



# IMPLEMENTATION OF SWM RULES

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SOLID WASTE MANAGEMENT STATUS  
Compliance of OA 606/2018

**21<sup>rd</sup> July 2022**

**Government of Tamil Nadu**

# Solid Waste Management in Tamil Nadu

## (Urban)

In Tamil Nadu, Municipal Administration and Water Supply Department has the administrative control over **649 ULBs** viz

- Greater Chennai Corporation
- Commissionerate of Town Panchayat (490 TPs)
- Directorate of Municipal Administration (20 Corporation & 138 Municipalities)

Total Waste Generation in TPD	Wet waste in TPD	Dry waste in TPD	Inert and silt in TPD
<b>14,995</b>	<b>8,084</b>	<b>5,471</b>	<b>1,440</b>

# Solid Waste Management status in Tamil Nadu

(Urban)

Status	As on July 2019	As on July 2020	As on June 2021	As on June 2022
Quantity of waste generated in TPD	13,744	11,437	13,006	14,995
Quantity of Door to Door Collection (TPD)	12,781	10,751	12,335	14,396
Quantity of waste segregated at source (TPD)	11,270	8,120	10,404	12,147
Quantity of waste collected & Transported (TPD)	13,744	11,437	13,006	14,995
Quantity of waste processed (TPD)	7,422 (54%)	5,947 (52%)	7,543 (58%)	9,310 (62%)

## Segregation at source and D2D collection of waste

- Currently the state has achieved an
  - ✓ 96% door to door collection
  - ✓ 81% source segregation.
- 100% of total waste is being collected

*To achieve 100% collection and segregation, massive IEC awareness campaign “Peoples movement for clean cities” is being conducted in all ULBs*



# Segregation at source and D2D collection of waste



## Waste Processing

- In 2022, Out of 14,995 TPD of total waste generation, 9,310 TPD is processed
- In 2019, Out of 13,744 TPD of total waste generation, 7,422 TPD processed

### Wet waste processing

- Out of 8,083 TPD of wet waste, 5542 TPD is processed
- In 2019 - Out of 7,146 TPD of wet waste, 3,827 TPD processed

Processing Facilities	2019		2022	
	Nos	Capacity (TPD)	Nos	Capacity (TPD)
Micro Composting centres	628	2198	995	3569
Bio CNG plant	-	-	1	100
Garden waste & tender coconut shells plant	-	-	4	320
Onsite composting centres	876	310	907	350
Biomethanation plants	104	244	107	259
Windrows & Vermi composting	485	1075	556	1,455
<b>Total</b>	<b>2,093</b>	<b>3,827</b>	<b>2,570</b>	<b>6,053</b>



# Wet waste processing



**MCC- Trichy**



**Attur Municipality**



**Thuraiyur Municipality**



**Windrows- Bathlagundu**



**Vermi Composting- Ponnampatti**



**Biomethanation plant- Coimbatore**

# Wet waste processing - Approach to reduce gap

## Gap in wet waste – 2,550 TPD

- 6 plants of Bio CNG with capacity of 600 TPD (100 TPD each) is under implementation on PPP mode
- Composting centers like MCC & windrows with capacity of 650 TPD in 215 ULBs
- 1,300 TPD of Bio CNG and windrow composting plant is sanctioned under SBM 2.0



**Bio CNG - Chennai**



**Komarapalayam MCC**



**PN Palayam –Windrows**



# Wet Waste Processing – Greater Chennai Corporation



MCC – Tenampet (GCC)



Windrow- Madhavaram (GCC)



Manure sale to TANFED @ Madhavaram (GCC)

# Waste Processing – Dry waste

- In 2022, Out of 5,470 TPD of total waste generation, 2,890 TPD is processed
- In 2019, Out of 5,223 TPD of total waste generation, 1,875 TPD processed

## Dry waste disposal

- ✓ 1190 TPD of Saleable waste /recyclable waste collected from household and sold out to local vendors and amount distributed to sanitary workers.
- ✓ 1700 TPD of combustible dry waste is being disposed in **439 nos of Material Recovery Facilities/Resource recovery centres** and sent to cement plants/ sugar mills/ power plants for co-processing.
- ✓ 880 TPD of Inert and drain silt is used for filling low lying areas

### Gap in dry waste – 2,579 TPD

512 nos of Material Recovery Facilities with capacity of 3,620 TPD is sanctioned under SBM 2.0 to process the dry waste



# Disposal of Dry Waste to Vendors, Cement factories and Sugar Mills



# Disposal of Legacy Waste - Biomining

- No of Locations where legacy waste exist – **271\* nos**
- The estimated quantity of legacy waste - **207 lakh cu.m**
- Biomining works taken up - **269 locations** (19 Corporations, 95 Municipalities and 121 Town Panchayats)
- Work completed in **69 locations** and cleared **32 lakh Cu.m**
- So far **360 acres** of land has been reclaimed

*\* Biomining not feasible in Colachal and Kodaikanal municipality due to salt-pan & undulated hilly terrain.*



## Plan of Action for 100% - Removal of Legacy waste

S.No	No. of locations	Total quantity in lakhs Cu.m	Progress in Percentage	Probable Date of Completion
1	40	25.02	> 75%	30.09.22
2	21	22.38	50 to 75%	31.12.22
3	18	2.84	25 to 50%	30.06.23
4	79	20.6	0-25%	31.12.23
5	42	1.03	Tender stage	31.12.23
6	2 (GCC)	34	Perungudi – 30%	31.03.24
		64	Kodangaiyur – DFR stage	31.12.24
	<b>200</b>	<b>174.67</b>		

- ✓ After completion of the biomining, about **1,500 acres of land will be reclaimed** & proposed to setup processing facilities and surplus land will be developed as a green belt.
- ✓ During 2022-23, it is proposed to takeup **Green belt** in 69 ULBs which covers 369 acres of reclaimed land.

# Legacy waste disposal – Biomining sites



*Pammal Municipality*



*Poonamallee Municipality*



*Idappadi Municipality*



*Erode Corporation*



# Legacy waste disposal – Biomining sites



*Tenkarai Town panchayat*

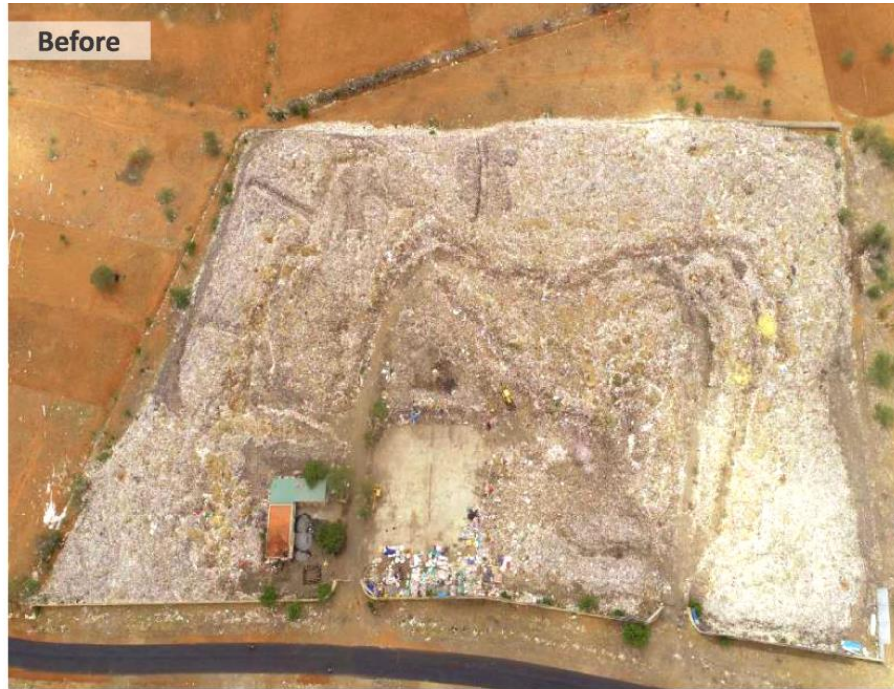


*Marakkanam Town Panchayat*



*GCC -Pallikaranai*

# Legacy waste disposal – Biomining sites



**Karur Municipality**



# Legacy waste disposal – Biomining sites

Before



After



**Chidambaram Municipality**

# Legacy waste disposal – Biomining sites

## Erode Corporation – Removal of Legacy waste from the bank of river Cauvery

- ✓ Location – Viairapalayam river side
- ✓ Total Legacy waste removed – 1.78 lakh cu.m
- ✓ Total area reclaimed - 7 acres

Before



After





## Biomining Work in progress at Perungudi Site (Greater Chennai Corporation)



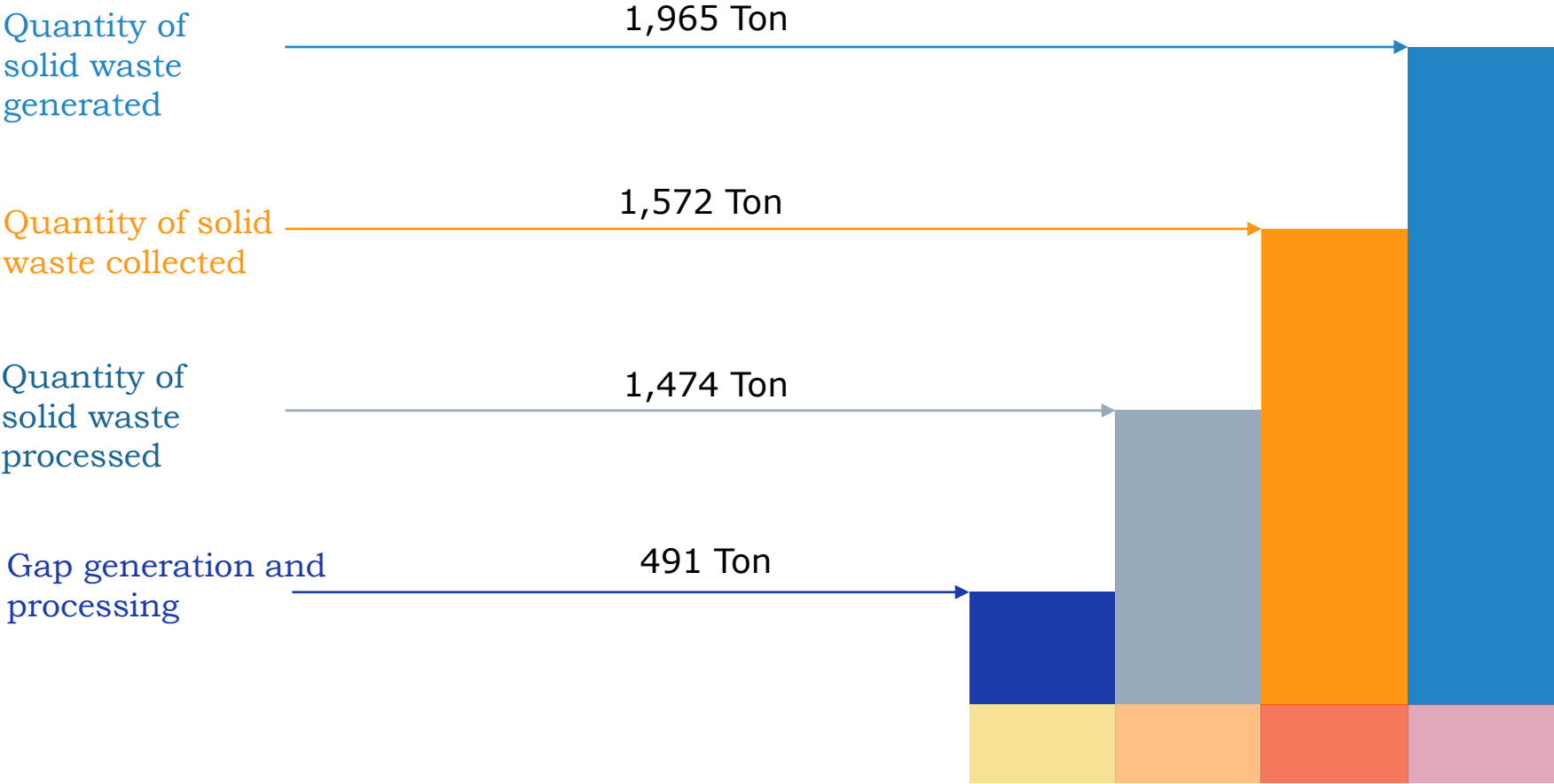
- Total quantity of legacy waste - **34 lakh cu.m**
- So far processed - **10.27 lakh cu.m (30%)**
- Total Area to be reclaimed – **225 acres**

## Time frame

<b>S.no</b>	<b>Type of waste</b>	<b>Probable date of achievement</b>
1	Door to Door Collection	31.12.22
2	Wet waste processing	31.03.23
	<b>300 TPD Bio CNG (GCC)</b>	31.03.23
	<b>300 TPD Bio CNG (GCC)</b>	31.12.23
	<b>650 TPD of MCC &amp; Windrows (DMA+CTP)</b>	31.03.24
	<b>700 TPD of Windrows &amp; 600 TPD of Bio CNG (GCC)</b>	31.12.24
3	Dry waste processing	31.12.23
	<b>3,620 TPD of MRF</b>	31.03.24
4	Biomining of legacy waste	198 locations - 31.12.23 2 locations (GCC) - 31.12.24



# Solid Waste Generation and Processing - Rural



# SEGREGATION, COLLECTION AND TRANSPORTATION OF WASTE

- Basic SWM Infrastructure facilities are provided in all 12,525 Village Panchayats in phased manner
- 66,130 Thooimai Kaavalars (Green warriors) have been engaged in 12,525 Village Panchayats for Door to Door collection of segregated waste
- The segregated waste are brought to the waste processing site through Tricycles / Push Carts / E Carts provided in each Village Panchayat

# SEGREGATION, COLLECTION AND TRANSPORTATION OF WASTE

- Secondary segregation done in the segregation shed. Bio degradable waste is processed in the community compost pit and generated manure is processed in the Vermi compost unit in the Village
- Micro Composting Centre's are established through World Bank fund to treat the wet waste generated effectively **(287 Micro Composting Centre's are established in the peri urban/bigger Village Panchayats)**
- Recyclable waste are sold to scrap dealers through Thooimai Kaavalars (Green warriors)
- Plastic waste is being shredded in Plastic Waste Management Unit and utilized for road construction.



## PLASTIC WASTE MANAGEMENT

- SBM(G) phase II provides Rs.16 lakh per Block to establish Plastic Waste Management unit
- So far 130 Plastic Waste Management units are established.
- One Plastic Waste Management per Block will be established.
- Shredded plastic is blended with bitumen (5% to 8%) and it is used for road construction
- From January 2020, 130 MT of plastic waste are shredded and 140 kms of road were laid.



# PLASTIC WASTE MANAGEMENT



# Good Models

## Model cities & towns

### Corporations

**Erode** – All wet waste generated in the town are converted into manure through 24 Micro composting centres. The manure generated is given to the farmers at free of cost

### Municipalities

#### Thiruvannamalai

About 250 kg of Cloth waste are collected every month from tailor shops. The fabric waste collected by municipal workers daily recycling of waste clothes in to mats.

#### Kadayanallur

About 652 households are successfully practicing home composting. The manure generated in each household are used for own gardening and also given to the neighbors at free of cost.

### Town Panchayats

#### Chinnalapatti

Cloth waste left over from garment factories are directly collected and processed to produce colorful and attractive door mats, bags, etc.

#### Andiapatti

The total waste generated in the TP is about 7 TPD. The wet waste is being effectively processed through windrow composting. The manure generated is value added through vermi composting and generating 2 MT per month and sold at a cost Rs.8 per kg.

#### Karunguzhi

Citric fruits collected from different juice shops are dried and powdered. This can be used for vessel washing detergent. Flower waste collected from different places and dried. This can be powdered and sold for the purpose of rangoli.

# IEC - People's Movement for Clean Cities

- To make the cities clean and to involve every citizen in journey towards Garbage free cities People's Movement for Clean Cities has been taken up on mass scale in Urban Local Bodies.
- Special campaign to create awareness about cleanliness on 2<sup>nd</sup> and 4<sup>th</sup> Saturday of every month with the following objectives:
  - ✓ Sensitize people about solid waste management and make them aware about their responsibility
  - ✓ Create awareness among the segregation of waste at source
  - ✓ Ensure non littering of public places
  - ✓ Quest for cleanliness among the citizens
  - ✓ Say No to Single Use Plastic (SUP)

**My Waste, My Responsibility**

“என் குப்பை - என் பொறுப்பு”



## IEC - Launching of Campaign

- Launch of the campaign by Hon'ble Chief Minister on 03.06.2022 at Chennai.
- Simultaneously, it was launched in all other ULBs.
- Planned for 2<sup>nd</sup> and 4<sup>th</sup> Saturday of every month.





# IEC - Launching of Campaign



# 1<sup>st</sup> Thematic activity - Peoples Movement

**In continuation to the launch of Peoples movement on 03.06.2022** for effective Implementation of the scheme, on June 11th i.e on second Saturday of the month, Cleaning activity have been taken up at

- ❖ Bus stands,
- ❖ Parks,
- ❖ Outside of Railway station,
- ❖ Outside of Religious places,
- ❖ Tourist Places,
- ❖ TNH UD settlements,
- ❖ slums,
- ❖ Crematorium / Burial grounds.

# 1<sup>st</sup> Thematic activity - Peoples Movement

Total No. of Volunteers / Students / NGOs / RWAs participated: **57,018**

Total No. of Elected representatives/ VIPs participated: **9,351**

Total No. of Locations mass cleaning activities done: **2,818**

Total Weight of Wastes removed : **742 Tonnes**

Total No. of persons downloaded Swachhata app : **16,005**





# Transformation of garbage vulnerable points



## 2<sup>nd</sup> Thematic activity - Peoples Movement

**Sensitizing for Source segregation, Non-littering of public places & say No to SUP**

Total No. of Volunteers / Students / NGOs / RWAs participated: **69,955**

No of people sensitized through Volunteers/ NGOs / RWAs: **5,07,623**

Total No. of Elected representatives/ VIPs participated: **9,452**

Total No. of Hotspots cleared/put it into alternate use : **2,818**

Total Weight of Wastes removed : **778 Tonnes**

Total no.of shops sensitized on SUP :**28,354**

Quantity of plastic seized (in Kg) : **21.19 Tonnes**

Total No. of persons downloaded Swachhata app :**16,097**

## 2<sup>nd</sup> Thematic activity - Peoples Movement

**Sensitizing for Source segregation, Non-littering of public places & say No to SUP**





## 2<sup>nd</sup> Thematic activity - Peoples Movement


**Sensitizing for Source segregation, Non-littering of public places & say No to SUP**



## 2<sup>nd</sup> Thematic activity - Peoples Movement

**Sensitizing for Source segregation, Non-littering of public places & say No to SUP**





திருநெல்வேலி மாவட்டம்  
களக்காடு நகராட்சி  
தூய்மை நகரங்களுக்கான மக்கள் இயக்கம்  
People's Movement for Clean cities

எனது குப்பை: \_\_\_\_\_ எனது நகரம்: \_\_\_\_\_  
எனது பெறுப்பு: \_\_\_\_\_ எனது பெருமை: \_\_\_\_\_

சான்று

எனது வீட்டில் உருவாதும் குப்பைகளை மக்கும் குப்பை  
மற்றும் மக்காத குப்பை என தனித்தனியாகப் பிரித்து நகராட்சி  
தூய்மைப் பணியாளரிடம் வழங்குகிறோம் என சான்று  
அளிக்கப்படுகிறது.

ச.முத்துமதி  
மாணவர் கையொப்பம்

N.சுப்பிரமணியன்  
S.லதா  
பெற்றோர் கையொப்பம்

**Declaration by parents on Source segregation**



# 3<sup>rd</sup> Thematic activity - Peoples Movement

## Awareness campaign in Schools and Colleges



- In addition to these events, every Wednesday the awareness campaign were planned in Schools and College to sustain the movement



# 3<sup>rd</sup> Thematic activity - Peoples Movement

## Awareness campaign in Schools and Colleges



- As a result of 3 thematic activities, the quantity of segregated waste to processing facilities has been increased to 5% - 8%.

# PLASTIC WASTE MANAGEMENT CAMPAIGN

Plastic waste management campaign is started in rural areas from **01.07.2022**. Following activities are planned in the campaign,

- Creating awareness on eradicating the use of Single Use Plastic and promoting 'Meendum Manjappai'
- Implementing Plastic Buyback Policy in all Village Panchayats
- Transporting the collected plastic waste to Plastic Waste Management Unit
- Sale of Shredded Plastic to Road Contractors

தூய்மை பாரத இயக்கம் (இளரகம்)  
திண்டுக்கல் மாவட்டம்

**நெகிழி இல்லா தமிழகம் !**

நம்ம ஊராட்சிக்கு நெகிழியிலிருந்து  
வீழவு காலம் வந்திருச்சுங்க...

பிளாஸ்டிக் மறுசுழற்சி  
உருவாவதில்  
சாத்தியமாகும்

**நெகிழி**யை தரம் ரிச்சு கொடுத்தா...

**1** கிலோவுக்கு  
**10** ரூபாய்

பிளாஸ்டிக் கவுன்ஸ், டிரைபிளாஸ்டிக் கவுன்ஸ், பாய் கவுன்ஸ், டிரைபிளாஸ்டிக் கவுன்ஸ், மசாண்ட கவுன்ஸ்

**நெகிழி பைகளை தாங்க ! காசு வாங்கிட்டு போங்க !!**

**மீண்டும் மஞ்சள்பை... ரேளரஸ்டிக் பைகளுக்கு குட்பை...**

மக்கும், மக்காத குப்பைகளை வீட்டிலேயே பிரித்து தூய்மை காவலர்களிடம் கொடுப்போம்...  
மாதிரியை காலத்தில் பயன்படுத்திய துணிகள், நெய்நெய்க்கை தனிகவரில் வைத்து கொடுப்போம்...  
தூய்மை காவலரின் சூழலாகியும்... நம் சுகாதார பழக்க வழக்கத்தின் துவக்கம்...

நெகிழி கழிவு மேலாண்மை அலகு  
தெலுப்புக  
என்புச்செட்டி, ஆத்தூர் ஊராட்சி ஒன்றியம்,  
திண்டுக்கல் மாவட்டம்.

**99444 75255**

## Plastic Waste Management

- From 01.01.2019, Government of Tamil Nadu issued orders banning of manufacture, storage, transport, supply, sale and use of 'use and throwaway plastics' (Single Use Plastics) vide G.O. Ms. No. 84 dated 25.06.2018.
- TNPCB taken steps to control production of SUP by issuing Closure direction and disconnection of power supply to **174 industries**. ULBs taken steps to seize SUPs and imposed fine amount from January 2019 to May 2022 are as follows:

S.No.	ULBs	SEIZED SUP in Tons	Fine Amount Collected in Lakhs
01.	Municipal Corporations	1012	600
02.	Municipalities	634	265
03.	Town Panchayat	122.37	143.24
04.	Greater Chennai Corporation	365	222
	Total	<b>2133.37</b>	<b>1230.24</b>



## Plastic Ban Awareness Campaign: “MEENDUM MANJAPPAI”

- Government of Tamil Nadu has issued orders *vide* G.O. (Ms) No. 116 of Environment, Climate Change & Forest (EC.2) Department dated 27.11.2021
  - To fight plastic pollution and eliminate single use plastics, roadmap for single use plastic ban, activities for **“Meendum Manjappai”** campaign and proposed plans for successful implementation of the People’s campaign on one time use and throwaway plastics
- Hon’ble Chief Minister of Tamilnadu launched a mega event **on 23.12.2021** by flagging off the **“Meendum Manjappai”** campaign, *launch of Manjappai logo* to use traditional cloth bag (manjappai) and also made an appeal to the public to use cloth bags and to avoid single use plastics.
- **Manjappai Vending Machine** has been installed and the same was inaugurated during World Environment Day, 2022 on 05.06.2022.
  - The automatic machine dispenses a yellow cloth bag for 10 rupees and has been promoted and conversely the use of plastic carry bags among the general public is decreased.



## Plastic Waste Management

MoEFCC Notification dated 12.08.2021 – SUP ban from 01.07.2022	Status
MOEF&CC notified Plastic Waste Management (Amendment) Rules, 2021 in which certain Single Use Plastic items have been prohibited from 30.09.2021 and plastic carry bags less than 120 microns from 31.12.2022.	Comply with

### MANJAPPALAI EXPRESS TRAIN

- Manjappalai Express Train to be launched this year.
- Train will run throughout the State for 45 days.
- Will have on board & off board awareness programmes on SUP.

### WAY FORWARD

- An Expo on Eco alternative proposed in August 2022
- Awareness on Eco alternatives & encourage Eco alternative industries
- Stop usage of banned plastic items in all department offices including district offices
- Moving towards a plastic free Secretariat, Collectorates, Police offices etc



# SEWAGE MANAGEMENT





## SEWAGE MANAGEMENT:

Category	Quantity of sewage generation (in MLD)	Treatment capacity in ( in MLD)	Current Gap in treatment (in MLD)	Utilization of treated sewage in MLD		
				Agriculture/ Horticulture purpose	Industrial purpose	Any other purpose
CMWSSB (Chennai)	743.00	745.00	-	-	71.00	8.00
DMA	1698.73	994.31	704.42*	36.50	44.00	324.35
DTP	429.29	29.67	399.62**	6.82	-	-
Total	2871.02	1768.98	1102.4	43.32	115	332.35

\* 359.72 MLD (STPs - 359 MLD and FSTPs - 720 KLD are under construction) – will be completed by Dec 2022

\*\* 12.52 MLD (STPs -12.52 MLD and 80 KLD FSTP are under construction) – One STP (Thiruporur) will be completed by 30.9.2022; one STP at Sriperumbudur will be completed by Dec 2022.

# Strategy for Used Water Management

- In Tamil Nadu there were 664 ULBs, (now reorganized to 649 ULBs) of which
  - ✓ 58 ULBs have functional underground sewerage systems
  - ✓ In 22 ULBs UGSS are under various stages of implementation and in 17 Towns it is under DPR stage.
  - ✓ The remaining 584 ULBs will be covered by onsite sanitation facility and Faecal Sludge and Septage Management (FSSM) systems.
- Underground Sewerage Systems is proposed in all Municipal Corporations, AMRUT cities, District headquarters towns, and some other towns of tourist and religious important places.

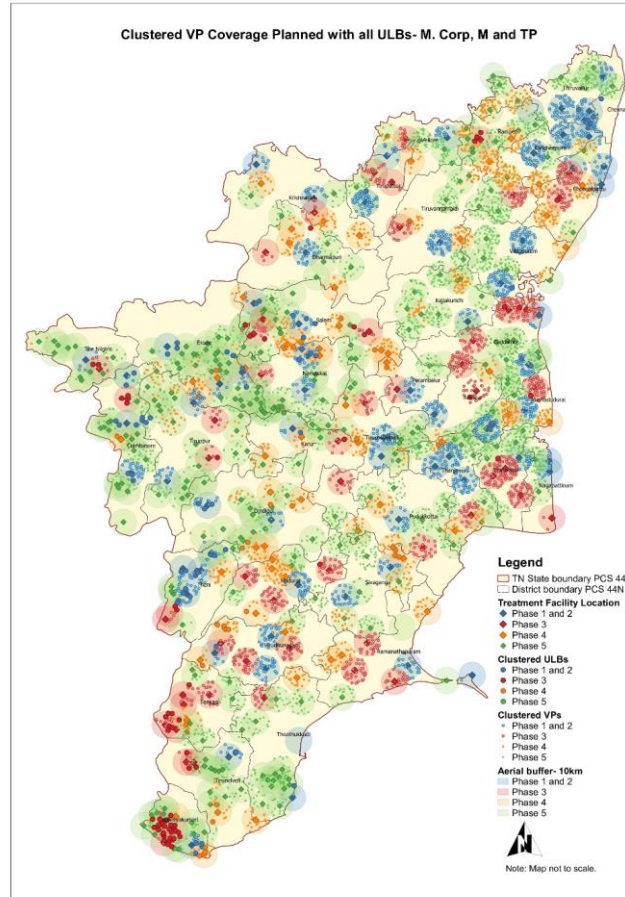
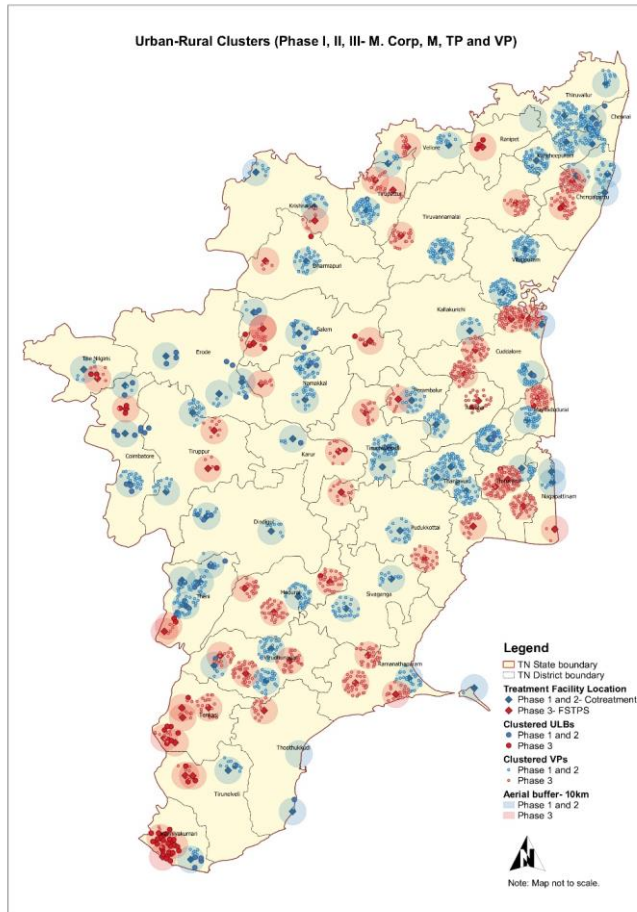
**Cont.....**

## Strategy.....

- 46 ULBs are served by functional 25 FSTPs and 31 FSTPS covering 75 ULBs are under implementation.
- The remaining 463 ULBs are proposed to be covered by 339 FSTPs under SBM 2.0, either on cluster basis or on standalone basis.
- The state has proposed FSTPs in 339 ULBs to serve 463 ULBs.
- The cluster towns are within 15-20 kms of proposed FSTPs is neither any sewage treatment plants or FSTPs
- **Enacted the amendment to District Municipality Act, CMWWSB Act, Madurai and Coimbatore City Municipal Corporation Act** - to exercise Faecal Sludge and Septage management including issuance of license for collection, transportation, treatment and disposal.
- The State will ensure that the untreated wastewater does not enter into waterbodies by implementing these works.



# Strategy of State in Used Water Management



# SEWAGE TREATMENT PLANTS COMPLETED AFTER 2019

## CMWSSB & other ULBs

Sl. No.	Location	Capacity of the plant in MLD	Status
1	Thiruvottriyur STP	31	Commissioned
2	Nesapakkam TTUF	10	Commissioned
3	Chetpet MSTP	1	Commissioned
4	Kotturpuram MSTP	0.6	Commissioned
5	Other ULBs (21 nos)	326	Commissioned
Total		368.60	

# SEWAGE TREATMENT PLANTS UNDER CONSTRUCTION - CMWSSB

No.	Location	Capacity of the plant in MLD	Progress in %	Expected Date of Completion Timeline
1	Sholinganallur STP (PHASE II)	54	90.00	Dec 2022 (36+18) 18 MLD trial run in progress
2	Kodungaiyur STP Zone - I	120	73.25	Dec 2022
3	Kodungaiyur STP Zone - II	120	86.65	Dec 2022
4	Nesapakkam STP Zone - IV	50	78.25	Dec 2022
5	Perungudi STP Zone - V	60	54.20	Dec 2022
6	Perungudi TTUF	10	70.00	Dec 2022
7	Nungambakkam MSTP	1.2	70.20	Dec 2022
8	Langs Garden (TTUF)	10	48.50	Dec 2022
9	Todd Hunter Nagar MSTP	4	86.00	Nov 2022
Total		429.20		



## TERTIARY TREATMENT PLANTS COMPLETED AFTER 2019 - CMWSSB

Sl. No.	Location	Capacity of the plant in MLD	Status
1	Kodungaiyur TTRO	45	Commissioned
2	Koyambedu TTRO	45	Commissioned
3	Nesapakkam TTUF	10	Commissioned
Total		100	

## TERTIARY TREATMENT PLANT UNDER CONSTRUCTION (CMWSSB)

No.	Location	Capacity of the plant in MLD	Physical Progress in %	Expected Date of Completion Timeline
1	Perungudi TTUF	10	70.00	Dec 2022
2	Langs Garden (TTUF)	10	48.50	Dec 2022
Total		20		

## STP under Construction – Other Corporations and Municipalities

Sl. No.	Location	Capacity of the plant	Status
1	STP (17 Locations)	359.00 MLD	Under construction
2	STP (15 locations)	272 MLD	Proposed
3	FSTP (46 locations)	0.72 MLD	Under construction
4	FSTP (24 locations)	0.37 MLD	Proposed
Total		632.19 MLD	

To monitor the quality parameters continuously as per **CPCB** directions, Installation of online continuous effluent monitoring system (**OCEMS**) under progress in all completed & ongoing STP's.

- OCEMS will be installed in all the existing STPS by September 2022 and;
- In ongoing STPs it will be completed by December 2023



## STP under Construction – Town Panchayats

Sl. No.	Location	Capacity of the plant	Status
1	STP (2 locations)	12.52 MLD	Under construction
2	FSTP (5 locations)	0.08 MLD	Under construction
Total		12.52 MLD	

- **For small towns less than 1 lakh population** - strengthening of sanitation services will be done by improving on-site systems regulation and Fecal sludge management in SBM 2.0. STP cum FSTP will be brought within the provision for the small volumes of used water and to treat fecal sludge.

# Best Practices

## For Urban:-

- **People below the poverty line** – sewer line connections are given to the premises less than 500 sq.ft at Rs. 100 per connection to improve hygiene and safe disposal of sewage.
  - A total of 11,839 house sewer connections have been given after 2019 under this scheme.
- **Septage Management** - To collect fecal sludge from the added areas of the Greater Chennai Corporation, served by septic tanks, CMWSSB has increased the number of decanting points in Sewage Treatment Plants for collection and co-treatment.
  - The collection of septage has been increased from 2.1 MLD in 2019 to 8.65 MLD at present and co-treated at Nesapakkam, Perungudi and Sholinganallur.

# Best Practice

## For Rural:-

- Individual and community soak pits works are taken in all Village Panchayats for Grey Water Management
- Under Swachh Bharat Mission (Grameen) Twin Leach Pit toilets are promoted to treat the faecal sludge at onsite
- **5 Faecal Sludge Treatment Plants** are proposed and under progress at Tiruvallur, Kanchipuram, Chengalpattu, Coimbatore and Salem
  - It is also planned to utilize the facilities of FSTPs located in the urban areas by mapping nearby Villages (in a radius of 10-15 kms) for treating the faecal waste from septic tank toilets.
  - Initially, **1035 Village Panchayats** have been mapped with urban FSTPs.



# Onsite Sanitation System - Rural



Individual Soak Pits - Keelmorappur Panchayat, Harur Block, Dharmapuri District



Community Soak Pit - Brahmedesam Panchayat, Bhavani Block, Erode District

# Addressing Connecting Issues (Utilisation of full capacity and reuse of treated water)

- Initially the House Service connections (HSC) were given on demand basis. So, the anticipated HSCs connection could not be achieved.
  - Now HSC to all the households in the town were included as a project component and HSC being effected during the implementation itself. At present the considerable quantity of flow is received at the STP.
- State Government have came out with a policy on reuse of treated wastewater during December 2019.
  - The policy envisages establishment of wastewater grids to promote the use of treated water for industrial, agriculture or non drinking purpose domestic use.
- Presently the utilization of treated water is :-

Industries	115.00 MLD
Agriculture	43.32 MLD
Any other purpose	332.35 MLD

# Reuse of treated used water by industries (Good Models)

- Secondary treated reuse water to Industries – 25 MLD
- Tertiary treated reuse water to Industries – 46 MLD
- Tertiary (TTUF) treated reuse water to lakes – 8 MLD



Koyambedu TTRO

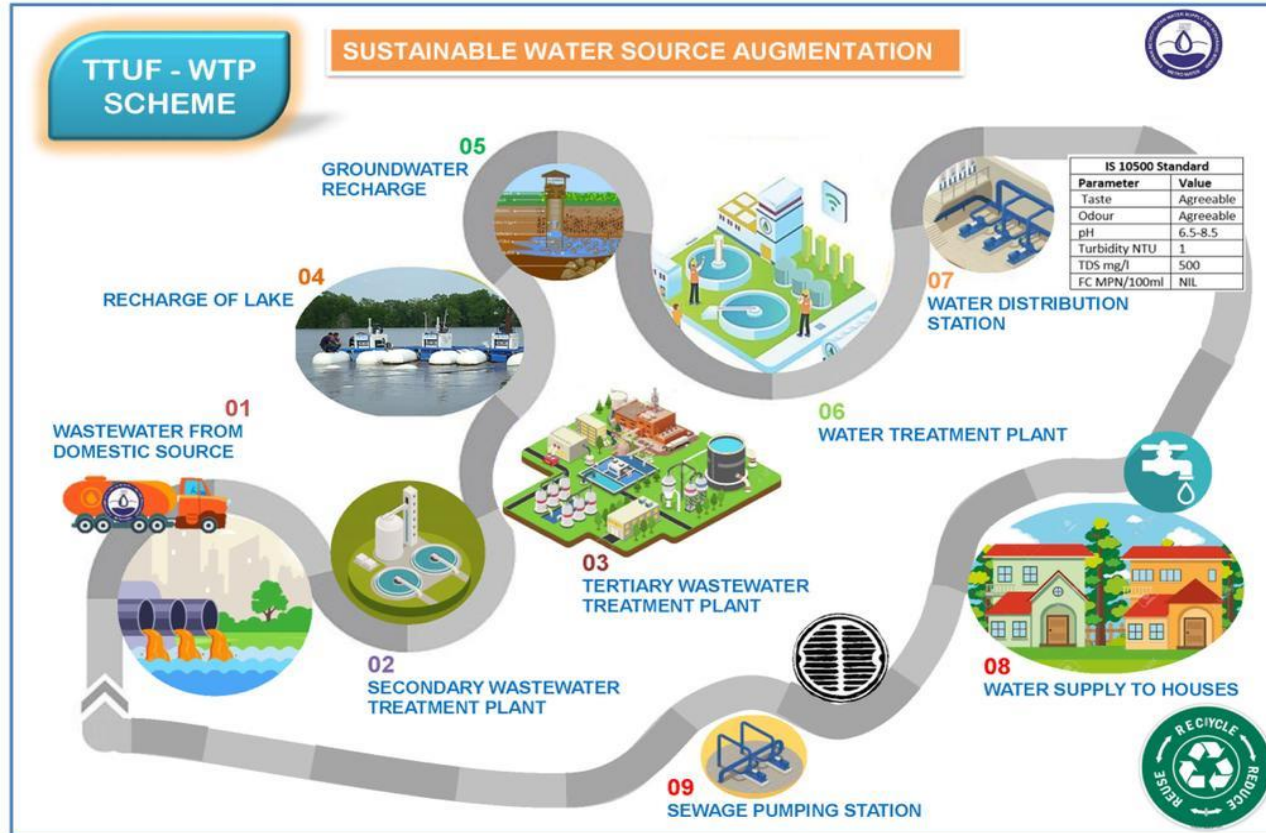


Kodungaiyur TTRO

**Utilization of treated used water has increased from 6% (32 MLD) in 2019 to 13% (79 MLD) at present**

# Utilisation – Treated used water (Good Models)

- Sustainable Decentralised Circular water usage model - Tertiary treated reuse water (STP (SBR) + Ultra Filtration → lake and WTP)





# Utilisation – Treated Used water (Good Models)

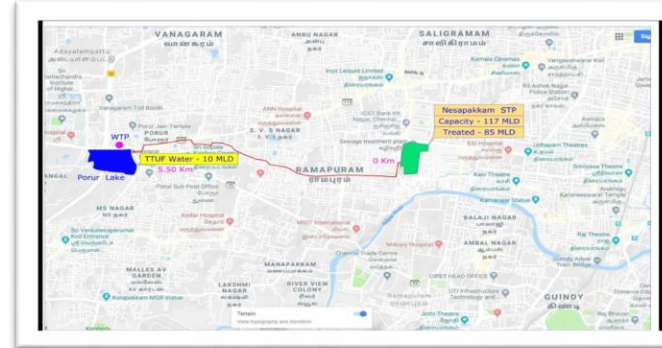
- Tertiary treated reuse water discharged to urbanised lakes – 8 MLD



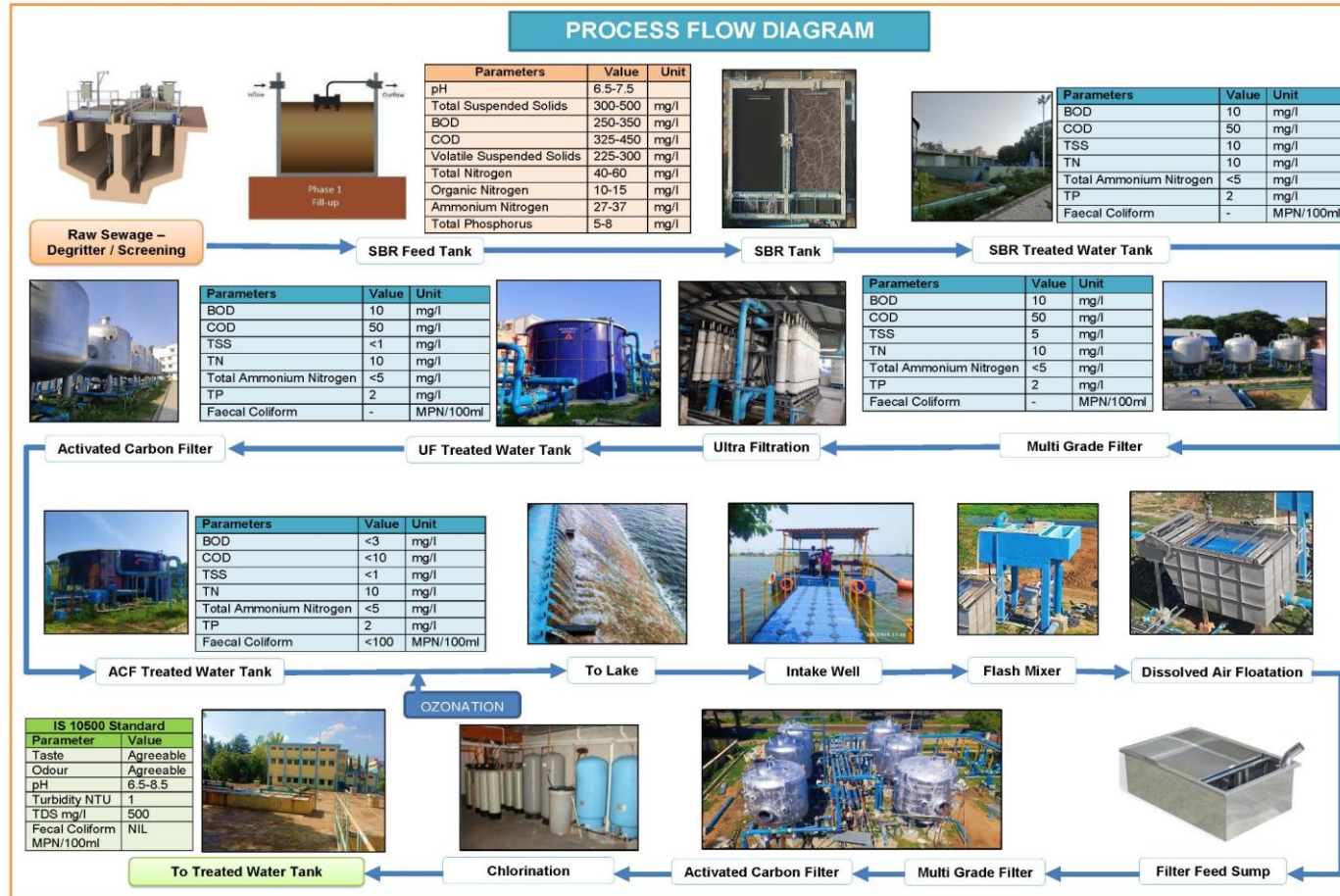
→  
**To Porur Lake**



Nesapakkam STP (SBR) + TTUF - 10 MLD  
(commissioned)



- Sustainable Decentralised Circular water usage model - Tertiary treated reuse water (STP (SBR) + Ultra Filtration lake and WTP)



# Time frame

<b>Actions planned</b>	<b>Status &amp; Numbers</b>	<b>Capacity MLD</b>	<b>Timeline</b>	<b>Rough Cost Estimate</b>
<b>STPs (CMWSSB)</b>	Under Construction (9 nos)	430	Aug 2022 – 1 No. Dec 2022 – 8 Nos.	747.44 Cr.
<b>STPs (DMA)</b>	Under Constrution (17 nos)	359	June 2023	3637 cr ( including collection system)
<b>STPs (DMA)</b>	Proposed (15 nos)	272	Dec 2025	5297 cr (including collection system)
<b>STPs (DTP)</b>	Under Construction (2 nos)	12	Sept 2022 July 2023	119.11 cr
<b>Total</b>	<b>43</b>	<b>1073</b>		<b>9,800.55 cr</b>