

PRESENTATION IN COMPLIANCE OF HON NGT ORDER 606/2018

CHIEF SECRETARY
GOVT OF MAHARASHTRA
BEFORE THE HON NGT, PRINCIPAL BENCH NEW DELHI

8th September 2022



SOLID WASTE MANAGEMENT

Progress of Solid Waste

S.N.	Management Particulars	2016	As per earlier presentation of 24.01.2020	August-2022
1	Number of ULBs	262	384	403
2	Quantity of MSW generated (TPD)	21867	23708	24951
3	Quantity of MSW processed (TPD)	6993	15647	23175
4	Gap in Solid Waste Management (TPD)	14874	8061	1776
5	% of Gap in treatment	68%	34%	7%

Compliance of Rule 22 of SWM Rules,

2016

Sr. No.	Activity	Applicable to No. of ULBs	2020 (384 ULBs)	Compliance as on Aug 2022		Timeline for compliance.
				Compliance	Gap	
1	Identification of suitable sites for setting up solid waste processing facilities	403	NA	100%, 403 ULBs	-	-
2	Identification of suitable sites for setting up common regional sanitary landfill facilities for suitable clusters of local authorities under 0.5 million population and for setting up common regional sanitary landfill facilities or standalone sanitary landfill facilities by all local authorities having a population of 0.5 million or more.			ULBs have identified individual sites.		
3	Procurement of suitable sites for setting up solid waste processing facility and sanitary landfill facilities.	403	314	96%, 388 ULBs	4%, 15 ULBs	31.03.2023
4	Enforcing waste generators to practice segregation of biodegradable, recyclable, combustible, sanitary waste domestic hazardous and inert solid wastes at source.	403	288	96%, 386 ULBs	4%, 17 ULBs	31.03.2023

Compliance of Rule 22 of SWM Rules, 2016

Sr. No.	Activity	Applicable to No. of ULBs	2020 (384 ULBs)	Compliance as on Aug 2022		Timeline for compliance.
				Compliance	Gap	
5	Ensure door to door collection of segregated waste and its transportation in covered vehicles to processing or disposal facilities.	403	379	96%, 386 ULBs	4 %, 17 ULBs	31.03.2023
6	Ensure separate storage, collection and transportation of construction and demolition wastes.	403	36	99%, 398 ULBs	1 %, 5 ULBs	31.03.2023
7	Setting up solid waste processing facilities by all Local Bodies having 1,00,000 or more population.	43	285	30 ULBs	13 ULBs	30.09.2023
8	Setting up solid waste processing facilities by Local Bodies below 1,00,000 population.	360		341 ULBs	19 ULBs	30.09.2023

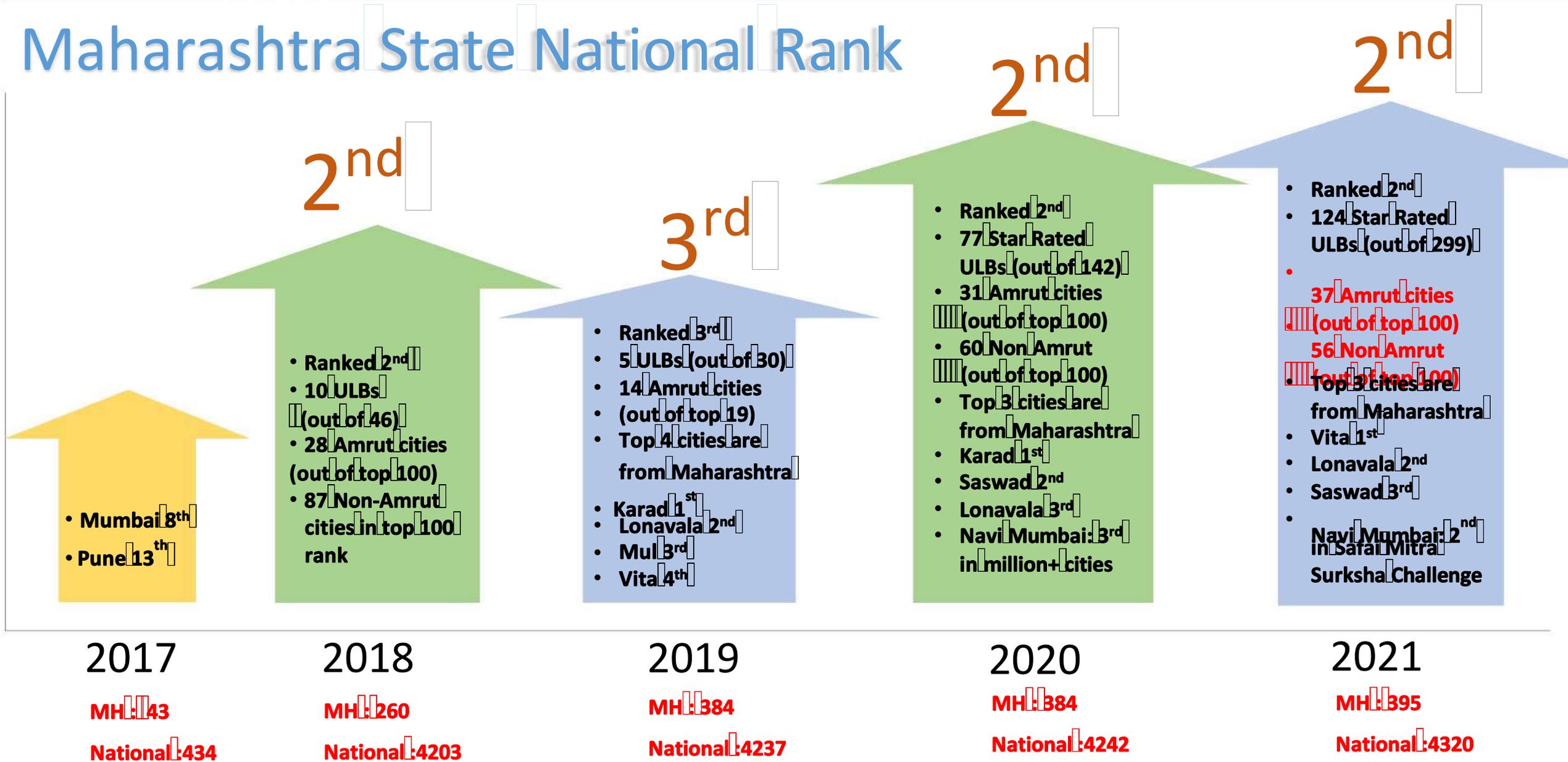
Compliance of Rule 22 of SWM Rules,

2016

Sr. No.	Activity	Applicable to No. of ULBs	2020 (384 ULBs)	Status as on Aug 2022		Timeline for compliance.
				Compliance	Gap	
9	Setting up common or standalone sanitary landfills by or for all Local Bodies having 0.5 million or more population for the disposal of only such residual wastes from the processing facilities as well as untreatable inert wastes as permitted under the Rules	22	243 ULBs	82%, 18 ULBs	18%, 4 ULBs	31.12.2023
10	Setting up common or regional sanitary landfills by all Local Bodies and census cities under 0.5 million population for the disposal of permitted waste under the rules. (State has standalone sanitary landfills facility)	381		91%, 344 ULBs.	9%, 37 ULBs	31.12.2023
11	Bioremediation or capping of old and abandoned dump sites.	273 Dumpsites	26 Dumpsites	69%, 189 Dumpsites	31%, 84 Dumpsite	31.03.2024

State Swachh Survekshan Performance at National Level

Maharashtra State National Rank



Initiatives by State & ULBs for Ensuring Good Practices in

- ❖ **Focused campaigns for citizen engagement:** Campaigns such as Kachra Lakh Molacha (Waste is Wealth), Swachh August Kranti, etc. launched by state & executed by ULBs
- ❖ **Disciplinary Actions:** Like spot fines for littering, non-segregation, etc, Plastic ban, framed by state & enforced by ULBs.
- ❖ **User Charges and Bye Laws:** For ensuring financial sustainability of the Solid Waste Management in cities (Notification dated 1st July 2019)
- ❖ **Engagement of Informal Workers, SHGs:** Waste pickers formalized by providing them IDs and inclusion in system for recycling of plastic / dry waste. SHGs involved in operationalizing the processing plants / MRFs.
- ❖ **Branding of City Compost:** State registered brand (**HARIT**) for marketing & promotion of compost produced by ULBs (complying with Govt. of India's Fertilizer Control Order)
- ❖ **Incentives:** Awarded to best performing ULBs in Swachh Survekshan & Garbage Free Cities which includes components like Waste generation, segregation & processing.

Action Plan to comply with the MSW Rules

2016

Milestones	Date
Cabinet Approval of Swachh Maharashtra Mission (Urban) 2.0	14 th July 2022
Government Resolution	15 th July 2022
State Level Capacity Building Workshop on CSWAP, CSAP & CBAP	23 rd July 2022
1 st State Level Technical Committee Approval	8 th August 2022
1 st State High Power Committee Approval	5 th Sept 2022

- Maharashtra Government under SBM 2.0 (City Solid Waste Action Plan) has approved a plan of Rs 4837.50 Cr for compliance of Solid Waste Management Rules, 2016 including management of legacy waste for all non-compliant ULBs.

Summary of City Solid Waste Action Plan (CSWAP)

Module Description	Sr.No	Category	Total Cost Rs.Cr
Module 1 Solid Waste Management	1	Wet Waste Plant Capacity Compost	642.90
	2	Wet Waste Plant Capacity Bio Gas	196.63
	3	Dry Waste Plant Capacity Material Recovery Facility	455.61
	4	Dry Waste Plant Capacity Material Recovery Facility Cum Refused Derived Fuel	15.67
	5	Dry Waste Plant Capacity Waste to Energy (>10L)	139.50
	6	Transfer Station (>5L)	217.35
	7	Scientific Landfill Proposals	453.76
	Total: Module 1		
Module 2 Legacy Waste Dumpsite Remediation	8	Legacy Waste	2503.88
	Subtotal Module 1&2		4625.30
Module 3 Construction & Demolition	9	2026 Proposed Construction & Demolition Waste Plant Designed Capacity in TPD (Requirement of 10 Cities)	144.00
Module 4 Mechanical Road Sweeper	10	Mechanical Road Sweeper Total Vehicles requirement	68.20
Grand Total of Module 1,2,3 & 4			4837.50

INNOVATION AND BEST PRACTICES IN SWM

Innovations



Green Belt Development
Around SWM Sites
In 383 Cities

Sustainable Waste
Management

Greening of Cities



State's own brand

"Harit: MahaCity Compost"

101 Certified Cities

Ensures Compost standard
as per FCO Norms

State Incentives Announced
Rs. 1500/Ton



HARIT App
396 Cities Registered

Connecting Producers (ULBs) &
Consumers (Farmers)
Rural -> Urban -> Rural

Monitoring Tool for Quality &
Quantity of Compost

Innovations



**Procurement
through GeM**

Biomining



**Legacy waste
cleared**



Incentives



- **Single Use Plastic Ban:**

- Complete ban.
- Notification issued on 28th March, 2018
- “Goodbye Single Use Plastic” campaign for citizen engagement



- **Spot Fine and User Charges**

- State wide By-laws for Spot Fine and User Charges for SWM services.
- Notification issued on 1st July, 2019'
- Notified & Implemented by all ULBs



- **C&D Waste Management**

- Provision of collection, segregation and reuse of C&D waste

Success Stories

1. Navi Mumbai Municipal Corporation Zero Waste Slum Model

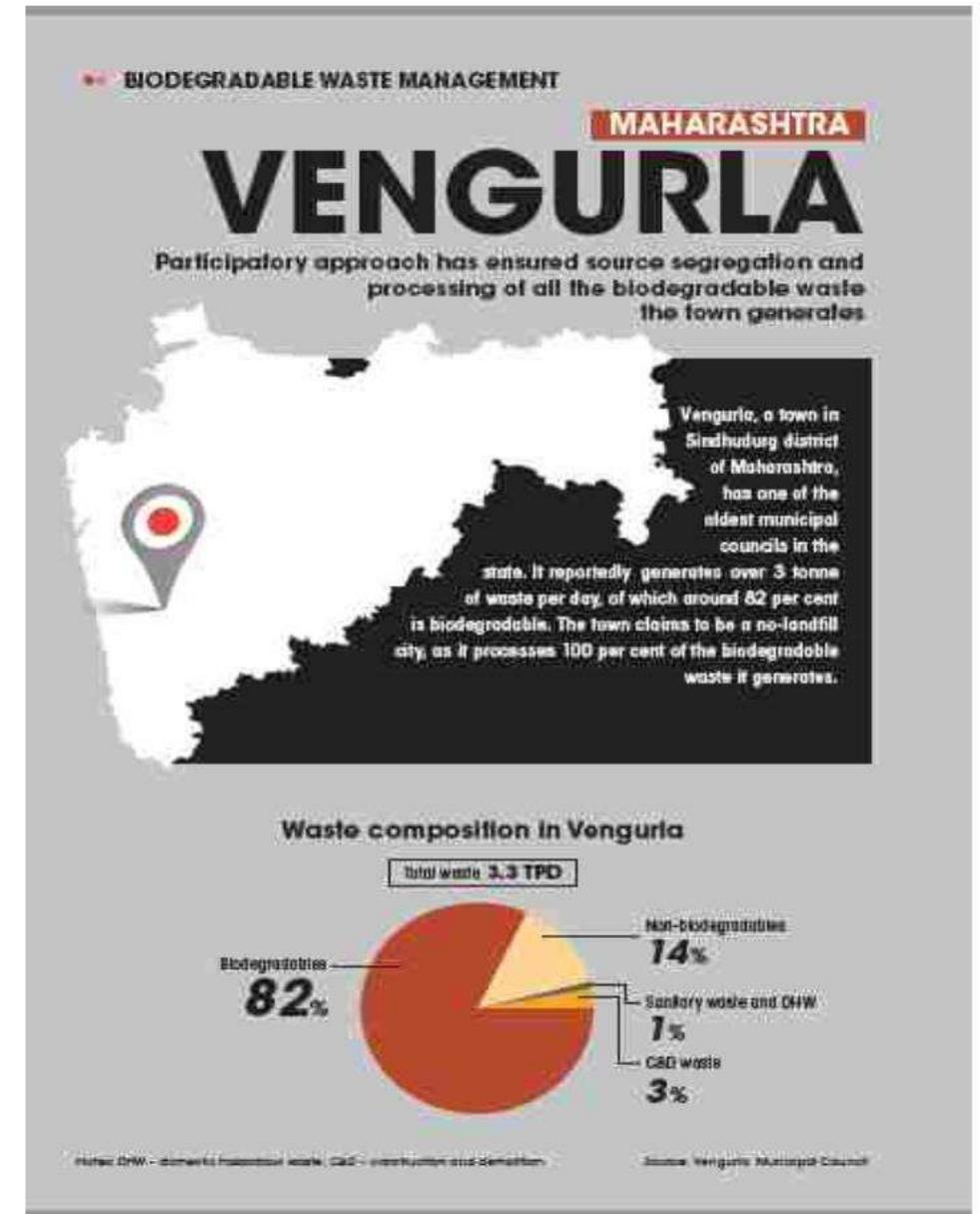
- To introduce Zero Slum Model - Decentralized Collection, transportation and processing of waste in all remaining Slum Areas
- Around 45+ Women's are part of this initiative and getting honorarium from NMMC. Yearly Saving of INR 7 Lakhs and 75 MT waste is now processed desterilized way
- Door to door Collection, Segregation and Composting for 10,000 households in Indira Nagar Slum and Adavali goan
- Reselling of Recyclables for sustainable livelihood of workers.
- Key Project Highlights
 - ❑ Monthly Garbage Generation – 75 MT
 - ❑ Quantum of waste – 9 TPD
 - ❑ Waste Bifurcation - 3.6 TPD dry, 5.4 TPD wet
 - ❑ Plastic Bottles are collected under the initiative “Bottles for Change”
 - ❑ NMMC pays Honorarium per month - 7000 each SHG Member



Success Stories

2. Vengurla Municipal Council (Dist-Sindhudurg): Zero Waste Model

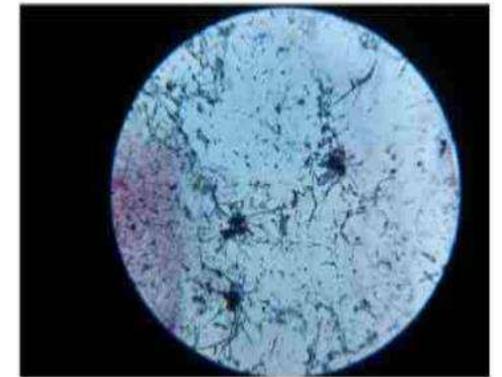
- Shunya Kachra Abhiyan i.e. Zero Waste Movement was pioneered in Vengurla & Panchgani around by 2014.
- Ensuring minimum waste disposal at landfill sites continues to be a challenge for most of the Indian cities.
- Vengurla has worked on adopting a zero landfill model. “Vengurla has no dumping site or landfill. The inert waste is mixed with organic waste and is used for mulching,”
- Vengurla’s landfill named as ‘Swachh Bharat Waste Park’ was transformed into a beautiful tourist attraction in 2015.
- It comprises of a lush green garden, plastic crushing unit, a biogas plant, a briquette-making plant and a segregation yard.
- Waste is collected in 27 Categories on weekly basis and waste collection calendar is published with citizens



Success Stories

3. Indapur Municipal Council: Bioremediation of Legacy Waste & Odor Removal

- A large scale domestic wet waste was produced in city area. It was producing bad odour in dumping area and due to which people are suffering from various problems. Due to domestic waste human as well as animals are suffering from different problems
- With the help of Indapur Taluka Shikshan Prasarak Mandal, Art's, Science And Commerce College bio culture was developed.
- The culture was sprayed over the waste at dumping ground
- During the decomposition the dry waste is segregated from the dumping ground
- In this study, council had formulated new type of biodegradation bio culture. Its Odor decreasing properties are checked. In future, it can use biodegradation for domestic wet waste management and other use biological method



BEFORE

AFTER



SEWAGE MANAGEMENT

Sewage Generation and Treatment in Maharashtra

No. of ULBs	Sewage Generation (MLD)	STP Capacity	GAP IN STP Capacity (MLD)	Actual Capacity Utilization/ Operational Capacity (MLD)	Recycled and Utilization of Treated Sewage (MLD)	Timeline for completion of STPs
403	9758.53	7800.44	1958.09	4338.2	395	31.12.2025

Summary of City Sanitation Action Plan (CSAP)

Component	Requirements	Unit Cost as per SBM 2.0 guidelines	Total funding requirement (In Crore)
Module 2: Used Water Management (UWM) admissible components for central share (For statutory towns < 1 Lakh population = 368 ULBs)			
Sewage Treatment Plant (STP)	1656 MLD	Rs. 1.17 Cr per MLD	1,937.90
Interceptor and Diversion drains (I&D)	1823 km	Rs. 50 lakh per km	911.55
Desludging Equipment	479 Vehicles	Rs. 25 lakh per vehicle	119.75
Central funded component: funding requirements for module 2: UWM			2,969.20
Sewerage network or Strengthening Municipal Drains funded by State and ULB (For statutory towns < 1 Lakh population = 368 ULBs)			
State funded component: UWM: Sewer Network/ Mixed approach (Settled sewer network/ converting open drains to closed drains)	10,056 km	Sewer: 40 lakh per km Mixed: Rs. 25 lakh per km	3,333.85
B. Total funding requirements for sanitation Module 2: Used water management			6,303.05
Total funding requirements for State City Sanitation Action Plan (CSAP) (A+B)			7,040.71

Faecal Sludge Treatment Plants



Vita Municipal Council



Deolali Pravara Municipal Council



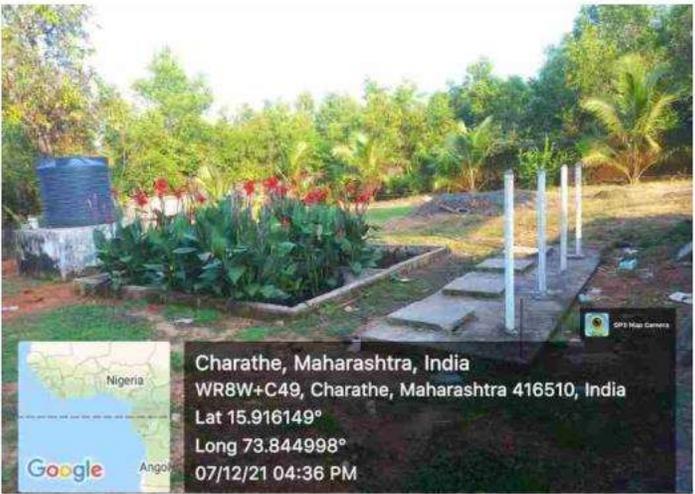
Manwath Municipal Council



Dhule Municipal Corporation



Karjat Municipal Council



Sawantwadi Municipal Council

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Success Stories

Wai: Citywide Scheduled desludging of septic tanks with 100% treatment and Reuse

- First 3-year cycle of desludging of all septic tanks completed through private sector participation. This has also led to improvement in environment
- 3600+ septic tanks serviced covering 6800+ properties with 95% acceptance rate, which covers all slum and non-slum properties
- Improvement in groundwater and river water quality due to reduction in Nitrogen, Total Suspended solids and Organic loads in septic tanks effluent after scheduled desludging
- 20+ Million litres of septage treated at Solar Powered FSTP and treated byproducts reused for gardening and landscaping

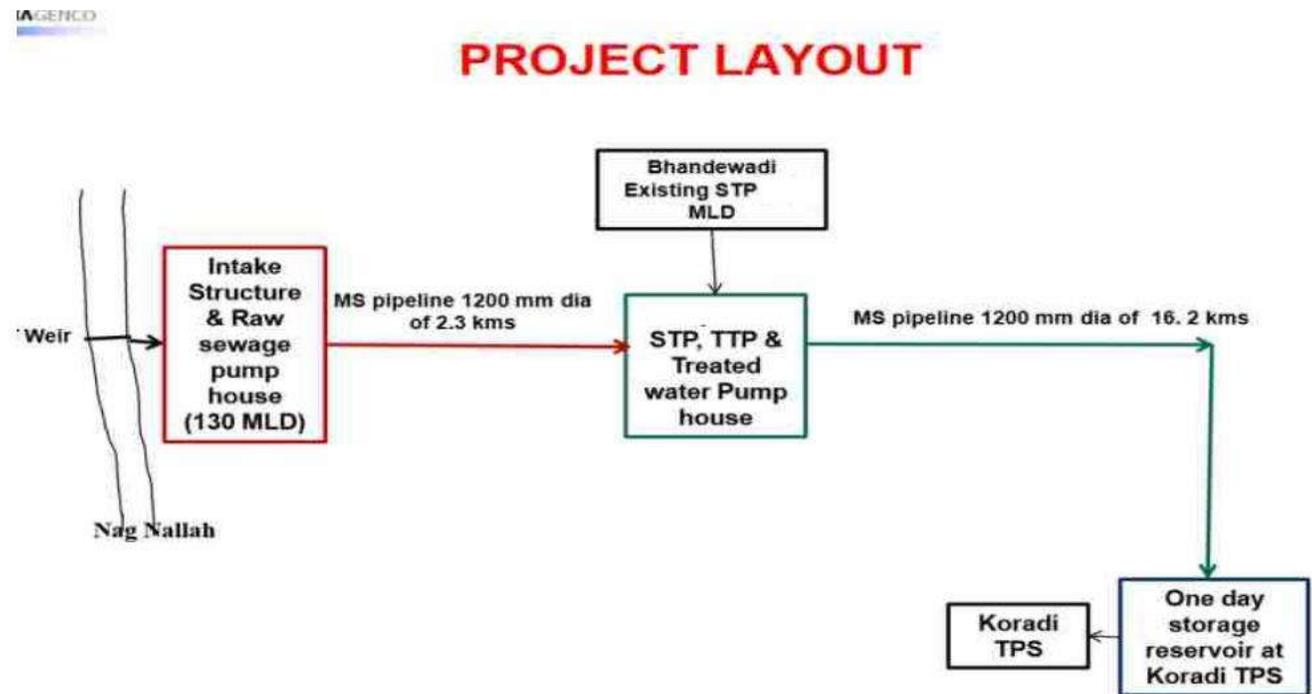
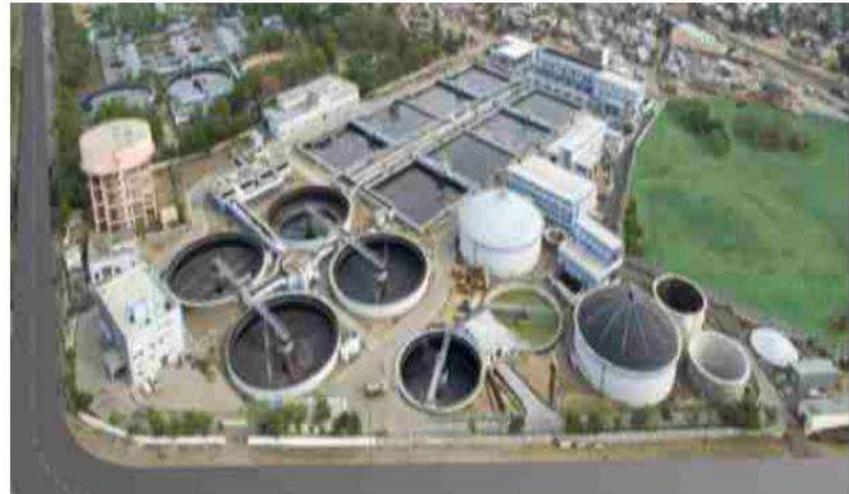


Reuse water practices at STP site – Nagpur Corporation



- STP Capacity (Bhandewadi STP plant- 1 and Plant 2) – 200 MLD + 180 MLD = **380 MLD**
- Total WW generation = 520 MLD
- Total treated water Generated at STP site = **370 MLD**
- **Total WW reused = 320 MLD**

- MOU signed with Maharashtra state power generation company (MAHAGENCO)
- MOU signed for to use of treated water at khaparkheda thermal power plant and Koradi thermal power plant (Dated -29 December 2017)
 - Khaparkheda Thermal power plant = **100 MLD**
 - Koradi Thermal power plant = **50 MLD**



Thank You!