

3144



**Status Of Compliance for Solid Waste Management and
Used water Management as per O.A No-606/2018 for
Karnataka**



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Figures are in TPD

State Overall Profile

Karnataka	
Total Solid Waste Generation	31,466

Urban	
Total Solid Waste Generation	12,140

Rural	
Total Solid Waste Generation	3,194
Total Solid Waste Processed	2,918
Gap	276

Urban & Rural Profile

Dry Waste	4,249	Wet Waste	6,677	Inert Waste	1,214
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315 ULBs	
Total Solid Waste Generation	6,640

BBMP	
Total Solid Waste Generation	5,500

Urban ULB Level Profile

Dry Waste Generated	2,324	Wet Waste Generated	3,652	Inert Waste Generated	664
Processed	1,342	Processed	3,500	Inert to Landfill	664
Gap	982	Gap	152		

Dry Waste Generated	1,925	Wet Waste Generated	3,025	Inert Waste	550
Processed	650	Processed	2,150	Hazardous Waste Processed	75
Gap	1,275	Gap	875	Inert to Landfill	475

Urban Waste Wise Profile

Total Dry Waste Generated	4,249
Dry Waste Processed	1,992
Processing Gap	2,257

Total Wet Waste Generated	6,677
Wet Waste Processed	5,650
Processing Gap	1,027

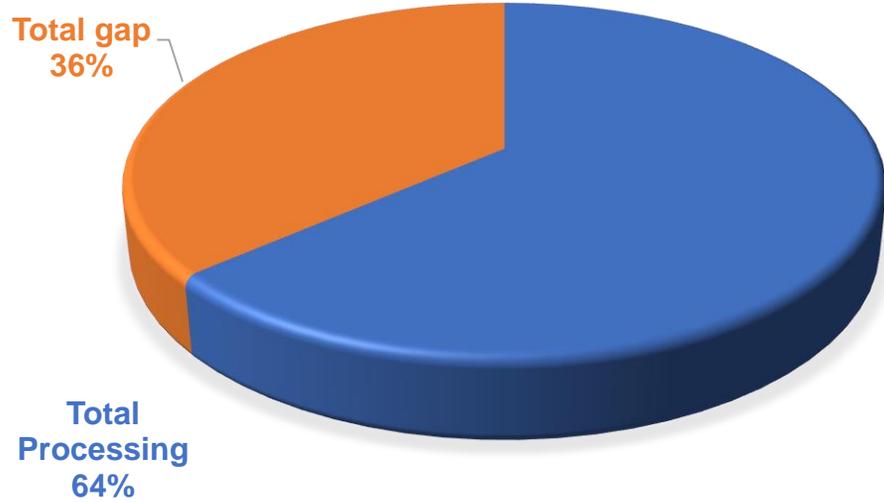
Total Inert Generated	1,214
Hazardous Processed	75
Inerts to Landfill	1,139

Total Urban Waste Generated	12,140
Total Urban Waste Processed	7,717
Processing Gap	3,284+1,139= 4,423

Total Rural Waste Generation	3,194
Total Rural Waste Processed	2,918
Processing Gap	276

Total State Waste Generation	15,334
Total State Waste Processed	10,635
Processing Gap	4,699

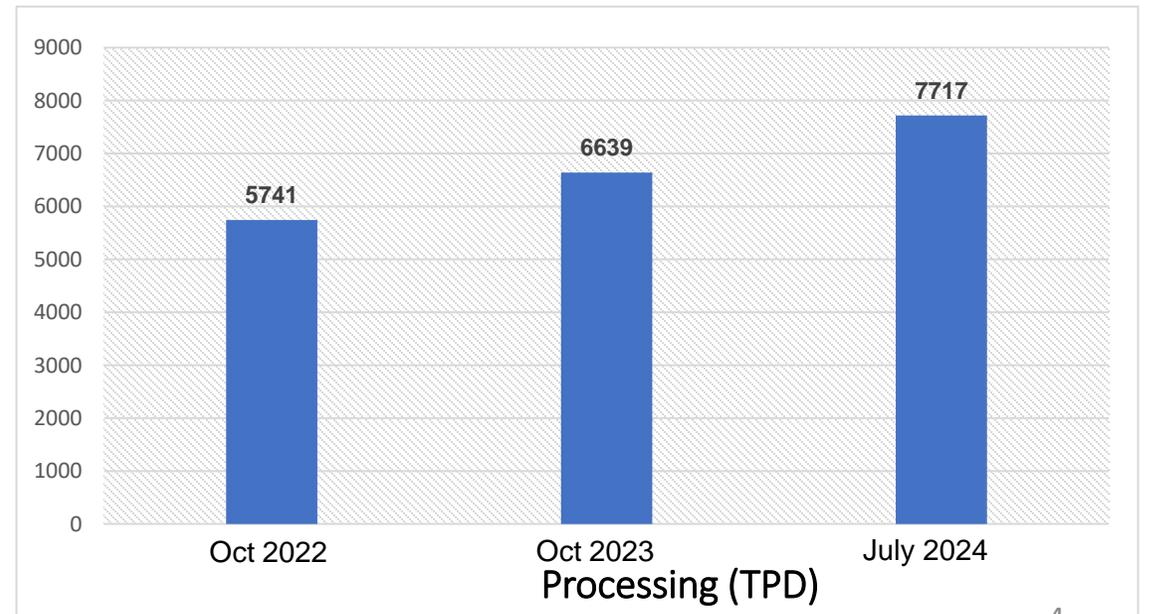
2. Solid Waste Management (SWM) Urban



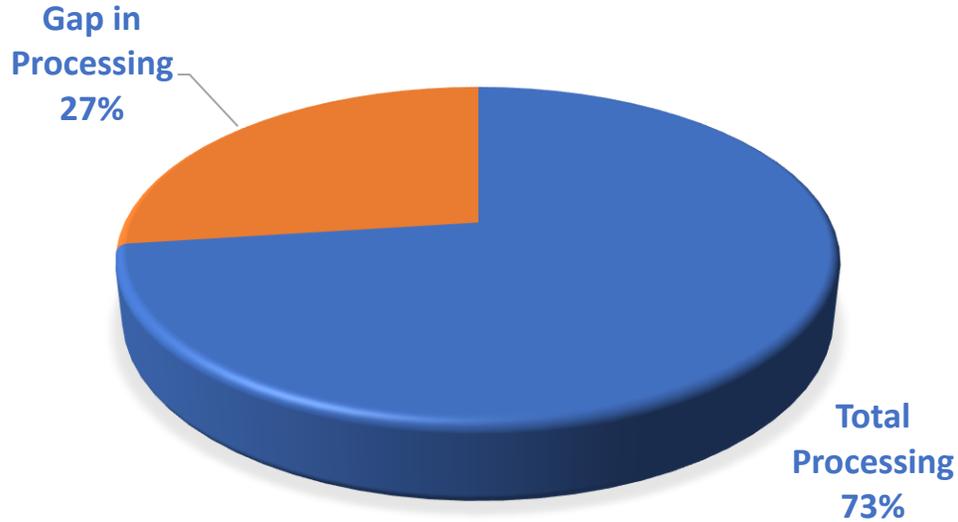
GENERATION VS PROCESSING

Generation- 12,140 TPD and 64% of the waste is processed

Category	OCT 2022			OCT 2023			MAY 2024		
	ULBs	BBMP	Total	ULBs	BBMP	Total	ULBs	BBMP	Total
Total Waste Generated (TPD)	6,640	5,500	12,140	6,640	5,500	12,140	6,640	5,500	12,140
Total Waste Processed (TPD)	3,139	2,602	5,741	3,787	2,852	6,639	4,842	2,875	7,717
Processing %	47%			55%			64%		
Gap (TPD)	3,501	2,898	6,399	2,853	2,648	5,501	1,798	2,625	4,423



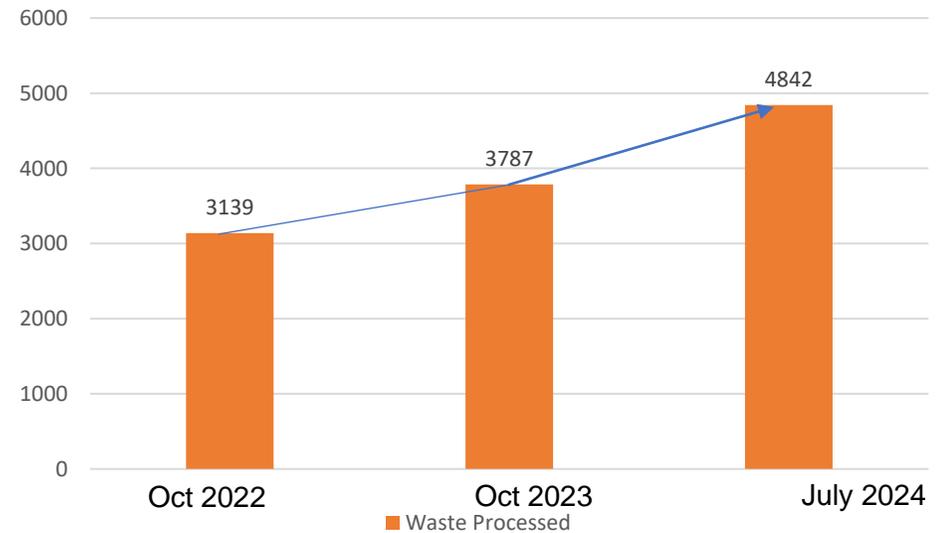
3. Solid Waste Management Profile for 315 ULBs



GENERATION VS PROCESSING

Category	OCT 2022	OCT 2023	MAY 2024
	ULBs	ULBs	ULBs
Total Waste Generated (TPD)	6640	6640	6640
Total Waste Processed (TPD)	3139	3787	4842
Processing %	47%	57%	73%
Gap (TPD)	3501	2853	1798

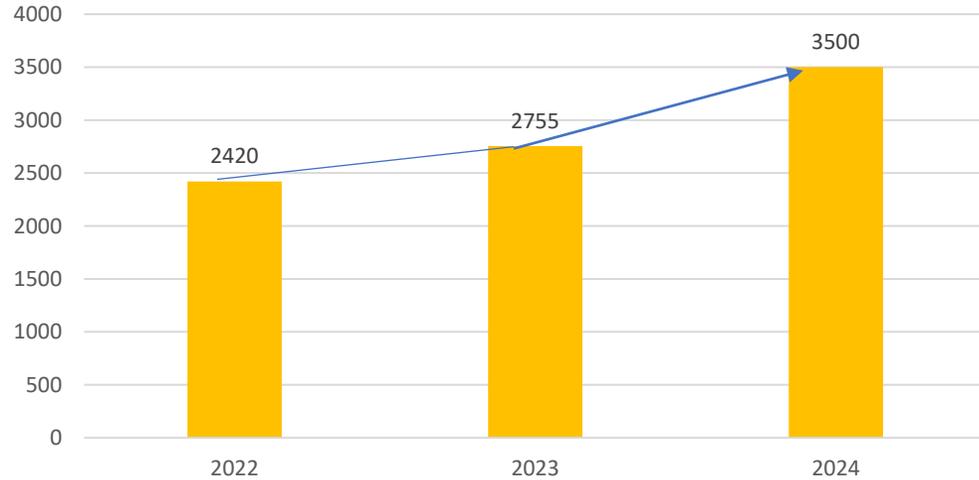
- Waste Processing has increased from **47%** in Oct 2022 to **73%** in July 2024
- Gap in processing has reduced from **3,501 TPD (53%)** in October 2022 to **1,798 TPD (27%)** in July 2024



Waste Processing in 315 ULBs

4. Wet Waste Management in 315 Urban Local Bodies

Wet Waste Management in 315 ULBs	
Total Wet Generation (Tonnes)	3,652
Total Wet Processing (Tonnes)	3,500
Gap in Wet Waste Processing (Tonnes)	152



Improvement of processing (Wet Waste) in 315 ULBs (TPD)

Key Highlights in Wet Waste Processing

- Wet Waste Processing has increased from **66%** in Oct 2022 to **96%** in July 2024
- Gap in processing has reduced from **1,232 (34%) TPD** in October 2022 to **152 TPD (4%)** in July 2024
- 203 Integrated Solid Waste Management Plants** are currently operational.
- ULBs have also constructed small decentralized composting units
- Around **221 TPD** of compost is being generated in 203 operational plants.
- ULBs are generating revenues by sale of compost.

Action Plan to tackle the Gap in Waste Management

3150

Action Plan to tackle the Gap



Schemes	Approach	Capacity Addition in TPD
Swachh Bharat Mission 2.0	Construction of Integrated Solid Waste Management Facilities in 91 ULBs	272
Swachh Bharat Mission 1.0	Construction of Integrated Solid Waste Management Facilities in 218 ULBs	746
Total		1,018

Under SBM 2.0, a total of **INR 366.35 Cr amount** is allocated for 91 newly upgraded ULBs for construction of ISWM Facilities. Total No of works is **1092**, out of which **237 Nos** of work are already tendered.

Implementation Status

1. Status of 91 ULBs under Integrated Solid Waste Management under Swachh Bharat Mission 2.0

Year	Target	ISWM DPRs approved (Nos)	Tenders Called (No of ULBs)	Balance for Tendering (No of ULBs)
Oct 2022	91	0	0	91
Oct 2023	91	12	0	91
Jul 2024	91	91	52	39

100% progress achieved under DPR completion, and **57% of the ULBs tenders** are being called from October 2022 under SBM 2.0 works will be completed by **Dec-2026**.

2. Status of Works under 219 ULBs under Integrated Solid Waste Management under Swachh Bharat Mission 1

Year	Total No. of Approved Works	Works Tendered	No of Works under Progress	No of Works Completed	Balance of Works to be Completed
Oct 2022	5393	4,181	1,380	2,801	2,592
Oct 2023		4,833	760	4,073	1,320
May 2024		5,393	930	4,463	930

Work completion progress has increased from **52% in Oct 2022 to 83% in July 2024** under SBM 1.0

Initiatives under Wet Waste Management



Before Status-Kaup TMC, Udupi Dt



After Status- Kaup TMC, Udupi Dt



Before Status- Malebennur TP, Davangere Dt



After Status- Malebennur TP, Davangere Dt

Initiatives under Wet Waste Management



ISWM Plant - 400 TPD (Mangalore CC)



Pit Composting- 2 TPD (Pandavpura TMC, Mandya Dt)



Decentralized Composting (Mysore CC)



Black Soldier Fly Composting – (Mangalore CC)



Waste Flower to Incense Sticks- Belgavi CC

Initiatives under Wet Waste Management



ISWM Plant - 60 TPD (Hassan CMC)



ISWM Plant- 8 TPD (Malebennur TMC, Davangere Dt)



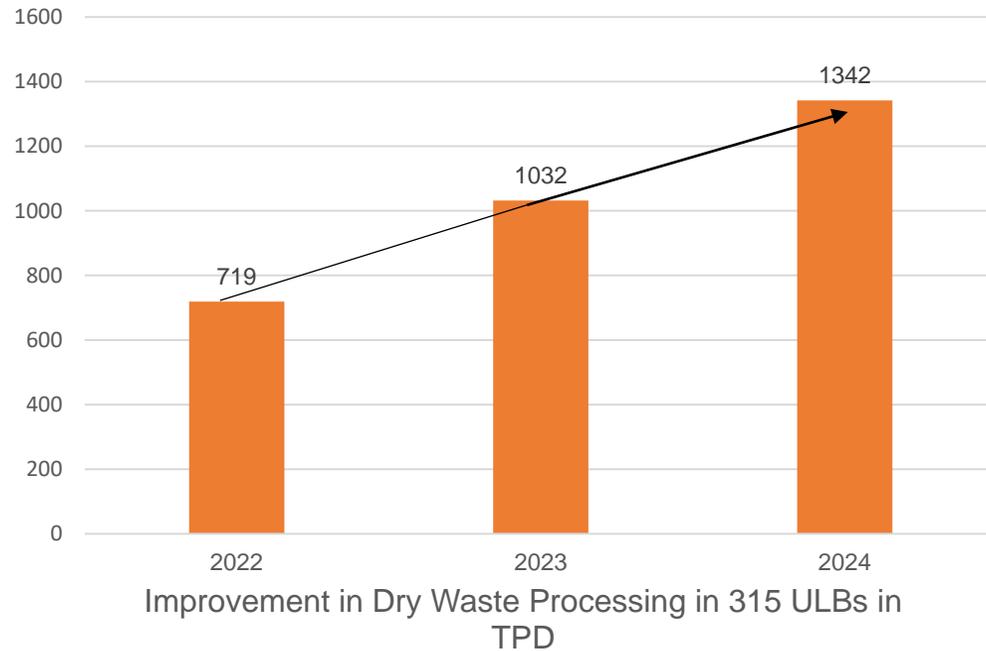
Compost for Sale (Udupi CMC)



VermiComposting - 2 TPD (Naragund TMC, Mysore Dt)

5. Dry Waste Management in 315 ULBs

Dry Waste Management in 315 ULBs	
Total Dry Generation (Tonnes)	2,324
Total Dry Processing (Tonnes)	1,342
Gap in Dry Waste Processing (Tonnes)	982



Key Highlights in Dry Waste Processing

- Dry Waste Processing has increased from **31%** in Oct 2022 to **58%** in July 2024
- Gap in processing has reduced from **1,605 TPD** in October 2022 to **982 TPD** in July 2024
- Currently processing is being undertaken through 348 DWCCs (Dry Waste Collection Centres) with a total capacity of **2,196 TPD** in 201 ULBs
- **90,632 Tonnes** of dry waste is sent to cement industries for disposal in FY 2023-24
- **Plastic Waste Management** has been strictly enforced with complete Single Use Plastic Ban, conducting raids and imposing fines, Focus on EPR, etc.,

Action Plan to tackle the Gap in Dry Waste Management

Action Plan to tackle the Gap



Schemes	Approach	Capacity Addition
Swachh Bharat Mission 2.0	Construction of Material Recovery Facilities	3045 TPD

- ULBs are constructing **Material Recovery Facilities** to manage dry waste
- **82% ULBs** have already initiated tenders for Material Recovery Facilities under SBM 2.0
- Under SBM 2.0, a total of **INR 418.76 amount** is allocated for construction of MRF Facilities in 309 ULBs. Total No of works is **2397**, out of which **1015 Nos** of work are already tendered
- Works will be completed by **Dec-2026**

Implementing Status

Status of 310 ULBs under Dry Waste Management under SBM 2.0

Year	Target	MRF DPRs approved (Nos)	Balance for Approval (Nos)	ULBs invited Tenders (Nos)	ULBs yet to invite Tenders
Oct 2022	309	0	309	0	309
Oct 2023	309	0	309	0	309
Jul 2024	309	309	0	253	56

Initiatives under Dry Waste Management 3156t



Before Status-Tavarakere TP, Koppala Dt



After Status- Tavarakere TP, Koppala Dt.



Before Status- Hosadurga TMC, Chitradurga Dt



After Status- Hosadurga TMC, Chitradurga Dt

Initiatives under Dry Waste Management 3157t



MRF Plant- 10 TPD (Udupi CMC)



DWCC- 3 TPD (Gundulupete TMC, Chamrajnagara Dt)



MRF Plant- 4TPD (Kaup TMC, Udupi Dt)



Storage Shed – 3 TPD (Vijaypura CMC)

6. C&D Waste Management

3158



C&D Waste Management in 315 ULBs	
Total C&D Waste Generation (Tonnes)	302
Total Processing (Tonnes)	0
Gap in C&D Processing (Tonnes)	302

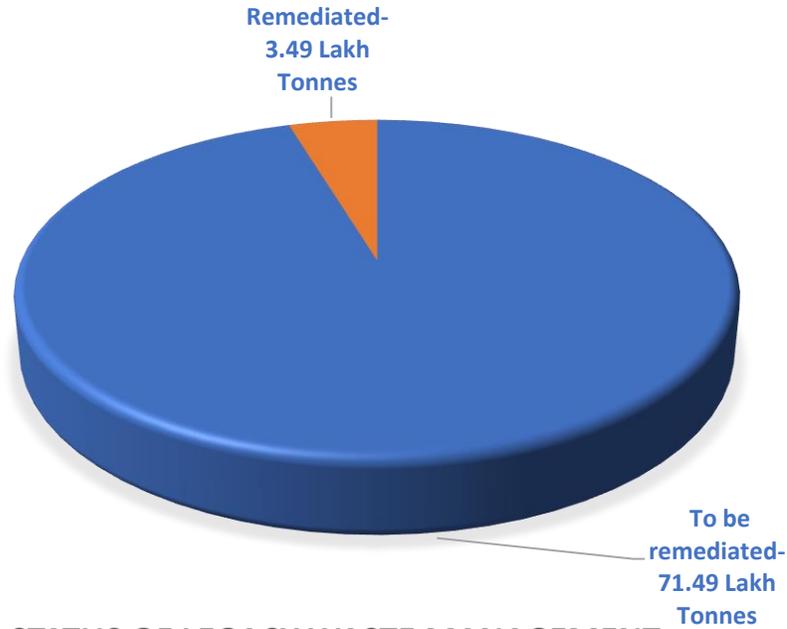


Approved Projects under C&D Waste Management			
Projects	Area	Capacity Approved (TPD)	Cost (Cr)
SBM 2.0	4 ULBs	302	38.02

Implementation Status			
Year	Target	DPRs approved	Tenders called
Oct 2022	4	0	0
Oct 2023	4	0	0
Jul 2024	4	4	4

7. Legacy Waste Management

3159



STATUS OF LEGACY WASTE MANAGEMENT

Area	No of Dumpsites	Quantity in Lakh Tonnes	Remediated in Lakh Tonnes	Balance in Lakh Tonnes	Timelines for Completion
ULBs (192)	192	75.25	3.49	71.76	Dec -2027

Action Taken from Oct 2022



DPR Preparation and approval process is completed for **192 ULBs**



In **120 ULBs** Work is under Progress



65 ULBs have initiated the tendering process

Success Story

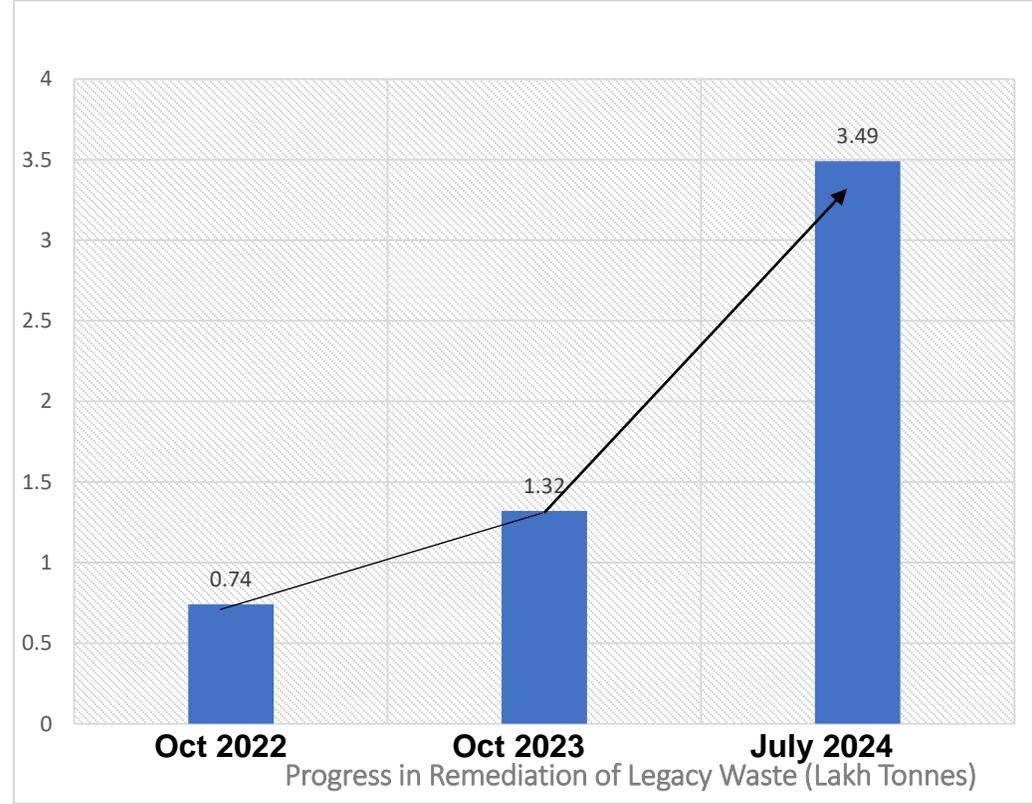
- Work is completed- **7 ULBs** and have remediated **~1.62 Lakh Tonnes** of legacy waste (Rabkavi Banahatti, Konnur, Kalaghatagi, Alnavar, Annigerri, Shivamogga and Vijayapura)
- Work is in progress- **120 ULBs** (Partial remediation is completed- **1.87 Lakh Tonnes**)

Implementation Status- Legacy Waste Management **3160**



Comparison of Progress in Legacy Waste Management from October 2022

Areas	Status in Oct 2022	LW Qnty (LT)	Status in Oct 2023	LW Qnty (LT)	Status in July 2024	LW Qnty (LT)
DPR Approval completed	4	12.97	183	71.68	192	75.25
Work Completed	1	0.74	4	1.32	7	1.62
Work Under Progress	3	10.15	95	18.92	120	36.18
Under tendering Process	0	0	84	51.44	65	37.45



LW: Legacy Waste

- Total Cost Allocation for Legacy Waste Management in 192 ULBs is 530.70 Crores
- Timeline for Completion: End of 2027

Legacy Waste Management Initiatives across Karnataka

3161



Before Status-Bijapur City Corporation



After Status-Bijapur City Corporation



Before Status-Kalghatgi TP, Dharwad Dt



After Status-Kalghatgi TP, Dharwad Dt

Legacy Waste Management Initiatives across Karnataka

3162



**Bioremediation- 9 Lakhs Tonnes (Mangalore CC)
Remediated- 97,000 Tonnes**



**Bioremediation- 90,000 Tonnes (Tumkur CC)
Remediated-67,000 Tonnes**

**Bioremediation- 25,000 T (Shimogga CC)
Completely Remediated**

Legacy Waste Management Initiatives across 3163 Karnataka



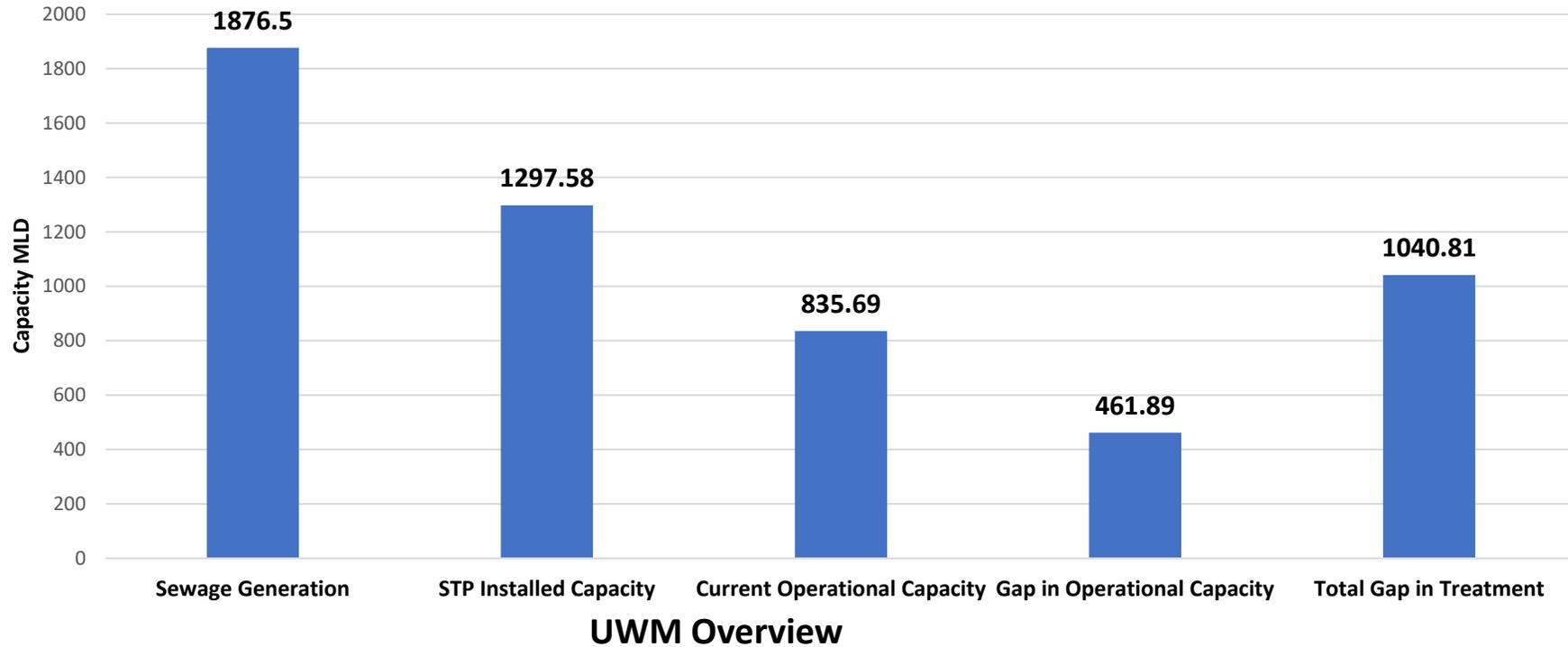
**Bioremediation-16,000 Tonnes (Nippani CMC, Belgaum Dt.)
(Work is in progress)**

**Bioremediation- 17,000 Tonnes (Gokak CMC, Belgaum Dt.)
(Work is in progress)**

8. Used Water Management Profile for 315 Urban Local Bodies

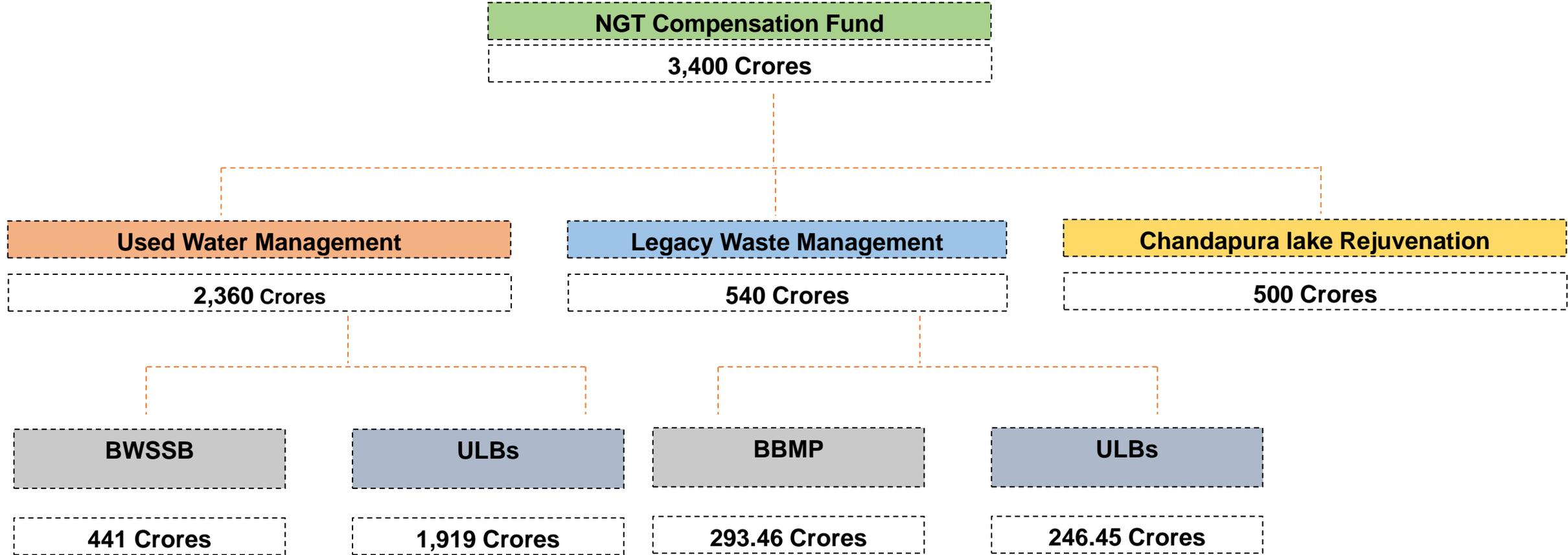


No. of ULBs	Generation (MLD)	Total Installed Capacity	Current Operational Capacity	Gap in Operational Capacity	Total Gap in Treatment
315 ULBs	1,876.5	1297.58	835.69	461.89	1,040.81



9. NGT Compensation Fund

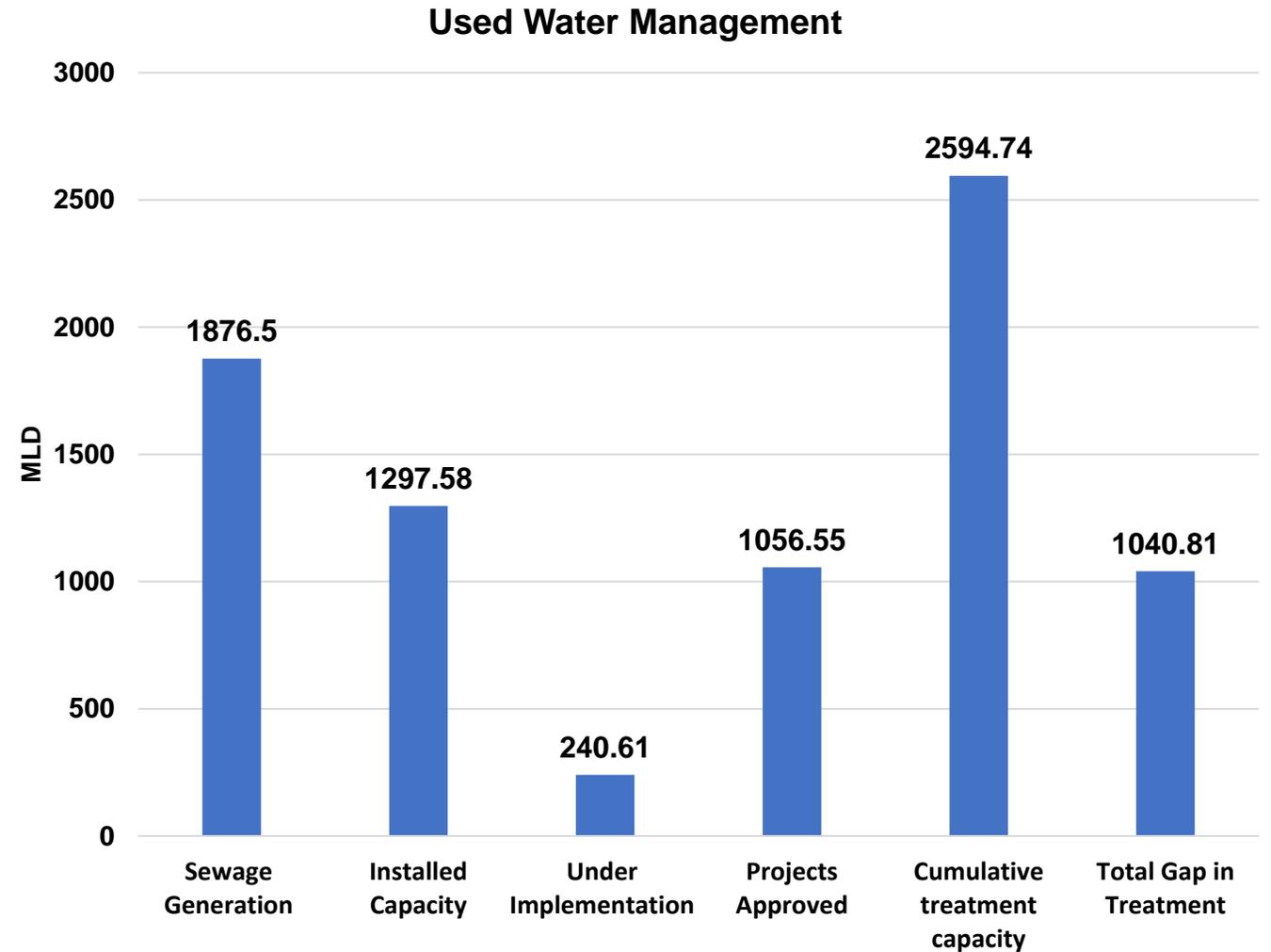
3165



- As per orders of Hon'ble NGT, **Ring Fenced Account** is created, and amount of **1967 Crores** have been deposited.
- An Interdepartmental Coordination Committee has been constituted on 31.10.2022 and 13 meetings have been convened.

10. Action Plan to tackle the Gap in Used Water Management **3166**

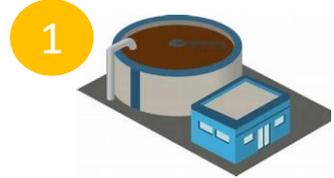
Status of UWM Projects	No. of STP	Capacity in (MLD)
Existing STPs	144	1,297.58
Sub total - A	144	1,297.58
Under Implementation	49	240.61
Projects Approved	303	1,056.55
Sub total – B	352	1,297.16
Total	496	2,594.74



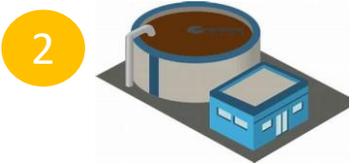
The state is in the process of adding **352 additional STPs** with a cumulative treatment capacity of **1,297.16 MLD** by **2028**, which will address the current gap of **1,040.81 MLD** and also address the future treatment requirements. 23

3167

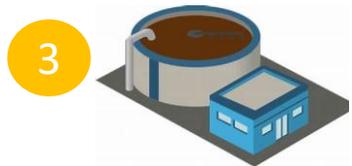
NGT Compensation Fund- Chandapura Lake Rejuvenation (500 Cr)



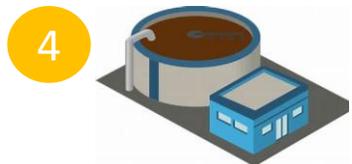
1
Hebbagodi CMC (24 MLD-SBR)- 194.10 Crs



2
Bommasanandra TMC (10 MLD-SBR)-128.20 Crs



3
Jigani TMC (6 MLD SBR & 100 KLD MBBR)-124.75 Crs



4
Chandapura TMC (6 MLD-SBR)-106.80 Crs

Total Capacity

46.1 MLD

Total Cost

553.85 Crores

Implementation Status

- Land acquisition is in progress
- 11(1) Gazette and paper notification issued on 22.02.2024.

- Tendering is Completed for all 4 Towns (Capex & O&M)

- LoA Issued to the agency for all the towns on 31.07.2024

- **Timeline for Implementation: End of 2027**

NGT Compensation Fund- KUIDFC (1,919.00 Crores)

S. No	Description	Project Cost (Crores)	Status			Timeline for Completion
1	110 FSTPs in 110 ULBs (less than 30,000 Population)	400.24	<ul style="list-style-type: none"> 110 FSTPS (12 Packages) LoA Issued - 74 ULBs for a total cost of 266.42 Crores Retendered for 36 ULBs for a total cost of 133.82 Crores 			August 2025 20.08.2024
2	UWM Priority works in 54 ULBs (Repair/ renovation of existing STPs/ Sewer lines, construction of new Sewer lines/ Missing sewer links/ UGD Networks, etc.)	1,518.00	Stage	ULBs	Cost in Cr	
			Work Under Progress	02	38.83	July 2025
			Tenders Invited	03	144.98	20.08.2024
			Tender under Evaluation	06	225.04	31.08.2024
			Approval for tendering	03	66.96	19.08.2024
			DPR under Finalization	09	307.32	10.09.2024
			Survey Under Progress	31	734.87	15.10.2024
			Total	54	1518.00	
Total	1,918.24				25	

Details of under construction & approved STPs in ULBs- 49 STPs **3169**

Projects Under Construction

Implementing Agency	No of STPs	Total capacity in MLD
KUWS&DB	48	239.11
KUIDFC	1	1.50
Total	49	240.61

Approved UWM Projects

Implementing Agency	No of STPs	Total capacity in MLD
KUWS&DB	35	129.30
KUIDFC (SBM U 2.0)	268	927.25
Total	303	1,056.55

In addition to the above, currently there are **45 FSTP projects** with a cumulative treatment capacity of **375 MLD** are implemented under the state funds by DMA (2 Works completed, 32 works under progress and 11 works tendered) and will be completed by 2025.

Timeline to tackle the Gap in Used **3170** Water Management



Timeline	No. of STPs	STP Capacity in MLD	Cumulative Capacity addition in MLD
Capacity addition by 2026	1	1.5	1.5
Capacity addition by 2027	83	368.91	370.41
Capacity addition by 2028	268	927.25	1,297.66
Total	352	1297.66	1297.66

STPs in Karnataka

3171



Sequential Batch Reactor (SBR) STP – 40 MLD Hubbali CC



Facultative Aerated Lagoon (FAL) STP- 7.5 MLD RANEBENNUR CMC, Haveri Dt.



Aerial view- STP 31 MLD (Vijayapura CC)



Soil Biotechnology (SBT) STP -4.30 MLD (Bagepalli TMC, Chikkabalapura Dt)



Sequential Batch Reactor (SBR) STP – 5.83 MLD (Jewargi TMC, Kalburgi Dt.)



SBR Technology STP- 8.00 MLD (Hunsur CMC, Mysore Dt.)



SBR Technology STP- 4.20 MLD (Periyapatna TMC, Mysore Dt.)

Bruhat Bengaluru Mahanagara palike & BENGALURU WATER SUPPLY AND SEWERAGE BOARD

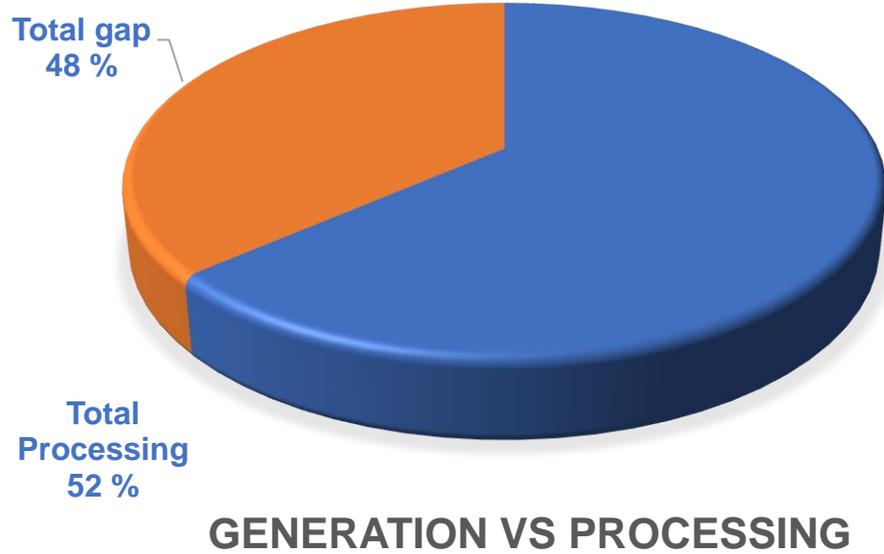


Presentation on compliance to NGT OA 606/2018

11. BBMP Profile

- Population of Bengaluru (2011 census) – 84,95,492
- Present projected Population of Bengaluru - 1,37,41,651
- Area of BBMP - 741 sq.km
- No. of Wards - 225
- Road length - 13,000 km
- Households No's - 29 lakh
- Commercial Establishments - 5 lakh
- Total Domestic Waste Generation Per Day – 5500 MT

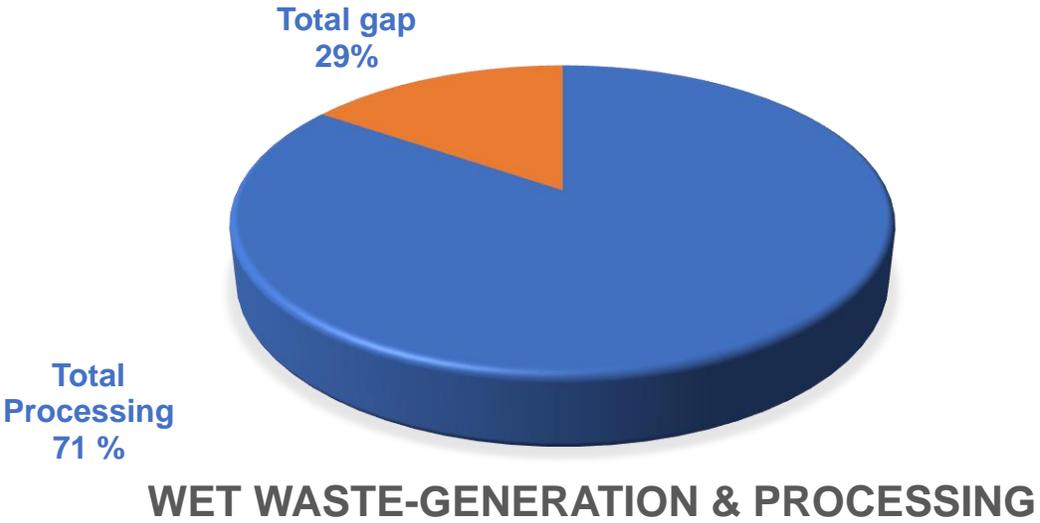
12. Solid Waste Management (SWM) – BBMP (TOTAL)



Category	OCT 2022	OCT 2023	August 2024
	BBMP	BBMP	BBMP
Total Waste Generated (TPD)	5500	5500	5500
Total Waste Processed (TPD)	2602	2852	2875
Processing %	47%	51%	52%
Gap (TPD)	2898	2648	2625

Generation- 5500 TPD and 52 % of the waste is processed

13. Wet Waste Management - BBMP



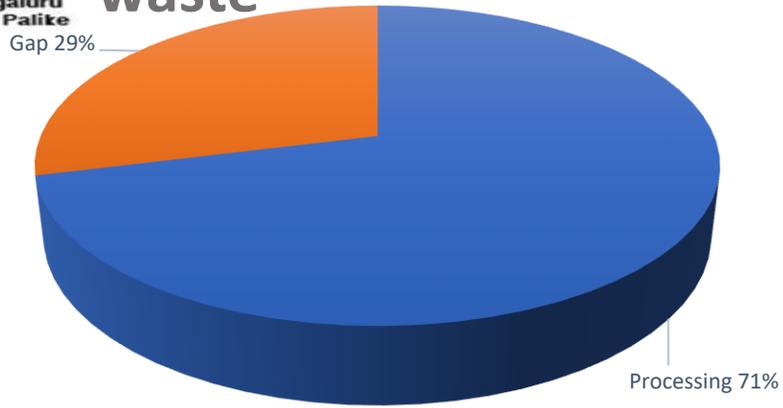
Category	Improvement in Processing		
	OCT 2022	OCT 2023	August 2024
	BBMP	BBMP	BBMP
Total Wet Waste Generated (TPD)	3025	3025	3025
Total Wet Waste Processed (TPD)	1950	2150	2150
Processing %	65%	71%	71%
Gap (TPD)	1075	875	875

Wet waste management:

- Generation of the wet waste is 3025 TPD
- 1400 MTPD is processed through Conventional Composting method at BBMP owned 7 wet waste processing plant
- 500 MTPD wet waste is processed at 1 Private plant(M/s MSGP)
- 65 MTPD in Biomethanisation plant.
- 185 MTPD is processed through Insitu processing processing by BGs.

Measures taken in BBMP to meet the gap towards processing of wet waste

3178



Processing Vs Gap for Wet Waste in BBMP

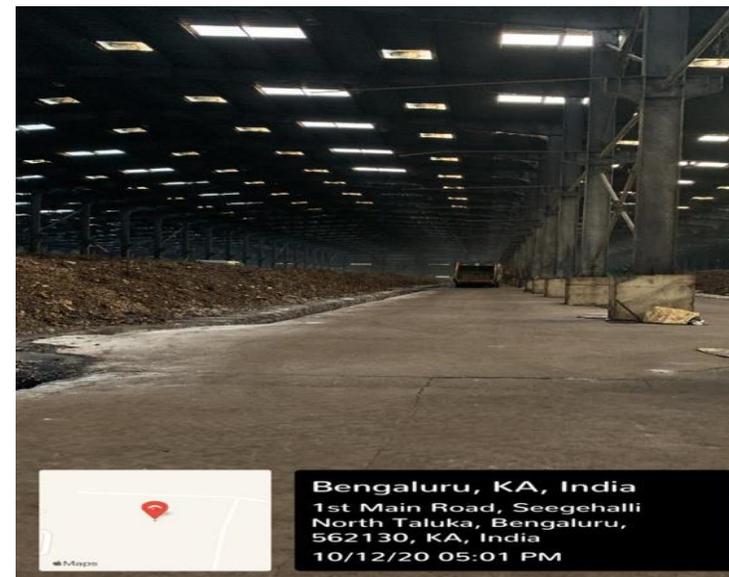
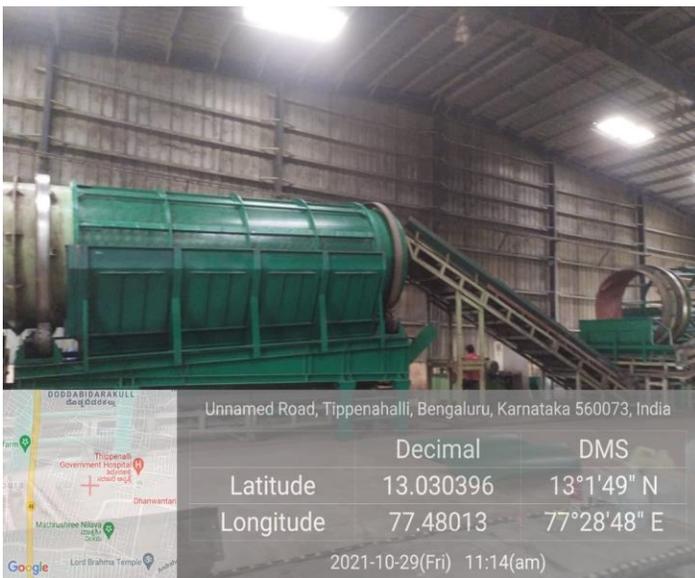
Status of BBMP	
Generation	3025 TPD
Processing	2150 TPD
Gap	875 TPD



- Proposal submitted to Government for establishment of four Integrated Solid Waste Management Facilities of approximately 2000 TPD processing capacity at 4 locations (Considering all Types of waste)
- Tenders will be invited shortly after approval from the cabinet – Time line is 2 years to implement from the date of work order
- Work in progress - Establishment of one No. of 50 TPD Bio CNG plant.
- Work in progress - Establishment of four No. of each 5 TPD Bio Methanization plant.
- Approval accorded by the Govt. for - Establishment of one No. of 300 TPD Bio CNG plant in collaboration with M/s GAIL

Proposed to process Total 2227 TPD of waste including the wet waste gap of 875 TPD

Initiative taken by BBMP 3179 Wet Waste Management



Centralized Waste Processing plants running at 8 locations to process the wet waste. The Wet Waste is being converted to Compost

3180 De-centralised composting units



In-situ Composting in Households



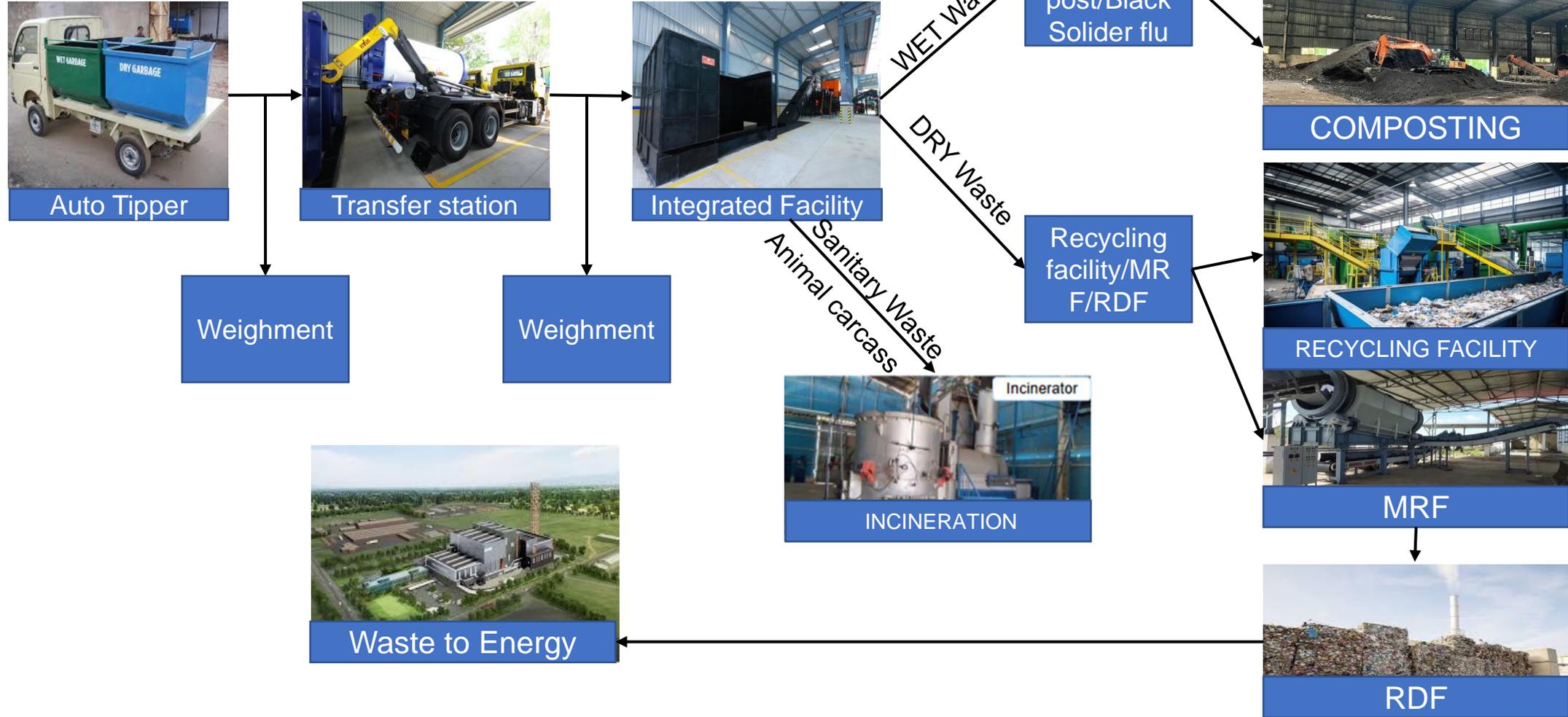
Bio-methanisation plant – 5 MTPD capacity each at 13 locations



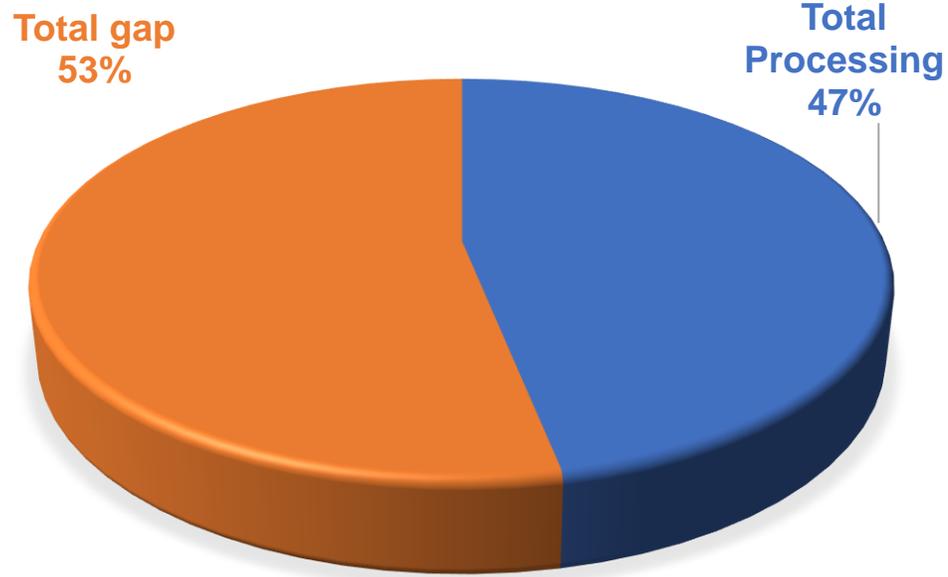
Composters in Apartments/Bulk Generators



PROCESSING AND DISPOSAL PROPOSED AT INTEGRATED FACILITY PROJECT



14. Dry Waste Management - BBMP 3182



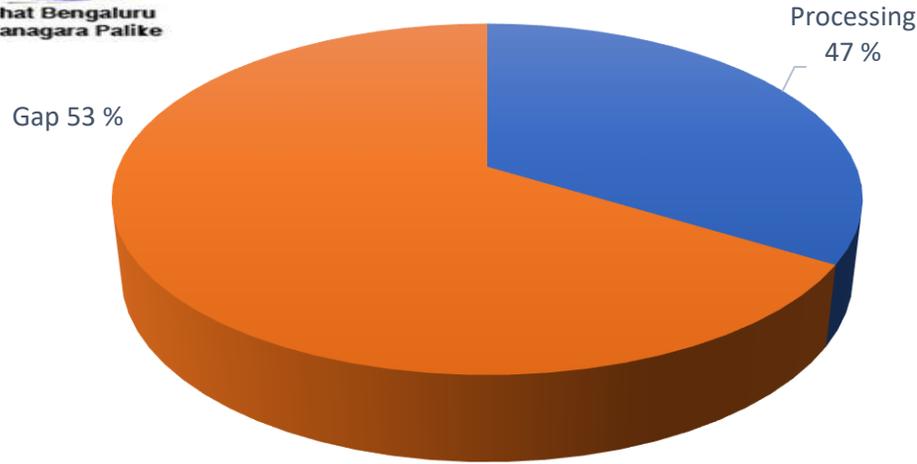
DRY WASTE-GENERATION VS PROCESSING

Improvement in Processing			
Category	OCT 2022	OCT 2023	JULY 2024
	BBMP	BBMP	BBMP
Total Dry Waste Generated (TPD)	1925	1925	1925
Total Dry Waste Processed (TPD)	650	750	900
Processing %	33%	39%	47%
Gap in TPD	1275	1175	1025

Generation- 1925 TPD and 47% of the dry waste is processed

Measures taken in BBMP to meet the gap towards processing of dry waste

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Processing Vs Gap of dry waste in BBMP

Status of BBMP

Generation	1925 TPD
Processing	900 TPD
Gap	1025 TPD



- 119 Dry Waste Collection Centers (DWCCs) to 3 TPD and 4 TPD Capacity.
- Establishment of 24 new DWCCs – Work in progress
- Establishment of RDF to Energy plant at Bidadi in collaboration with M/s KPCL to manage 600 TPD RDF every day. Plant is ready for commissioning and trials runs are on progress – Established at a project cost of Rs. 260 crores
- Establishment of four Integrated Solid Waste Management Facilities which handles dry waste – Material Recovery Facility

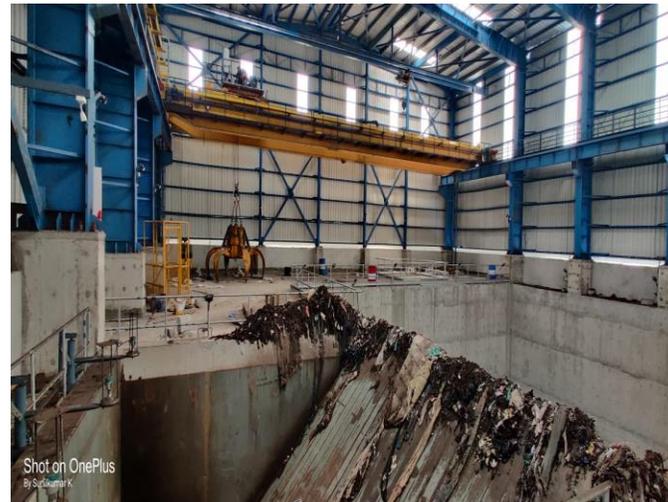
Proposed to process 1025 TPD of dry waste against the gap of 1025 TPD

Initiatives taken Towards ³¹⁸⁴ Dry Waste processing



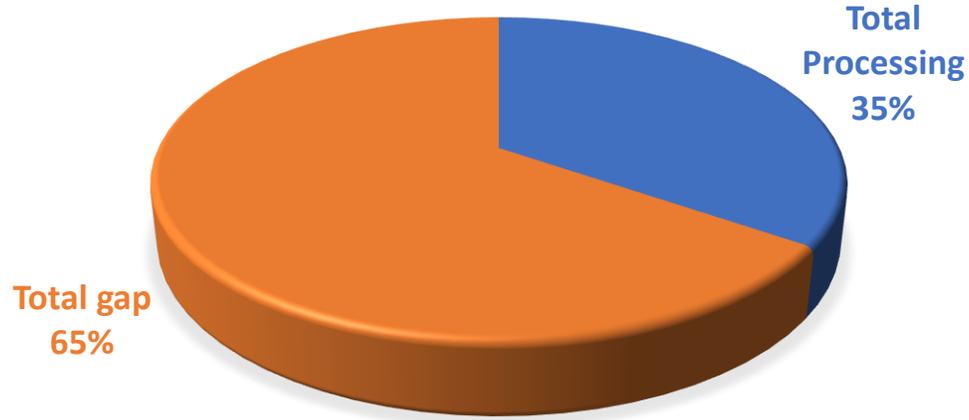
De-centralized Dry Waste Processing plants running at 119 locations and sent to Recyclers

Waste(RDF) to Energy plant at Bidadi 3185



Centralized Waste to Energy Plant Newly Constructed at Bidadi by KPCL to generate 11.5 MW of Power from 600 MTPD of RDF Waste

15. C&D Waste Management - 3186



C&D WASTE GENERATION & PROCESSING

Generation- 4750 TPD and 35% of the C&D waste is processed

Approved Projects under C&D Waste Management			
Projects	Area	Capacity Approved (TPD)	Cost (Cr)
SBM 2.0	BBMP	3000	167

Generation (TPD)	Processing (TPD)	Gap (TPD)
4750	1750	3000

Status of C&D Wastein BBMP					
Year	Target	DPRs approved	Balance	Tenders called	Yet to be called
July 2024	2	2	0	2	0

Under Tendering Process:

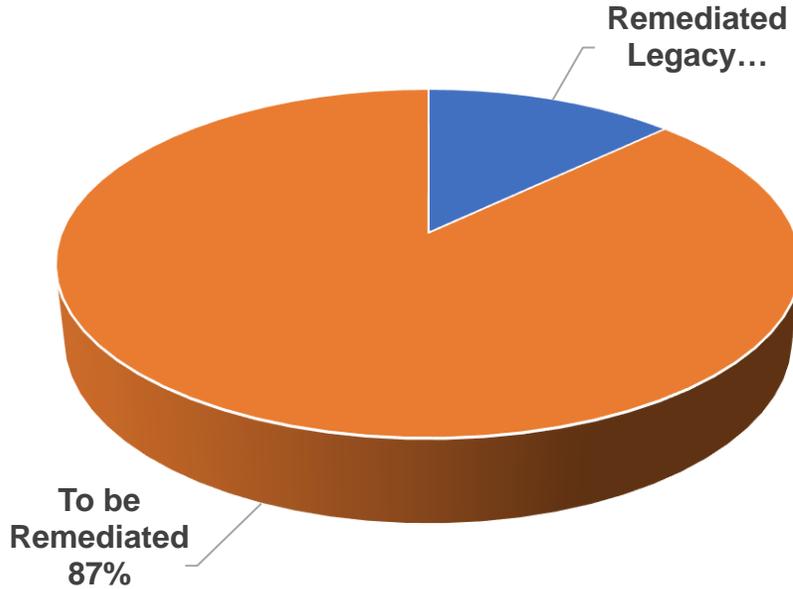
- **BBMP's** Proposal of Collection and Transportation of 1750 TPD C&D waste to existing 2 Nos. of C&D processing plants at Kannur and Chikkajala on PPP Model is under Tender process.
- **BBMP's** Proposal of Collection, Transportation and Processing of 3000 TPD C&D waste on PPP Model is under Tender process.

Initiative taken in BBMP to process C & D waste



C & D Waste Processing Plant of capacity 750 MTPD established at Kannur

16. Legacy Waste Management in BBMP **3188**



Status of Legacy Waste Management

Area	No of Dumpsites	Quantity in Lakh Tonnes	Remediated in Lakh Tonnes	Balance in Lakh Tonnes
BBMP	9	97.82	18.88	78.94

Action Taken from Oct 2022



DPR is completed for all 9 Legacy waste dumpsite (97.82 Lakhs Tones)



DPR approval process is completed for 5 Legacy waste dumpsite



Tender process completed for 5 Legacy waste dumpsite



At one Legacy waste site (Bagalur) work completed
At Two Legacy waste site (Mandur Phase-1 and Bellahalli) work is on progress

Status of Legacy waste Management

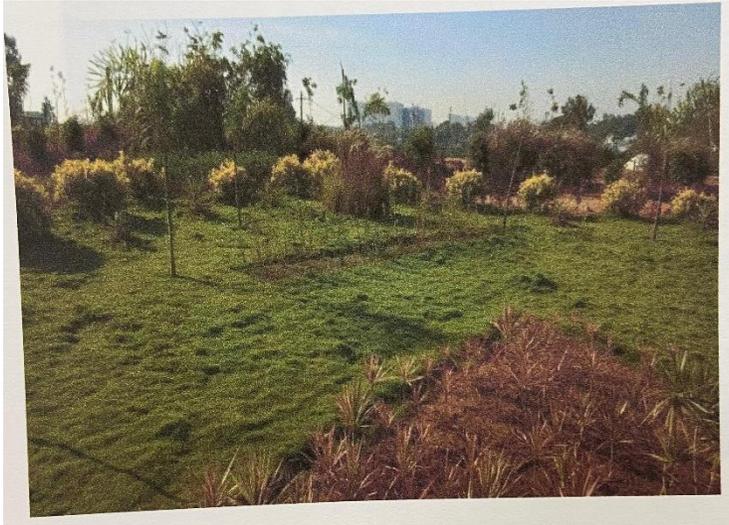
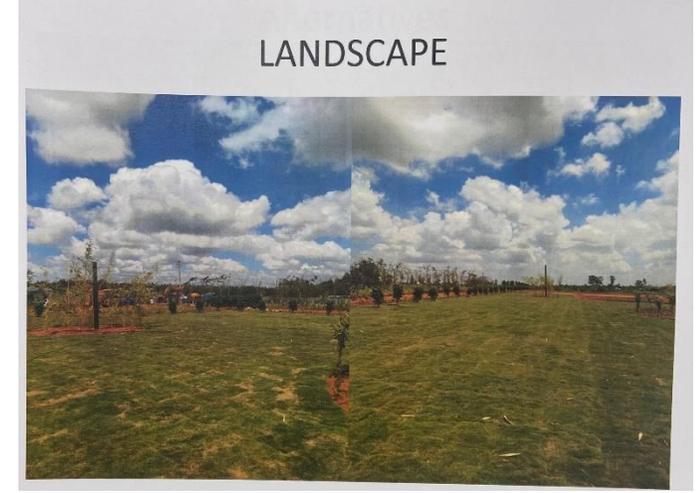
➤ There are 9 old dumping sites having 97.82 lakh tonnes legacy waste—

- 1) Mandur phase-1
- 2) Mandur phase-2
- 3) Mavallipura
- 4) Bingipura
- 5) Lakshmpura
- 6) Bagalur
- 7) Bellahalli.
- 8) SubbarayanaPalya
- 9) Doddabidarekallu

➤ Status of Legacy waste Management-

- Bagalur – completed through Bio remediation process.
- Mandur - Taken in two Phase. Mandur Phase 1- work under process. Approx. 6 lakhs tonnes processed through biomining. At Mandur phase-2 Tender is under process.
- Bellahalli.- Work under process through Bio remediation.
- Mavallipura - Tender is under process
- SubbarayanaPalya , Doddabidarekallu Bingipura & Lakshmpura – DPR Approval stage,

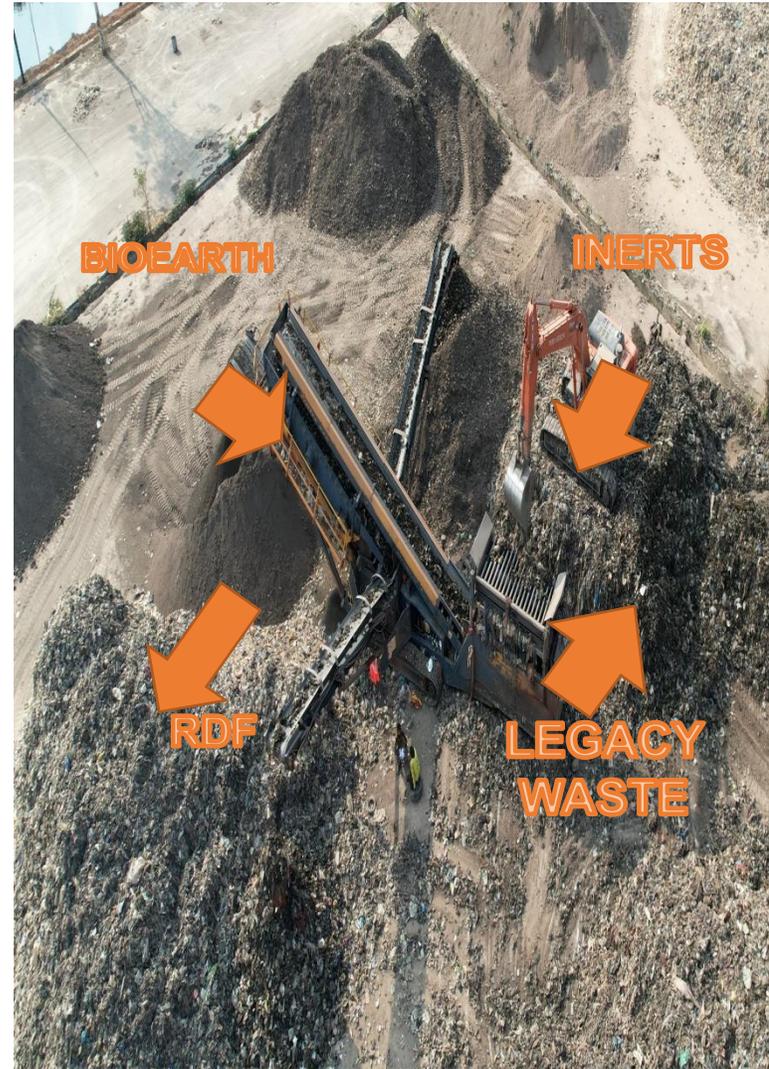
3190 Bio remediation at Bagalur (Completed)



3191 Legacy waste Management at Mandur phase-1



ARIEL VIEW OF MANDUR LANDFILL SITE



BIOMINING OF LEGACY WASTE



LEACHATE COLLECTION POND



Extraction of methane Gases at legacy Landfill site



3193

Used Water Management – Bengaluru

About BWSSB

3194

- Formed in 1964 under Government of Karnataka State Legislature Act, one of the 1st Water Utilities in India
- Serves 13 million population and 800 km² service area
- Mandates
 - Safe and reliable water and used water services for all
 - Customer satisfaction
 - Technological innovation
 - Public engagement
 - Be an instrument for change in water & used water service delivery

Used Water Management	
Generation	1,480 MLD
Installed Capacity	1,348.5 MLD
Currently treated	1,212 MLD
Reused	850 MLD
Gap in Treatment	268 MLD
Connections	10.87 Lakhs
Network	11,894 Km

Water Management	
Production	1,450 MLD
Storage capacity	1, 067 ML
NRW	28%
Network	14,194 Km
Per capita consumption (avg)	108 L/Day
Connection	10.70 Lakhs

STP Details

3195

- BWSSB has constructed the STPs in phased manner of different capacities at various places .
- After commissioning of 4th Stage Phase II Cauvery Water, 10 STPs are constructed at various places of different capacity with JICA funding, the total capacity was 1061.5 MLD and treating capacity was 721 MLD.
- In Mega City Revolving Fund , 4 STPs are constructed and commissioned 2021 in various places of different capacity, with a total capacity is 440 MLD.
- In AMRUTH Scheme, 5STPs are constructed and commissioned 2021 in various places of different capacity, with a total capacity is 75 MLD.
- Further as per IISc Concept report, 180 MLD STP @ V valley & 60 MLD STP @ Hebbal are demolished for non achieving the NGT standards and constructed new 150 & 60 MLD STPs in lieu of Existing STPs taken up under Up gradation project.
- Presently BWSSB is having 34 STPs with a total capacity of 1348.5MLD and by increasing the treating capacity from 721 MLD to 1212 MLD.
- BWSSB is constructing 26 new STPs with a capacity is 470 MLD and planned to be completed by 2026.
- Further, BWSSB has proposed 17 STPs with a capacity is 583 MLD

Used Water Management Profile under BBMP Area

3196

Agency	Cauvery Water Supplied in MLD	Borewell Water extraction in MLD approximate (considering 110 villages & Core area)	Total Water Supplied in MLD	Sewage Generation (MLD) (considering 110 village & Core area)	Total Installed Capacity	Current Operational Capacity	Gap in Operational Capacity	Total Gap in Treatment
BWSSB	1450	1200	2650	2120	1348.5	1212	212.5	604
Private STPs					380	304		

Action Plan to tackle the Gap in Used Water Management

Status of Projects	No. of STP	Capacity in (MLD)
Existing STPs in BWSSB	34	1348.5
Under Implementation in BWSSB	26	470
Proposed STPs in BWSSB	17	583
Total	77	2401.5

Timeline to tackle the Gap in Used Water Management

Timeline	No. of STPs	STP Capacity in MLD	Cumulative Capacity addition in MLD	Cumulative Installed Capacity in MLD
Current Installed Capacity	34	1348.5	-	1348.5
Capacity addition by 2024	16	132	132	1480.5
Capacity addition by 2025	8	178	310	1658.5
Capacity addition by 2026	2	160	470	1818.5
Capacity addition by 2028	17	583	1053	2401.5

The BWSSB is in the process of adding **26 additional STPs** with a cumulative treatment capacity of **1818.5MLD** by **2026**, which will address the current gap of **604 MLD** and also address the future treatment requirements.

•NGT Compensation Fund- BWSSB (441.00 Crores)

3197

In order to ensure complete utilization of existing STPs and STPs under construction, the following works are proposed and details are as follows.

Sl. No	Description	Project cost	status	Timeline for completion
1	Work of providing and laying of 2000mm,2200mm and 2400mm dia RCC sewer pipeline from Mylasandra STP to Doddabele STP	94.50	Work under progress	March 2027
2	Work of providing and laying of 1200 & 1600mm dia RCC sewer pipeline from SMV Layout near Hosakere lake to Vidhyapeeta common Chamber near Kengeri Bridge	49.40	Work under progress	September 2026
3	Work of providing and laying of 1200mm dia RCC sewer pipeline from Outer Ring Road laggere bridge to summanahalli Bridge Magadi main Road	40.10	Work under progress	March 2026
4	Work of providing and laying of 1600mm dia RCC sewer pipeline from Outer Ring Road near Hennur Police Station to Rajacanal STP	36.50	Work under progress	March 2026
5	Work of Providing and laying of 900/1200/1400 mm dia RCC NP-3 class sewer pipeline including trenchless method from MV Garden to Amarjyothi layout ISPS, Domluru	48.30	Work under progress	March 2026
6	Work of Providing and Constructing ISPS at KGA Road, Amarjyothi Layout and Laying 1100mm dia DI rising Main from ISPS Domluru to 218 MLD STP, Challaghatta Turnkey.	62.20	Work under progress	December 2026
7	Work of Providing and Laying of 1000/1200/1800/2000mm dia RCC NP-3 class sewer pipe line from 7th main road, Garvebhavipalya along HSR layout up to Agaram STP and Construction of ISPS at HSR layout under AEE(WWM-N)K&T-2 Sub Division at Various locations.	110	Work under progress	March 2027

Upgradation of STPs as per Revised Standards prescribed by Hon'ble NGT OA No 125/2017 & 1069/2018

3198

Sl No	Parameter	Unit	Revised Standards prescribed by Hon'ble NGT OA No 1069/2018
1	PH	Units	5.5-9
2	BOD5	MG/L	10
3	TSS	MG/L	20
4	COD	MG/L	50
5	Total Nitrogen	MG/L	10
6	Total Phosporus	MG/L	1
7	Total Coliform	MPN/100ML	Prescribed<230 required<100

Further, as per the NGT order OA No.125/2017, it was directed that all the STPs shall have biological nutrient removal facilities (BNR) and OA No 1069/2018, NGT had directed to meet the revised effluent discharge standards

In order to meet the revised effluent discharge standards given by NGT OA 1069/2019 & BNR Removal, BWSSB is taking action to upgrade the existing 20 STPs of various capacities, construction new STPs in lieu of existing STPs and without affecting the present treatment process. Works are under progress and planned to be completed by 2026

3199 Current reuse of treated water

- **Around 850 MLD out of 1212 MLD treated used water is currently reused in Bangalore**
- **BWSSB generates average monthly revenue of 55 Lakhs by selling the recycled water.**
- **Approximately 550 MLD treated used water is supplied to extremely dry region of Kolar, Chikkaballapur and Anekal for filling of lakes intern Groundwater recharge.**
- **Treated Water supplied to KIADB Industrial area, KPCL, KIAL, IAF, BEL, Rail Wheel Factory, ITC. Raj Bhavan, Vidhana Soudha, High Court, Golf Course, M/s HPCL Cubbon park botanival garden and Lal Bagh Botanical Garden for non potable purpose.**
- **During Summer Crisis** BWSSB has planned to overcome from the dependency on Cauvery water & Borewell the treated water supplied to Industries, Apartments, BBMP medians and parks, Car wash, Stadium etc.,

- BWSSB with the assistance and guidelines of **IISc Scientists, Indian technology utilized to produce Zero Bacteria treated water** of which 3 lakh liters of water will be supplied to Wipro and other consumers like HAL, Brookfiled and Adobe Systems along with IT parks.
- BWSSB has issued a circular for not using the Borewell/Cauvery Water for washing cars. BWSSB made **mandatory regulations for car wash centers to use treated water for car wash** to reduce the dependent on Cauvery Water & Bore well water.
- Government of Karnataka has issued a circular for mandatory to use the treated water for **construction purpose**.
- The Treated Water supplied through tankers for **Chinnaswamy Stadium at the time of IPL matches** for maintain the ground for reduce the dependent on Bore well water.
- BWSSB has signed a **Memorandum of Understanding with Bangalore Apartments Federation** between apartment communities for selling of Treated water.
- BWSSB has signed a **Memorandum of Understanding with FKCCI/CREDAI** for supply of Treated water.
- BWSSB has already filled the 18 lakes through Eco friendly Treated water from Used Water Treatment Plants. Another 40 lakes taken up for filling of treated water from Used Water Treatment Plants.
- BWSSB launched the **Parisara Jala Snehi Web Application** where we can book the treated water tankers for treated water supply for non potable purpose.
- **UNFCCC has recognized the BWSSB for Sustainable Development using Innovative Concepts** to Overcome Climate Change during 2024 Summer crisis
- **CLIMATE SMART UTILITIES** has recognized the BWSSB for the Successful Climate Smart Utilities application in the recognition program

Filling of lake by Treated Water 3201

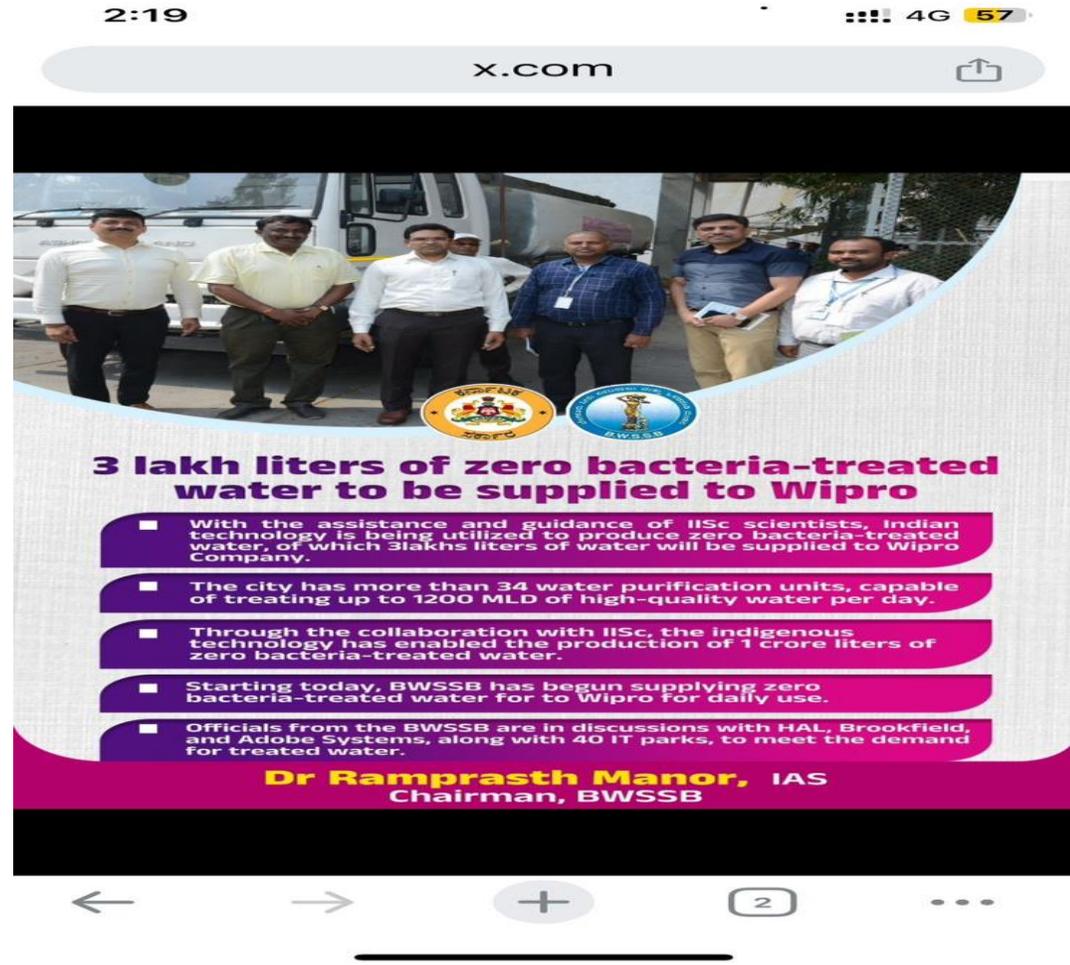
Agaram Lake



Sarakki Lake



BWSSB has supplied 3³²⁰² lakh liters zero bacteria treated water to Wipro & Other consumers



BWSSB, IISc collaborate to launch zero-bacteria water technology

BENGALURU, DHNS: The Bangalore Water Supply and Sewerage Board (BWSSB) with the support from scientists at Indian Institute of Science (IISc) has adopted a new technology which will further improve the quality of treated water.

The technology will ensure 'zero bacteria water' that can be used for all purposes except for drinking.

BWSSB Chairman Dr Ramprasad Manohar V said that the technology was adopted at the Sewage Treatment Plants (STP) in the city in just two weeks time.

"At present, the water from our STPs are already up to the standards stipulated by the pollution control board. However, it still contains a few bacteria and hence we had to advise people to use it only for flushing and gardening purposes. With this new technology, the treated water will have

zero bacteria making it safe for all purposes except drinking," he said.

The technology has been adopted at Agara, KC Valley and Bellandur STPs and is producing 10 MLD of zero bacteria water daily.

BWSSB said that there has been a demand for 'zero bacteria water' from tech parks and large public sector undertakings since treated water cannot be used in air conditioning systems and for cleaning purposes.

"Owing to the presence of bacteria in treated water, it could not be used in air conditioning systems since there is a high probability of human exposure to bacteria. With this new technology we will be able to prevent the use of potable water for these purposes," Manohar said.

This will in turn bring down the demand for Cauvery water and borewell water.

BWSSB to supply high-quality treated water for construction activities

The Hindu Bureau
BENGALURU

In a move aimed at addressing water needs of construction projects, the Bangalore Water Supply and Sewerage Board (BWSSB) has declared its readiness to provide 10 MLD (million litres per day) of treated water to them.

This initiative is set to

benefit the construction sector, ensuring uninterrupted progress while promoting sustainable water usage practices.

During a meeting convened at the BWSSB headquarters, V. Ram Prasath Manohar, chairman of BWSSB, reiterated the board's commitment to supplying high-quality treated water for construction purposes. He

directed the Confederation of Real Estate Developers Association of India (CREDAI) to furnish a detailed report outlining the water demand required for ongoing construction activities.

Proactive approach

Amar Mysore, president of CREDAI Bengaluru, expressed satisfaction with the BWSSB's proactive

approach and commended the water supply and sewerage board for its efforts in facilitating continuous construction work amid water scarcity challenges. Mr. Mysore lauded the initiative to provide treated water at affordable rates, while also highlighting the need for support in transportation and storage facilities at construction sites.

BWSSB wins accolades at global workshop

BENGALURU, DHNS: The Bangalore Water Supply and Sewerage Board (BWSSB) has been receiving adulations for its effective water management strategy during the crisis in the city, with the latest recognition coming from participants at the UN Climate Change Innovation Workshop.

BWSSB Chairman Ramprasad Manohar V, who attended the 5th systemic innovation workshop, pro-

vided insights into the board's water management initiatives during the crisis.

During his presentation, Manohar also encouraged innovators to analyse Bengaluru's water situation and develop ideas for enhanced management.

"We urge all innovators to view Bengaluru's water management as a case study and propose more sustainable innovations," the BWSSB chief said.

BWSSB ensures treated water supply for IPL matches

BENGALURU, DHNS: Putting an end to speculations that the IPL matches could be shifted out of Bengaluru owing to the water crisis, the Bangalore Water Supply and Sewerage Board (BWSSB) has assured to supply 75,000 litres of treated water to the stadium during the matches.

According to a statement by the BWSSB, officials from the Karnataka State Cricket Association (KSCA) met board chairman

Dr Ramprasad Manohar V on Wednesday and requested treated water be supplied during all the match days.

Manohar stated that they could allow the matches to proceed, given that the stadium is neither using Cauvery water nor borewell water, thus ensuring there is no misuse of water.

"Considering that they have asked for treated water and we want to promote its use, we have approved their

request," Manohar said.

The water will be supplied from the Sewage Treatment Plant (STP) located in Cubbon Park.

The Chinnaswamy Stadium, with a capacity to host 32,000 spectators, is all set to host the first IPL match in the city on March 25, where Royal Challengers Bangalore will face Punjab Kings.

Subsequent matches are scheduled for March 29 and April 2.

Project accolades

- UNFCCC has recognized the BWSSB for Sustainable Development using Innovative Concepts to Overcome Climate Change during 2024 Summer crisis

3204

 **UN GA President** ✓
@UN_PGA

The KC valley wastewater management project in Karnataka 🇮🇳 is [#transformation](#) in the making.

Four years ago it was a dry waste land. Today, I am enjoying coconut water produced here using the treated wastewater.

Congrats to everyone behind this success story.

 1:25

7,311 views

👤 Narendra Modi and 8 others

8:33 AM · 01/02/23 · **23.6K** Views





A Step Towards Cleanliness



**Government of Karnataka
Rural Drinking Water and Sanitation Department**

NGT OA 606/2018- Karnataka (Rural)

18. State Profile of Rural Karnataka 3206



Total Rural Population
3.75 Cr (2011 Census)
4.45 Cr Current)



Districts

31



Gram Panchayats

5990



Total Villages

26775

Activities as part of Rural Sanitation

1. IHHL
2. Community Sanitary Complex
3. Solid Waste Management
4. Grey Water Management
5. Fecal Sludge Management
6. Material Recovery Facility

19. Solid Waste Management Overview ~~3207~~ Rural

Solid Waste Management Overview- @ Rural

1

Generation : 3194 TPD : Wet waste : 916 TPD
Dry waste : 2278 TPD

2

Processing : 2918 TPD : Wet waste : 875 TPD
Dry waste : 2043 TPD

3

Wet Waste Processing Methods : Household Compost Pits- 31926
Household Biogas: 2501
Community Compost Pit:5583
Kitchen Garden: 66,5688 HH
Govardhan: 87 Units

20. Solid Waste Management

3208



Swachh Sankeerna

- Total SWM facilities : 5952
(Processing facility capacity varies from 1 TPD to 2.5 TPD)
- No. of SWM Vehicle : 7180
- Women drivers : 3414
- No of women (SHG) handling the facility : 12,237



MRF / PWM

- 10TPD Standard Capacity
- Approved : 31 Units
- Completed : 4 Units
- 27 MRF DPRs finalized, tender will be initiated shortly



Gobhardhan

- Approved : 74 Units
- Functional : 68 (Biogas production -2290m3/day)
- Ongoing : 6

Grey Water Management :

- DPRs Approved : 23,868
- Work considered: 30,485
- Completed : 9,522
- Ongoing : 6,449
- Yet to start : 14,454

GWM Methods : Kitchen garden & Individual soak pit :

10,97,698 Community soak pit :5604,Inline treatment:3918

Grey water in line work are being prepared based on topographic survey maps

FSM:

- 10 Urban-Rural convergence: Co-Treatment with existing STPs of ULB covering 640 villages of 6 districts
- Approved 3 KLD FSTP - 102 units
- Completed : 28 units
- Ongoing : 33 units
- Tender initiated : 31 units



Inline treatment & Community soak pit @ Bedavatti & Belavinal villages of Koppal



FSTP @Rajanukunte

3210



Individual Household Latrine (IHHL)

- Target : 1.02 Crore
- Completed : 78 Lakhs
- Ongoing : 1.08 Lakhs
- Self-funded toilets : 17.06 Lakhs
- HH tagged with 2643 Community toilets: 66656
- Yet to be constructed IHHL : Around 4 Lakhs , target 2024-25 *(Resurvey is under progress to validate the numbers as per the field conditions)*



Community Sanitary Complex Constructed: 2643

Community Sanitary Complex in Kalyan Karnataka Area

- Target : 400
- Completed : 52
- Under Progress : 194

3211

Thank you