

**GOVERNMENT OF KERALA**

Local Self Government (WM) Department

No.WM1/320/2022-LSGD

16-08-2023,Thiruvananthapuram

From

Additional Chief Secretary to Government

To

The Registrar General,
The National Green Tribunal(Principal Bench),New Delhi

Sir,

Sub: OA 606/2018-Compliance of MSW management Rules,2016
and other environmental issues-Report-Reg

Ref: Order dtd 01.12.2022

With reference to the Order dtd 01.12.2022 of Hon' National Green Tribunal, I am directed to forward herewith the progress report on both solid and liquid waste management in the State , duly approved by the Additional Chief Secretary,Local Self Government Department for necessary action.

Yours Faithfully,

PREETHA K S

ADDITIONAL SECRETARY

For Additional Chief Secretary to Government.

Report in OA 606/2018 on Implementation of Solid and Liquid Waste Management before the Hon'ble NGT (PZ)

After a comprehensive review of the State of Kerala's advancements in the domains of Solid and Liquid Waste Management, the Hon'ble National Green Tribunal, while determining the gap in waste management (particularly liquid waste management) by the State, has refrained from imposing environmental compensation, considering the ring fencing of funds towards waste management.

A substantial financial reserve of Rs. 2343.18 crores had been ring-fenced by the State for addressing sewage and sullage management. The allocation of these funds underscores the State's proactive approach to rectifying these environmental challenges.

In line with the order dated 01.12.2022 in OA No. 606/2018 (PZ), the NGT has mandated the submission of biannual progress reports in the matter. These updates are to be communicated via email to the Registrar General of the Tribunal.

Solid Waste Management Campaign

The government has responded diligently to the directives issued by the esteemed Tribunal. The intervention of the Honorable High Court in the Brahmapuram fire incident case spurred heightened efforts to fortify waste management facilities and practices, for ensuring a safer and more sustainable environment. The State Government launched a year long campaign for a waste free State, with the involvement of multiple departments, private partners and civic society.

Significant strides have been achieved in the initial phase of the campaign of two and a half months, culminating on June 5th, which marked World Environment Day. Phase I focused on gap assessment, institutionalising waste management by bulk waste generators, augmenting and standardising the quality of segregated collection, cleaning up of public garbage heaps (garbage vulnerable points- GVPs) and water bodies through mass mobilisation of elected representatives, official and civic society stakeholder groups. Haritha sabhas to exclusively discuss the report cards of

the local bodies and janakeeya audit (community audit) of the work undertaken and impact of the campaign specific to each Local Self Government were also undertaken.

Phase II of the campaign which is currently undergoing, focuses on drawing insights from gap analysis and community audits to augment infrastructure initiatives, policy deficits and system corrections concerning waste management. Citizen education for behavioural change is also prioritised under the close supervision of the hon'ble High Court. All six City Corporations have meticulously formulated their Solid Waste Management (SWM) blueprints, opting for newer, state of the art technologies to enhance integrated solid waste management.

Liquid Waste Management

Of the projected 3500 Million Litres per Day (MLD) of liquid waste generated in the State, it was estimated that 1011 MLD undergoes treatment via septic tanks. The widespread usage of soak pits was assumed to have handled the problem of liquid waste.

In the wake of the directive of the hon'ble NGT, the State has undertaken a concerted effort to address the shortage of treatment facilities for black and grey water. An exercise was undertaken to cluster local bodies based on the treatment requirement and to find suitable locations where projects could come up. It was also decided to look at the possibility of converting degraded and defunct quarrying sites in both the public and private space across the State. Over 898 sites were examined by district level technical teams, based on which 127 sites were found suitable. The District Collectors were instructed to make the land available in respect of these sites. A Decision was taken at the highest level to permit District Collectors to identify appropriate public land up to one acre and issue NOC for the purpose of waste management projects.

An amount of Rs 2343 Cr had been ring fenced by the State for liquid waste management projects - these included the AMRUT scheme funds, the finance commission grants, the development funds and own source revenues of the State and the Swachh Bharat funds. Local bodies were mandated to take up liquid waste management projects to manage the deficit as per the annual plan guidelines. The

District Planning Committees were oriented on how to appraise liquid waste management projects and to insist on such projects to be undertaken by LSGs before approving their annual plans. A technical support mechanism of identified Engineers was trained and put in place in the districts to facilitate project preparation and fast track project approvals pertaining to liquid waste management. A major challenge had come up in the inability of the local bodies to secure identified lands on account of very severe local resistance. Agitations that have sprouted in nearly 70% of the identified sites remain an unresolved issue. This brings down the suitable, available site count to 39. Despite the resistance on the ground, 47 new treatment plants have been slated for commencement this year.

The details of progress made by the State in the management of solid and liquid waste for the last six months is presented below as three sections namely Biomining, Solid Waste management and Liquid Waste Management.

Biomining

Till date, 22 sites have been cleared of 167 Thousand tonnes of waste and 45 Acres of land reclaimed. The details of these sites are given below.

Sl No	Name of Local Body	Name of Location
1	Thiruvananthapuram	Palayam market
2	Thiruvananthapuram	Erumakuzhi, near chala market
3	Kollam	Kureepuzha
4	Pathanamthitta	Near Mini stadium
5	Pandalam	Near RRF Unit
6	Adoor	Kaimalapara, Ward no. 2
7	Kalamassery	Kalamassery
8	Kodungalloor	Pullut, Chappara
9	Guruvayoor	Choolpuram
10	Pattambi	Sankaramangalam
11	Perinthalmanna	Kunnappalli
12	Manjeri	Vettekkode
13	Kalpetta	Vellaramkunnu

14	Mundakkayam	Vettukallamkuzhy
15	Erumeli	Kavumgumkuzhy
16	Alathur	Vaveli
17	Vadakkanchery	Aryankadavu
18	Nemmara	Vakkavu
19	Munnar	Munnar
20	Punalur	Punalur
21	Chittoor-Thathamangalam	Thathamangalam
22	Vaikom	Vaikom

On account of the volume involved and the lack of resources on the part of LSGs, additional funds had to be identified and tied up in respect of the remaining sites. Additional resources have now been tied up and projects taken up by all the remaining LSGs. On tying up of funds, biomining is now ongoing in 9 sites, Work order has been given in 3 sites, tender proceedings are ongoing in another 5 sites, Feasibility study has been completed and tender process initiated in 19 sites.

Details of the dumpsites are given below.

Sl No	Name of Local Body	Name of Location	Volume of waste (in m ³)
1	Attingal	Chudukad	18500
2	Thrissur	Laloor	51634
3	Ottapalam	Panamanna	3000
4	Kochi	Brahmapuram	551903
5	Kozhikode	Njaliyan parambu	130000
6	Chavakkad	Chavakkad	4210
7	Kannur	Chelora	120323
8	Irinjalakuda	Manjadikunnu, Porathissery	7459.119
9	Kanhangad	Trenching Ground Chemmattamvayal	5600
10	Kayamkulam	Murukkummoodu	9129
11	Muvattupuzha	Kurianmala	31995
12	North Paravoor	Vedimara	11860
13	Kothamangalam	Kumbalathumuri	21295
14	Kunnamkulam	Kunnamkulam	28934
15	Chalakydy	Near take a break, near Cosmos Club	4399
16	Wadakanchery	Kumbalangad	25238
17	Palakkad	BPL Junction, Koottupatha, Kodumba	76192
18	Kottayam	Vadavathoor	86662
19	Alappuzha	Sarvodaya puram	22500
20	Changanacherry	Fathimapuram	7300
21	Erattupetta	Thevarrupara	77058
22	Kattappana	Puliyannmala	9500

23	Thodupuzha	Parakkadavu	28000
24	Kodungalloor	T.K.S. Puram	1214.055
25	Manjeri	Vettekkode	15433
26	Payyannur	Moorikkovval	2625
27	Mattannur	Karithurparamba	19600
28	Kuthuparamba	Palapparamba	15101
29	Iritty	Athithattu	3800
30	Kasaragod	Kelugudde	11226.368
31	Kottarakkara	Ugrankunnu	8245
32	Kalamasseri	Kalamasseri	33569
33	Malappuram	Near Inkel City, Ward 38, Puliyettummal	7936
34	Vadakara	Puthiyappa	29765
35	Kalpetta	Vellaramkunnu	9485
36	Thalassery	Punnol Petty palam	56788
	Total	m3	1547478.54
		tonnes	773739.27

Solid Waste Management

A detailed picture of various solid waste management systems in Kerala is tabulated below. The details cover the type of technology, no of facilities, capacity of facility and location of the facility.

Existing waste management facilities

Facility	Type Of Plant	Number	Location	Capacity (Tpd)
Composting Facilities				
Centralized Plants	Windrow Composting Plant (Large)	1	Kochi Corporation	25
		1	Kozhikode Corporation	100
		2		125
	Windrow Composting Plant (Small)	1	Palakkad Municipality	10
		1	Attingal	15
		1	Adoor	1
		1	North Paravur	1
		1	Kothamangalam	4
		1	Chalakydy	2
		1	Irinjalakuda	4
		1	Kodungalloor	4
		1	Kunnumkulam	9
		1	Wadakancherry	10
		1	Guruvayoor	5
		1	Chittur Thattamangalam	5

	1	Pattambi	3
	1	Shornur	5
	1	Perinthalmanna	2
	1	Thaliparamba	1.5
	1	Mattanur	2
	1	Koothuparamba	5
	1	Ottapalam	5
	1	Iritty	2
	1	Kalpetta	4
TOTAL	21		99.5

Facility	Type Of Plant	Number	Location	Capacity (Tpd)
Centralized Plants	Vermi Composting Plant (Small)	1	Attingal	0.25
		1	Kattapana	0.5
		1	Mattannur	5
		1	North Paravur	1
		1	Chavakkad	2
		1	Chalakkudy	0.5
		1	Koothuparamba	1
		1	Perinthalmanna	2
		1	Manjeri	0.5
		1	Kuthuparamba	1
	Total	10		13.75
Community Facility	Aerobic Composting Unit	773		443.39
Institutional Facilities	Small Composting Devices	28406		20
	Owc	1	Angamaly	0.5
		3	Thrissur corporation	16
		1	Kayamkulam	10
	Total	5		26.5
Household Level	Composting devices	349815		699.63
	Compost Pits	476530		476.53
	Total	783200		1176.16
Composting Facilities Total		855562		1904.3 Tpd

Biomethanation Facilities				
Facility	Type Of Plant	Number	Location	Capacity (Tpd)
Centralized Facilities	Large Capacity Biogas Plants	1	Thodupuzha	8
		1	Manjeri	10
		1	Perinthalmanna	2
		1	Kattappana	5
		Total	4	
Community Level	Total	117		58
Household Level	Total	77070		385.35

Biomethanation Facilities (Total)		77191	469.35
Rendering Plants			
District	No.Of Units	Capacity (Tpd)	
Thiruvananthapuram	0	0	
Kollam	3	81	
Pathanamthitta	1	30	
Alappuzha	0	0	
Kottayam	0	0	
Idukki	0	0	
Ernakulam	6	156	
Thrissur	2	6	
Palakkad	7	103.25	
Malappuram	24	302	
Kozhikode	1	30	
Wayanad	0	0	
Kannur	2	44	
Kasargod	2	110	
	48	862.25	
Qty Of Waste Managed From Urban Sector (20%)		159.35 Tpd	

Compost pits constructed under urban schemes

2022-23		
District	Local Body	No.s
Compost pit		
Kollam	Kollam	1000
Trivandrum	Attingal	90
Pathanamthitta	Pathanamthitta	220
Alappuzha	Chengannur	180
Kottayam	Erattupetta	4
Idukki	Thodupuzha	8
Palakkad	Cherpulassery	50
Palakkad	Shornur	108
Malappuram	Ponnani	1100
Kozhikode	Vadakara	223
Wayanad	Mananthavady	500
Wayanad	Sulthan Bathery	55
	TOTAL	3538

The total number of compost pits that have been constructed under Ayyankali Thozhilurappu Padhathi is 5956, of which 2418 were constructed during the period April

2023 to July 2023. The total number of compost pits that have been constructed under MGNREGS is 476530, of which 14532 were constructed during the period April 2023 to July 2023.

Non Bio Waste Management

Nbd Waste Collected By Ulbs	614 Tpd
Nbw Collected By Authorized Waste Collector	60 Tpd
Plastic/Nbd Waste (Recycling)	696 Tpd
Waste Management Capacity Of The State	3231 Tpd

December 2022- July 2023 : the malinya muktam navakeralam campaign

The State of Kerala has been making concerted efforts to universalise standardised systems of waste segregation, collection and processing, including recycling. All the local governments have been brought into the loop of the waste collection - management- disposal cycle and the assessment of adequacy of facilities has been undertaken for all local bodies. A statewide campaign for waste management - 'Malinya Muktam Navakeralam' - has been launched. Additional Haritha karma sena have been identified, trained and positioned (3363). Unauthorised operators have been weeded out and operators accountable to the local body have been positioned. House to house visits were conducted to assess bio waste management facilities and tie ups for non bio waste collection. A total of 7867360 HH were visited.

Nearly 6000 garbage vulnerable points (GVPs) in public spaces and on local bodies were identified and cleaned. Surveillance cameras are being provided by the concerned local bodies in areas where there is repeated dumping of waste. A facility for the public to upload geotagged GVPs was also provided, based on which over 5023 additional GVPs were identified of which 89% has been cleaned. The Government also announced an incentive of 25% of the fine imposed on violations to those who helped identify violators of the law and Rules on waste management. 23 enforcement teams were newly created in all the districts and they have been inspecting establishments, waste management facilities and public spaces to identify lacunae in management and compliance. A sum total of 13106 inspections were done by the enforcement teams and 4486 violations were identified, for which fine of Rs.1,60,44,550/- has been imposed. Local level vigilance squads have also been

created to cement compliance to the SWM Rules.

To address the significant waste generation from Urban Local Bodies, zone-wise workshops were conducted by the Kerala Solid Waste Management Program (KSWMP) in four zones, covering all Urban Local Bodies. Additionally, a three-day technical workshop was organized at the state level, attended by selected engineers from the Local Self Government Department (LSGD), Suchitwa Mission, and KSWMP. This workshop provided insights into various solid waste processing technologies and included field visits to waste processing facilities in Kerala. To ensure comprehensive coverage, this technical workshop will be conducted in all districts to equip all LSG engineers for waste management. These engineers can then guide their respective LSGs in selecting appropriate waste management technologies based on their specific requirements. As a result of this, 6433 projects addressing various aspects of waste management have been newly undertaken by LSGs.

Projects sectors and no of projects in each sector are as tabulated below

Sl. No	Projects	Total Projects submitted
1	Projects submitted for establishing new/Repair existing /Modification of existing sanitary waste management facilities	291
2	Project submitted to buy/refill the fire extinguishers in Legacy Dump sites	35
3	Project submitted for establishing new water supply facilities/repairing existing water supply facilities in Legacy Dump sites	11
4	Projects for Establishing new CCTV Surveillance system / Repair of modifying existing CCTV Surveillance system in Legacy Dump sites	128
5	Projects submitted for the lifting and safe disposal of Hazardous waste	45
6	Projects for availing the services of Haritha Sahaya Sthpanangal	305
7	Projects for allocating fund for the IEC activities of the Malinya Muktham Nava Keralam Campaign	492
8	Project for viability gap fund for HKS	103
9	Project for buying new vehicles/repairing existing vehicles for HKS	366
10	Project for buying uniforms and safety equipment for HKS	616
11	Project for buying new weighing machine for HKS	101
12	Project for buying new E-Post machines/Smartphones for HKS	22
13	Projects for availing the service of Haritha Mithram application	509
14	Projects for covering the user fee of those who are not required to remit the user fee	317
15	Projects for new Mini MCFs	443
16	Projects for Repair/Development of Existing Mini MCFs	25

17	Projects for new MCFs	323
18	Projects for Repair/Development of Existing MCFs	376
19	Projects for buy/refill the fire extinguishers for MCF	136
20	Projects for constructing new roads/Repairing existing roads to MCF	32
21	Projects for establishing new water supply facilities/repairing existing water supply facilities in MCF	71
22	Projects for buying new weighing machines in MCF	81
23	Projects for purchase or repair existing machineries in MCF	137
24	Projects for constructing new restrooms and toilets / repairing existing restrooms and toilets in MCFs	76
25	Projects for Establishing new CCTV Surveillance system / Repair of modifying existing CCTV Surveillance system in MCF	223
26	Projects for Buying new safety gears for workers in MCF	300
27	Projects for new RRFs	25
28	Projects for Repair/Modify RRFs	30
29	Projects for purchase/refill the fire extinguishers in RRF	29
30	Projects for constructing new roads/Repairing existing roads to RRF	5
31	Projects for establishing new water supply facilities/repairing existing water supply facilities in RRF	4
32	Projects for buying new weighing machines in RRF	23
33	Projects for buying or repair existing machineries in RRF	20
34	Projects for constructing new restrooms and toilets / repairing existing restrooms and toilets in RRF	13
35	Projects for Establishing new CCTV Surveillance system / Repair of modifying existing CCTV Surveillance system in RRF	33
36	Projects for Buying new safety gears for workers in RRF	37
37	Project for new waste management facilities for transferred institutions	244
38	Project for Repairing existing waste management facilities in transferred institutions	3
39	Projects for New Centralized waste Treatment Plants	103
40	Project for Repair/ modification of Existing centralized Treatment Plants	21
41	Projects for establishing waste management facilities for markets in LSGs	69
42	Projects for repair/modification of existing waste management facilities in Market	16
43	Projects for new Community waste management facilities	175
44	Projects for repairing Community waste management facilities	19
	Total	6433

Furthermore, special efforts were taken to identify the Bulk Waste Generators and ensure their compliance regarding both SWM and LWM. 14976 notices have been issued and 12396 BWGs have been found to be or have become compliant. Also, to ensure effective participation of private sector, workshop under the leadership of hon'ble LSGD Minister was conducted with leaders from various sectors like scrap

dealers, plastic manufacturers and recyclers (ie entrepreneurs in waste management), hotel owners, hostel owners, apartment owners, owners of auditoria and community halls (bulk waste generators), travel and tourism representatives, film chamber members, youth organizations, startups, NGOs, trade unions and service organisations (citizen stakeholder groups for communication and behaviour change). Action is being taken on the various policy and operational suggestions that arose during the course of the workshop.

In the wake of the various issues that have arisen during the course of reviews and consultations, the government is also working on developing the following policies to bring greater clarity to specific matters pertaining to waste management.

1. Scrap policy (to engage with the informal sector of scrap collectors and dealers)
2. Policy on private public partnership (to enable and expedite collaboration with private sector partners already involved in or associated by the nature of their work with waste management)
3. Guidelines for hair waste, e-waste
4. Policy amendments on licensing of pig farmers who are now an important end point for institutional food waste.
5. Protocol for the management of the material collection facilities
6. Extended Producers Responsibility (EPR) operationalisation.

Liquid Waste Management

While Sewage Treatment Plants (STPs) and the corresponding sewer networks are widely recognized as a lasting remedy for managing liquid waste, the process of laying sewer pipes is characterized by heightened costs and time-intensive procedures as well as huge resistance on the ground. Consequently, Kerala has adopted a strategic

approach : it emphasizes the inclusion of a segment of the Local Body population through the implementation of STPs and their associated networks. Simultaneously, a broader portion of the populace is encompassed by construction of a co-treatment facility within the same STP or by the establishing an independent Faecal Sludge Treatment Plant (FSTP). This approach ensures a balance between comprehensive coverage and efficient waste management while navigating the constraints posed by expenses and time considerations.

Kerala has undertaken liquid waste management projects under AMRUT 1.0 & 2.0, SBM Phase 1 & 2, RKI, KIIFB and Central and State Plan Funds.

Under the ambit of AMRUT-1.0, 130 sewerage projects, valuing Rs. 412.06 Crore had been formulated. Among these, a sum of Rs. 159.67 Crore has been allocated for the development of 10 Sewage Treatment Plants (STPs) with a collective capacity of 27.75 Million Liters per Day (MLD) and a septage co-treatment capability of 150 KiloLiters per Day (KLD). Additionally, this allocation caters to 5 Faecal Sludge Treatment Plants (FSTPs) with a capacity of 320 KLD, alongside their related endeavors. The remaining Rs. 252.39 Crore has been dedicated to sewer network initiatives and complementary undertakings within the sewerage and septage sector. Notably, the incurred expenditure as of 31.05.2023 stood at Rs. Rs. 186.01 Crore against the financial corpus earmarked within the ambit of AMRUT-1.0 of Rs. 659.65 Crore. However, some slow starting projects within this have been shifted to AMRUT 2.0, leading to revision of this figure to Rs. 412.06 Crore.

Transitioning to AMRUT-2.0, as on 31.05.2023, approval has been received from the Ministry of Housing and Urban Affairs (MoHUA) for sewerage & septage sector projects worth Rs.527.90 cr (an increase of Rs.418.04 cr) and administrative sanction has been issued for projects worth Rs.348.62 cr (increase - Rs.348.62 cr).

Currently, there are 6 STP projects ongoing, of which three have proposed co-treatment facilities. 2 FSTPs of 300 KLD are under construction. Three of these projects are nearing completion.

To bridge the gap in the treatment facilities intensive work was carried out to encourage LSGs to undertake projects for the same.

As per the meetings conducted by Additional Chief secretary LSGD, on the

possibility of using degraded land for construction of FSTPs on 17/10/2022 and the letter sent by the state Suchitwa Mission office to the government, the Government of Kerala issued the G.O.(Rt) No.2558/2022/LSGD on 21/10/2022 regarding District level inspection committee for checking the feasibility of proposal for setting up Faecal sludge Treatment Plants(FSTPs) in degraded land.

As per the G.O.(Rt) No.2558/2022/LSGD dated 21-10-2022, from LSG(WM)D, GoK, a technical committee was formed at the district level including Executive Engineer, LID &EW (Convenor), District Environmental Engineer, KSPCB and Co-ordinator, District Suchitwa Mission. As directed in order to check the feasibility of using such sites for FSTPs, it was highly essential to draw a site suitability checklist.

Suchitwa Mission prepared a checklist for feasibility study after consulting with national practitioners in Faecal sludge management. Based on the list shared by the Mining and Geology department and the data available with Suchitwa Mission regarding the degraded land, field inspection by the technical team was carried out between 26/10/2022 and 09/11/2022. About 127 sites were identified in the preliminary survey.

Suchitwa Mission then conducted a second-level analysis using GIS to identify the most suitable quarries. The analysis shortlisted 39 sites. District Collectors were asked to identify and include other feasible and available lands for the FSTP projects apart from quarries. Thus the search for public land extended to Revenue Land, Land owned by LSGs, Other Department lands and Private lands. A 2 days state-level workshop at Ernakulam was conducted on the 27th & 28th of December 2022. The following topics were covered in the workshop:

- ❖ How to prepare District FSSM Plan
- ❖ GIS - based planning
- ❖ Project planning, Implementation and monitoring
- ❖ Business models etc.

Based on the workshop, FSSM plans were prepared and presented. 10 government quarries and 26 private quarries, 6 Revenue lands, 31 LSGI lands, 9 lands owned by Other depts, and 6 private lands were included in the cluster formation.

As a result of these exercises, presently 47 LSG projects of 977 Cr for a total of 93.4 MLD have been approved, which can cover upto 1.7 Cr population. Also, another set of projects including purchase of 7 Mobile FSTP units and 69 new FSTP projects are under scrutiny to ensure feasibility and land availability.

The detailed list of projects being taken up is tabulated below.

SL. No	District	LSG Name	Type of Facility	Proposed Capacity (KLD)	Type Of Fund	Total Project Cost in Cr
Under Construction						
1	Kollam	Kollam (Kureepuzha)	Co-treatment	12050	Amrut 1.0	31.92
2		Cherthala	FSTP	250	RKI	7.84
3	Alappuzha	Alappuzha, General Hospital	STP	240	Amrut 1.0	3.45
4	Ernakulam	Kochi (Elamkulam, 2nd STP)	Co-treatment	5050	Amrut 1.0	16.68
5	Idukki	Munnar	FSTP	50	SBM(G)	3.07
6	Thrissur	Thrissur Corp., General Hospital	STP	360	Amrut 1.0	4.5
7	Kannur	Kannur Corp., Padannapalam	STP	1000	Amrut 1.0	41.54
8	Kozhikode	Kozhikode (Medical College)	Co-treatment	3100	Amrut 1.0	14.12
DPC Approved						
9		Attingal	FSTP	20	U.A	1.5
10		Varkala	FSTP	50	RKI	4.7
11	Thiruvananthapuram	Neyyattinkara	Mobile FSTP	6	SK(U), CFC	0.25
		Parashala (AVM canal)	STP	30		
12	Alappuzha	Alappuzha (Alissery)	Co-treatment	5013	Amrut 2.0	68
13		Thrissur (Kottapuram)	Co-treatment	5022	Amrut 2.0	48.68
14	Thrissur	Guruvayur (existing Chakkamkandam STP)	Co-treatment	5020	Amrut 2.0	25.15
15	Kozhikode	Kozhikode (Sarovaram)	Co-treatment	27220	Amrut 2.0	179.29
16	Kannur	Kannur (Maithanapally)	Co-treatment	5130	Amrut 2.0	115.5
17	Alappuzha	Alappuzha	Mobile FSTP	10	Amrut 1.0	0.4
18	Alappuzha	Alappuzha	Mobile FSTP	10	Amrut 1.0	0.4
19	Thrissur	Chalakkudy	Mobile FSTP	6	SK(U), CFC	0.45

20	Ernakulam	Ambedkar Colony, North Paravoor	STP	1100	Amrut 1.0	18.66
21	Ernakulam	Vedimara, North Paravoor	FSTP	50	LSG Fund	0.036
22	Ernakulam	Kottakunnu, Eloor	FSTP	10	LSG Fund	0.05
23	Ernakulam	Elamkulam, Kochi Corp.	Co-treatment	5024	Amrut 2.0	193.2
24	Malappuram	Perinthalmanna	FSTP	100	LSG Fund	1.5
25	Malappuram	Tirur	FSTP	100	LSG Fund	0.25
26	Malappuram	Valancheri	FSTP	100	UA Fund	3.5
27	Kannur	Chelora, Kannur Corp	FSTP	100	Amrut 1.0	3.42
28	Trivandrum	Azhoor GP	FSTP	100	SBM(G)	5
29	Trivandrum	Kalikkadu GP	FSTP	100	SBM(G)	5
30	Alappuzha	Mavelikkara Thekkekara	FSTP	70	SBM(G)	2.53
31	Kottayam	Erumeli GP	FSTP	113	SBM(G)	0.1
32	Thrissur	Chelakkara GP	FSTP	85	SBM(G)	0.95
33	Thrissur	Ramavarmapuram, Thrissur Corporation	FSTP	100	Amrut 1.0	3.5
34	Palakkad	Yakkara, Palakkad Municipality	FSTP	40	Amrut 1.0	3
35	Kannur	Valliyayi, Mokeri GP	FSTP	50	SBM(G)	9
36	Kasaragod	Bedadukka GP	FSTP	60	SBM(G)	5.62
37	Kasaragod	Madikkunnu, Cheruvathur GP	FSTP	95	SBM(G)	1.1
38	Alappuzha	Thottumadi, Alappuzha	STP	50	Amrut 1.0	41.54
39	Palakkad	Municipal Complex, Palakkad	STP	30	Amrut 2.0	0.425
40	Kozhikode	Kothi, Kozhikode	STP	6000	Amrut 2.0	17.63
41	Kozhikode	Avikkal Thodu, Kozhikode	STP	7000	Amrut 2.0	21.14
42	Palakkad	Ottapalam	STP	1500	KIIFB	27
43	Kollam	Mayyanad	STP	590	RKI	11.55
44	Ernakulam	Brahmapuram	FSTP	1000	Amrut 2.0	31
45	Kollam	Karunagapally	FSTP	100	LSG Fund	1.5
46	Trivandrum	Chirayinkeezhu	Mobile FSTP	6	SBM-Kosh	0.25
47	Thrissur	Kodungallur	Mobile FSTP	6	SK(U), CFC	0.45
				93316		977.191

The set of new proposals under scrutiny:

Proposed - New

SL.

Proposed

No	District	LSG Name	Type of Facility	Capacity (KLD)
1	Kottayam	Kumarakom	Mobile FSTP Unit	6
2	Ernakulam	Maradu	Mobile FSTP Unit	6
3	Idukki	Thodupuzha	Mobile FSTP Unit	6
4	Thrissur	Irinjalakkuda	Mobile FSTP Unit	6
5	Thrissur	Wadakkanchery	Mobile FSTP Unit	6
6	Malappuram	Manjeri	Mobile FSTP Unit	6
7	Kasaragod	Kanjhangad	Mobile FSTP Unit	6
1	Alappuzha	Palamel	FSTP	50
2	Alappuzha	Aryad - Charaparambu	FSTP	50
3	Alappuzha	Karthikappally- Mahadevikadu	FSTP	85
4	Ernakulam	Elankulam	FSTP	250
5	Ernakulam	Varapetti	FSTP	30
6	Ernakulam	Periyar Valley (Aluva)	FSTP	20
7	Ernakulam	Kalamassery Dumping Yard	FSTP	20
8	Ernakulam	Kalloorkkad.	FSTP	90
9	Ernakulam	Mookkannoor.	FSTP	70
10	Ernakulam	Ayyankuzhi.	FSTP	50
11	Idukki	Kattappana.	FSTP	78
12	Idukki	Edavetty.	FSTP	81
13	Idukki	Mariyapuram.	FSTP	72
14	Kannur	WSS- Thalasseri, Keezhallur	FSTP	82
15	Kannur	Pariyaram Medical College	FSTP	164
16	Kannur	Kuttiattoor.	FSTP	226
17	Kannur	Kambalari- Sreekandapuram.	FSTP	87
18	Kannur	Ayyankunnu GP	FSTP	68
19	Kannur	Pettipaalam trenching ground	FSTP	30
20	Kasargod	Puthukai	FSTP	40
21	Kasargod	Kayyur Cheemeni	FSTP	30
22	Kasargod	Cheruppa - Pet Kundu.	FSTP	40
23	Kasargod	Mogu-Mud Thadukka	FSTP	80

25	Kasargod	Mangalpady.	FSTP	12
26	Kollam	Kuriottumala	FSTP	100
27	Kollam	Kattamala, Kulapara Pattazhy	FSTP	120
28	Kollam	Kudavattoor, Veliyam	FSTP	90
29	Kollam	Puthiyadom , Ummannoor	FSTP	90
30	Kottayam	Medical College, Kottayam	FSTP	89
31	Kottayam	Pipe yard quarters, Manganam	FSTP	140
32	Kottayam	HNL Compound Velloor	FSTP	67
33	Kozhikode	Thamarassery.	FSTP	168
34	Kozhikode	Meppayur	FSTP	253
35	Kozhikode	Mukkom	FSTP	225
36	Kozhikode	Kumaranellor.	FSTP	74
37	Kozhikode	Kozhikode Corporation	FSTP	235
38	Kozhikode	Chekyad.	FSTP	89
39	Malappuram	Narukara(manjeri)	FSTP	178
40	Malappuram	Nilambur BP Plot(chungathara)	FSTP	125
41	Malappuram	Tavanur Central Jail	FSTP	100
42	Malappuram	Cherukavu(abandoned quarry)	FSTP	140
43	Malappuram	Kondotty.(abandoned quarry)	FSTP	195
44	Malappuram	Manjeri .	FSTP	275
45	Palakkad	Thrithala.	FSTP	135
46	Palakkad	Muthalamada.	FSTP	96
47	Palakkad	Ayiloor.	FSTP	82
48	Palakkad	Attapady.	FSTP	29
49	Palakkad	Kuthanoor.	FSTP	80
50	Palakkad	Palakkad Municipality 2	FSTP	83
51	Pathanamthitta	Koodal	FSTP	40
52	Pathanamthitta	Koodal.	FSTP	38
53	Pathanamthitta	Vadasserikkara.	FSTP	57
54	Pathanamthitta	Pandalam.	FSTP	40
55	Pathanamthitta	Erath.	FSTP	50
56	Thiruvananthapuram	Vamanapuram.	FSTP	25
57	Thiruvananthapuram	Karavaram.	FSTP	85
58	Thiruvananthapuram	Irinjayam,Anad	FSTP	93
59	Thrissur	Meppadam.	FSTP	10
60	Thrissur	Vazhakode.	FSTP	50
61	Thrissur	Cherussery.	FSTP	50
62	Thrissur	Inchakund.	FSTP	50

63	Thrissur	KURUMALA	FSTP	100
64	Wayanad	Vellamunda	FSTP	65
65	Wayanad	Aarattupura- Ambalavayal	FSTP	55
66	Wayanad	Pulppalli.	FSTP	35
67	Wayanad	Vengapalli.	FSTP	20
		Total		5981

The planned facilities as above can cater to a population of 2.8 Cr people. It is expected that all these facilities together will cater to more than 90 % of the population of the State, once they are up and running.

The issue of land continues to be a major bottleneck, despite the efforts taken, with even private land owners with degraded land, backing off from negotiated purchase (after first confirming) on account of local pressure. In nearly all sites local agitation committees have been constituted, and the local bodies and district administration are under pressure to find alternate sites.

By way of remedy to the problem, the Government have come out with an amendment of the Kerala Panchayati Rj and Kerala Municipality Acts which significantly increase the penalties imposed for violation and non compliance with the EP Act and its attendant provisions for waste management, as well as putting much more onus on the local body to enforce compliance including setting up of adequate facilities and systems. The Amendment bills are to be considered in the forthcoming Assembly session. Also, surveillance by the police and transport authorities to capture vehicles carrying liquid waste illegally has been beefed up, on the basis of which 508 vehicles have been seized in the last three months.

574 other projects covering various aspects of liquid waste waste management like purchase of desludging vehicles, renovation as well construction of new septic tank and soak pits, institutional STPs, ETPs and other community level projects of 124.76 Cr have been incorporated in the plan for this current financial year by the LSGs out of the resources available to them including Swachh Bharat (Gramin).

The consolidated details of projects taken up for LWM so far out of the ring fenced allocations are as below:

1.

- Amrut 1 - Rs. 412.06 Cr
2.
Amrut 2 - Rs. 348.62 Cr
3.
SBM (Grameen) - Rs. 124.76 Cr
4.
LSG Plan Funds - Rs. 354.68 Cr
5.
MGNREGS - Rs. 36 Cr
- Total - Rs. 1276.12 Cr**

This report is submitted for consideration of the hon'ble NGT of the actions taken up by the State pursuant to the directions issued in OA 606.

Sarada



Sarada Muraleedharan IAS
Additional Chief Secretary
Local Self Government Department
Government Secretariat
Thiruvananthapuram.