inspection Towers have been constructed at 4 locations for monitoring the dumping operations.
- Two High Mast Lamps have been provided to carryout the garbage dumping operations and to monitor the dumping ground during the night.
- Cement Concrete Road to a distance of about 2 km has been formed for the movement of garbage lorries in the



dumping ground. It has also been proposed to form further roads at the Kodungaiyur Dumping Ground at a cost of Rs.5 crore.

- Amenities such as sump and borewell are provided for extinguishing fire.
- Electricity connections and generators are provided at dumping grounds.

## **5. INNOVATIVE PROJECTS**

### **5.1 Bio-methanation from Vegetable, Market waste and Food waste**

Bio-methanation power plant projects are under implementation by targeting the bulk generators of organic waste viz. hotels, restaurants, marriage halls, vegetable markets, slaughter houses etc., The funds were allocated to the tune of Rs.28.70crore to 23 Municipalities and 8 Corporations to set up 33 bio-methanation cum power plants of capacity ranging from 3T, 5T and 10T per day using segregated organic waste. The project works are at various stages and all 33 plants will be ready for functioning in 2015-16.

A pilot project on establishment of Bio-methanation power plant at Arcot Municipality with 3 TPD capacity with a power generation of 24 Kw per day has been established and functioning.

In Chennai Corporation 14 Nos. of Biomethanation power plants are established, of which 2 have been commissioned, 4 are nearing completion and 8 are under various stages.

## Outcome of the Bio Methanation Project

Bio Gas Plant Capacity in MT	No. of Plants	Power Output per Day Kwh	Power Output per Year Kwh
10	3	2640	963600
5	25	10500	3832500
3	2	480	175200
Total	30	13620	4971300

- After commissioning of all the Biomethanation plants, the expected generation (net) of electric energy per year will be 4971Mwh and the Emission Reductions will be 4225tonnes of CO<sub>2</sub>per year
- Small scale Biogas plant is also encouraged in Hotels, Hostels, and Residential colonies, so as to utilize the vegetable and food wastes to generate effectively.
- The innovation of food waste to energy projects has already been implemented in Mamallapuram Town Panchayat. The capacity of the plant is 100 Cu.m. 10K.W electricity is being generated every day and this is being used for energizing street lights.
- In Thiruneermalai Town Panchayat, 25 Cu.M capacity Bio gas plant has been setup at a cost of Rs.6.15 lakhs. The Bio gas plant produces gas from night Soil. 3000 Watts is being generated every day and is being used for energizing street lights.
- The initiative of Bio-methanation from kitchen / market waste will be expanded to realize full potential during the coming years after stabilization of the plants under construction.



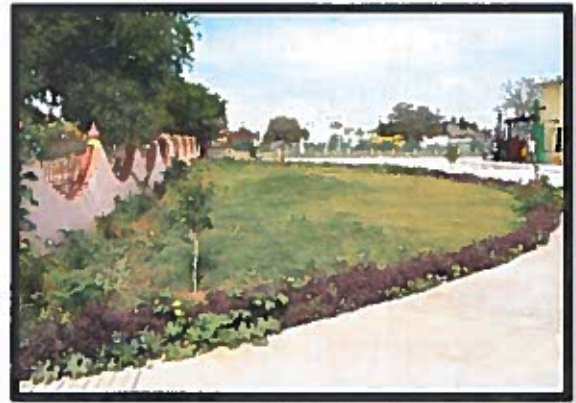
**Digester**



**Arcot Biomethanation Plant  
-3TPD Capacity**



**Biogas Engine**



**Landscapping**

## **5.2 Cluster based Waste to Energy Projects**

Cluster based regional processing and disposal facility of 300 TPD with Waste to Energy concept for handling solid waste in Pallavapuram and Tambaram Municipalities at Vengadamangalam is under implementation at an estimated cost of Rs.99 crore with the financial assistance of JnNURM on PPP mode with a concession period of 20 years. On completion of the project, the nearby four urban local bodies namely, Anakaputhur, Pammal, Sembakkam and Marimalai Nagar will also get face lift by not dumping their waste in their own area. This plant will start producing 2.9 Mega watt electricity per hour from August 2015 onwards.



**Sanitary Landfill**



**Secondary shredder**



**Hot air generator erection**



**Dryer Erection**



**11KV/433V Transformer is erected**



**Kannadapalayam Transfer Station**





**Static compactor and accessories are erected**



**RDF shed - Inner side**

Municipal Solid Waste Processing facility with Waste to Energy concept is under execution in Tirunelveli Corporation under Public Private Partnership mode at an estimated cost of Rs.55 crore. Initial land leveling work is being taken up.

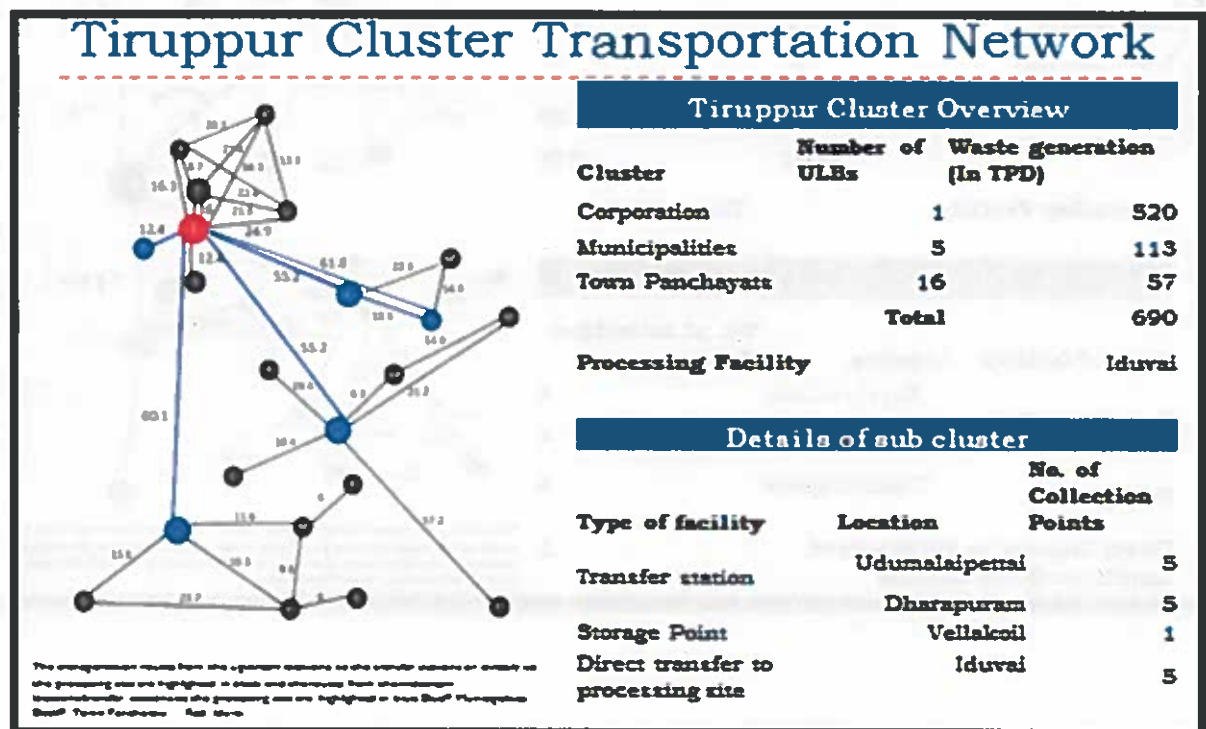
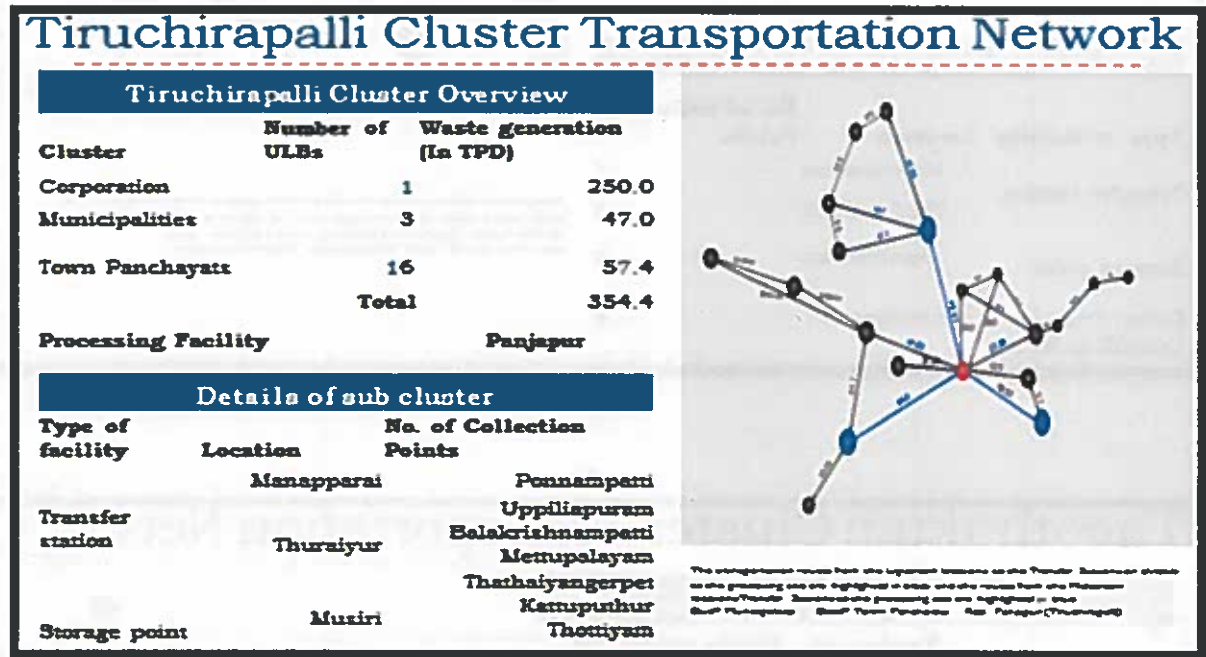
### **5.3 Regional facilities on cluster based approach for ISWM projects**

- Cluster based approach is the new concept which primarily saves the land. Through cluster approach the waste management technologies such as segregation by local sorting and processing facility for windrow composting, recovery of recyclables, Waste to Energy, and development of scientific sanitary landfill will be developed by roping nearby municipalities and village panchayats.
- Detailed Project Reports have been prepared for establishing regional facilities in the 5 identified clusters Tiruchirappalli, Tiruppur, Thoothukudi, Vellore and Nagercoil covering 4 Corporations and 25 municipalities and the Government have made announcements to implement the project with a total cost of Rs.631.39 crore.



Action will be taken to start implementation of atleast two clusters during the year 2015-16. Action is also being taken to form further clusters if found necessary during the year 2015-16. A number of Corporation / Municipality / Town Panchayat level projects are already sanctioned during the past two years and all of them will be completed during 2015-16.

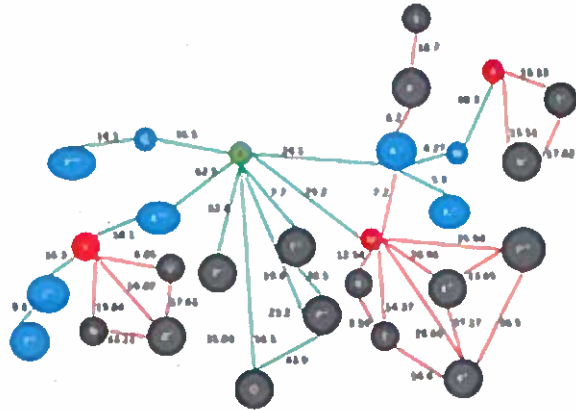
### Maps showing proposed 5 clusters



# Vellore Cluster Transportation Network

## Vellore Cluster Overview

Cluster	Number of ULBs	Waste generation (In TPD)
Corporation		230
Municipalities		297
Town Panchayats		29
<b>Total</b>		<b>556</b>
<b>Processing Facility</b>	<b>Kazam</b>	



## Details of sub cluster

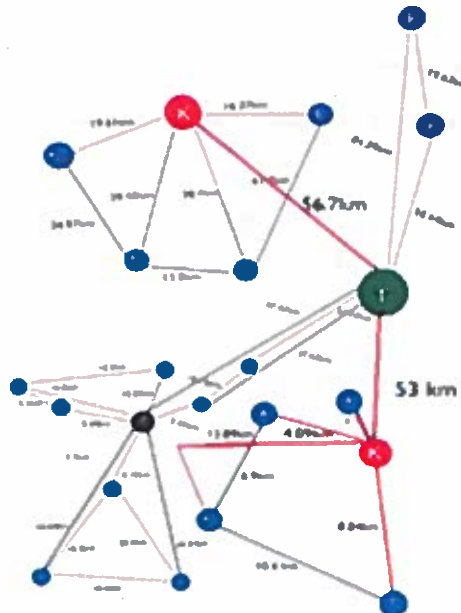
Type of facility	Location	No. of collection Points
Transfer station	Melvisharam	7
	Vaniyambadi	3
Storage point	Arakkonam	2
Direct Transfer to the Proposed Landfill in Kazam		4

The regional transportation routes from the upstream ULBs to the Transfer Station or direct to the processing unit are highlighted in red and the routes from the upstream ULBs to the Transfer Station to the processing unit are highlighted in green. **ULBs: Panchayats: Sullipalayam, Sullipalayam, Sullipalayam.**

# Thoothukudi Cluster Transportation Network

## Thoothukudi Cluster Overview

Cluster	Number of ULBs	Waste generation (In TPD)
Corporation	1	190
Municipalities	2	47
Town Panchayats	19	39
<b>Total</b>		<b>276</b>
<b>Processing Facility</b>	<b>Tharuvaiikulam</b>	

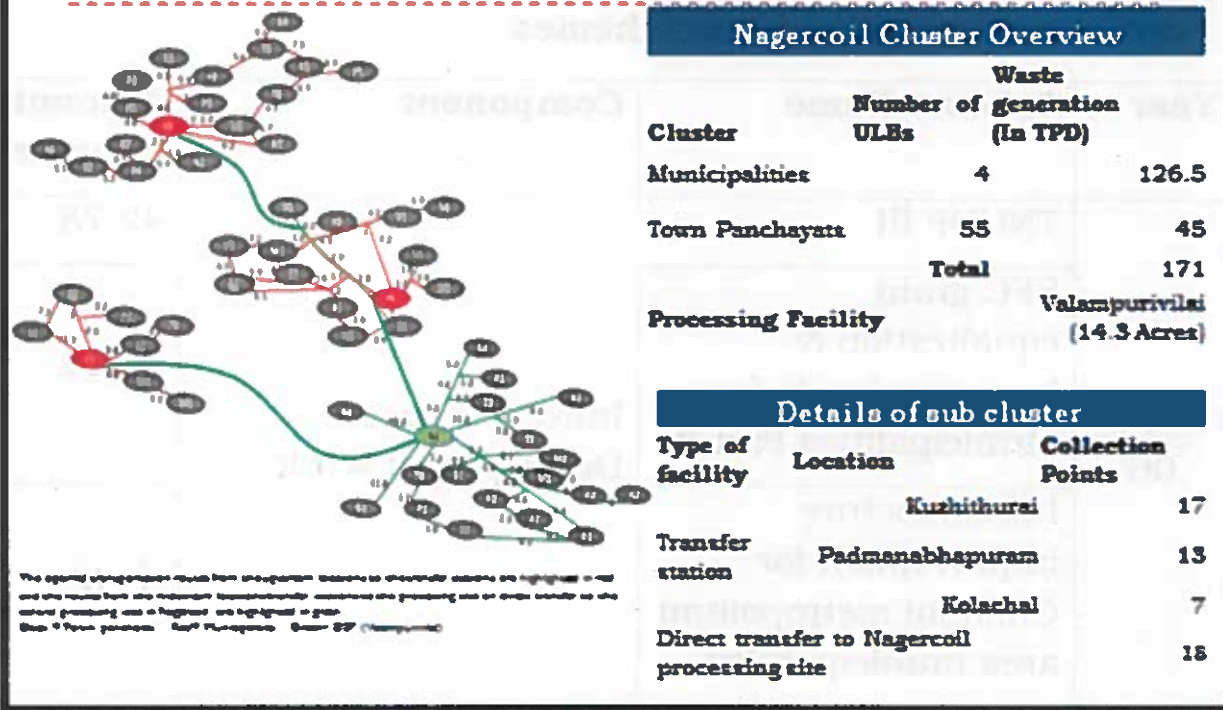


## Details of sub cluster

Type of facility	Location	No. of collection Points
Transfer station	Kayalpattinam	4
	Kovilpatti	4
Storage point	Thenthiruperali	6
Direct Transfer to the Proposed Landfill in Tharuvaiikulam		5

The regional transportation routes from the upstream ULBs to the transfer station or direct to the processing unit are highlighted in red and the routes from the upstream ULBs to the transfer station to the processing unit are highlighted in green. **ULBs: Panchayats: Sullipalayam, Sullipalayam, Sullipalayam.**

# Nagercoil Cluster Transportation Network



## 5.4 Construction and Demolition Waste

Administrative sanction has been given for the Construction and Demolition waste project to Coimbatore Corporation. The estimated project cost of Rs 12.58. crore has been sanctioned under Special Solid Waste Management Fund of Tamil Nadu. By this project the entire C & D waste will be recycled and used as paver blocks.

During the year 2015-16 Detailed Project Report will be prepared for all the Corporations for conversion of C&D waste into useful products. Apart from Coimbatore action will be taken to implement the project in atleast three more Corporation viz., Chennai, Madurai, Tiruchirappalli.

## 6. FUNDS PROVIDED

### 6.1 Support under various schemes

Year	Scheme Name	Component	Amount in crore
2005-06	TNUDP III	Infrastructure Development Work	42.78
	SFC grant equalization & incentive funds for Municipalities Part II		21.82
	Infrastructure improvement for Chennai metropolitan area municipalities		31.00
2006-07	Part II	Purchase of Land for Compost yard	6.48
2006-07	JnNURM (Namakkal)	Sanitary landfill and composting plant	3.58
2005-06 to 2010-11	XII Finance Commission grant	Infrastructure Development Work	327.15
2007-08	JnNURM (Coimbatore)	Scientific Closure, Transfer station, Sanitary Landfill and composting plant	96.51
2007-08	JnNURM (Madurai)	Scientific closure, Sanitary landfill, and composting plant	74.23
2008-09	JnNURM (Pallavapuram and Tambaram)	Scientific Closure, Transfer station, Landfill, RDF, composting and waste	99.00



		to energy plant	
2011-12	IUDM	Purchase of Primary collection,Secondary collection vehicles and compost yard development	139.04
2012-13	IUDM		71.56
2013-14	IUDM		16.74
2012-13	Part II	Purchase of Primary collection,Secondary collection vehicles and compost yard development	0.30
2013-14	Part II	Bio-methanation plant at Arcort (pilot project)	4.80
2012-13	Infra gap filling Fund	Purchase of Primary collection,Secondary collection vehicles and compost yard development	2.00
2013-14	Infra gap filling Fund		1.72
2013-14	O&M gap filling		1.66
2013-14 to 2014-15	Special solid waste management fund	SWM infrastructure development activities in urban local bodies	206.43
2015-16	State Innovative Fund	Generation of Enriched biogas as an alternative fuel for Thoothukudi corporation SWM secondary collection vehicles.	1.34
<b>Total</b>			<b>1148.14</b>

## 6.2 Special Solid Waste Management Fund

The Government of Tamilnadu had created a special Solid Waste Management fund of Rs.250 crores per annum vide G.O (Ms) No.351, Finance (FC-IV) dated: 12.08.2013 for carrying out Solid Waste Management activities for which Rs.150 crore for village panchayats and Rs.100 crores for Urban Local Bodies (ULBs) viz., Town panchayats, Municipalities and Corporations. Under this Fund 222 works have been taken up at an estimated cost of Rs.206.43crore of which Rs.143.46crore has been sanctioned and the progress of works are in various stages of implementation. The details of work are furnished below;

Name of the Project	Estimated Cost in crore	Grant	No.of Works
Waste to energy project in Thirunelveli Corporation	55.00	9.00	1
Scientific closure at Ramayanpatti dumping site in Tirunelveli Corporation	8.16	6.53	1
Litter free project in Tambaram Municipality	8.76	7.89	1
Construction of 5 MT Bio-methanation plant in Tambaram Municipality	0.90	0.45	1
Construction of Bio-methanation plant 120m <sup>3</sup> capacity -3nos in Coimbatore corporation	1.69	0.85	3
Construction of 100TPD C&D waste in coimbatore corporation	12.58	11.32	1
Implementation of SWM project in Vellore corporation	2.63	2.37	6
Implementation of SWM project in Thanjavur corporation	11.86	10.67	7
Implementation of SWM project in Thiruvanamalai Municipality	13.93	12.54	26
Implementation of SWM project in Pollachi Municipality	4.61	4.15	9
Implementation of SWM project in	11.17	10.05	12

*Kundu who...*

Kumbakonam Municipality			
Implementation of SWM project in Jeyankondam Municipality	10.22	9.22	20
Implementation of SWM project in Karaikudi Municipality	3.58	3.23	13
Implementation of SWM project in Melur Municipality	2.08	1.87	7
Implementation of SWM project in Palani Municipality	4.86	4.37	13
Implementation of SWM project in Rameswaram Municipality	5.83	5.24	24
Implementation of SWM projects in 77 Town Panchayats @ 63,12	48.58	43.72	77
<b>Total</b>	<b>206.43</b>	<b>143.46</b>	<b>222</b>

### 6.3 Satellite Town Scheme under GOI

During the year 2012-13, Sriperumbudur Town Panchayat was taken up under **Satellite Town Scheme under Government of India scheme** at a project cost of Rs.4.44 crore and has also been provided with sufficient vehicles, machineries, Resource Recovery Park with equipments and infrastructure facilities have been provided.

**Funds available under the Solid Waste Management Fund (Rs.100 crores per annum), Swachh Bharat Mission (Rs.166 crores per annum) and other State and Central Schemes will be utilized to implement SWM projects.**

## 7. Information, Education and Communication (IEC) and Capacity building for MSWM

Developing Information, Education and Communication (IEC) materials for awareness programme and disseminate the same through mass and print media.

- I. Intensive training have been imparted to the officers involved in Solid Waste Management through TamilNadu Institute of Urban Studies, Coimbatore, Engineering Staff

College of India, Hyderabad, Administrative Staff College of India, Hyderabad, State Institute of urban development, YASHADA, Pune and other leading Educational Institutions. A Post Graduate Diploma Course in Solid Waste Management (PGDSWM) affiliated by Bharathiyar University through TamilNadu Institute of Urban Studies, Coimbatore.

- II. Motivating the public in a continuous manner to render their cooperation and for inculcating the habit and attitude for the effective segregation of waste into dry and wet at their source itself
- III. Ensuring the segregation of recyclables to the maximum extent possible
- IV. The **Ready reckoner** containing 333 pages on MSWM has been published in 2008, for the use of ULBs for the effective implementation of SWM projects. A to Z information with relevant rules and norms are available in this ready reckoner.

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<p><b>வசிகரிப்பில் சுவயம்சம்!</b> <b>வசிகரிப்பில் யாசித்த வயம்!</b></p> <p><b>மக்களது மீளமைப்பு சுவயம்சம் மட்டுமே வசதிகள்!</b> <b>விநியோகம்! வசதிகள்! மீளமைப்பு மீளமைப்பு!</b></p>		<p><b>பகுத்தறிதல் ஆரம்பிப்பது!</b> <b>புதிதான மீளமைப்பு மீளமைப்பு!</b></p> <p><b>மக்களது சுவயம்சம் மீளமைப்பு வசதிகள்!</b> <b>மக்களது சுவயம்சம் மீளமைப்பு வசதிகள்!</b></p> <p><b>மக்களது வசதிகள் மீளமைப்பு வசதிகள்!</b> <b>மீளமைப்பு வசதிகள் மீளமைப்பு!</b></p>		<p><b>சுவயம்சம் மீளமைப்பு வசதிகள்!</b> <b>சுவயம்சம் மீளமைப்பு வசதிகள்!</b></p> <p><b>மீளமைப்பு மீளமைப்பு வசதிகள்!</b> <b>மீளமைப்பு மீளமைப்பு வசதிகள்!</b></p> <p><b>மீளமைப்பு மீளமைப்பு வசதிகள்!</b> <b>மீளமைப்பு மீளமைப்பு வசதிகள்!</b></p>	
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