



KERALASTATE POLLUTION CONTROL BOARD

കേരളസംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram – 695 004

പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

PCB/HO/EE4/CS/NGT Meeting/2019/ Vol IV

Date: 02/07/2020

From

The Member Secretary

To

The Principal Secretary
Environment Department

Sub: - Quarterly progress report on the compliance of Hon'ble NGT Order dated 25-04-2019 in O.A. No. 606/2018.

Ref: NGT Orders dated 16/01/2019 25/04/2019, 12/09/2019 & 07/01/2020 in O.A. No. 606/2018.

Sir,

Kind attention is invited to the subject matter. The modified quarterly progress report on the compliance of Hon'ble NGT Order dated 25-04-2019 in O.A. No.606/2018 is submitted herewith for kind information and further action.

Yours faithfully

MEMBER SECRETARY

Encl: As above

**Modified Quarterly Progress Report on the
Compliance by the State of Kerala**
with the directions of
The Hon'ble National Green Tribunal, Principal Bench, New Delhi

as per the

Orders dated 16.01.2019, 25.04.2019, 12.09.2019 &
07.01.2020 in O.A. No.606/2018

Order dated 17.07.2019 in O.A.No.519/2019

Order dated 24.01.2020 in O.A No 514/2019

Order dated 26-9-2019 in O.A. No. 360/2018

Order Dated 19.02.2019 in O.A. No. 593/2017

Order dated 17-9-2019 in O.A. No. 829/2019

Orders dated 20-9-2018 and 8-4- 2019 in O.A.No.673/2018

Order dated 10-5-2019 in O.A. No. 325/2015

Order dated 05-11-2019 in O.A. No. 639/2018

Order dated 13-12-2018 in O.A.No.1038/2018

Order dated 8-10-2018 in OA No.681/2018

Orders dated 12.04.2019 and 26.08.2019 in O.A no. 804/2017

Order dated 15-7-2019 in O.A. No. 710/2017, 711/2017, 712/2017 and 713/2017

Submitted by
The Chief Secretary, Government of Kerala

2nd July, 2020

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List of Acronyms

Acronym	Expansion
AMC	Annual Maintenance Contract
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
BMWM	Bio-Medical Waste Management Rules
CAAQMS	Continuous Ambient Air Quality Monitoring Station
CBMWTF	Common Biomedical Waste Treatment Facility
CC	Closed Circuit
CEPI	Comprehensive Environmental Pollution Index
CETP	Common Effluent Treatment Plant
CPA	Critically Polluted Area
CPCB	Central Pollution Control Board
D2D	Door to Door
DG	Diesel Generator
EPR	Extended Producer Responsibility
ETP	Effluent Treatment Plant
GKA	Greater Kochi Area
GO	Government Order
HCI	Health Care Institutions
HKS	Haritha Karma Sena
IEC	Information Education and Communication
IMAGE	Indian Medical Association Goes Eco-friendly
KIFB	Kerala Infrastructure Investment Fund Board
KINFRA	Kerala Industrial Infrastructure Development Corporation
KSIDC	Kerala State Industrial Development Corporation
KWA	Kerala Water Authority
KWIL	Kerala Waterways and Infrastructure Development Ltd
MCF	Material Collection Facilities
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act, 2005
MLD	Million litre Per Day
MoEF&CC	Union Ministry of Environment, Forests and Climate Change
MRF	Material Recovery Facility
MT	Metric Tons
NAMP	National Ambient Air Quality Monitoring Programme
NCAP	National Clean Air Program
NGT	National Green Tribunal
NWMP	National Water Quality Monitoring Programme
OA	Original Application
PET	Polyethylene Terephthalate
PPP	Public-Private Partnership
RRC	Resource Recovery Centre
RRF	Resource Recovery Facility
SAMP	State Ambient Air Quality Monitoring Programme
SLAC	State Level Advisory Committee
STP	Sewage Treatment Plant
SWM 2016	Solid Waste Management Rules, 2016
SWMP	State Water Monitoring Programme
TPA	Tonnes per Annum
TPD	Tonnes Per Day
TVM	Thiruvananthapuram Municipal Corporation
VGf	Viability Gap Funding

1. Present Status

In Kerala , 3.7 million tonnes of municipal solid wastes is generated annually¹. 45% is generated by the Municipalities, 41% by the GPs, and 14% by the City Corporations. 77% of the wastes are biodegradable, 18% are non-biodegradable, and 5% are inert². To facilitate effective solutions for scientific management of wastes and to reiterate its commitment towards realizing the goals of the SWM Rules 2016, the Government of Kerala notified the State Policy on Solid Waste Management in 2016, with an overall goal of transformation of Kerala into a garbage-free and environmentally healthy State. The key strategies prescribed were:-

- Mandatory segregation of waste at source, based on primary characteristics.
- Aerobic or anaerobic composting of biodegradable waste at source (household and institutions) as far as possible.
- Ensure decentralized community facilities for biodegradable waste that overflows from source’.
- Establish door to door collection of non-biodegradable waste.
- Establish procedure for handling domestic hazardous waste and promote its implementation.
- Promote usage of storage bins for dumping wet and dry waste by all vendors and institutions.
- Enforce captive waste management systems for the bulk waste generators.
- Promote modern centralized waste processing facilities in major cities using state-of-the-art technologies.
- Make use of the enabling environment created under the Haritha Keralam Mission to integrate the use of treated waste products, enhance organic agriculture and upkeep of fragile ecosystems.
- Develop regional sanitary landfill facility to dispose of ultimately unusable materials.
- Undertake appropriate IEC campaigns.
- Implement appropriate capacity building programmes for stakeholders.
- Network with academic and research & development institutions for upgrading of technologies and application protocols.

The Hon’ble National Green Tribunal issued directions on 25-4-2019 in O.A. No. 606/2018 to the State on waste management. The directions include:

1. At least three cities and three towns in the State and at least three villages in every district of the State may be identified within two weeks and earnest and demonstratable endeavor be made to make them fully compliance in respect of environmental norms within six months. Remaining State may be made fully compliant within one year
2. At least three cities and three towns in the State and at least three villages in every district of the State may be identified within two weeks and earnest and demonstratable endeavor be made to make them fully compliance in respect of environmental norms within six months. Remaining State may be made fully compliant within one year

¹ Sectoral status study on solid waste management sponsored by the Water and Sanitation Project - South Asia (World Bank)

² Presentation of the Local Self Government Department, Government of Kerala (<http://sanitation.kerala.gov.in/wp-content/uploads/2019/01/NGT-Regional-Monitoring-Committee-review-kochi-25.01.19.pdf>)

3. The District Magistrates may monitor the status of compliance of environmental norms, at least once in two weeks.

The first quarterly report was submitted before the Hon'ble NGT on 15-7-2019. The second quarterly report was submitted on 31-10-2019. The third quarterly report was submitted on 19-2-2020. The present report summarizes the actions taken by the Government of Kerala to abide by the Order dated 16-1-2019 in O.A. 606/2018 (para.40); order in O.A. 593/2017 dated 19-2-2019; orders dated 25-4-2019 and 12-9-2019 in O.A. 606/2018; order dated 17-9-2019 in O.A. No. 829/2019; order dated 10-5-2019 in O. A. 325/15; and order dated 26-9-2019 in O.A. No. 360/2018. It outlines the status of different interventions, the timelines set for meeting the targets, and the estimated budget.

1.1 Statistics of Kerala's Sewage and Solid Waste

Sl. No	Subject	Sewage (MLD)	MSW (TPD)																
1	Total generated	1159*	11449																
2	Total capacity installed to treat	115.48	6303																
3	Gap in capacity	1043.5	5146																
4	Total amount treated	78.5 (Common STP)	8468**																
5	Gap in treatment	<ul style="list-style-type: none"> STPs are provided for high rise buildings and hospitals. Septic tank, soak pits are provided for individual household 	2981																
6	Capacity under construction	<table border="1"> <thead> <tr> <th>Status[#]</th> <th>No</th> <th>Capacity (MLD)</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>Tendering</td> <td>12</td> <td>4.56</td> <td>STPs/FSTPs</td> </tr> <tr> <td>DPR</td> <td>7</td> <td>22.7</td> <td>STP</td> </tr> <tr> <td>Planning</td> <td>14</td> <td>7.07+</td> <td>STPs/FSTPs</td> </tr> </tbody> </table> <p># AMRUTH scheme - Annexure 13</p>	Status [#]	No	Capacity (MLD)	Type	Tendering	12	4.56	STPs/FSTPs	DPR	7	22.7	STP	Planning	14	7.07+	STPs/FSTPs	<p>2 Nos</p> <ul style="list-style-type: none"> WtE plant at Kozhikode - work awarded and clearing started WtE plant at Sulthanbathery - started construction
Status [#]	No	Capacity (MLD)	Type																
Tendering	12	4.56	STPs/FSTPs																
DPR	7	22.7	STP																
Planning	14	7.07+	STPs/FSTPs																
6 (a)	How many plants under construction which will be completed by March 2021	All the 19 plants	<p>2 Nos</p> <p>Kozhikode Sulthanbathery</p>																
(b)	How many plants under tender process	12 Nos	<p>8 Nos</p> <p>(Tendering for WtE plant at Kollam, Kannur, Palakkad completed and bidders were identified. Tendering for WtE at Thiruvananthapuram, Kochi and Munnar under progress. Initiated activities in Malappuram and Thrissur)</p>																
(c)	How many plants in DPR stage	7 Nos	-																

Sl. No	Subject	Sewage (MLD)	MSW (TPD)
(d)	Date of completion of plants in DPR stage	31.03.2021	2021-2022

* 30% of domestic waste is taken as sewage and for remaining sullages sustainable facilities to be provided

** Some quantity of wastes namely iron, steel, brass, aluminium, paper, plastic treated outside the State

1.2. Compliance status in the State

- Setting of Waste to energy plants at 10 locations is at various stages
- **Single use plastic products was banned** all over the State and action being taken for its strict implementation
- **Implementation of EPR registration under Solid Waste Management Rules, 2016** for the collection of EPR fee for meeting the expenditure of Door to door collection by the local bodies is in an advanced stage. Development of online portal is also under progress.
- For **Regional Sanitary Landfill**, land (25 acre) has been identified at site of FACT at Ambalamedu, Ernakulam and action is being taken for take over.
- **Biomining** started at Njalianparambu dumpsite and work awarded at Kureepuzha Kollam. Tendering stage at Kottayam, Bhramapuam, Chelora. Out of the 38 dumpsites, drone survey to be done in 10 large dumpsite and total station survey in remaining dumpsites.
- **19 Nos of STPs** (27.3 MLD) are under tendering process and 14 are under planning in **AMRUTH scheme**.
- **Environmental monitoring Cell** was set up in the office of the Chief Secretary.
- **District Environmental Plan submitted by all districts and State Environmental Plan is being prepared.**
- **Considerable progress** has been achieved in providing **Door- to –Door collection for dry waste** in both households (81.5%) and establishments(73%) for model cities/town/villages
- **Proposal for co-incineration facility at Malabar cements is under consideration**
- **Rendering plant** for treating the chicken waste in Kozhikode Corporation is in operation. **Refrigerator is provided in the chicken stall** for storage and transportation in refrigerated vehicle .
- **Setting up of waste recycling facility in industrial areas is promoted.**
- **Collection and disposal of unused medicines from houses by Chemist and Druggist Association and Drugs Controller** (PROUD programme). In Thiruvananthapuram Corporation around 200 bins were provided in front of medical shops.

1.3. Compliance Status of Model City / Town / Village

As per Govt. Order. (Rt.) No. 45/2019/Env. dated 31-5-2019 following local bodies are selected as model cities, model towns and model villages (3 each in 14 districts) in the State.

1.3.a Model city

- Work awarded for the waste to energy plant at Kozhikode and land identified for waste to

energy plant in other model cities namely Thiruvananthapuram and Thrissur

- More than 65% Door to door collection for dry and wet waste achieved for both household and establishment in Kozhikode Corporation. 87% door-to door collection provided for establishment through 12 agencies by Thiruvananthapuram Corporation.
- Biomining started at Kozhikode and clearing of landfills began at one place in Thiruvananthapuram Corporation and another one is undertaken under Smart City programme.

1.3.b Model town

- 100% Door-to-Door collection achieved for dry waste from households and establishments in Punalur and Kunnamkulam municipality. 100% Door-to-Door collection for dry waste from establishment in Attingal Municipality
- Dumpsite cleared in Punalur and for Attingal, it is under project preparation.

1.3.c Model villages

- Many local bodies achieved 100% Door to Door collection for dry wastes and majority of local bodies achieved more than 50% for Door to Door collection for dry wastes in households
- Waste collectors/ Haritha Karma Sena are provided in Panchayaths
- Waste treatment options include ring compost, biogas plants, compost pits. Compost pits are provided under Ayyankali scheme

Compliance of Rule 22 in Model Cities

No.	Model cities	Thiruvananthapuram	Thrissur	Kozikode
	Population (2011)	9,58,000	3,17,526	609000
	No of houses	2,72,820	86,604	1,26,100
	No of establishments	18,882	15,250	26,893
	Quantity of waste generated (TPD)	455	153	300
	Quantity of waste treated (TPD)	221	57	182
	Gap (TPD)	234	96	118
	Available facilities	Pipe compost- 50000, Kitchen bin-19000 , biogas plant (HH level)- 3892 , Community level Biogas plant- 18 , Aerobin- 53 , bio bin- 109[Total wet waste treated –(106 TPD)] 107 MLD common sewerage treatment plant and there is provision for treatment of septage.	Pipe compost- 2272, biogas plant(HH level)- 23, biocomposter- 50, OWC	Windrow composting-100 TPD, Aerobins, Biogas plants, Pipe compost, compost pits, Kitchen bins, Rendering plant for treating wastes from chicken stall
Compliance of Rule 22				
22(1)	Identification of suitable site for solid waste processing plant	Land is identified at Vizhinjam	Land is identified at Ollookkara	Land identified at Njaliyanparmba

No.	Model cities	Thiruvananthapuram	Thrissur	Kozikode
22(3)	Procurement of suitable site for setting up solid waste processing facilities and sanitary landfill facilities	Transfer of land being done	Procurement of land being done	Land is already available
22(4) 22(5)	Source level segregation Door to Door collection of segregated waste	30% door to door collection from households for dry waste and no wet waste from households. Haritha karma sena is to be in force 92% of dry and wet waste from establishment by engaging 12 service providers <ul style="list-style-type: none"> • MCF-54 • RRF-4 • Haritha Karma Sena –No reported for households 	23.3% door to door collection of dry waste from households 19.7% door to door collection of dry waste from establishment <ul style="list-style-type: none"> • MCF-8 • RRF-3 • Haritha Karma Sena/collectors -145 	66.4% door to door collection of dry wastes from households 69.3% door to door collection of dry waste from establishment <ul style="list-style-type: none"> • MCF-2 • RRF-Nil • Haritha Karma Sena/collectors - 602
22(6)	Ensure separate storage, collection and transportation of construction and demolition waste	Being initiated	Being initiated	Being initiated
22(7)	Setting up of solid waste processing facilities by all local bodies	Tendering		Work awarded to Zonta Infratech Private Limited and site is being cleared
22(9)	Setting up common or standalone sanitary facilities	Land (25 acre) has been identified at site of FACT at Ambalamedu, Ernakulam for the sanitary landfill and action is being taken for take over		
22(10)	Bio-remediation or capping of old and abandoned dumpsites	Three dumpsites <ul style="list-style-type: none"> • Palayam(7000m³)-remediation work undertaken by Smart City • Erumakkuzhy(2388 m³)- Biomining in progress • Vilappilsala (to be initiated) 	One dumpsite at Laloor (1,00,000m ³) Some area is reclaimed and construction of stadium is progressing and the remaining area is taken up for booming with Clean Kerala and KIEL	One dump site at Njaliyanpramba (29,000 TPA) Bioremediation and capping work is in progress by M/s Zonta Infratech Private Limited

Compliance of Rule 22 in Model Towns

	Model Town	Attingal	Punalur	Kunnamkulam
	Population (2011)	37,648	48,648	54,071
	No of houses	13,891	13,062	13,156
	No of establishments	974	1,232	3,028
	Quantity of waste generated (TPD)	17	20	23
	Quantity of waste treated (TPD)	17	20	15
	Gap (TPD)	0	0	8
	Available facilities	Windrow compost , biogas plant(HH level)-410, Community level Biogas plant- 18	Biogas-250 , Pipe Compost-5000, Compost pit - 6500, Aerobins - 27	Biogas plant(HH level)-196 , Aerobins- 3, Biocomposter -4835
Compliance of Rule 22				
22(4) 22(5)	Source level segregation Door to Door collection of segregated waste	48.5% door to door collection from households for dry waste and no wet waste from households. 100 % of dry and wet waste from establishment <ul style="list-style-type: none"> • MCF-1 • RRF-1 • Haritha Karma Sena/ Collectors – 43 	99.2% door to door collection of dry waste from households 99.9% door to door collection of dry waste from establishment <ul style="list-style-type: none"> • MCF-200 mini • RRF-1 • Haritha Karma Sena/collectors -127 	100% door to door collection of dry wastes from households 100% door to door collection of dry waste from establishment <ul style="list-style-type: none"> • MCF-1 • RRF-1 • Haritha Karma Sena/collectors - 6
22(6)	Ensure separate storage, collection and transportation of construction and demolition waste	Being initiated	Being initiated	Being initiated
22(9)	Setting up common or standalone sanitary facilities	Land (25 acre) has been identified at site of FACT at Ambalamedu, Ernakulam for the sanitary landfill and action is being taken for take over Action has been initiated for providing secured landfill at Attingal.		
22(10)	Bio-remediation or capping of old and abandoned dumpsites	One dumpsites <ul style="list-style-type: none"> • Attingal(13000m3)- Project preparation ongoing. 	One dumpsite at Punalur Site cleared	-

Status of waste management model villages

Sl. No.	Distri ct	Local body	Quantit y of SW generat ed in TPD	MCF	RRF	HKS/co llectors	Door-to-Door househ old in %	Door-toDoor establishm ents in %	Quant ity of waste treat ed in TPD	Quan tity of wet waste treat ed in TPD	Material recovered , recycled, coprocess ed and scrap feeders	Gaps in generation and treatment
Model Panchayaths												
1	Thiruvanthapur am	Karakulam	15.73	1	0	48	100	42.29	13.38	8.81	4.58	2.34
2		Parassala	15.68	3	0	38	27.00	1.56	13.34	8.78	4.56	2.34
3		Poovachal	13.08	4	1	28	34.00	100	11.13	7.33	3.81	1.95
4	Kollam	Chavara	12.80	1	1	46	83.69	60	10.89	7.17	3.72	1.91
5		Kadakkal	9.22	0	0		-		7.84	5.16	2.68	1.37
6		Perinad	10.19	1		40	67.10	10.94	8.67	5.70	2.96	1.52
7	Pathanamthitta	Aranmula	8.61	1	1	28	100	100	7.33	4.82	2.51	1.28
8		Kulanada	7.10	22	0	34	100	100	6.04	3.97	2.07	1.06
9		Thumpamon	2.27	2(MC F & Mini MCF)	Nil	23	100	100	1.93	1.27	0.66	0.34
10	Alappuzha	Aaryad	9.68	1	1	36	100	100	8.24	5.42	2.82	1.44
11		Mararikkulam North	9.40	2	1	36	100	100	8.00	5.26	2.73	1.40
12		Thamarakula	8.11	2	1	33	58.97	58.06	6.90	4.54	2.36	1.21
13	Kottayam	Kadaplamato	3.91	1	0	13	100	100	3.33	2.19	1.14	0.58
14		Moonilavu	2.62	1	0	13	100	100	2.23	1.47	0.76	0.39
15		Poonjar	3.79	2	0	13	100	100	3.23	2.13	1.10	0.57
16	Idukki	Adimali	3.79	1	1	48	81.35	76.32	3.23	2.13	1.10	0.57
17		Kumali	10.77	2	1	42	78.48	70.18	9.17	6.03	3.14	1.61
18		Nedumkanda	12.59				56.44	100	10.72	7.05	3.66	1.88
19	Ernakulam	Chottanikara	6.80	1	0	28	94.54	87.50	5.78	3.81	1.98	1.01
20		Kalady	8.48			14	82.19	-	7.22	4.75	2.47	1.26
21		Pampakuda	13.21	1	0	36	70.99	92.65	11.24	7.40	3.84	1.97
22	Thrissur	Manalur	9.87	1	1	38	100	100	8.40	5.52	2.87	1.47
23		Parappukkara	8.90	2	0	10	89.99	30.74	7.57	4.98	2.59	1.33
24		Periganam	6.30	1	1	30+1	100	100	5.36	3.53	1.83	0.94
25	Palakkad	Muthuthala	7.46				100		6.35	4.18	2.17	1.11
26		Sreekrishnapuram	6.56	1	-	15	100	100	5.58	3.67	1.91	0.98
27		Vellinezhi	5.13	1	1	13	100	100	4.37	2.87	1.49	0.76
28	Malappuram	Chaliyar	6.25	1	0	13	100	100	5.32	3.50	1.82	0.93
29		Maranchery	10.50	1	0	38	100	0.00	8.94	5.88	3.06	1.56
30		Thuvur	12.09	1	0	15	100	100	10.29	6.77	3.52	1.80
31	Kozhikode	Meppayur	8.38	1	0	26	89.00	100	7.13	4.69	2.44	1.25
32		Kunnumel	5.41	mini	0	28	100	99.03	4.60	3.03	1.57	0.81
33		Kuttiadi	5.81	1	0	17	99.00	100	4.94	3.25	1.69	0.86

Sl. No.	Distri ct	Local body	Quantit y of SW generat ed in TPD	MCF	RRF	HKS/co llectors	Door-to-Door househ old in %	Door-toDoor establishm ents in %	Quant ity of waste treat ed in TPD	Quan tity of wet waste treat ed in TPD	Material recovered , recycled, coprocess ed and scrap feeders	Gaps in generation and treatment
34	Wayana d	Meenagadi	10.04	1	0	26	100	0.00	8.54	5.62	2.92	1.50
35		Muttill	10.58	1	0	10	100	0.00	9.01	5.93	3.08	1.58
36		Vythri	5.49	1	0	18	100	100	4.67	3.08	1.60	0.82
37	Kannur	Padiyur	6.46	1	1	17	100	75.00	5.50	3.62	1.88	0.96
38		Pariyaram	9.86	1	1	20	98	53.47	8.39	5.52	2.87	1.47
39		Udayagiri	5.64	Under constr uction (95% compl eted)	0	15	98	100	4.80	3.16	1.64	0.84
40	Kasargod	Beddukka	8.36	MCF 1 No, Mini MCF 81 No., Bottle Box 8 Nos	1	37	100	100	7.11	4.68	2.43	1.25
41		Kinanoor-Karinthalam	9.96	1	1		44.19		8.48	5.58	2.90	1.48
42		Madikkai	6.62	1	0	30	100		5.63	3.70	1.92	0.99

1.4. Status of Solid Waste Management in the State

Name of District	Quantity of Municipal Solid Waste		Status of door to door collection (%)	Status of segregation at source	No: of MSW treatment facilities with their capacities		Quantity of waste treated (TPD)			Gaps in generation and treatment	Plan of action to overcome the gaps	Number of Dumpsites and status of legacy waste management	
	Total Generated (TPD)	Collected (TPD) (Dry waste)			Designed	Operational	Composting and other decentralised facilities	Materials recovered, recycled & Coprocessed, Scrap feeders	Quantity of waste Landfilled			Major	Minor
Thiruvananthapuram	1211.05	162.41	48.42	Yes	One WtE plant of 300 TPD proposed Land identified	Aerobins, Windrow composting, Biogas plants, Pipe compost, compost pits, Kitchen bins	480.29	351.92	0	378.84	Planned to construct WtE plant of 300 TPD	1	4
Kollam	902.49	128.82	54.67	Yes	One WtE plant of 200 TPD proposed	Aerobins, Biogas plants, Pipe and ring compost, compost pits, Kitchen bins	384.21	262.51	0	255.77	Planned to construct WtE plant of 200 TPD	1	
Pathanamthitta	391.80	48.62	38.40	Yes		Aerobins, Biogas plants, Pipe compost, compost pits, Kitchen bins, Windrow composting	186.53	114.26	0	91.00			
Alappuzha	702.54	109.07	59.33	Yes		Aerobins, Biogas plants, Pipe compost, compost pits, Kitchen bins	314.77	204.06	1.5	182.22		1	
Kottayam	669.40	82.65	39.08	Yes		Aerobins, Biogas plants, Pipe compost,	291.05	194.97	0.5	182.88		1	4

Name of District	Quantity of Municipal Solid Waste		Status of door to door collection (%)	Status of segregation at source	No: of MSW treatment facilities with their capacities		Quantity of waste treated (TPD)			Gaps in generation and treatment	Plan of action to overcome the gaps	Number of Dumpsites and status of legacy waste management	
	Total Generated (TPD)	Collected (TPD) (Dry waste)			Designed	Operational	Composting and other decentralised facilities	Materials recovered, recycled & Coprocessed, Scrap feeders	Quantity of waste Landfilled			Major	Minor
						compost pits, Kitchen bins							
Idukki	357.11	29.27	49.72	Yes	Proposed one WtE plant of 20 TPD Land available	Aerobins, Biogas plants, Pipe compost, compost pits, Kitchen bins	182.97	104.40	5.24	64.50	Planned to construct WtE plant of 200 TPD		3
Ernakulam	1199.68	370.57	50.54	Yes	Proposed one WtE plant of 300 TPD Land available	Aerobins, Windrow composting, Biogas plants, Pipe compost, compost pits, Kitchen bins	592.37	349.51	93.8	164.01	Planned to construct WtE plant of 300 TPD	1	4
Thrissur	1065.24	84.34	36.34	Yes	Proposed one WtE plant of 200 TPD Land identified	OWC, Aerobins, Biogas plants, Pipe compost, compost pits, Kitchen bins, Windrow and vermi composting units	463.46	309.60	9	283.18	Planned to construct WtE plant of 200 TPD	1	3
Palakkad	918.91	103.62	47.75	Yes	Proposed one WtE plant of 200 TPD Land available	Aerobins, Biogas plants, Pipe compost, compost pits, Kitchen bins, Windrow composting	444.73	267.59	1.2	205.38	Planned to construct WtE plant of 200 TPD	1	1

Name of District	Quantity of Municipal Solid Waste		Status of door to door collection (%)	Status of segregation at source	No: of MSW treatment facilities with their capacities		Quantity of waste treated (TPD)			Gaps in generation and treatment	Plan of action to overcome the gaps	Number of Dumpsites and status of legacy waste management	
	Total Generated (TPD)	Collected (TPD) (Dry waste)			Designed	Operational	Composting and other decentralised facilities	Materials recovered, recycled & Coprocessed, Scrap feeders	Quantity of waste Landfilled			Major	Minor
Malappuram	1360.62	172.88	50.13	Yes	Proposed one WtE plant of 200 TPD Land available	Aerobins, Biogas plants, Pipe compost, compost pits, Kitchen bins	619.00	396.42	0.6	344.59	Planned to construct WtE plant of 200 TPD		3
Kozhikode	1098.40	223.31	69.88	Yes	One WtE plant of 300 TPD started	Windrow composting, Aerobins, Biogas plants, Pipe compost, compost pits, Kitchen bins	460.29	319.37	1.5	317.23	Planned to construct WtE plant of 300 TPD	1	1
Wayanad	265.37	36.83	45.04	Yes	Proposed one WtE plant Land identified	Aerobins, Biogas plants, Pipe compost, compost pits, Kitchen bins	139.10	77.33	0	48.95			2
Kannur	872.76	176.33	68.32	Yes	Proposed one WtE plant of 200 TPD Land available	Aerobins, Biogas plants, Pipe compost, compost pits, Kitchen bins	382.27	254.39	17.5	218.60	Planned to construct WtE plant of 200 TPD	2	2
Kasaragod	434.03	44.24	43.48	Yes		Aerobins, Biogas plants, Pipe compost, compost pits, Kitchen bins	193.96	126.46	0	113.61			2
Total	11449.39	1772.96			10 WtE plant of total 1920 TPD		5135.01	3332.79	130.84	2850.76		10	29

2. The Status of Implementation of Interventions

A snapshot of the status of interventions is provided in the table given below, while the detailed status is outlined in the subsequent sections.

The colour coding for the cases is presented below:

Colour	Status
Green	Complete
Yellow	In Progress
Red	Yet to be initiated
Blue	Not Applicable to State Context

Sl. No.	Cases		Order	Status	Page No.
2.1.	Order dated 25-4-2019 of the Hon'ble NGT in O.A.No.606/2018 on waste management	Para 48 (i)	At least three cities and three towns in the State and at least three Villages in every District of the State may be identified within two weeks and earnest and demonstrable endeavor be made to make them fully compliant in respect of environmental norms within six months. Remaining State may be made fully compliant within one year.	<p>The State identified three cities, three towns, and three villages in each district (42 villages). Earnest and demonstrable endeavor has been taken to bring those model city/town/villages fully compliant in respect of environmental norms.</p> <p>State Level Advisory Committee on waste management is convened by the Chief Secretary every month to review the progress achieved in the implementation of Solid waste treatment plants.</p> <ul style="list-style-type: none"> • 36 meetings have so far been conducted. • By this drive, in the State, land has been identified at ten places for the Waste to Energy plant and of which work has been initiated at Kozhikode. • Tendering of the works have been done with the support of Kerala State Industrial Development Corporation. 	8,28

				Extra manpower (20 technical assistants) has been provided through PCB for monitoring the compliance for the model city/town/villages and for other remaining local bodies, additional 47 technical assistants have been engaged.	
2.2	Order dated 16-1-2019 in O.A.No.606/2018 on waste management	Para 40(a)	Status of compliance of Solid Waste Management Rules, 2016 in the respective areas.	The State is ensuring compliance to Rules 11, 22, 23 and 24. The State requires two years for achieving full compliance.	49
	Order dated 25-4-2019 in O.A. No. 606/2018 on waste management	Para 48(ii)	A quarterly report be furnished by the Chief Secretary, every three months		
	Order dated 12-9-2019 in 606/2018 on waste management	Para. 4	Information on current status, desirable level of compliance in terms of statutes, gap between current status and desired levels, proposal of attending the gap with time lines, name and designation officer for ensuring compliance to provisions under statutes is to be submitted by the Chief Secretary to CPCB for submitting to Hon'ble NGT		
	Order dated 07-01-2020 in 606/2018 on waste management	Para 13	In view of above, CPCB needs to redesign formats and secure relevant quantifiable information from the Chief Secretaries under different heads so that the Chief Secretaries are able to respond to the Tribunal on their appearance as per schedule of appearance.	Additional Details Submitted in the Revised Format to the Central Pollution Control Board vide letter dated PCB/HO/NGT/06/2018/06/2019 dated 15/05/2020 as per Hon'ble NGT order dated 07.01.2020 in O.A 606/2018	50
Order dated 10-01-2020 in 606/2018 on waste management		Compliance of SWM Rules requires taking up several steps mentioned in Rule 22 from serial no. 1 to 10 and order dated 17.07.2019 in O.A No 519/2019 to commence legacy waste remediation on 01-11-2019. Continued failure of the above will result in liability of every local body to pay compensation. Steps be ensured by the Chief Secretary in terms of direction of this Tribunal especially with respect to plastic waste , Bio medical waste, Construction and Demolition waste and with			

			<p>respect to hazardous waste , E waste, polluted industrial clusters, reuse of treated water, performance of CTPs/ ETPs, ground water extraction, ground water recharge, Restoration of water bodies, noise pollution and illegal sand mining</p> <p>Compensation regime laid down for failure of local bodies and/or Department of Irrigation and Public Health/ In charge Department to take action for treatment of sewage</p> <p>Compensation in terms may be deposited with the CPCB for being spent on restoration of environment which may be ensured by the Chief Secretaries.</p> <p>An Environment Monitoring Cell may be set up in the office of Chief Secretaries within one month (Hon'ble NGT order dated 24.01.2020 in O.A No 514/2019)</p> <p>Compliance reports in respect of significant environmental issues may be furnished I terms of order dated 07.01.2020 quarterly with a copy to CPCB</p>	<p>Environment Monitoring Cell was formed vide G.O.(Rt)No.22/2020/Envt dated 27.02.2020</p>	
	<p>Order dated 17-7-2019 in O.A.No.519/2019 with on waste management</p>	<p>Para.25</p> <p>Para.28</p>	<p>Order deals with the issue of dumpsites and the guidelines of CPCB, and Indore model or other model for bio mining and bioremediation, is found to be suitable to be followed for other big dumps, the same may be followed which may be monitored by the Chief Secretaries</p> <p>The Chief Secretaries may ensure allocation of funds for processing of legacy waste and its disposal and in their respective next reports, give the progress relating to management of all the legacy waste dump sites. Remediation work on all other dumpsites may commence from 1-11-2019 and completed preferably within six months in no case beyond one year.</p>	<p>The State has initiated action for compliance.</p> <p>39 dumpsites have been identified in the State, of which 10 are large.</p> <p>Clearing of legacy waste started at Njaliyanparambu, Kozhikode and is in an advanced stage at Brahmapuram, Kollam Corporation and Kannur Corporation and Munnar Grama panchayath.</p>	<p>42</p>

2.3	Order dated 16-1-2019 in O.A.No.606/2018 on waste management	Para 40(a)	Status of compliance of Plastic Waste Management Rules, 2016 in the respective areas.	<p>Government have imposed a complete ban on the manufacture, storage, transport, and sale of single use plastic items in the State with effect from 1-1-2020 vide G.O.(Rt) No. 128/2019/ENVT dated 31-12-2019.</p> <p>For the implementation of the producer responsibility as per Solid Waste Management Rules, 2016 and Plastic Waste Management Rules, 2016, Kerala State convened National level seminar on 12-6-2019. A hearing of brand owners was conducted on 7-12-2019 and evolved proposal for the implementation of EPR and is under the consideration of the Government.</p> <p>The State has ensured compliance to Rules 16 on constitution of State Level Advisory Committee and Rule 17 on annual report. The State requires one year for achieving full compliance.</p>	66
2.4	Order dated 16-1-2019 in O.A.No.606/2018 on waste management		Status of compliance of Bio-Medical Waste Management	<p>The State has complied with Rule 13 on annual report.</p> <p>The State requires two years to complete 2 numbers of common Biomedical Waste Treatment Plants.</p> <p>Presently, Common Biomedical waste treatment facility is in operation in Palakkad.</p> <p>For CBWTF at Ambalamedu by IMA, the Kochi Corporation earmarked 3 acre land to IMAGE for the project. has been instructed to earmark the area</p> <p>Work for CBWTF in Ambalamedu by Kerala Enviro Infrastructure Limited will commence soon.</p>	78

				Clean Kerala Company submitted proposal for setting up landfill at the site of KINFRA at Ambalamedu and is under the consideration of the Government.	
	Order dated 15-7-2019 in O.A. No. 710/2017, 711/2017, 712/2017 and 713/2017	Para. 8	<p>The State may furnish complete inventory of HCFs and BMW generation within two months and where the inventories are in complete, the same may be completed. The order is to ensure authorization by all HCFs, setting up common treatment and disposal facility, furnish information on the barcode system, and for satisfactory action plans. Chief Secretaries may personally monitor compliance of environmental norms including BMW Rules with the District Magistrate once every month. The District Magistrate may conduct such monitoring twice every month.</p> <p>District Environmental Plan is to be prepared by District Committee chaired and monitored by District Magistrate. Such District Environment Plan and constitution of District committee may be placed in the website of district. Monthly report to be filed by District Magistrate to the Chief Secretary and this may be placed on the website of district for a period of one year. This may be operative from 1-8-2019.</p>	<p>Inventory has been submitted to the Central Pollution Control Board.</p> <p>District Level Monitoring Committee (DLMC) constituted under the Chairmanship of District Collector, has informed to submit the District Environmental Plan. All District have submitted District Environmental Plan.</p>	
2.5	Order dated 25-4-2019 of the Hon'ble NGT in O.A.No.606/2018 on waste management	Para 48(a)	Status of compliance of E-Waste Management Rules, 2016 in the respective areas	The State initiated action for the compliance of EPR. The State has complied with Rule 18 on submission of annual report, and I in the process of setting up a waste processing unit which will become operational in 2020 and land has been allotted to Clean Kerala Company Limited. Action is being taken for the implementation	88

				of EPR in the State.	
2.6	Order dated 25-4-2019 of the Hon'ble NGT in O.A.No.606/2018 on waste management	Para 48(a)	Status of compliance of Hazardous Management Rules, 2016 in the respective areas	The State has complied with Rule 20(3).	82
	Orders dated 12.04.2019 and 26.08.2019 in O.A no. 804/2017 in the matter of Rajiv Narayan & Anr. Vs. Union of India & Ors.	Para 10	The Chief Secretaries may look into the issue of capacity building of the SPCB/PCCs to deal with the issue of compliance of the rules. All the Chief Secretary of the all States/UTs have to provide compliance status report on implementation of recommendation made by Monitoring Committee in its interim report as well as final report to monitor of provisions of Hazardous & Other Waste (Management and Transboundary Movement) Rules 2016.		
2.7	Order dated 25-4-2019 of the Hon'ble NGT in O.A.No.606/2018 on waste management	Para 48(a)	Status of Batteries Waste Management and Handling Rules, 2001	The State has complied with Rule.	
2.8	Order dated 16-1-2019 in O.A.No.606/2018 on waste management	Para 40 (b)	Status of functioning of Committees constituted by this order.	The State has complied with the order, and formed a State Level Monitoring Committee and District Level Monitoring Committee. Field visits have been undertaken.	94
2.9.	Order dated 16-1-2019 in O.A.No.606/2018 Order dated 20-9-2018 and 8-4-		Item (c) of para 40 of the order dated 16-1-2019 in O.A.No.606/2018 on polluted stretches. As per order dated 20-9-2018 in O.A.No.673/2018 action plan is to be submitted for 21 polluted stretches	The implementation of Karamana river action plan has been reviewed by RRC. Action plans for 20 Priority IV & V Polluted stretches were submitted in December 2018. Macroplans for 13 stretches were submitted	95

	<p>2019 in O.A.No.673/2018 on polluted stretches.</p> <p>Order dated 25-1-2019 in O.A.No.581/2018 on river Karamana.</p> <p>Order dated 25-1-2019 in O.A.No.582/2018 on river Tirur-Ponnani.</p> <p>Order dated 17-9-2019 in O.A.No.829/2019</p>		<p>As per order dated 25-1-2019 in O.A.No.581/2018 directing the State to take remedial action on action plan.</p> <p>As per order dated 8-4-2019 in O.A. No. 673/2018 Karamana action plan was approved.</p> <p>As per order dated 25-1-2019 in O.A.No.582/2018 directing the State to prepare the action plan of Tirur-Ponnani within one month.</p> <p>The Tribunal is also considering the issue of remedying 351 identified polluted stretches.</p>	<p>in June 2019. Though the remaining exempted category is in an advanced state, as instructed by the Central Pollution Control Board, action plans were submitted for the remaining seven polluted stretches on 30-7-2019. The progress on the implementation of action plan is reviewed regularly.</p> <p>The State requires three years for compliance.</p> <p>Action Plan for Tirur – Ponnani submitted to CPCB and Hon'ble NGT.</p> <p>Action plan for priority river IV revised submitted and approved.</p>	
2.10.	Order dated 16-1-2019 in O.A.No.606/2018	Para 40 (d)	Non attainment city on air quality	None of the cities in Kerala is included in the Non-attainment cities. However, the action plan to expand the ambient air-quality monitoring network was submitted to CPCB. Continuous Real-Time Monitoring is being done in 8 locations.	101
	Order dated 8-10-2018-Non-attainment cities (OA No.681/2018)	Para 15 (i)	All the states with non-attainment cities must prepare appropriate action plans within 2 months aimed at bringing the standards of air quality within the prescribed norms within 6 months from the date of finalization of action plans.		

2.11.	<p>Order dated 16-1-2019 in O.A.No.606/2018</p> <p>Order dated 13-12-2018 in O.A.No.1038/2018</p>	Para 40 (e)	<p>As per order dated 13-12-2018 in O.A.No.1038/2018 SPCB is to finalize the time bound action plan with regard to identification of industrial clusters in accordance with the revised norms laid down by the CPCB.</p> <p>To restore environmental qualities within norms.</p>	<p>Greater Kochi was identified as critically polluted in 2009. The score was again calculated in 2011 and the Moratorium imposed on developmental activities in the Greater Kochi Area as CPA was lifted vide office memorandum No. J-11013/5/2010-1A II (I) dated 23.05.2011 by Ministry of Environment and Forest.</p> <p>Now the score has been reduced and now this area is identified as "Other Pollutant Stretches" only. However preparation of Action Plan for monitoring the Air Quality within the limit has been initiated.</p>	105
2.12.	<p>Order dated 16-1-2019 in O.A.No.606/2018</p> <p>Order dated 4-9-2018 in O.A.No.173/2018 by Sudarsan Das Vs. State of West Bengal and others</p>	Para 40 (f)	Item (f) of para 40 of order dated 16-1-2019 in O.A. No.606/2018	Not Applicable	105
2.13.	Order dated 16-1-2019 in O.A.No.606/2018	Para 40 (g)	Total amount collected from erring industries on the basis of "Polluter Pays Principle" "Precautionary Principle and details of utilization of funds collected.	<p>15 Industries have been fined, INR 7.25 Crores have been collected.</p> <p>Direction issued to Thrissur Corporation for environmental compensation of Rs. 4.5 Crore. Land has been identified by the Corporation for the centralized plant.</p> <p>Notice issued to Thiruvananthapuram Corporation for giving environmental compensation of 14.59 crore. Land has been identified for the centralized plant at Vizhinjam. Tendering is being done.</p>	105

				<p>Notice was also issued to Kochi Corporation, Municipalities namely Thrippunithura, Aluva, Angamaly, and Kalamassery and Maradu panchayath for taking steps to provide biomethanation plant for the food wastes generated.</p> <p>Direction issued to the three hospitals and to DMO and Urban Directorate and Panchayath in Idukki in OA 585/2018. Meeting conducted with DMO, Urban and Panchayath Directorate in May, 2020 and action is being taken for the implementation of the decisions.</p>	
	Order dated 23-09-2019 in O.A.No. 585/2018	Para 14	As per order dated 23-09-2019 in O.A.No. 585/2018, directed the Chief Secretary, State of Kerala to look into matter along with Director of Urban Directorate and Panchayat Director and the respective Principal Secretaries at the State Level and take appropriate against those erring officers who are standing against of the Rules and delaying the implementation of rules so far.		
2.14.	Order dated 16-1-2019 in O.A.No.606/2018	Para 40 (h)	Identification and development of Model Cities and Towns in the State in the first phase which can be replicated later for other cities and towns of the State	As in Sl. No. 2.1 above	8,28
2.15.	Order dated 16-1-2019 in O.A.No.606/2018 Order dated 19-2-2019 in O.A.No.593/2017		<p>As per order dated 19-2-2019 in O.A.No.593/2017, Chief Secretaries may specially look into the subject of setting up and proper functioning of STPs/CETPs/ETPs in their respective jurisdiction.</p> <p>All the local bodies and or the concerned departments of the state government have to ensure 100% treatment of the</p>	<p>Non-functioning ETPs have been identified and further action has been initiated. The reports for the term up to November 2019 have been submitted.</p> <p>The Urban Directorate has been informed.</p>	107

	Order dated 28-8-2019 in O.A.No.593/2017		generated sewage and in default to pay compensation which is to be recovered by the State/UTs, with effect from 01.04.2020. The Chief Secretaries of all the State/UTs may furnish their respective compliance report on this subject also in O.A.No.606/2018		
2.16	Order dated 17-9-2019 in O.A.No.829/2019 Order dated 29-11-2019 in O.A.No.829/2019		The Tribunal has directed that no untreated sewage/industrial effluent be discharged into any water bodies (which include coastal waters). Any violation is to result in compensation starting from 01.02.2020 District Environment Plans to be prepared on coastal and marine pollution Direction to all SPCB of Coastal state to give relevant information to CPCB within 1 month	Informed Urban Directorate	107
2.17	Order dated 26-9-2019 in OA.No. 360/2018	Para. 12	The Department of Environment of all States may collect such District Environment Plans of their respective states and finalize the State Environment Plan covering the specific thematic area in Para. 7 including the information as contained in Para-8 and template of model by CPCB, The action for preparation of State's Environment Plan shall be monitored by the respective Chief Secretaries of the State.	District Environmental Plan was submitted by all districts. Action is being taken to prepare State Environment Plan.	107
2.18	Order dated 10-5-2019 in OA No 325/2015	Para 13	All the States are directed to review the existing framework of restoration of all the water bodies by preparing an appropriate action plan. Such action plan may be submitted within three months and a report furnished to the CPCB. The Chief Secretaries of all the State in the course of undertaking monitoring exercise in pursuance of order in OA 606/2018	1 st phase report submitted. Action initiated for 2 nd phase including field monitoring.	108

	Order dated 25-02-2020 in OA No 325/2015	Para .5	<p>may also include restoration of water bodies.</p> <p>Information is to be provided by 31-03-2020 failing which compensation is to be paid.</p> <p>The Action plan should provide for commencement from 01.04.2020 and conclusion 31-03-2021</p>		
2.19	Order dated 05-11-2019 in O.A. No. 639/2018		<p>The Hon'ble National Green Tribunal vide Order dated 05-11-2019 in O.A. No. 639/2018 directed that State Pollution Control Board may undertake capacity enhancement out of consent fund by procuring requisite equipments, setting up of modern labs and recruiting/engaging staff and experts. It is also directed that all vacancies must be filled up as already directed by NGT vide order dated 28-08-2019 I O.A. No. 95/2018 which may be ensured by the Chief Secretary.</p>	<p>The Board is working with 433 employees including 93 permanent employees. An amount of Rs.2.9 crore is incurred monthly towards salary and other expenses which are met from the consent fund.</p> <p>For permanent appointment, notification was issued on 26-12-2015 for appointment by Public Service Commission and rules notified on 14-11-2019. After getting sanction for the renewal of Kerala State Pollution Control Board Subordinate Service Rules, 1999, Government can make permanent appointment to the Board.</p>	108

3. Status of compliance of order dated 25-4-2019 of the Hon'ble NGT in O.A.No. 606/2018 on model city/town/village

3.1 Background

The Government of Kerala vide G.O. (Rt.) No. 45/2019/Env. dated 31-5-2019 selected three model cities, three model towns and 42 model villages (3 each in 14 districts) in the State. The model cities are Thiruvananthapuram, Thrissur and Kozhikode and three model towns are Attingal, Punalur and Kunnankulam. Workshops were convened to make them fully complied with environmental norms.

3.2 Present status

3.2.1. Constitution of Environment Monitoring Cell

Environment Monitoring Cell was formed vide G.O.(Rt)No.22/2020/Env. dated 27.02.2020.

3.2.2 Activities under Rule 22 of the Solid Waste Management Rules, 2016

- (a) **Rule 22(1) - Identification of suitable sites for setting up solid waste processing facilities**
- (b) **Rule 22(3)- Procurement of suitable sites for setting up solid waste processing facility and sanitary landfill facilities**
- (c) **Rule 22(7)- Setting up solid waste processing facilities by all local bodies having one lakh population or more population**
- (d) **Rule 22(8)- Setting up solid waste processing facilities by local bodies and census town below 1 lakh population**

Action taken -

- **Proposal for Co-incineration submitted by Malabar Cements, Palakkad**
 - Entrusted National Council for Cement and Building Materials (NCBM) to study and prepare a technical proposal considering the various technical aspects with regards to AFR/co-processing.
 - NCBM submitted the proposal with multi-channel burner system which is not presently practiced/established in the country and may affect the productivity and smooth operations of the plant at increased thermal substitution rates
 - The facilities for using liquid hazardous waste like used/spent oil on marginal scale can also integrate after conforming the suitability
 - The investment required for the same as per the Techno Economical Feasibility Study (TEFS) for Co-processing of Alternate Fuel is around Rs. 44.62 Crore.
 - Finance Department was asked to review the proposal from Malabar Cements Limited in detail and to explore the possibility of allocating funds under MIDP scheme to Malabar Cements Limited for modernizing the plant.
- **Sites for Waste to Energy plant identified are Kannur, Kozhikode, Palakkad, Thrissur, Kochi, Kollam, Thiruvananthapuram, Malappuram, Munnar and Sulthan Bathery.** Work awarded for the plant at Kozhikode. The progress is given below:

- A revised proposal for allocation of funds for the developmental initiatives of waste to energy projects under Major Infrastructure Development Projects head was submitted by Kerala State Industrial Development Corporation on 18th January 2020, to Planning and LSG Departments.

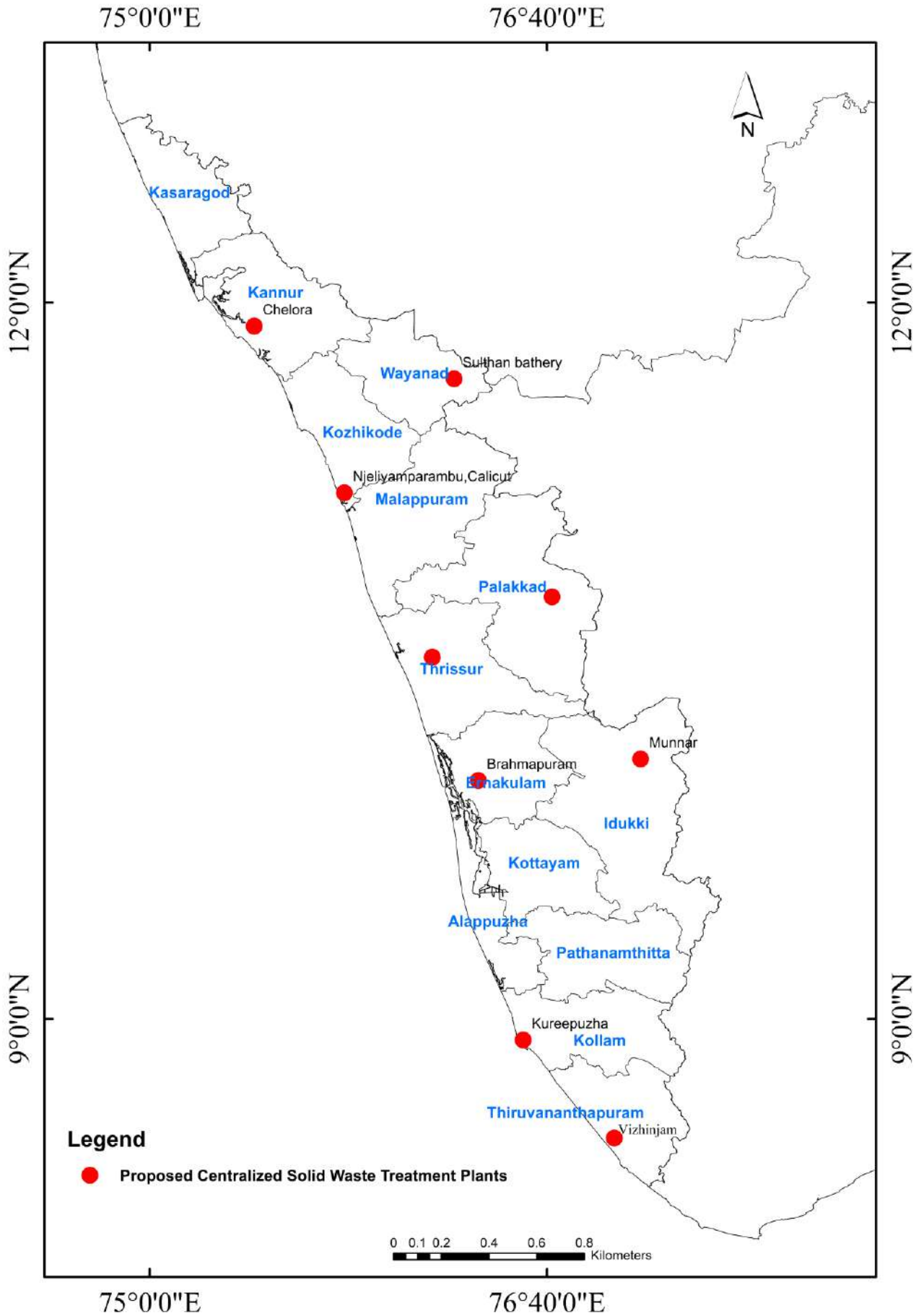
Sl. No	Corporation/ Municipality	Identified site	Area (acre)	Status	Completion date
1)	Kozhikode	Njaliyanparambu (Govt. land)	12.67	<ul style="list-style-type: none"> • Work awarded to Zonta Infratech Private Limited for the construction of Waste to Energy Plant at Njaliyan parambu • A company namely M/s.Malabar Waste Management Limited was formed and they applied for registration in Kerala Single Window Clearance Portal (KSWIFT) and to individual departments for clearance. • The company obtained NOC from State Environmental Impact Assessment Authority • Suchitwa Mission submitted the proposal to Ministry of Housing and Urban Affairs for approval of their share in the VGF for the project. Clarification on the points was called for by the Ministry and the same is being processed. • M/s Zonta Infratech Pvt Ltd started the work of clearing of legacy waste on 3rd March, 2020. • The clearing work of legacy waste resumed at the dumpsite on 4th May 2020 and approximately 15000 cum of legacy waste has been cleared from the project site as on 12th May 2020. 	2 years
2)	Kannur	Chelora (Govt. Land)	9.7 acres	<ul style="list-style-type: none"> • M/s Organic Recycling Systems Private Limited and M/s. Blue Planet Environment Solutions India Limited have completed the incorporation of SPVs in the name of Blue Planet Kannur Waste Solutions Private Limited to take up the development of the project. 	

Sl. No	Corporation/ Municipality	Identified site	Area (acre)	Status	Completion date
				<ul style="list-style-type: none"> • Consortium has selected agency for the preparation of DPR, waste quantification and characteristic study in Kannur district and the agency could not commence due to lock down announced in connection with Covid 19 pandemic. • Govt vide GO(Rt) No. 714/2020/LSGD dated 27-3-2020 issued direction to Kannur Municipal Corporation to hand over the 9.75 acres of the land identified at Chelora on lease basis to KSIDC for the development of Waste to Energy project and to execute MoU with KSIDC for clearing the existing legacy waste at dump site in Chelora. • Detailed waste characterization of study of dumpsite at Chelora was done by the Pollution Control Board. 	
3)	Palakkad	Kanjikode (Land taken over from Kerala State Electricity Board Ltd. in advance possession)	15 acres	<ul style="list-style-type: none"> • M/s Organic Recycling Systems Private Limited and M/s. Blue Planet Environment Solutions India Limited have completed the incorporation of SPVs in the name of Blue Planet Kannur Waste Solutions Private Limited to take up the development of the project. • Consortium has selected agency for the preparation of DPR, waste quantification and characteristic study in Kannur district and the agency could not commence due to lock down announced in connection with Covid 19 pandemic. 	

Sl. No	Corporation/ Municipality	Identified site	Area (acre)	Status	Completion date
4)	Kollam	Kureepuzha (Govt. land)	7.05	<ul style="list-style-type: none"> Letter of Intent (LOI) issued to the consortium by M/s. Zonta Infratech Pvt Ltd., the successful bidder of the project on 12-3-2020 and consortium accepted the LOI and the Consortium has taken steps to incorporate the SPV and reserved Venad Waste Management Private Limited as the name of the SPV with the Ministry of Corporation Affairs. Consortium requested for an extension of time for the incorporation of SPV due to current lock down announced as part of Covid 19 pandemic. For biomining the site, the Corporation informed that draft agreement to be executed with M/s.Zonta Infratech Pvt Limited is vetted by the Corporation's Standing Counsel and the same will be placed in the next Council meeting for approval. 	2 years
5)	Ernakulam	Brahmapuram (Govt. land)	20 acres	<ul style="list-style-type: none"> Action is being taken for the widening of approach road As the financial closure was not achieved by M.s.G. J. Ecopower Pvt Ltd., Secretary, Kochi Corporatation was directed to take steps to cancel the concession agreement executed. KSIDC was authorized to take immediate steps to float an RFP for the selection of suitable concessionaire to set up Waste to Energy plant at Brahmapuram. KSIDC floated e-tender to identify a suitable agency for the rehabilitation of MSW dump site at Brahmapuram. KSIDC submitted a proposal to constitute a Technical Evaluation Committee for technical evaluation of the bids. 	2 years

Sl. No	Corporation/ Municipality	Identified site	Area (acre)	Status	Completion date
6)	Thiruvananthapuram	Peringamala (Govt. Land)	15	<ul style="list-style-type: none"> Land identified for the solid waste processing plant for setting up the plant at Vizhinjam. The approval of the Board of VISL is to be obtained by the Board for the transfer of 15 acres of land on lease to KSIDC. The Board approval is to be communicated to the Port Department to issue necessary orders. Notice for environmental compensation was issued to Thiruvananthapuram Corporation for not identifying land for solid waste treatment plant and for not providing door to door collection. It has been stayed by the Hon'ble High Court. Land has been identified at Vizhinjam for setting up solid waste processing plant. Retendering has been done for the development of centralized solid waste treatment plant. 	2 years from the date of obtaining environmental clearance.
7)	Thrissur	Laloor (Govt. Land)	15	<ul style="list-style-type: none"> Thrissur Corporation identified land at Ollookkara village in Thrissur district. Vide GO (Rt) No 111/2020/LSGD dated 13/01/2020 State Government has accorded sanction to Thrissur Municipal Corporation to purchase the identified land at Ollookkara Village in Thrissur district and to hand over the same on lease basis to KSIDC for the development of the project The matter is being placed before the Council for approval and further proceedings. 	2 years
8)	Malappuram	Panakkad (Land in possession with Kerala State Industrial Development Corporation)	10	<ul style="list-style-type: none"> District Administration Malappuram has requested Revenue Department for issuing necessary orders to allot 8.09 acres of land in Kurumbathoor Village in Thirur Thaluk, Malappuram district to KSIDC for the development of the WtE project. The file is now pending with 	2 years

Sl. No	Corporation/ Municipality	Identified site	Area (acre)	Status	Completion date
				Land Board. Land Board sought further details from the District Administration. District Administration has submitted the details as sought by the Land Board.	
9)	Wayanad	Sulthan Bathery (Govt. Land)	0.5	<ul style="list-style-type: none"> • Construction of platform completed • Action to be taken on the installation of machinery 	Expected to be commissioned
10)	Idukki	Munnar (Land handed over by M/s Kannan Devan Hills Plantations Pvt. Ltd)	2	<ul style="list-style-type: none"> • KSIDC has re – tendered project on 14th January 2020. • The technical bid submitted by the Consortium of Ms. Al Bucheeri Transport Est and M/s Organic Recycling Systems Pvt Ltd was opened and evaluated based on the minimum eligibility criteria detailed in the tender document and the bid found eligible for technical presentation. • The technical presentation by the bidder to be scheduled on issue of Govt orders reconstituting the Bid Evaluation Committee. • Ex Service Charitable Trust was earlier directed to re submit the proposal for clearing the legacy waste at the project site to Suchitwa Mission through Munnar Grama Panchayath. • The Munnar Grama Panchayath Secretary reported that the proposal document for the project for clearing the legacy waste has been finalized and submitted to DPC for approval. 	2 years



Map showing proposed Waste to Energy plant

- e) **Rule 22(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 stand alone sanitary landfill facilities by all local authorities having a population of 0.5 million or more**
- (f) **Rule 22(3)- Procurement of suitable sites for setting up solid waste processing facility and sanitary landfill facilities**
- Action is being taken for the procurement of suitable site at Thrissur and Thiruvananthapuram Corporation for setting up solid waste processing facilities
 - Action is also being taken for the procurement of land of KINFRA at Ambalamedu, Ernakulam for the providing of landfill.
- (g) **Rule 22(9)-Setting up common or stand alone sanitary landfills by or for all local bodies having 5 lakh or more population for the disposal of only such residual wastes from the processing facilities as well s untreatable inert wastes as permitted under rules**
- Land has been identified at the site of FACT at Ambalamedu, Ernakulam for the sanitary landfill and action is being taken at the Government level for the takeover of the same.
- (h) **Rule 22(10)Setting up common or regional landfills by all localbodies and census town under 5 lakh for the disposal of permitted waste under the rules**
- Action has been initiated for providing secured landfill at Attingal.
- (i) **Rule 22(5) -Ensure Door to Door collection of segregated waste and its transportation in covered vehicles to processing or disposal facilities**
- (j) **Rule 22(4) – Enforcing waste generators to practice segregation of biodegradable, recyclable, combustible, sanitary waste, domestic hazardous and inert solid waste at source**

For the model city/town/villages, considerable progress has been achieved in providing door to door facility for dry wastes in both households (81.5%) and establishments (73%). Detailed report is submitted within Annexure 1.

Show cause notice for not levying Environmental Compensation of Rs. 14. 59 crore was issued to the model city, Thiruvananthapuram Corporation having no considerable progress in the identification of land and on door to door collection . A copy of show cause notice issued and its reply are submitted as Annexure 2 and 3. However the Corporation approached the Hon'ble High Court and has been stayed (Annexure 4). The case is pending with the Hon'ble High Court.The land has been identified for centralized system at Vizhinjam, Thiruvananthapuram.

Direction was issued to Thrissur Corporation for remitting environmental compensation (Annexure.5) and they also approached Hon'ble High Court and the Court in judgment dated 26-11-2019 in WP (c) No. 30789 of 2019, directed to approach Hon'ble NGT within the stipulated time or to implede in the case in NGT or both (Annexure 6). Then they submitted appeal before the High Court (Annexure 7) and the Court stayed the notice and directed to have bond with Pollution Control Board that arrears will be given as per the final order of the Court. However they identified land at Thrissur for solid waste treatment plant and action is taken to procure land. Notice for not levying Environmental Compensation of Rs. 1.12 Crore was issued to Kochi Corporation (Annexure 8).Notice for not levying Environmental Compensation of Rs. 2.47 Crore issued to Kalamassery Municipality (Annexure 9).Land has been identified for centralized system at Ollukkara, Thrissur.

I Door to Door Collection

A. Model City/Town/ Panchayath

A 1 Households

Status of Achievement	No of Model city		No of Model town		No of Model villages	
	Dry	Wet*	Dry	Wet*	Dry	Wet*
<u>75 -100%</u>			<u>2</u> (Kunnamkulam, Punalur)		<u>35</u>	<u>1</u>
50- <75%	1 (Kozhikode)				4	2
25 - <50%		1 (Kozhikode)	1 (Attingal)		3	1
Below 25 %	2 (Thiruvananthapuram, Thrissur)	2 (Thiruvananthapuram, Thrissur)	-	3 (Attingal, Punalur, Kunnamkulam)	0	38

* Windrow and vermi composting, aerobins, biogas plants, kitchen bins, bio composter, biobin, pipe and ring compost, compost pits etc

A2. Establishments

Status of Achievement	No of Model city		No of Model town		No of Model villages	
	Dry	Wet	Dry	Wet	Dry	Wet
<u>75 -100%</u>	<u>1</u> (Thiruvananthapuram)	<u>1</u> (Thiruvananthapuram)	3 (Attingal, Punalur, Kunnamkulam)	<u>1</u> (Attingal)	<u>31</u>	<u>1</u>
50- <75%	1 (Kozhikode)				3	
25 - <50%		1 (Kozhikode)			3	2
Below 25 %	1 (Thrissur)	1 (Thrissur)		2 (Kunnamkulam, Punalur)	5	39

B. All Corporations, Municipalities

B1. HOUSEHOLD

Status of Achievement	No of Corporation		No of Municipality	
	Dry	Wet	Dry	Wet
75 -100%	<u>1</u> (Kochi)	<u>1</u> (Kochi)	<u>27</u>	<u>2</u>
50- <75%	3 (Kollam, Kozhikode, Kannur)		15	
25 - <50%		2 (Kozhikode, Kannur)	18	5
Below 25 %	2 (Thiruvananthapuram, Thrissur)	3 (Thiruvananthapuram, Thrissur, Kollam)	27	80

B2. ESTABLISHMENTS

Status of Achievement	No of Corporation		No of Municipality	
	Dry	Wet	Dry	Wet
75 -100%	2 (Thiruvananthapuram, Kannur)	1 (Thiruvananthapuram)	25	4
50- <75%	2 (Kozhikode, Kochi)	2 (Kochi, Kannur)	11	1
25 - <50%	1 (Kollam)	1 (Kozhikode)	12	3
Below 25 %	1 (Thrissur)	2 (Thrissur,Kollam)	39	79

C 1. Door to Door collection in all Municipalities- Households

Status of Achievement		75 -100%	50- <75%	25 - <50%	Below 25 %
Thiruvananthapuram	Dry	-	1 (Varkala)	2 (Attingal, Neyyattinkara)	1 (Nedumangad)
	Wet	-	-	-	4 (Nedumangad, Attingal, Neyyattinkara Varkala)
Kollam	Dry	2 (S.paravur, Punalur)	1 (Kottarakara)	1 (Karunagapally)	-
	Wet	-	-	-	4 (Karunagapally, Kottarakara, S.paravur, Punalur)
Pathanamthitta	Dry	1 (Thiruvalla)	1 (Pandalam)	-	2 (Adoor, Pathanamthitta)
	Wet	-	-	-	4 (Adoor, Pathanamthitta, (Pandalam, Thiruvalla)
Alappuzha	Dry	2 (Alappuzha, Harippad)	2 (Cherthala, Mavelikkara)	1 (Kayamkulam)	1 (Chengananur)
	Wet	-	-	-	6 (Chengananur, Cherthala, Kayamkulam, Mavelikkara, Alappuzha, Harippad)

Status of Achievement		75 -100%	50- <75%	25 - <50%	Below 25 %
Kottayam	Dry	-	1 (Erattupetta)	1 (Pala)	4 (Changanassery, Ettumanoor, Kottayam, Vaikom)
	Wet	-	-	-	6 (Changanassery, Ettumanoor, Kottayam, Vaikom, Pala, Erattupetta)
Idukki	Dry	2 (Thodupuzha, Kattapana)	-	-	-
	Wet	-	-	1 (Kattapana)	1 (Thodupuzha)
Ernakulam	Dry	2 (Thrikkakara, Thripunithura)	1 (N.paravur)	3 (Aluva, Kalamassery, Piravam)	7 (Angamaly,Eloor, Koothatukulam,Kot hamangalam,Muva ttupuzha,Maradu,P erumbavoor)
	Wet	2 (Thrikkakara, Thripunithura)	-	2 (Aluva, Kalamassery)	9 (Angamaly, Eloor, Koothatukulam, Kothamangalam, Muvattupuzha, N.Paravur, Maradu, Perumbavoor, Piravom)
Thrissur	Dry	3 (Chalaky,Kodu ngallur, Kunnamkulam)	-	3 (Chavakkad,Iri njalakuda,Vada kanchery)	1 (Guruvayur)
	Wet	-	-	-	7 (Guruvayur, Chavakkad,Irinjalak uda, Vadakanchery, Chalaky,Kodung allur, Kunnamkulam)
Palakkad	Dry	1 (Shornur)	3 (Cheruplassery, Chittur- Thattamangalam,Ottapa lam)	1 (Palakkad)	2 (Mannarkkad, Pattambi)
	Wet	-	-	-	7 (Cheruplassery, Chittur- Thattamangalam, Ottapalam, Mannarkkad,Patta mbi, Palakkad, Shornur)
Malappuram	Dry	3 (Kondotty, Malappuram, Tirur)	2 (Ponnani, Thanoor)	3 (Parappanang adi, Perinthalmann a, Thiroorangadi)	4 (Kottakkal, Manjeri,Nilambur, Valanchery)

Status of Achievement		75 -100%	50- <75%	25 - <50%	Below 25 %
	Wet	-	-	1 Parappanangadi	11 (Kondotty, Kottakkal, Malappuram, Manjeri, Nilambur, Perinthalmanna, Ponnani, Thanoor, Thiroorangadi, Tirur, Valanchery)
Kozhikode	Dry	2 (Mukkam, Vadakara)	1 (Koyilandy)	1 (Faroke)	3 (Koduvally, Payyoli, Ramanattukara)
	Wet	-	-	1 (Faroke)	6 (Koduvally, Payyoli, Ramanattukara, Koyilandy, Mukkam, Vadakara)
Wayanad	Dry	-	-	2 (Kalpetta, Mananthavady)	1 (Sulthanbathery)
	Wet	-	-	-	3 (Sulthanbathery, Kalpetta, Mananthavady)
Kannur	Dry	6 (Kuthuparambu, Iritty, Matannur, Payannur, Sreekan dapuram, Thaliparambu)	2 (Panoor, Thalassery)	-	1 (Anthoor)
	Wet	-	-	-	9 (Anthoor, Panoor, Kuthuparambu, Iritty, Matannur, Payannur, Sreekan dapuram, Thalassery, Thaliparambu)
Kasargod	Dry	3 (Kanhagad, Kasargod, Nileshwaram)	-	-	-
	Wet	-	-	-	3 (Kanhagad, Kasargod, Nileshwaram)

C2. Door to Door collection in all Municipalities- Establishment

Status of Achievement		75 -100%	50- <75%	25 - <50%	Below 25 %
Thiruvananthapuram	Dry	2 (Attingal Varkala)	1 (Nedumangad)	-	1 (Neyyattinkara)
	Wet	1 (Attingal)	-	-	3 (Neyyattinkara,

Status of Achievement		75 -100%	50- <75%	25 - <50%	Below 25 %
					Nedumangad, Varkala)
Kollam	Dry	2 (S.paravur, Punalur)	-	-	2 (Kottarakara, Karunagapally)
	Wet	-	-	-	4 (Karunagapally, Kottarakara, S.paravur, Punalur)
Pathanamthitta	Dry	1 (Thiruvalla)	-	-	3 (Adoor, Pathanamthitta, (Pandalam)
	Wet	-	-	-	4 (Adoor, Pathanamthitta, (Pandalam, Thiruvalla)
Alappuzha	Dry	1 (Alappuzha)	-	2 (Chengananur , Kayamkula m)	4 (Cherthala, Kayamkulam,Mavelikk ara, Haripad)
	Wet	-	1 (Alappuzha)	-	5 (Chengannur, Cherthala, Kayamkulam,Mavelikkara , Haripad)
Kottayam	Dry	-	1 (Ettumanor)	-	5 (Changanassery, Kottayam, Vaikom, Pala, Erattupetta)
	Wet	-	-	-	6 (Changanassery, Ettumanoor, Kottayam, Vaikom, Pala, Erattupetta)
Idukki	Dry	2 (Thodupuzha,Katta pana)	-	-	-
	Wet	-	-	-	2 (Thodupuzha,Kattapan a)
Ernakulam	Dry	3 (Eloor, N.Paravur, Thripunit hura)	1 (Thrikkakara)	2 (Kalamassery, Piravam)	7 (Aluva,Angamaly,Kooth atukulam,Kothamangala m,Muvattupuzha,Marad u,Perumbavoor)
	Wet	1 (Thripunithura)	-	2 (Kalamassery, Thrikkakara)	10 (Aluva,Angamaly,Eloor, Koothatukulam,Kotham angalam,Muvattupuzha, N.Paravur,Maradu,Peru mbavoor,Piravom)
Thrissur	Dry	4 (Guruvayur,irinjalaku da,kunnamkulam,va dakanchery)	2 (chalakudy, chavakkad)	1 (kodungallur)	-
	Wet	-	-	-	7 (Guruvayur, Chavakkad,irinjalakuda,V adakanchery, Chalakudy,kodungallur, Kunnamkulam)

Status of Achievement		75 -100%	50- <75%	25 - <50%	Below 25 %
Palakkad	Dry	3 (Cheruplassery, Mannarkkad, Shornur)	1 (Ottapalam)	-	3 (Chittur- Thattamangalam, Palakkad,Pattambi)
	Wet	1 (Chittur- Thattamangalam)	-	-	6 (Cheruplassery, Ottapalam, Mannarkkad,Pattambi, Palakkad, Shornur)
Malappuram	Dry	1 (Tirur)	2 (Parappanangadi, Ponnani)	4 (Kottakkal,Malappu ram,Manjeri,Perint halmanna)	5 (Kondotty,Nilambur, Thanoor,Thiroomangadi , Valanchery)
	Wet	-	-	1 (Parappanangadi)	11 (Kondotty Kottakkal,Malappuram,Ma njeri, Nilambur,Perinthalmanna, Ponnani,Thanoor,Thirooma ngadi,Tirur, Valanchery)
Kozhikode	Dry	2 (Mukkam,Vadakara)	-	-	5 (Faroke,Koduvally,Koyi landy, Payyoli,Ramanattukara)
	Wet	-	-	-	7 (Faroke, Koduvally, Koyilandy, Payyoli, Ramanattukara, Mukkam,Vadakara)
Wayanad	Dry	1 (Kalpetta)	-	1 (Mananthavady)	1 (Sulthanbathery)
	Wet	-	-	-	3 (Sulthanbathery, Mananthavady, Kalpetta)
Kannur	Dry	3 (Koothuparambu, Mattanur, Sreekantapuram)	2 (Iritty, Payannur)	1 (Panoor)	3 (Thaliparambu,Anthoor , Thalassery)
	Wet	1 (Mattanur)	-	-	8 (Anthoor, Panoor, Koothuparambu, Iritty, Payannur, Sreekantapuram, Thalassery, Thaliparambu)
Kasargod	Dry	-	1 (Nileshwaram)	1 (Kasargod)	1 (Kanhangad)
	Wet	-	-	-	3 (Kanhangad,Kasargod, Nileshwaram)

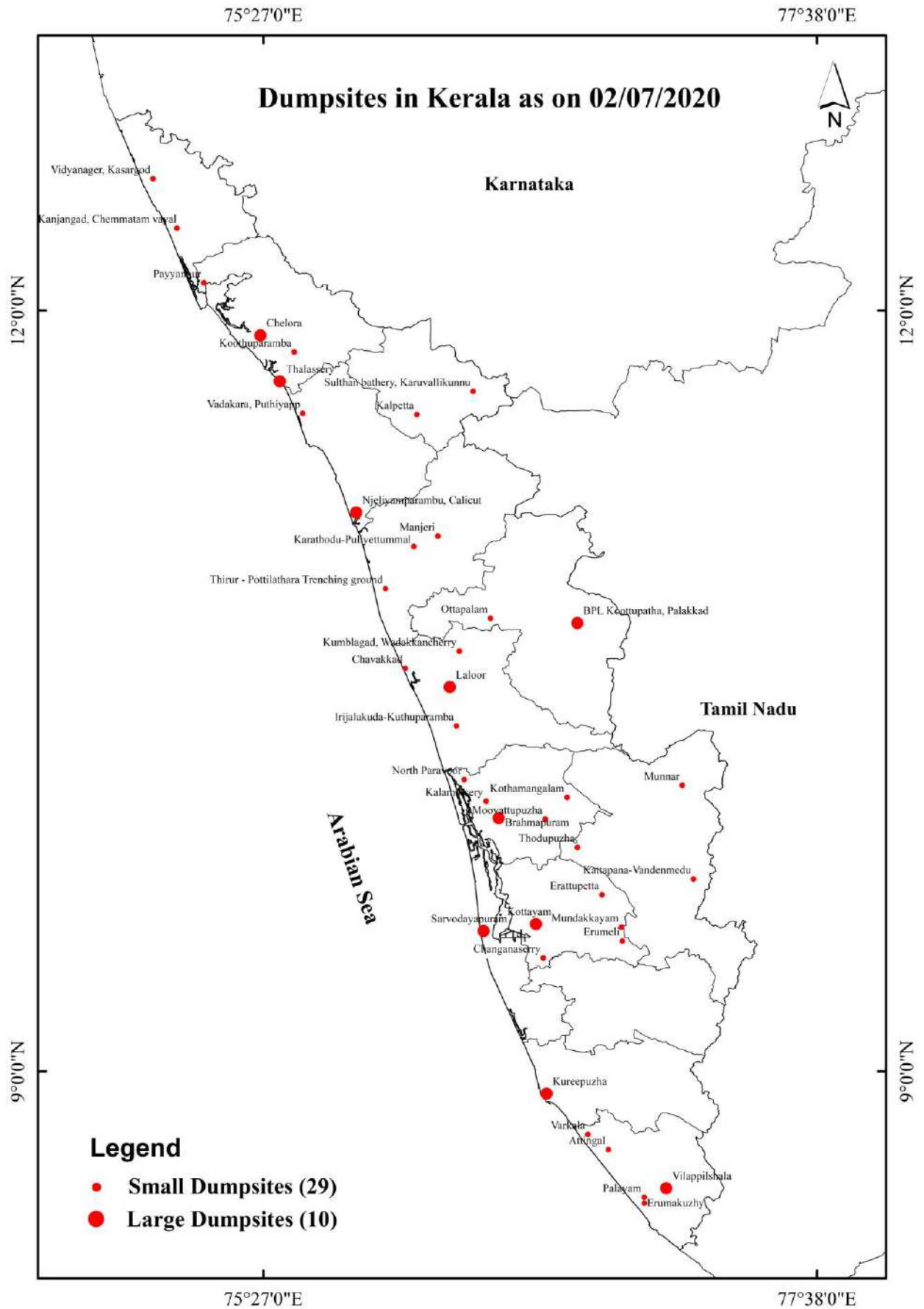
(k) Rule 22(11) -Bioremediation or capping of old and abandoned dumpsites

39 numbers of dumpsites have been identified in the State. Biomining of dumpsites tendered for Kochi, Kozhikode and Kollam. Bio mining is in progress for Palakkad. Dumpsites at Guruvayoor, Punaloor, Kottarakkara, Adoor, Thathamangalam, Vaikom, Adoor are informed as cleared and are thus removed from the list.

Major Dumpsites locations					
Sl No:	Location	District	Latitude	Longitude	Status
1	Vilappilshala	Thiruvanthapuram	8.5388	77.0388	
2	Kureepuzha	Kollam	8.9116	76.5671	For biomining the site, the Corporation informed that draft agreement to be executed with M/s.Zonta Infratech Pvt Limited is vetted by the Corporation's Standing Counsel and the same will be placed in the next Council meeting for approval.
3	Kottayam Vadavathoor	Kottayam	9.5808	76.5253	Tendering stage
4	Sarvodayapuram	Alappuzha	9.5527	76.3189	Clearing of dumpsite started through Clean Kerala Company
5	Brahmapuram	Ernakulam	9.9983	76.3786	KSIDC floated e-tender to identify a suitable agency for the rehabilitation of MSW dump site at Brahmapuram. KSIDC submitted a proposal to constitute a Technical Evaluation Committee for technical evaluation of the bids.
6	Laloor	Thrissur	10.5149	76.1858	Some area is reclaimed and construction of stadium is progressing and remaining area is taken up for biomining with Clean Kerala mission and KIEL
7	BPL Koottupatha, Palakkad	Palakkad	10.7674	76.6881	Under Consideration
8	Njeliyamparambu, Calicut	Kozhikode	11.2036	75.8169	M/s Zonta Infratech Pvt Ltd started the work of clearing of legacy waste on 3 rd March, 2020. The clearing work of legacy waste resumed at the dumpsite on 4 th May 2020 and approximately 15000 cum of legacy waste has been cleared from the project site as on 12 th May 2020.
9	Chelora	Kannur	11.9018	75.4389	Govt vide GO(Rt) No. 714/2020/LSGD dated 27-3-2020 issued direction to Kannur Municipal Corporation to hand over the 9.75 acres of the land identified at Chelora on lease

					<p>basis to KSIDC for the development of Waste to Energy project and to execute MoU with KSIDC for clearing the existing legacy waste at dump site in Chelora.</p> <p>Detailed waste characterization of study of dumpsite at Chelora was done by the Pollution Control Board.</p>
10	Thalassery	Kannur	11.7207	75.5153	
Other Dumpsite locations					
Sl No:	Location	District	Latitude	Longitude	Status
1	Attingal	Thiruvanthapuram	8.6911	76.8105	Project Preparation ongoing
2	Erumakuzhy (Chalai)	Thiruvanthapuram	8.4805	76.9522	
3	Palayam	Thiruvanthapuram	8.5029	76.9519	Corporation under taking biomining process
4	Varkala	Thiruvanthapuram	8.7509	76.7301	Project Going on
5	Changanassery, Fathimapuram	Kottayam	9.447	76.5541	Project worth 13.5 Lakh completed. 20 lakh project to be implemented soon. Project for bioremediation
6	Erattupetta- Thevarupara	Kottayam	9.696229	76.7852972	Planned a proposal with Suchitwa mission, Kerala.
7	Mundakkayam - Vettukallamkuzhy	Kottayam	9.5683483	76.8746208	-
8	Erumeli- Kavumgumkuzhy	Kottayam	9.5683483	76.8746208	Legacy waste is being disposed periodically in Thumboormuzhy aerobic bins
9	Kattapana-Vandenmedu	Idukki	9.7583	77.1468	-
10	Thodupuzha	Idukki	9.883	76.6886	-
11	Munnar	Idukki	10.2697	76.9677	Tendering in Progress
12	Kalamassery	Ernakulam	10.0653	76.3282	-
13	Kothamangalam	Ernakulam	10.0797	76.6476	-
14	Moovattupuzha	Ernakulam	9.9942	76.5614	-
15	North Paravoor	Ernakulam	10.1505	76.2424	Central Financial grant 25 Lakhs to disposal of legacy waste.
16	Chavakkad	Thrissur	10.589	76.0099	-
17	Irijalakuda-Kuthuparamba	Thrissur	10.3617	76.2115	Some area is reclaimed and construction of windrow compost plant is going on.
18	Kumblagad, Wadakkancherry	Thrissur	10.6565	76.223	Biomining project for this site is undertaken as part of SBM Urban DPR. A DPC project on the same is also approved for 30 lakhs
19	Ottapalam	Palakkad	10.7868	76.3456	-
20	Karathodu-Puliyettummal	Malappuram	11.0692	76.0434	-
21	Manjeri	Malappuram	11.1101	76.1379	SEUF is entrusted to prepare DPR

22	Thirur - Pottilathara Trenching ground	Malappuram	10.903	75.9316	-
23	Vadakara, Puthiyapp	Kozhikode	11.5945	75.6056	Capping done over a part of legacy waste
24	Kalpetta	Wayanad	11.5906	76.0555	-
25	Sulthan bathery, Karuvallikunnu	Wayanad	11.6814	76.2772	-
26	Koothuparamba	Kannur	11.8364	75.5718	-
27	Payyannur	Kannur	12.109	75.2158	-
28	Kanjangad, Chemmatam vayal	Kasargod	12.3251	75.1098	-
29	Vidyanager, Kasargod	Kasargod	12.5196	75.0154	-



Map showing the dumpsites

3.2.2 Ban on single use plastic

- Government have imposed a complete ban on the manufacture, storage, transport, and sale of single use plastic items in the State with effect from 1-1-2020 vide G.O.(Rt) No. 128/2019/ENVT dated 31-12-2019 (Annexure10).
- Alternative materials that can be used as a substitute for the banned single use plastic has been issued vide G.O. (Rt.) No.02/2020/Env. dated 27-01-2020 (Annexure11)
- Surprise checking has been conducted by the officials of Pollution Control Board, Local bodies and District Collectorate and action taken against/charged fine 36 numbers of violators.
- Workshop was conducted on 13-02-2020 for the awareness of "Identification of Single Use Plastics Products by Simple Methods, Alternatives & Compostable Products" by Kerala State Pollution Control Board, CIPET and NIIST to the stakeholders. The programme is also arranged on 24-02-2020 and 26-02-2020 at Ernakulum and Kozhikode.

3.2.3 Extended Producer Responsibility under Solid Waste Management Rules

For the implementation of the producer responsibility as per Solid Waste Management Rules, 2016 and Plastic Waste Management Rules, 2016, Kerala State convened National level seminar on 12-6-2019. A hearing of brand owners was conducted on 07-12-2019 and evolved proposal for the implementation of EPR and is under the consideration of the Government. The financial assistance by brand owners/producers/manufacturers/importers can be remitted in the EPR fund and this fund can be utilized for meeting to the extent possible cost of door-to-door collection. A copy of the proposal is submitted herewith as Annexure12.

3.2.4 Other good initiatives

- **Rendering plant for the wastes from chicken stalls** is functioning in Kozhikode. The main feature of this facility is the storage of chicken wastes in refrigerators in chicken stall and transportation in refrigerated vehicle and thereby preventing the emanation of bad odour during transportation. Chicken stall having agreement with the rendering plant shall only be issued consent from the Board. It is reported that Rs. 50,000 has been given by the company to the local body.
- **Collection and disposal of unused medicines from houses** were initiated by Chemists and Druggist Association and Drugs Controller (PROUD programme) in Thiruvananthapuram Corporation. Around 200 bins were provided in front of medical shops in Thiruvananthapuram Corporation. The first load of collected waste of 5T has been flagged off from Thiruvananthapuram to biomedical waste treatment facility on 1-10-2019. Action is being taken to have this collection programme in other parts of the State. The scope for getting fund from manufacturers, producers and brand owners as per EPR is also looked into.

3.3 Waste quantification as per the report of Suchitwa Mission

Kerala generates about 10,044TPD of municipal solid wastes; 14% by 6 city Corporations, 45% by Municipalities and 41% generated by 941 Grama Panchayaths, 49% of the waste is generated in households; 36% in institutions and 15% in way sides and public places. 7734 TPD of waste is putrescible in nature, 1808 TPD is non-biodegradable and 502TPD is inert. Non biodegradables wastes include 603TPD of paper, 402TPD of plastic, 100TPD of metals, 100TPD of glass, 200 TPD of rubber and leather and 40TPD of domestic hazardous waste. Currently 3494 TPD, out of total 7734TPD (45%) of biodegradable waste is treated in households, institutions and community level. This works out to be 45% of the biodegradable waste generated in the State. Projects for installation of 13,09,478 household level composting or bio-methanation units will increase the waste treatment capacity to 71%(i.e. 5491 TPD). The non-biodegradable waste is collected from sources and temporarily stored in material collection facility (MCF). There are 658 operational MCF in Grama panchayaths and 179 operational MCFs in ULBs.

- Segregation of waste is practiced in 75% urban local bodies and 66% Grama panchayths. 87 ULBs out of total 93 ULBs and 620 GPs, out of 941 GPs are practicing segregation at source. The segregation is ensured as the Local Governments are engaging Haritha Karma Sena (HKSs) for Door-to-Door collection of segregated non-biodegradable waste. HKS is a micro-enterprise group formed and trained by the State Poverty Eradication Mission namely Kudumbasree, which collects the segregated waste by charging a user fee. In the initial stages of operation, the HKS is given validity Gap Fund for one year as per the rate fixed by the State Government.
- About 150 schools in Thiruvananthapuram district have installed sanitary napkin incinerator by the Hindustan Life care Systems. 18 ULBs have proposed to install 420 sanitary napkin incinerators at a total cost of Rs. 1.34 Crore.
- Government proposes to establish C&D waste management facility for which fund is earmarked under the budget provision for 2-19-20. It is proposed to establish the facility in collaboration with major stakeholders for management of construction and demolition waste, such as building materials, debris, rubbles resulting from construction, re-modelling, repair and demolition of any civil structure. Preliminary discussions have been held with Swach Bharath Mission (Urban) in the Ministry of Housing and Urban Affairs, Government of India for technical support.
- Government through the Suchitwa Mission has initiated enlistment and registration of all types of scrap dealers in the state to promote recycling. Around 2000 scrap dealers and rag pickers have been registered so far in district wise and their address and contact details are uploaded in the website of Suchitwa Mission. It is estimated that about 50% of recyclable materials are handled by the scrap dealers in the State.
- Government has enlisted 3 accredited agencies and 64 service providers for providing technical services for installation of various tools.
- Government have constituted Haritha Kerala Mission to enable the local authorities to pursue integrated action for environmental degradation of the State linking with waste management, compost generation, organic cultivation, water conservation etc.
- Government have made it mandatory to provision 10% and 15% of the plan fund received respectively by rural and urban local government for waste management.
- Government is also providing additional fund required for improving infrastructure for waste management as well as awareness and capacity building.
- In 2019-2020, the Urban Local Government earmarked Rs. 178.48 Crore and Rural Local Government earmarked Rs.316.44 Crore for sanitation and waste management. In addition Rs. 75 Crore had been

provided under State scheme and Rs. 182.93 Crore had been provided under Centre-State Scheme namely Swachh Bharath Mission.

- Government have constituted Clean Kerala Company to provide waste management services, especially in the management of plastic and other recyclables, e-waste and operation and maintenance of resource recovery facilities established by the Urban Local Government and Block panchayaths.
- Site available for recovery and recycling facility have been notified by Kerala State Industrial Development Corporation and Kerala Industrial Infrastructure development Corporation. Vide G. O. (M.S) No. 6/2019/Envt dated 27-11-2010 has issued direction to earmark 5% area for recycling and recovery in industrial parks.
- Capacity building programs are organized through Kerala Institute of Local Administration to give training to stake holders.
- Aerobic composting and bio-methanation plants are established and operated at 410 tons biodegradable waste per day. Centralized composting plants are operational in 14 locations which also treat market waste on day to day basis.
- Aerobic composting or biomethanation facility is installed in about 4.64 lakh houses, 31075 institutions and 2151 community places. In addition about 30 lakh households are composting their waste in composting pits. Sanction has been given for installation of 13,09, 478 household level composting facilities. In addition 23 ULBs have set up centralized composting plants among which the plants include Brahmapuram plant of capacity 220 TPD at Kochi and at Kozhikode of capacity 100TPD. The rest of the plants have capacity varying from 1 to 10 TPD and of which only 10 are functional. 4090 TPD out of total 7762 TPD of biodegradable waste is treated at households, institutions and community level. This works out to be 53% of the biodegradable waste generated in the State.
- There are 658 operational MCFs in Grama Panchayaths and 179 operational MCFs in ULBs. The non biodegradable waste stored in MCF are transferred to Resource Recovery facility(RRF) for final segregation and recycling.it is proposed to establish 263 RRFs all over the Sate by providing at least one RRF in each block panchayath and Municipality and for each in each city Corporation. All RRFs are provided with plastic shredding units and bailing units. Some of the RRFs are also equipped to recycle plastic materials.
- The Clean Kerala Company Limited is entrusted to collect the non-biodegradable waste from MCF and operate the RRF. From 2016 onwards. the Clean Kerala Company have supplied 665 T of shredded plastic for mixing with bitumen. 360 T of shredded plastics are consumed for road making in Local Self Government Institutions and 315 T by the PWD.

4. Status of implementation of Solid Waste Management Rules, 2016

4.1 Background

The Government of Kerala has taken efforts to implement the Solid Waste Management Rules, 2016 in the State. There are 6 Corporations, 87 Municipalities and 941 GPs in the State. The Kerala State Pollution Control Board (KPSCB) issued repeated directions to all local bodies to ensure compliance of the Solid Waste Management Rules, 2016. 3831.6 TPD of solid waste is generated from the cities and towns. The Government of Kerala constituted a State Level Advisory Committee on Waste Management chaired by the Chief Secretary; this Committee has conducted **36** meetings, till date, for monitoring solid waste management on monthly basis.

4.2. Additional Details Submitted in the Revised Format to the Central Pollution Control Board vide letter dated PCB/HO/NGT/06/2018/06/2019 dated 15/05/2020 as per Hon'ble NGT order dated 07.01.2020 in O.A 606/2018

Questions	Remarks				
Numbers of ULBs	93				
Over all waste management status in States/UTs					
Quantity of MSW generated (TPD)	3452				
Quantity of MSW collected (TPD)	833				
Quantity of MSW segregated & transported (TPD)	833				
Quantity of MSW processed (TPD)	663				
Quantity of MSW disposed in secured land fill site (TPD)	0				
Gap in Solid Waste Management UTs (TPD) [1(a)- 1(d)- 1(e)]	2789				
Solid Waste Management Plan	For setting up solid waste treatment plant				
	400 g/person/day				
	This includes treatment in the centralised system only. Decentralised units are reported by local bodies. Details of centralised and decentralised facilities are enclosed.(Annexure)				
Waste Collection	Existing	Target	Gap	Timeframe	Remarks
ULBs in which waste door-to-door collection is implemented(No.)	100 % D2D collection in Household: Dry - 9 ULB & Wet - 1 ULB ; 100 % D2D collection in Establishment: Dry - 9 ULB & Wet – 2 ULB	93	Household: Dry - 85 ULB & Wet - 92 ULB; D2D collection in Establishment: Dry - 84 ULB & Wet - 91 ULB	September, 2020	D2D Household above 50%: Dry - 43 ULB & Wet - 3 ULB D2D Establishment above 50%: Dry - 41 ULB & Wet - 8 ULB

ULBs in which segregation of waste is implemented (No.)	100 % D2D collection in Household: Dry - 8 ULB & Wet - 1 ; 100 % D2D collection in Establishment: Dry - 9 ULB & Wet - 2	93	Household: Dry - 85 ULB & Wet - 92 ULB; D2D collection in Establishment: Dry - 84 ULB & Wet - 91 ULB	September, 2020	
ULBs in which transportation of segregated waste is implemented (No.)	12	93	81		
Waste Processing					
<u>Material Recovery facilities</u>					
Total Capacity (TPD)	2700			September, 2020	
Number	151	264	113	September, 2020	Details from Suchitwa Mission as on Feb 2020
Number of ULBs covered	56	93	37	September, 2020	
<u>Recycling</u>					
Total Capacity (TPD)	List enclosed Annexure.3	0	0		
Number	214	0	0		
Number of ULBs covered	List enclosed Annexure.3	0	0		
<u>Composting</u>					
Total Capacity (TPD)	420.59			September, 2020	
Number	47	93	46	September, 2020	
Number of ULBs covered	47	93	46	September, 2020	
<u>Biomethanation</u>					
Total Capacity (TPD)	103.15			September, 2020	
Number	12			September, 2020	
Number of ULBs covered	12		0	September, 2020	
<u>RDF</u>					
Total Capacity (TPD)		9	9	2 Years	

Number		9	9	2 Years	
Number of ULBs covered		9	9	2 Years	
Waste to Energy Plants					
Total Capacity (TPD)		11	11	2 Years	
Number	0	11	11		
Number of ULBs covered	0	11	11	11 ULBs	
Waste Disposal					
<u>Landfill</u>					
Total Capacity (T)		9	9	2 Years	
Number	8		0		
Number of ULBs covered			0		
Legacy Waste Waste management					
Number of dumpsites (No.)	41				
Quantity of Waste dumped at dumpsites (Tons)	Not Available				
Number of dumpsites cleared (No.	0				
Number of dumpsites in which biomining has commenced (No.)	1				
Time frame for clearing all dumpsites	2021				
Other Information					
Information regarding development of model towns/cities/villages	For the model city/town/villages, considerable progress has been achieved in providing door to door facility for dry wastes in both households (81.5%) and establishments (73%) in October 2019.				

Creation of Environmental cell	The Chief Secretary convenes the meeting of State Level Advisory Committee (SLAC) on Solid waste management monthly. The progress in waste to energy plant is reviewed during the meeting. 36 nos of meeting had been conducted so far. The District Collector, Secretaries of local bodies, Pollution Control Board, Kerala State Industrial Development Corporation are the participants for the meeting.				
Standardization of rates for procurement of services/equipment (to do away with the tendering process) required for solid waste management	Kerala State Industrial Development Corporation is dealing with the tendering for installation of waste management system in the State and is monthly reviewed by the Chief Secretary				

The colour coding for the cases is presented below:

4.3 Format I on solid waste management send on October 2019

The colour coding for the cases is presented below:

Colour	Status
Green	Complete
Yellow	In Progress
Red	Yet to be initiated
Blue	Not Applicable to State Context

	Name of State/UT: KERALA		1. SOLID WASTE MANAGEMENT				
	Name and designation of Nodal officer: Secretary, Corporation/Municipality/Panchayath						
Sl. No.	Item	SPCB/PCC Response	Remarks	Current Status	Desirable level as per Statutes	Gap between Current Status and desired level	Time frame for addressing the Gap
8	Percentage of Districts in which Special Task Force (Four members nominated by DM, SP, RO SPCB & District Legal Services Authority) for Awareness has been created	100%		Complied			
12	Percentage of ULBs which have framed byelaws incorporating provisions of SWM Rules (15e)?	Not Available		Common bye law is under vetting by law Department Some of the individual local	Bye law to be framed		

				bodies have framed byelaws.			
30	Percentage of operators of Solid Waste processing facility who have submitted Annual report.	0%		Local bodies submitted the annual report			
31	Percentage of ULBs which have appointed nodal officer/committee.	100%		Secretary of Local bodies			
34	Percentage of ULBs which have submitted Annual Report in Form IV to Secy, UD and SPCB	100%		Complied			
36	Percentage of ULBs in which Sweeping is carried out twice or more in public areas	100% (once in public areas)					
38	Percentage of ULBs in which user fees has been incorporated in Byelaws			Common bye law is under vetting by law Department Some of the individual local bodies have framed byelaws.			
39	Percentage of ULBs having Door to door collection system	69 %	ULB with D2D collection more than 25%		100%		

40	Percentage of ULBs transporting wastes in covered vehicles	32.3%	Ernakulam, Palakkad	32.3%	100%	67.7%	
41	Percentage of ULBs having GPS installed on garbage collection vans (> 5 lakh population)	0%			100%	100%	
42	Percentage of ULBs using Compartmentalized vehicles for collection of different fractions of waste	8.6%		8.6%	100%	91.4%	2020
43	Percentage of ULBs having Computerized weighing machine for weighing solid waste	0%			100%	100%	2020
44	Percentage of ULBs having tipping fee based on quantum of waste generated/ processed	13%	As per the data from Urban Directorate	13%	100%	87%	
45	Percentage of ULBs having twin-bin system installed at public places	3.2%	As per the data from Urban Directorate	3.2%	100%	96.8%	2020
46	Percentage of ULBs having transfer stations instead of secondary storage bins	13%	As per the data from Urban Directorate	13%	100%	87%	
47	Percentage of ULBs in which PPE has been provided to workers	42%	As per the data from Urban Directorate	42%	100%	58%	
48	Percentage of ULBs in which Capacity building of local bodies has been taken up by State Deptt of UD	100%					
49	Percentage of ULBs in which workers have been educated on Door to door collection of waste	100%					

50	Percentage of ULBs in which Training has been imparted to waste pickers/waste collectors	100%					
51	Percentage of ULBs having separate Street sweepings collection and disposal system	9.67%	As per Form IV, SWM 2016	9.67%	100%	90%	
52	Percentage of ULBs in which Segregation of waste at household level/source has been implemented	Dry : 86.02% Wet: 61.3%	As per the data from Urban Directorate				
53	Percentage of ULBs in which waste Segregation by street vendors has been implemented.	25%	As per the data from Urban Directorate	25%	100%	75%	
54	Percentage of ULBs in which Segregation of waste by RWAs, market associations, gated communities, institutions (> 5000 sqm area), hotels, restaurants etc has been implemented	34%	As per the data from Urban Directorate	34%	100%	66%	
55	Percentage of ULBs in which Segregation of Waste at source for inerts and C&D Waste has been implemented	10%		10%	100%	90%	
56	Percentage of ULBs in which informal sector of waste pickers, waste collectors and recycling industry in reducing waste in state policy has been engaged	85%	As per Data from Urban Directorate (79/93)				

57	Percentage of ULBs in which Space for SW segregation, storage and processing of solid waste for 200 units / 5000 square feet has been allocated	MCF=550 RRF=180			100%		
58	Percentage of ULBs in which Scheme for registration of waste pickers and dealers has been implemented	14%	-	14%	100%	86%	
59	Percentage of ULBs in which land has been identified for setting up waste processing facilities (22 (1))	79%	All 14 districts except Thiruvananthapuram, Pathanamthitta and Kasargod		100%	21%	
60	Percentage of ULBs in which non-biodegradable waste and inert waste are used for filling up of construction areas and construction of roads	52%	From Clean Kerala Company		100%	48%	
61	Percentage of ULBs in which Usage of RDF by Cement plants /Power plants/Industries located within 200 km of such facility has been implemented	0%	Action taken by Malabar Cements Limited, Government of Kerala undertaking for co-processing installation.	Draft proposal for making modification for co-incineration will be submitted by 31 st October 2019.	100%	100%	One year October, 2020
65	Percentage of ULBs in which home /decentralized and centralized composting has been initiated	79.60%			100%	20.4%	
66	Percentage of ULBs in which Storage of Horticulture waste on generators own premises has been initiated	17%			100%	83%	

67	Percentage ULBs in which setting up of solid waste and processing facilities has been incorporated in Master Plan of the city	1%			100%	99%	
68	Percentage of ULBs in which 5% or 5 sheds in SEZ, IE, Industrial park have been allocated for recovery and recycling facility		<ul style="list-style-type: none"> •Kuttipuram, Malappuram for plastic recycling unit by Clean Kerala Company •Kannur for converting hair to manure 				
69	Percentage of ULBs in which material recovery facilities for sorting of recyclables by informal sector have been set up	57%	<ul style="list-style-type: none"> • Corporation -6/6 • Municipality -45/87 Total =51/93 =54.83%	Material collection facility is all ULBs Resource recovery facility is provided in six corporations and 45 municipalities Godowns were also hired for storage.	100%	0 for MCF	One year
70	Percentage of ULBs in which Waste from vegetable, flower, fish, meat, poultry market is processed in biomethanation plant	24%	AS per annual report, SWM				
71	Percentage of ULBs in which use of Chemical fertilizers in parks has been phased out	3.4%			100%	96.6%	

72	Percentage /Number of Waste processing based on Waste to Energy/RDF	Seven 77%	Land identified at seven places. Land to be identified in Thiruvananthapuram and Thrissur	<ul style="list-style-type: none"> • Brahmapuram, Ernakulam and work will be started • Kozhikode, DPR submitted by the company. • Palakkad and Kannur – bidding • Kollam, Munnar-retendering • Sulthan bathery, Wayanad-installation of machinery to be done 	100%	23%	2020
73	Percentage of Waste processing units based on Composting/Biomethanation	28%			100%	72%	
77	Percentage of ULBs in which Biodegradable waste is sent to compost/biomethanation plant	79.50%	Brahmapuram, Attingal, North Paravur, Kumaly, Kattappana	79.50%	100%	20.5%	

78	Percentage of ULBs in which non-biodegradable wastes is sent to MRF/ Secondary storage facility	100%	54.8%	<ul style="list-style-type: none"> • Corporation -6/6 • Municipality -45/87 • Total =51/93 =54.83% 	<p>Material collection facility is all ULBs</p> <p>Resource recovery facility is provided in six corporations and 45 municipalities</p> <p>Godowns were also hired for storage.</p>	100%	0 for MCF	45.2% for RRF
79	Percentage of W to E plants having Facilities for segregation of waste prior to processing of waste in W to E Plants	0%	Land for WtE plant is identified at 7 places.	<ul style="list-style-type: none"> • Brahmapuram, Ernakulam and work will be started • Kozhikode, DPR submitted by the company. • Palakkad and Kannur – bidding • Kollam, Munnar-retendering 	100%	100%	Two years	
80	Percentage increase in number of Authorizations granted	80%	1 No in 2017-2018, 5 Nos in 2018-2019					
81	Percentage of ULBs displaying data related to functioning of plant and its adherence to prescribed parameters displayed on ULB's website	0%	-	-	100%	100%		

83	Percentage of ULBs in which land has been identified for landfill site (11 f)	1.07%	Attingal				
84	Percentage of ULBs in which land has been allocated for landfill site (Rule 12a)		Not available				
85	Percentage of ULBs having own /regional operational Landfill sites	1.07%	Attingal				
86	Percentage of landfill sites in which Provision of Green Belt /Buffer Zone around landfill site has been made.	1					
87	Percentage of Landfill sites for which Buffer zone has been notified	0%			100%	100%	Two years
88	Percentage of landfill sites in which efforts have been taken to prevent/manage generation of leachate	2%	Attingal, Kochi		100%	98%	
89	Percentage of landfill sites in which efforts have been taken to prevent /manage generation of methane gas		Brahmapuram & Villapilsala sites are capped with gas escape capacity				
90	Percentage of landfill/dumpsites in which CCTV has been installed	1%			100%	99%	
91	Percentage of ULBs having Decentralized waste disposal facilities	100%			0	0	
92	Percentage of landfill sites in which landfilling or dumping of mixed waste is continued	2%			100%	98%	

93	Percentage of landfill sites in which only non-usable, non-recyclable, non-biodegradable, non-combustible and non-reactive waste is disposed	80%			100%	20%	
94	Percentage of ULBs in which Investigation of old /existing dumpsites for bio-mining has been initiated	11%	Brahmapuram Ernakulam Kozhikode Kannur Biomining has been started in Palakkad Total-37 identified	11%	100%	89%	2020
102	Percentage of ULBs which have framed Byelaws incorporating User fees and spot fines for littering		Common Byelaw is under vetting by Law Department User fee is collected				
104	Have efforts taken to increase public awareness (Attach details)	Yes					
105	Percentage of ULBs having Citizen Grievance redressal mechanism	100%					
106	Percentage of ULBs uploading Month wise details of SWM targets on MIS	0%			100%	100%	
	For item no, 2, 5,10, 22, 30, 62, 63,64,98,99,104: Detailed Information to be uploaded						

4.4 Gap Analysis and Action Points of Solid Waste Management (As per Hon'ble NGT order dated 12/09/2019 in OA No. 606/2018) in ULBs

- i. Quantity of Waste generated / collected /treated: 3452 * / 833 / 663 # TPD { *waste generated 400 g /person per day; # This includes treatment in the centralised system. Decentralised units are reported at household level. Details of centralised and decentralised facilities are enclosed as Annexure.1. }
- ii. Quantity of Waste processed in Composting Sites/ Bio-methanation/ waste to energy plants/ Landfill: 663 TPD
- iii. Existing capacity of Waste Processing/ Disposal Facilities: 663 TPD
- iv. Planned capacity of Waste Processing/ Disposal Facilities: 1800 TPD
- v. Timeframe for installation of planned capacity of Waste Processing/ Disposal Facilities:24 months
- vi. Percentage of Urban Local Bodies (ULBs)/ Village Panchayats (VPs) Covered and timeframe for covering all the ULBs/VPs: 78% , .24 months
- vii. Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation: 40 nos.

4.5. Issue of directions/notice

Notice has been issued to seven Corporation/Municipalities/panchayaths for non compliance of SWM Rules. Direction has been issued to Thrissur Corporation.

As per order in 585/2018 of the Hon'ble NGT, notice issued to Urban Directorate and Panchayat Directorate regarding 54 localbodies in Idukki district. A meeting was conducted through video confrerencing with the Urban and Panchaayth Directorate and to District Medical Officer. Action is being taken to implement the decisions taken in the meeting.

Notice was also issued to Southern Railway, Thiruvananthapuram and Palakkad divisions. Reply from Southern Railway has been received on 8-10-2019 and they have also submitted the details namely item name, code, quantity and registered recycler and the same is under scrutiny. The major findings in the reply are as follows:

- 1) In Thiruvananthapuram division, segregation of solid waste is done. Aerobin is provided for biodegradable wastes and non-biodegradable waste are cleared of dust, shredded and disposed through Clean Kerala Company.
- 2) Two bottle crusher units are installed in Thiruvananthapuram for the scientific way of treatment of plastic bottles generated from coaches and stations
- 3) Construction of waste water recycling plant at Thiruvananthapuram. Kochuveli, Nagercoil and Ernakulam is under final stage.
- 4) Effluent treatment plant is under construction at Irumpanam, Ernakulam.
- 5) A pilot project for the waste disposal at both Poojappura Railway station and one way station-VAK is under progress.

4.6. Other initiatives

4.6.1 Proposed Kerala Waste Management Authority

The Government of Kerala has amended the Panchayath Raj Act to take over the powers of local bodies in waste disposal and is working on the proposal to set up Kerala Waste Management

Authority in the State especially for the setting up of modern solid waste treatment plants, rendering plant, slaughter house, sanitary landfills, and common biomedical waste treatment facilities. This Authority shall take care of the wastes that are not presently handled by the local bodies and the Kerala Water Authority (KWA). Real-time monitoring of water quality of water bodies shall be made available to the authority. The proposal is now under the Law Department for vetting.

4.6.2 Project Green Grass in Forest Area

Following the NGT Order in OA No. 585/2018, 126 waste dumping sites in forest areas were mapped in the State (Project "Green Grass"). Rs. 51 lakh was the project outlay and waste from Thalekkod to Valara in NH 85 passing through Munnar was successfully removed by DFO with the help of Ex-service men Trust. Following this, Chief Wildlife Warden has initiated action for bringing all 11 WL Division, 17 WL Sanctuaries, 5 National Parks under the project.

Tourism department has implemented the following three projects

No.	Project	Amount in Rs.	Remarks
1.	Nilakurinji Waste Management	89,66,600	Waste disposal-35km road from Adimali to Munnar
2.	Save Road-Save Tourism	48,41,760	Waste removal twice
3.	Solid waste management in Idukki district	70,20,000	Waste removal twice in a week from eight destinations

4.6.3 Removal of garbage on road sides

Public Works Department is in the process of mapping the garbage dumped on the sides of all PWD roads. The garbage will be kept in the material recovery centers till its proper disposal.

4.6.4 Removal of waste has been declared as a priority activity of all departments; by earmarking 5% of the departmental budget for waste reduction, collection and treatment. Power Department is mapping waste in hydal tourism sites and dams; Irrigation department is mapping wastes in dam sites; Devaswom Department is mapping waste disposal from pilgrim centers and Health department from hospitals.

5. Status of implementation of Plastic Waste Management Rules, 2016

5.1 Gap Analysis and Action Points of Plastic Waste Management (As per Hon'ble NGT order dated 12/09/2019 in OA No. 606/2018)

1. Quantity of plastic waste generated: 1,33,316 TPA
2. Coverage of ULBs/VPs: Material collection facility is all ULBs
3. Channelization through various routes including recycling, road making co –processing: Detailed in Sl. No. 5 in the table detailed below.
4. Thrust areas which require attention is EPR framework and Processing of Plastic waste through alternate routes available: Plastic bottles, mineral water bottles, plastic cover, plastic carry bags, plastic packaging in FMCG products, mattresses. Detailed in sl. No. 3 in the table below.

5.2 Information on plastic waste management

Sl. No.	Item	Status									
1	What is the quantity of plastic waste generated (Annual Report form VI pt.2,6) (TPD)	1,33,316 TPA (As per the annual report vide letter No. PCB/HO/PLA/AR/4/2019 dated 23-07-2019)									
2	Percentage of ULBs which have set-up of plastic waste management system as per Rule 6(2)? (including collection, segregation, channelization & processing of plastic waste)	Material collection facility in all ULBs Resource recovery facility in all ULBs as follows: Corporation-6/6 Municipality-45/87 Total =51/93 =54.83%									
3	Percentage of Grama Panchayat which have set-up of plastic waste management system as per Rule 7?	453 in a total of 941 Grama panchayaths									
4	Has the system for plastic waste management with assistance of producers been set-up? Rule (6(3))?	<table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Item</th> <th>Action done</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Plastic bottles</td> <td>Reverse Vending machine functioning at Reliance outlet, Edappazhinji. Direction will be given to other supermarkets and malls to provide such reverse vending machine.</td> </tr> <tr> <td>2.</td> <td>Beverage bottles</td> <td>Direction to pay Rs. 5/- per bottle and to take back through their own distribution channel was issued to Kerala State Beverages Limited. Kerala State Civil Supplies Corporation and Kerala State Co-operative Consumers Federation Limited on 14-8-2019 and 24-9-2019 and reply is being scrutinized.</td> </tr> </tbody> </table>	Sl. No.	Item	Action done	1.	Plastic bottles	Reverse Vending machine functioning at Reliance outlet, Edappazhinji. Direction will be given to other supermarkets and malls to provide such reverse vending machine.	2.	Beverage bottles	Direction to pay Rs. 5/- per bottle and to take back through their own distribution channel was issued to Kerala State Beverages Limited. Kerala State Civil Supplies Corporation and Kerala State Co-operative Consumers Federation Limited on 14-8-2019 and 24-9-2019 and reply is being scrutinized.
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		3.	Plastic carry bag	Proposal to buy back used plastic carry bags at a price of Rs. 0.80/bag , either priced or gratis by all shops and establishments handing out plastic carry bags submitted to Urban and Panchayath directorate on 27-8-2019 and the matter is being followed up.
		4.	Milk cover	Meetings were held with MILMA, KERA, Kerala Beverages Limited. MILMA and Kerala Beverages Limited engaged Clean Kerala Company Limited, Government company to prepare action plan.
		5.	Mineral water bottles	Meetings held with the associations of Mineral water bottles and proposed to introduce Bottle return scheme by increasing Rs. 1 for packaged drinking water bottle as "Bottle return scheme". And also to get feedback from Vyapari Vyavasaya Ekopana Samithi.
		5.	FMCG products	Direction issued on 11-10-2019 to brand owners who have obtained EPR authorization from Central Pollution Control Board to submit the address and name of the distributors in Kerala State and also informed the proposal of the board to register all brand owners who see within the State and collect registration fee at the rate of Rs. 10/kg of packaging introduced into market and the registration fee need to compensate local bodies on submission of their annual report under Solid waste Management rules, 2016. The payment of registration fee shall be taken as discharge of EPR of brand owners and inform their distributors details, as their action plan for taking back was not obtained in the State.
		6.	Mattress	As per the meeting conducted with Indian Sleep Producer Federation(ISPF), it has been decided <ul style="list-style-type: none"> • to have a collection point by dealers/retailers in each district irrespective of brand of mattresses • All manufacturers shall arrange for take back of old mattresses irrespective of brand , through retail outlets that sell their branded mattresses • Brand owners and manufacturers are urged to introduce buy back prices for old mattresses against sale of new mattresses
		7.	Unused medicines in houses	Initiated by Chemists and Druggist Association and Drugs Controller (PROUD programme) in Thiruvananthapuram Corporation. Around 200 bins were provided in front of medical shops in Thiruvananthapuram Corporation. The first load of collected waste of 5T has been flagged off from Thiruvananthapuram to biomedical waste treatment facility on 1-10-2019. This was done with the funding of Chemists and Druggists Association.

				<p>Action is being taken to have this collection programme in other parts of the State.</p> <p>Action is taken to get fund from manufacturers, producers and brand owners as per EPR.</p>
		8.	End of life vehicle	As per the meeting 24-05-2019, it has been decided to take steps to control the unauthorized dismantling centers; to arrange meeting with KINFRA, SIDCO, KSIDC for setting up dismantling units and to have own authorized dismantling centers for KSRTC.
5	Status of Utilization of plastic waste (Annual Report form VI pt.4)			
a	In Recycling	<ul style="list-style-type: none"> Clean Kerala Company-100T by Clean Kerala Company 		
b	Road Construction	<ul style="list-style-type: none"> Clean Kerala Company collected 845.5 T of plastic waste and 583.4T (69%) has been used for road construction by Clean Kerala Company Limited. 		
c	Waste to oil	Nil		
d	Co-processing of Plastic Waste in Cement kilns	Nil		
e	RDF	Nil		
f	Footpath /Tiles	Nil		
g	Others	-		
6	Whether local bodies have framed bye-laws [Rule 6(4)]?	Common byelaw		
7	Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule 4(c)]?	Banned		
8	Has complete ban on plastic carry bags been imposed? (Annual Report format pt.3)	<ul style="list-style-type: none"> Plastic ban in and around Nilackal, Sabarimala, Pamba, Pilgrim area vide notification dated 08-11-2018. Plastic ban in Erumeli by District collector vide order No. Dated 02-11-2015. Plastic ban in tourist spots as per order no. PCB/T4/115/97 dated 14-6-2018. 		
9	Status of action taken on noncompliance of PWM Rules (Annual Report format pt.9)	<p>Fine collected for illegal sale of plastic carry bag (<50 micron) by Mannarkad Municipality –Rs. 1,05,500</p> <p>Fine collected for illegal sale of plastic carry bag (<50 micron) by Nedumagad Municipality –Rs. 85,500 from 19-2-2018 -19-8-2019 and 96.318 kg of plastic confiscated.</p>		

		Cherthala municipality imposed registration fees of Rs.4000/- (for one month) for the use of plastic carry bag (<50 micron). Thrissur Corporation, Attingal and Manjeri municipality constituted squad for checking the sale of plastic carry bags.
10	Status of marking &labelling on plastic carry bags & multi layered packaging.(Rule 11)	<ul style="list-style-type: none"> • Kerala State Pollution Control Board issued registration to 1,185 plastic units. • The Board inspected the plastic carry bag units and verified the thickness of carry bags. The Board also verified whether the conditions of registration were complied with.
11	No. of registered plastic manufacturing units / recycling units/ Producers / brand owners/ importers as per Rules 9 &13 of PWM Rules?	<ul style="list-style-type: none"> • Registered plastic manufacturing units-1185 • Registered plastic recycling units - 214
12	No. of unregistered plastic manufacturing or recycling units (Annual Report format pt.7)	Action has been taken to bring all units under the purview of registration.
13	Whether State Level Advisory Committee is constituted or not? [Rule 16] If yes, details of number of meetings conducted in a year and implementation of suggestions of committee in the last two years.	Yes 36 meetings were conducted by SLAC and review
14	Status of phasing out of manufacture and use of multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use of plastic in two years' time [Rule 9-3]	PVC flex has been banned in the State. Action has been initiated for its implementation.

6. Format on sewage management

6.1. Additional Details Submitted on sewage management in the Revised Format to the Central Pollution Control Board vide letter dated PCB/HO/NGT/06/2018/06/2019 dated 15/05/2020 as per Hon'ble NGT order dated 07.01.2020 in O.A 606/2018

SI.No	Issue	Remarks	
1	a	Quantity of Sewage generated in the State	1127 MLD
2	a	Quantity of Sewage treated in the State	Please see annexure
3	a	Existing Coverage of Sewerage Network	84.14 MLD
4	a	Has Sewage generation (town / City wise) been estimated for present and future population? Please provide details of the same	2021>1134MLD, 2031>1189 MLD
5	a	Has adequate treatment capacity been developed for treatment of sewage?	Please see annexure
	b	If not, then what is present percentage of sewage being treated?	90%
	c	If not, please provide the the timeframe by which all sewage generated in the State shall be treated	
6	a	Please provide details of STPs (Town/ City Wise) along with details on compliance status and treatment capacity	2770 Nos of STP (individual)
7	a	Is entire sewage generated from each town being linked with sewerage network in the state?	No
	b	If not, then what is the present current percentage of sewage being collected through the existing sewerage network?	7.50%
	c	If not, then please provide the the timeframe by which all sewage generated in the State shall be collected through sewerage network	
8	a	Have all drains carrying waste water in each town / city been identified	No
	b	Provide details on the pollution load due to these drains	Please see annexure
	c	Has in-situ treatment of wastewater being carried out in all such drains for reduction of pollution load?	No
	d	If not, then please indicate the number of drains in which in-situ treatment of waste water has commenced	Please see annexure
	e	If not, then please provide the the timeframe within which in-situ treatment of wastewater shall be carried out in all such drains for reduction of pollution load	
6	a	Have all bulk users for reuse of wastewater been identified ?	No
	b	Is all treated wastewater from the STPs being reused for different purposes?	No
	c	If not, then what is current percentage of wastewater being reused?	Please see annexure
	d	If not, then please provide the the timeframe within which all treated wastewater from STP shall be reused for different purposes	

Annexure

Total current sewage generation in the State, based on the population data is 1127 MLD. About 97% of the rural households and 99% of the urban households in Kerala have access to improved toilet facility. Kerala is open defecation free State. 84.14 MLD sewage is collected and treated through common STP's. State Pollution Control Board is ensuring sewage treatment plants to highrise residential building,

commercial buildings like hotels, malls etc while issuing consents and post monitoring is also being conducted for compliance. It is directed to reuse treated water to maximum extent and balance to soak pit/drain. Individual households in Kerala is provided with onsite sanitation facility like septic tanks, pit latrine etc. Common STP's are constructed with capacity based on the population. But the sewerage network is not fully covered. Action is being initiated to install the sewerage network from core area to cover widely.

6.2. Format on sewage management send on October 2019

Sl. No	Action Point	A	B	C=A-B	D
		Existing Status	Desired/ Projected	Gap	Timeline
1	Estimated Sewage Generation MLD	1117	1200	83	
2	Treatment Capacity (projection for 5 years to be taken into consideration)	125 962 high rise buildings are having STP	STP in all municipalities and Corporation except Thiruvananthapuram Augment sewer system in Thiruvananthapuram		
3	Status of Sewerage System (in km)	Sewerage system in Thiruvananthapuram	In all municipalities and Corporation except Thiruvananthapuram	In all other municipalities and Corporation Augment sewer system in Thiruvananthapuram	
4	No. of STPs (Details to be provided as per Annexure)	9			Annexure
5	Has bulk users identified for reuse of treated Water such as industrial clusters, Metro Rail, Indian Railways, Infrastructure Projects, Agriculture, Bus Depots and PWD(Y/N)	N			
6	Quantity of treated wastewater being used by Bulk User (in MLD)	N			
	Industrial clusters,				
	Metro Rail,				
	Indian Railways,				
	Infrastructure Projects,				
	Agriculture, Bus Depots and PWD.				
7.	No. of Water Aquatic Sources (Lakes, Pond etc.) being developed through treated waste water	N			

ANNEXURE

INVENTORIZATIION OF SEWAGE TREATMENT PLANTS LOCATED IN KERALA

Sl. No.	City/Town	STP location	STP commissioned in Year	Status (Operational/ Non-Operational/ Under construction)	STP Installed capacity	Actual utilization capacity	Technology (UASB/ASP/OP/SBR/MBR/FAB/Etc.)	Water supply	Disposal (land, River, Sea or any other)	Consent status
1	Thiruvananthapuram	Common Sewage Treatment Plant, Muttathara, Trivandrum (105MLD) Maintained by Kerala Water Authority	2015	Operational	107 MLD	44 MLD	ASP	Thiruvananthapuram	Land	Consented
2	Pathanamthitta	Sewage Treatment Plan at Sannidhanam (5MLD) Maintained by Travancore Devaswam Board		Seasonly Operated during festival season	5 MLD	3.5 MLD	VASB/SBR	Kunnar Dam	River	Consented

		Sewage Treatment Plan at Pamba (3.5 MLD) Maintained by Travancore Devaswam Board		Seasonly Operated during festival season	3.5 MLD	3.5 MLD	Congulation & Setting	Kochu Pamba	River	Validity expired
3	Kottayam	STP for Houseboat (0.09 MLD) at Kumarakom Maintained by District Tourism Promotion Council, Kottayam		Operational	90 KLD	90 KLD	ASP (Activated sludge process)	From House Boat	Irrigation	Consent valid up to 30/06/2018
4	Ernakulam	Sewage treatment unit, Kerala Water Authority, Elamkulam, Ernakulam(3 MLD)	1988	Operational	4.5MLD	3 MLD	ASP (Activated sludge process)	Corporation water	River	Consent valid up to 30/06/2018
		STP owned by Greater Cochin Development Authority, Kadavanthra, Kochi (0.45 MLD)	2014	Operational	0.45 MLD	0.45 MLD	ASP (Activated sludge process)	Corporation water	River	Consent 19/07/2019
		Septage Treatment Plant at Brahmapuram	2016	Operational	100m ³ /D	100m ³	MBR	Corporation water	Land	Issued consent to establish consent to

		(0.1 MLD) Kochi Corporation, Ernakulam								operate under process
		Sewage Treatment Plant, DO - 1, Aluva Municipality								
5	Kannur	Sewage treatment Plant at Taliparambu (0.5MLD) Taliparambu Municipality, Kannur	2012	Operational	0.5MLD	0.5MLD	ASP with MBBR	Waste water from Thaliparambu municipal area	Storm water drain leading to Kuppam river	applied for consent to operate - under processing
6	Thrissur	Sewage treatment Plant at Guruvayur in Thrissur District		Not yet commissioned	3 MLD	3 MLD	ASP	Guruvayur Municipal area		applied for consent to operate - under processing

6.3. Status of Sewage treatment plants under AMRUTH Scheme

It is noted that under the Amruth Project, 112 projects including 24 main projects at a cost of Rs. 159.81 Crore are included. Of which they have completed 38 works for an amount of Rs. 25 crore.

a) In Kollam Corporation, five projects including three projects at a total cost of Rs. 87.74 Crore. Technical Sanction has been issued for an amount of Rs. 39.67 Crore and it is in the stage of tendering.

b) In Alappuzha municipality, four projects are at a cost of 10.09 Crore. Of which technical sanction issued to two projects at a cost of Rs. 3.05 Crore and it is in the tendering stage.

c) In the case of Kochi Corporation, there are four projects at a cost of Rs. 103.34 Crore. Of which, technical sanction issued to three projects at a cost of Rs 56.644 Crore and it is in tendering stage.

d) For Thrissur, there are three projects at a cost of Rs. 103.34 Crore and of which technical sanction is given for three projects at a cost of Rs. 52.92 crore and is in a tendering stage.

e) In Guruvayoor, there is one project at a cost of Rs. 4.5 Crore. Technical sanction is issued for Rs. 3.9 Crore and is in the tendering stage.

f) For Kozhikode Corporation, there are three projects at a cost of Rs. 120.81 Crore. Technical sanction was issued for three projects at a cost of Rs. 130.6 Crore. Work awarded to one project at a cost of Rs. 14.1 Crore. The actionplan for Kallayi river included in Polluted stretch includes proposal for sewage treatment plant.

g) For Kannur, there are two projects at a cost of Rs. 50.23 crore and of which technical sanction issued to one project at a cost of Rs. 2.36 crore and is in tendering stage.

6.4. Status of sewage treatment plant planned to set up under AMRUTH scheme

The details of Sewage Treatment Plant which is planned to set up in 14 districts under the AMRUTH scheme obtained from Suchitwa Mission are enclosed as Annexure 13.

7. Format on Noise pollution

Sl. No	Content	Current Status	Desirable	Gap	Time
1.	No. of stations for Ambient Noise Monitoring	Nil	Proposed 4 Nos. of Stations	Setting up of Ambient monitoring station	2019-2020
2.	No. of stations in Industrial Zone	Nil		Setting up of Ambient monitoring station	-
3.	No. of stations in commercial Zone	Nil		Setting up of Ambient monitoring station	2019-2020
4.	No. of stations in Residential Zone	Nil		Setting up of Ambient monitoring station	-
5.	No. of stations in Silence Zone	Nil		Setting up of Ambient monitoring station	2019-2020
6.	Compliance of Ambient Standards (No. of Stations) Industrial Zone Commercial Zone Residential Zone Silence Zone	Noise mapping was done and it was observed that junctions are non complying	Setting up of Ambient monitoring station	Setting up of Ambient monitoring station	2019-2020-
7.	Identification of Hot Spots	Yes in Thiruvananthapuram, noise mapping was done and it was observed that junctions are non complying	Noise mapping in other cities	Noise mapping in other cities	2020
8.	Designated Authorities defined as per Noise Rules (Y/N) Details to be provide)	Yes District Magistrate, Commissioners of Police / Superintendents of Police and Deputy Superintendents of Police (Sub Divisional Officers) were designated as per G.O No. 111/2002 the Home (F) Department			
9.	Has Methodology been prepared for granting permission for installation of Public Address System (Y/N) (Details to be provide)	Yes		Police department is granting the permission for public address system	-
10.	Has Methodology been prepared for redressal of complaint on noise pollution ? (Y/N) (Details to be provided)	Yes		<ul style="list-style-type: none"> Pollution Control Board for noise due to various activities such as operation of 	-

				<p>machinery</p> <ul style="list-style-type: none"> • District Magistrate and Police Department are the authorities for ensuring ambient noise standards with respect to public redressal system. • Support to the Police Authority is being given by the Board on request basis for the measurement of the sound level 	
11.	No. of Police Stations equipped with sound level meter	-	Sound level meter	Sound level meters	2020
12.	No. of Police Stations having officers trained as per noise Pollution Rules by SPCBs/PCs.	<ul style="list-style-type: none"> • Specification of sound level meter and the list of leading suppliers were given to the State Police department as per order dated 25-6-2019 in OA 681/2018 • Discussion done with ADGP regarding training and training will be conducted on getting the training schedule and reply awaited. 	-	Training to be given	2020
13.	Has protocol been developed for taking appropriate action against the defaulters?	-	Development of protocol by Police department	Development of protocol by Police department	2020
14.	No. of cities in which Noise Mapping has been done (if applicable) #	Study on noise has been done for Thiruvananthapuram	Noise mapping in other cities	Noise mapping in other cities	2020

8. Format on Biomedical Waste Management

Sl. No.	Query	Reply
1	Why inventory on numbers of Healthcare Facilities is still incomplete in State/UT, as required under BMW Rules, 2016?	Inventory has been updated by the Board (bedded, non-bedded and AYUSH) and the same has been submitted to CPCB on 30-9-2019.
2	What is the reason that inventory is still under process?	
3	As observed that non-bedded HCFs have not applied for authorization, why such HCFs are allowed to operate without authorization under BMW Rules, 2016?	<p>Concerned departments were addressed to ensure that HCF under their jurisdiction is complying with the BMW Rules. Applying for authorization.</p> <p>As per order in 585/2018 of the Hon'ble NGT, directions issued to three defaulting hospitals for remitting Environmental compensation. Direction issued DMO, Health regarding other 64 HCIs in Idukki district. Out of the three, Rajakkad Medical Centre, Rajakkad remitted the EC. Notice issued to the DMO, Idukki to show cause why not to levy the EC from the individual units. Even though DMO instructed the units to remit the EC none of them remitted. Hearing conducted through VC with the DMO and instructed to submit the status report. Meanwhile KSPCB addressed CPCB to reconsider the formula for EC calculation for small hCIs and clinics as it is not proportional with the damage caused by such units. Waiting for the reply from CPCB</p> <p>Meeting with officials of Urban and Panchayath Directorate and DMO was conducted in May 2020. It was decided that DMO is to report the status on obtaining of authorization as well as whether undertaking executed with IMAGE and by the Directorate of Urban and Panchayath on the status of implementation on solid waste management. Action is being taken to implement the decisions taken in the meeting.</p>
4	How many applications are still under process with State Boards for grant of authorization?	The application for authorization of HCFs in Munnar, Idukki district were kept pending for want of remittance of EC. But now it was decided by the Board to dispose such applications if they are complying with the BMW rule at present, after conducting inspections. The action is progressing. No other applications are pending.

5	In case of no Common Biomedical Waste Treatment Facility in Arunachal Pradesh, Andaman & Nicobar, Goa, Lakshadweep, Mizoram and Nagaland & Sikkim State/UT how generated biomedical waste is being treated and disposed.	NA
6	Why still there is no proposal submitted by Arunachal Pradesh, Andaman & Nicobar, Goa, Lakshadweep, Mizoram and Nagaland & Sikkim State/UP for setting up CBWTF?	NA
7	Why Barcode system is not implemented in Andaman Nicobar, Arunachal Pradesh, Assam, J & K, Lakshadweep, Mizoram, Orissa, Puducherry, Sikkim, Uttar Pradesh, West Bengal, Chandigarh, Delhi, Jharkhand, Madhya Pradesh, Maharashtra, Rajasthan and Tamil Nadu so far even when the deadline is over as per BMWM Rules, 2016?	NA
8	Whether State/UT has constituted State Advisory Committee so as to review the implementation status?	Yes
9	What steps have been taken by Advisory Committee so as ensure implementation of BMWM Rules, 2016?	<p>The first meeting of the Advisory committee was conducted on 3-9-2019. Steps taken are as follows:</p> <ul style="list-style-type: none"> • State Finance department allowed for earmarking funds not more than 5% from the Annual plan amount allotted to the Health department for utilizing or the activities of solid and liquid waste management in hospitals. • To take action for the gap identified in 127 hospitals for conducting verification, present stage of working, adequacy, need for augmentation of existing facilities, filling up of gap in biomedical, general waste and sewage management in those hospitals in the first phase and for primary level health care institutions in the second phase. • To ensure proper segregation, collection, transportation and on site storage facility of biomedical wastes. • For establishing sewage treatment facility in hospitals and to follow MBR technology • For establishing modern biogas plant (like BARC model) in hospitals for treatment of food

		<p>and vegetable waste; source segregation of general wastes other than biomedical wastes; establishing MCF and RRF</p> <ul style="list-style-type: none"> • For giving proper IEC activities for reduction of waste • To promote common treatment and disposal facility in Medical colleges where there is sufficient land available for catering the need of the hospital and other small hospitals in the district • Monitoring by District Level Monitoring committee chaired by District Collectors
10	How many HCFs other than hospitals, nursing homes etc. such as veterinary hospitals, animal houses, and AYUSH hospitals have been monitored?	257 veterinary institutions, two animal houses and 256 AYUSH units have been identified. Notice was issued to the concerned departments for bringing all such HCFs under authorization. The status is being updated through the annual reports being collected from the HCFs and from the District offices
11	What is the frequency for conducting training or capacity building programmes for State Board officials and for staff of HCFs?	<p>Board in association with National Safety Council is conducting training to the staff of HCF and CBMWTF once in a year.</p> <p>The CBMWTF, (IMAGE) conducts training to</p> <ul style="list-style-type: none"> • newly affiliated HCF; • newly appointed staff if any on need basis; • Whenever notices improper segregation/handling of BMW, in any HCF; • CBMWTF conducts routine training also with not less than twice a year.
12	What is the status of installation of Continuous Online Emission Monitoring System with CBWTF and why it has not been implemented by all CBWTFs? What follow-up action has been taken by State Boards?	<p>Online emission monitoring system installed in CBMTWT and is connected to Board's server.</p> <p>The parameters namely CO, CO₂ and primary and secondary temperatures are continuously monitored and the other parameters namely PM, HCl, NO_x and VOC are monitored by CBMTW on monthly basis.</p>
13	How OCEMS data received by state Boards is being validated?	The values of CO, CO ₂ , and primary and secondary temperature are connected to Board's server and exceedances if any are noticed.

14	<p>What is the status of compliance to BMWM Rules, 2016 by CBWFFs? What action has been taken against defaulting facilities?</p>	<p>Common Biomedical waste treatment facility is in operation in Palakkad.</p> <p>For another CBWTF at Ambalamedu by IMA, the Kochi Corporation has been instructed to earmark the area of five acre for the project. The District Collector issued order on 06.02.20 to hand over 3 acre of land at Brahmapuram. The surveying work is progressing by the Taluk Surveyors.</p> <p>Work for CBWTF in Ambalamedu by Kerala Enviro Infrastructure Limited will commence soon.</p>
15	<p>What is the frequency of monitoring of Healthcare Facilities for verification of compliance to BMWM Rules?</p>	<p>Health care institutions having more than 100KL generation of effluent falls under Red category and for such category, time frame fixed for inspection and collection of sample is once in a month.</p> <p>The other HCIs fall under orange category For such units, frequency of inspection is once in three for large scale, once in six months for medium and once in a year for small scale.</p>

9. Format for compliance of Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016

Sl. No.	Direction of Hon'ble Tribunal in O.A. No. 804/2017	Action Plan along with time line for implementation of orders of Hon'ble Tribunal	Current status of implementation	Gaps identified for implementing the direction of Hon'ble Tribunal	Details of state level committee constituted for the purpose of compliance of HOWM Rules, 2016				
1.	Vide orders dated 12.04.2019 Hon'ble NGT directed that "Having regard to the sensitiveness of the issue and impact of noncompliance on environment and public health, the above recommendations need to be fully implemented and monitored by the Chief Secretaries at State Level."	<table border="1"> <tr> <td>Directions given on 4-7-2019 and 16-8-2019</td> <td>Organizations to which directions given</td> </tr> <tr> <td> <p>To fully implement the following provision as stipulated under Rule 5(1), 5(2), 5(3) and Schedule VII pertaining to</p> <ul style="list-style-type: none"> • Allocation/earmarking of industrial space • Recognition/registration/ health safety etc of workers involved in recycling/pre-processing. • Other utilization activities of hazardous waste, • Submission of integrate plan, identification and notifications of sites for common TSDF • Publication of periodic inventory of disposal sites </td> <td> <p>Director, Department of industries & Commerce</p> <p>Additional Chief Secretary, Department of Labour Skills</p> <p>Labour Commissioner, Government of Kerala,</p> <p>Managing Director, Kerala State Industrial Development Corporation LTD</p> <p>Director, KINFRA, Thiruvananthapuram</p> </td> </tr> </table>	Directions given on 4-7-2019 and 16-8-2019	Organizations to which directions given	<p>To fully implement the following provision as stipulated under Rule 5(1), 5(2), 5(3) and Schedule VII pertaining to</p> <ul style="list-style-type: none"> • Allocation/earmarking of industrial space • Recognition/registration/ health safety etc of workers involved in recycling/pre-processing. • Other utilization activities of hazardous waste, • Submission of integrate plan, identification and notifications of sites for common TSDF • Publication of periodic inventory of disposal sites 	<p>Director, Department of industries & Commerce</p> <p>Additional Chief Secretary, Department of Labour Skills</p> <p>Labour Commissioner, Government of Kerala,</p> <p>Managing Director, Kerala State Industrial Development Corporation LTD</p> <p>Director, KINFRA, Thiruvananthapuram</p>		<p>Industrial space is to be identified</p> <p>Projects for utilizing hazardous waste to be identified</p> <p>One hazardous waste treatment disposal facility in the State</p> <p>Inventory is to be updated</p>	2020
Directions given on 4-7-2019 and 16-8-2019	Organizations to which directions given								
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<ul style="list-style-type: none"> • Principal Secretary, Environment Department, Government Secretariat requested 0 22-7-2019, PCB to take necessary steps to liaison with Industries department and Labour Department and monitor the 									

		setting up and operation of the common or captive treatment storage and disposal facility in the State								
2.	Vide orders dated 26.08.2019 Hon'ble NGT directed that "All the Chief Secretaries of the States/UTs may be directed to submit biannually compliance report to CPCB by collecting information from the State Government/ Departments like Labour/ Industries/Environment and SPCBs/PCCs."	<table border="1"> <thead> <tr> <th>Date of direction</th> <th>Directions given</th> <th>Organization to which direction given</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Date of direction	Directions given	Organization to which direction given				Complied	Escrow account opened and the amount transferred to the account.
Date of direction	Directions given	Organization to which direction given								

			6-9-2019	<ul style="list-style-type: none"> Practice of returning HW consignment needs to be immediately stopped and the consignment needs to be stored within the TSDF with information to the Waste generator and PCB. TSDF shall take appropriate measures to dispose this waste at the risk and cost of the waste generator with intimation to SPCB. Provide the laboratory attached to TSDF with facilities to analyse all the hazardous waste parameters Immediately open the Escrow account as per OM of MoEF &CC including deposition of mandatory amount, disclose the details of the mandatory amount deposited in Escrow account annually to SPCB/CPCB and display those details in their website 	Director, KEIL		<p>Action has been initiated</p> <p>Action has been initiated</p>
			16-9-2019	<ul style="list-style-type: none"> Used /waste oil from ships collected by the reception facilities of various ports shall be covered under authorization purview of SPCB Regarding disposal of 	Director of Ports, PCB officials		Central Laboratory of the

			<p>illegally imported consignments, Port authorities/ICDs may also devise a policy in consultation with customs to ensure HW disposal and its cost for expediting the disposal of all unclaimed cargo lying at various ports.</p> <ul style="list-style-type: none"> • Laboratory up gradation in ports/docks for testing HW • Authorisation from SPCB to be obtained to deal with hazardous waste, manifest shall be submitted at waste reception and port operations and annual report is to be submitted 		Board at Ernakulam is being upgraded
		16-9-2019	<ul style="list-style-type: none"> • SPCB shall have atleast one laboratory where all HW parameters as required under the rules can be analysed. 	SPCB	
		18-9-2019	<p>Directions regarding illegally imported consignments, laboratory upgradation in ports/docks, verification of documents for HW, RMS system and harmonization of other category in line with HWM Rules, penal</p>	Commissioner, Central Excise and Customs, Kozhikode and Kochi	2021
					2020

				action against defaulters and in obtaining authorisation		2020
			17-10-2019	Take action to include HWM Rules with special reference to assessment, inventorisation, hazardous waste treatment process, remediation and restoration of hazardous waste contaminated sites in MTech Environmental Engineering course	Registrar Cochin University of Science and Technology, Registrar APJ Abdul Kalam Technological University	
			17-10-2019	Provide hazardous waste incinerator at TSDF	Kerala Enviro Infrastructure Limited	
			17-10-2019	National Productivity Council	Discussion was carried out by Chairman with NPC, Chennai officials regarding the material balance .Study and waste generation factor of hazardous waste units further action is being taken.	

3.	<p>Vide orders dated 26.08.2019 Hon'ble NGT directed that "The committee recommends Hon'ble Tribunal to direct Chief Secretaries of States to ensure effective and urgent implementation of the provisions of the rules as stipulated under Rule 5(2) of HOWM Rules, 2016 by Department of Labour."</p>	<table border="1"> <thead> <tr> <th>Directions given on 4-7-2019</th> <th>Organizations to which directions given</th> </tr> </thead> <tbody> <tr> <td> <p>To fully implement the following provision as stipulated under Rule 5(1), 5(2), 5(3) and Schedule VII pertaining to</p> <ul style="list-style-type: none"> • Allocation/earmarking of industrial space • Recognition/registration/health safety etc of workers involved in recycling/pre-processing. Other utilization activities of hazardous waste, • Submission of integrate plan, identification and notifications of sites for common TSDF • Publication of periodic inventory of disposal sites </td> <td> <p>Director, Department of industries & Commerce</p> <p>Additional Chief Secretary, Department of Labour Skills</p> <p>Labour Commissioner, Government of Kerala,</p> <p>Managing Director, Kerala State Industrial Development Corporation LTD</p> <p>Director, KINFRA, Thiruvananthapuram</p> </td> </tr> </tbody> </table>	Directions given on 4-7-2019	Organizations to which directions given	<p>To fully implement the following provision as stipulated under Rule 5(1), 5(2), 5(3) and Schedule VII pertaining to</p> <ul style="list-style-type: none"> • Allocation/earmarking of industrial space • Recognition/registration/health safety etc of workers involved in recycling/pre-processing. Other utilization activities of hazardous waste, • Submission of integrate plan, identification and notifications of sites for common TSDF • Publication of periodic inventory of disposal sites 	<p>Director, Department of industries & Commerce</p> <p>Additional Chief Secretary, Department of Labour Skills</p> <p>Labour Commissioner, Government of Kerala,</p> <p>Managing Director, Kerala State Industrial Development Corporation LTD</p> <p>Director, KINFRA, Thiruvananthapuram</p>	<p>Industrial space is to be identified</p> <p>Projects for utilizing hazardous waste to be identified</p> <p>One hazardous waste treatment disposal facility in the State</p> <p>Inventory is to be updated</p>	
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10. Status of implementation of E- Waste Management

FORMAT FOR IMPLEMENTATION OF E- WASTE MANAGEMENT

Sl. No.	Challenge/ Activities	Stakeholder responsible for implementation	Action	Current Status	Desirable level of compliance in terms of statuses	Gap between current status & desired timelines	Proposal for attending the gap with timelines	Name, designation, contact number of designated officer for Compliance to the provisions under statute
a.	Checking of informal trading dismantling and recycling	SPCBs/PCCs / District Administration	SPCBs/PCCs/ in coordination with District Administration has to carry out quarterly drive for checking of this activity	The DLMC was constituted as per OA 606/2018, has been entrusted to overlook the matter on E-waste Rule implementation.	From the informal sector, 19 T of e-waste disposed to registered recyclers.	E-waste from informal sector is to be disposed through registered recyclers	2020	Smt. Premalatha Environmental Engineer 9447975725
				No authorized dismantling and recycling facility in the State	Authorized dismantling and recycling facility are to be provided in the State	Authorized dismantling and recycling facility are to be provided in the State	1) Action is being done to have dismantling unit at Kuttipuram, Malappuram by Clean Kerala Company, Government undertaking. They initiated EOI for dismantler unit installers. Preliminary land	

							<p>development work started.</p> <p>2) From the informal sector, 385 T of e-waste disposed to registered recyclers by Eco Friendly Solutions, Erattupetta, Kottayam and they have also submitted the details namely item name, code, quantity and registered recycler</p> <p>3) Industrial sites for setting up of facilities are being identified.</p>	
b.	Facilitate collection and disposal of e-waste	SPCBs/PCCs / District Administration/ CPCB	State Government to formulate mechanism for collection and for incentivizing settling up of recycling facilities	<p><u>I. Facility available for the collection and disposal of e-waste</u></p> <p>1) Clean Kerala company, Government Company is collecting E-waste.</p> <p>2) Collection centers are provided by recyclers and by brand owners.</p> <p>3) Collection of E-waste from informal sector to registered recyclers is being carried out.</p>				

				<p><u>II. Identification of land in industrial estate</u></p> <p>There are 39 industrial estate with a total area of 2420 acre of land. The Director of Commercial Industrial department reported regarding the allotment of land in the industrial estate for plastic/e-waste management.</p> <ol style="list-style-type: none"> 1) Thiuvananthapruam-Veli Industrial area - 1 acre 2) Alappuzha – Punnapra Industrial Development area- 20 cents 3) Pathanamthitta-Kummathanam- area 50 cents 4) Ernakulam-Edayar Industrial Developemtn Area-1 Acre 5) Thrissur- Paravoor Veli Industrial Development-50 cents 6) Kasargod- Aanthapuam lud development- 1 acre 				
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c.	Governance frame work for monitoring compliance	SPCBs/PCCs / District Administration/ CPCB	Monitoring to be ensured at city/ district and State levels for which nodal officers (State environmental secretary, district collector, CMD/ Commissioners) to be designated. Time Frame - Three (3) months	The DLMC was constituted as per OA 606/2018, has been entrusted to overlook the matter on E-waste Rule implementation.				
d.	Capacity building at district/State / CPCB level	SPCBs/PCCs / District Administration/ CPCB	Special workshops to educate functionaries in government/ NGOs be run over one year	MAIT conducted an awareness program on the responsible handling of E-waste among various stakeholders including schools, colleges, RWA/s, bulk consumers, informal sector, refurbishers, and in creating green e-champions in the State.				
e.	IEC plan be firmied up and executed	SPCBs/PCCs / District Administration/ CPCB	State Government to firm up IEC plan for education public at large about the system of collection, incentive structure and facilities for					

			recycling. The IEC plan to be executed over one year					
f.	Strengthen system of enforcement	SPCBs/PCCs / District Administration/ CPCB	Quarterly review of violations and enforcement actions at city/district/ state level and quarterly reports to be filed with CPCB.	Collection centers operated by various brand owners were inspected in Thiruvananthapuram district, based on the violation notices and reported to CPCB and subsequently CPCB revoked the EPR authorization issued. The matter is being followed up.				
				Brand owners/producers while applying for EPR authorization have to submit action plan. But the Urban Directorate in the State Government and State PCBs are not aware about the action plan. Hence the action plans have to be endorsed by the State Government. The EPR authorization re instated by CPCB.	Action plan by brand owners is to be endorsed by State Government and SPCB	Not submitted the action plan by producers/ brand owners	Central Pollution Control Board is to instruct the producers in this regard. Notices issued to all EPR authorizers' and from the replies received it is understood that the collection centers provided by the producers are not adequate to collect all their products from the users. The CPCB was addressed to introduce bye back/take back system with declared appreciable price to the returned goods at least by major brand owners.	

				Annual reports are not regularly submitted by the producers/ brand owners.		Not submitting the annual report by producers/ brand owners	2020	
				Inventorisation of E-waste as per the schedule in the E-waste Rule is a difficult task and the Board taken steps to outsource the inventory work. NIIST, TVM submitted proposal.			2020	
				Annual reports for the year 2018 based on the available information was submitted to CPCB.				

10.1 Other good initiatives

From the informal sector, 19 T of e-waste disposed to registered recyclers by Eco Friendly Solutions, Erattupetta, Kottayam on 9-10-2019 and 15-10-2019 to registered recyclers through PRO, RLG India who got approval from Central Pollution Control Board. They have also submitted the details namely item name, code, quantity and registered recycler to the Board.

11. Compliance of NGT order dated 16-1-2019 in OA 606/2018

In compliance with the Order dated 16/01/2019 of the Hon'ble NGT on in O.A. no. 606/2018, the State Level Monitoring Committee was constituted under the Chairmanship of Hon'ble Justice A.V. Ramakrishna Pillai, Former Judge, High Court of Kerala, and Member Secretary, Kerala State Pollution Control Board as the Member Secretary of the Committee. Other members are Additional Chief Secretary - Local Self-Government Department; Additional Chief Secretary - Health, Family Welfare Department; and the Principal Secretary - Environment Department. The Committee held 12 meetings from February 2019 to February 2020. In accordance with SLMC meeting decision, training for secretaries and officials of Corporation and Municipalities with population more than 1 lakh was conducted at Thiruvananthapuram. Training for remaining secretaries and officials of municipalities and panchayat was conducted in concerned districts in the month of January and February 2020.

The Chairman and the Member Secretary of the State Level Monitoring Committee inspected all the 14 districts in the State for streamlining the action of newly formed District Level Monitoring Committees headed by the District Collector. The sites of Tirur –Ponnani River, Malappuram, Brahmapuram dumping yard, Kalamassery dumping yard and Periyar were also inspected.

11.1 Details of SLMC, DLMC Meeting up to 08-06-2020

Subject	District	No. of Meetings
SLMC Meeting- Total meetings		12
DLMC Meeting	Thiruvananthapuram	5
	Kollam	3
	Pathanamthitta	3
	Alappuzha	6
	Kottayam	2
	Idukki	3
	Ernakulam	1
	Thrissur	1
	Palakkad	3
	Malappuram	5
	Kozhikode	1
	Wayanad	2
	Kannur	2
	Kasargod	2

12. Polluted river stretches in O.A. No. 673/2018

12.1 Status

- There are 21 polluted river stretches in Kerala. Critically Polluted (Priority 1) is the Karamana River stretch from Melekadu to Moonnattumukku. The other rivers fall in Priority
- For the river Karamana, Action Plan was approved by the NGT vide order dated 8-4-2019 in OA 673/2018. The action plan is being implemented by the concerned departments. For the remaining 20 polluted stretches, action plans were prepared and submitted to the NGT. The compliance status is regularly monitored.
- Out of the 20 polluted stretches, action plans for the 13 polluted stretches were submitted to CPCB and to Hon'ble NGT on 26-6-2019. Though for the remaining seven stretches (Pamba, Manimala, Kavvai, Kuttiyadi, Uppala, Mogral, Bhavani), BOD is within the standard of 3 mg/l as per the water quality report during 2017-18. As instructed by the Central Pollution Control Board, action plans were submitted for the remaining seven polluted stretches on 30-7-2019. As instructed by CPCB, Kerala revised action plan of five river stretches (Pamba, Manimala, Kecheri, Kdambrayar, Bharathapuzha) were submitted. Of which the action plan of Bharathapuzha was reviewed on 22.02.2020. Then the revised action plan after RRC approval of five river stretches under Priority IV were submitted to CPCB on 19.05.2020 and was approved by CPCB.
- As per the Hon'ble NGT order website exclusively for RRC was developed by KSPCB as www.ksrrc.in.
- The progress on the implementation of Karamana Action Plan by the departments was reviewed on 8-7-2019, 30-8-2019, and 24-10-2019. The Principal Secretary reviewed the status of implementation on 9-12-2019 and on 18-02-2020. The Ministry of Jal Shakti reviewed the same on 19-02-2020 through video conferencing and submitted the progress report to them. The progress was checked by NMCL, NRCD, CPCB officials on 05-03-2020 and 06-03-2020
- For the Karamana action plan, more than 50% of short term measures were implemented and the departments are also in the process of implementing long term measures. Progress of action plan for other rivers is also reviewed periodically.
- As per the NGT order in OA No. 673/2018, Board's all district offices were instructed to monitor Faecal Streptococci also in addition to Faecal coliform while monitoring the water quality of polluted stretches
- One day training was given to officers regarding the method of analysis of the same.
- As per the order dated 6-12-2019 of the Hon'ble NGT in OA 673/2018, Board all district offices were instructed to conduct a survey with all said parameters such as BOD, FC, pH,

COD, DO and other recalcitrant toxic pollutants having tendency of bio-magnification, within three months and that monitoring gaps be identified and upgraded so as to cover upstream and downstream locations of major discharges to the river.

- Board's six district offices are equipped with portable water quality monitoring analyzers to measure pH, DO etc, Action is being taken to equip rest of district officers also with such analyzers

Status report on Implementation of Action Plan as per Hon'ble NGT order in O.A. No. 673/2018 as on May 2020

SL. No.	District	River	Polluted River stretches	Priority	Quality of Water	% of compliance	STP/Treatment	Time of achievement
1.	Kasargod	Uppala	Poyya to Mulinja	V	BOD <3 FC<500	90%	Periodical checking and sampling	31.03.2020
2.		Mogral	Along Mogral	V	"	90%	"	"
3	Kannur	Kavvai	Along Kavvai	V	"	"	"	"
4		Kuppam	Thaliparamba to Velichangool	V	"	"	"	"
5		Peruvamba	Along Peruvamba	V	"	"	"	"
6.		Ramapuram	Along Ramapuram	V	"	"	"	"
7	Malappuram	Thirur	Naduvilangadi to Thalakkadathur	V	"	"	STP construction progressing. 1 STP completed	"
8.		Kadalundi	Along Hajirappally/Hajiyarpalli	V	"	"	Periodical checking and sampling	"
9	Palakkad	Bharathapuzha	Along Patambi	IV	"	"	STP proposed by Shornoor Municipality	"
10.		Bhavani	Along Elachivazhy	V	BOD <3 FC>500	80%	Community/Individual Toilets proposed	"
11	Thrissur	Kecheri	Puliyannor to Kechery	IV	BOD <3 FC< or =500	85%	STP proposed	30.06.2020
12		Karuvannur			BOD <3	"	FSTP & STP	"

SL. No.	District	River	Polluted River stretches	Priority	Quality of Water	% of compliance	STP/Treatment	Time of achievement
			Along Karuvannur	V	FC<500		proposed	
13		Puzhakkal	Olarikkara to Puzhakkal	V	"	"	100 KLD & 360 KLD STP proposed	"
14	Ernakulam	Chithrapuzha	Irumpanam to Karingachira	V	BOD <3 FC>500	30%	STP proposed	18.02.2021
15		Kadambrayar	Manckakadavu to Brahmapuram	IV	"	"	"	"
16		Periyar	Alwaye-Eloor to Kalamassery	V	"	"	"	"
17	Kozhikode	Kallayi	Thekepuram to Arakkinar	V	BOD <3 FC>500	40%	STP proposed	18.02.2021
18		Kuttiyadi	Along Kuttiyady	V	"	"	"	"
19	Pathanamthitta	Pamba	Mannar to Thakazhy	IV	BOD <3 FC>500	70%	Minimal Treatment & Disinfection proposed	31.03.2020
20	Alappuzha	Manimala	Kalloopara to Thondra	IV	BOD <3 FC>500	50%	STP proposed	18.02.2021
21	Trivandrum	Karamana	Malekkdu to Thiruvallam	I	BOD <3 FC>500	30% (Short term > 50%)	STP proposed, Sewerline	31.03.2021

12.2 Other Projects

a) National Hydrology Project

Under the National Hydrology Project, a study is planned on 5 major rivers, namely Meenachil, Periyar, Bharathapuzha, Kallai and Valapatnam.

b) Urban Regeneration and Integrated Water Transport System in Cochin

A project titled Urban Regeneration and Integrated Water Transport System in Cochin with a project outlay of Rs 1365.16 crores has been appraised by KIIFB for funding. It is intended to regenerate the urban area in and around the 5 canals in Kochi, rehabilitate the slum dwellers and make use of the commercial area near the canal along with creation of tourism destinations and navigation through the canals. In principle, approval has been given for KIIFB funding for Rs 566.51 crores for land acquisition and building compensation in 2 Phases, namely Phase 1 for Rs 340.69 crores and Phase 2 for Rs 225.82 crores. Kochi Metro Limited is the Special Purpose Vehicle for this project.

c) Akkulam Lake Rejuvenation

A project titled Akkulam Lake Rejuvenation with a project outlay of Rs 126 crores has been appraised by KIIFB for funding. In principle, sanction has been accorded for conducting bathymetric and other studies for Rs 4 crores, as the 1st step. Translational Engineering Centre at Barton Hill Engineering College is the project consultant. WAPCOS is the Special Purpose Vehicle for the project. Bathymetry study has been conducted.

13. O.A. 681/2018 on Ambient Air Quality

13.1 Online Continuous Real Time Monitoring Data Of Industries/Public Places (Status as on 17-2-2020)

13.1.1 Active

Active					
SL NO.	Site Name	City	Site Status	Exceedence	Vendor
1	Cochin Special Economic Zone Authority	Cochin	Active	Exceedence Detected	GLens
2	The Fertilisers And Chemicals Travancore Ltd (FACT) Udyogamandal Complex- Petrochemical Plants	Ernakulam	Active	No Exceedence	Yokogawa
3	Kozhikode Diesel Power Project Kerala State Electricity Board Limited	Kozhikode	Active	No Exceedence	AICPL
4	The Kerala Minerals And Metals Ltd	Kollam	Active	No Exceedence	ESA
5	Kairali Steels And Alloys Private Limited	KANJIKODE	Active	No Exceedence	STEAM
6	Hindustan Insecticides Limited	Eloor	Active	No Exceedence	GLens
7	Prodair Air Products India Pvt Ltd	Ernakulam	Active	No Exceedence	Yokogawa
8	TMS Leathers	Edayar	Active	Exceedence Detected	Global Technology
9	The Travancore Cement Ltd	Nattacom	Active	No Exceedence	Adage
10	Adani Vizhinjam Port Private Limited	Vizhinjam	Active	Exceedence Detected	

11	P P S Steels Pvt Ltd	KANJIKODE	Active	No Exceedence	GLens
12	KSPCB CALICUT PALAYAM STATION	Calicut	Active	No Exceedence	GLens
13	KSPCB TRIVANDRUM PLAMOOD STATION	Trivandrum	Active	Exceedence Detected	Ecotech
14	KSPCB ERNAKULAM VYTTILA STATION	Ernakulam	Active	No Exceedence	GLens
15	Kunnath Paper Mills Ltd	Meenkaradam	Active	No Exceedence	Chemtrols
16	Travancore Cochin Chemicals Limited	Eloor	Active	No Exceedence	Yokogawa
17	Prince Rollings Private Limited	Pattambi	Active	No Exceedence	GLens
18	Cochin Cements Ltd	Kottayam	Active	No Exceedence	SWAN
19	The Fertilisers And Chemicals Travancore Ltd (FACT) Udyogamandal Complex-Fertiliser Plants	Eloor	Active	No Exceedence	Yokogawa
20	The Fertilisers And Chemicals Travancore Ltd (FACT) Cochin Divison	Ambalamedu	Active	No Exceedence	Yokogawa
21	Malabar Cements Ltd_CHERTHALA	CHERTHALA	Active	No Exceedence	GLens

13.1.2 In active

Action has been taken to make it active.

In active					
SL NO.	Site Name	City	Site Status	Exceedence	Vendor
1	Brahmapuram Diesel Power Plant	Kakkanad	Site Inactive	No Exceedence	AxisNano
2	Rubber Park India Private Limited	Ernakulam	Site Inactive	No Exceedence	AxisNano

In active					
SL NO.	Site Name	City	Site Status	Exceedence	Vendor
3	THE CANARA PAPER MILLS PVT. LTD	CHANGANACHE RRY	Site Inactive	No Exceedence	Vasthi
4	KINFRA SMALL INDUSTRIES PARK	MAZHUVANNO OR	Site Inactive	No Exceedence	
5	NTPC Limited	NTPC	Site Inactive	No Exceedence	
6	RPC Paper Mills	Punalur	Site Inactive	No Exceedence	SWAN
7	KINFRA Textile Centre	KTCK	Site Inactive	No Exceedence	
8	Hindustan Newsprint Ltd	Kottayam	Site Inactive	No Exceedence	DNP
9	M/s Nitta Gelatin India Ltd	koraty	Site Inactive	No Exceedence	AxisNano
10	Gramox Paper and Boards Ltd	Muvattupuzha	Site Inactive	No Exceedence	AxisNano
11	Amrita Institute of Medical Sciences and Research Centre	Ernakulam	Site Inactive	No Exceedence	AxisNano
12	Southern Ispat & Energy Ltd	Palakkad	Site Inactive	No Exceedence	
13	INDIAN NAVAL ACADEMY SEWAGE TREATMENT PLANT	PAYYANUR	Site Inactive	No Exceedence	ForbesMars hal

13.1.3 Partial

Partial Connected					
SL NO.	Site Name	City	Site Status	Exceedence	Vendor
1	KSPCB ELOOR STATION	Eloor	Partial Connectivity	No Exceedence	GLens
2	GREENLAND PAPER MILLS LTD	Kollam	Partial Connectivity	No Exceedence	STEAM
3	BPCL Kochi Refinery	Kochi	Partial Connectivity	No Exceedence	Chemtrols;ESA;Y okogawa
4	Hindustan Organic Chemicals Limited	Ernakulam	Partial Connectivity	No Exceedence	GLens;Vasthi

5	Malabar Cements Ltd	Pallakad	Partial Connectivity	No Exceedence	ESA
6	Apollo Tyres Limited	Kalamassery	Partial Connectivity	Exceedence Detected	GLens;Yokogawa
7	Indian Medical Association Goes Ecofriendly	Palakkad	Partial Connectivity	No Exceedence	Vasthi
8	KSPCB ERNAKULAM MG ROAD STATION	Opp Seematti MG Road Cochin	Partial Connectivity	No Exceedence	GLens

13.2 Real time ambient air quality stations at public places

Ambient air quality data of 8 real time ambient monitoring stations in the State located at the following places:

1. Thiruvananthapuram-Plamood (Capital of Kerala)
2. Thiruvananthapuram-Kariyavattom (University of Kerala)- connected to CPCB server
3. Ernakulam- Eloor (Industrial Hub of the State)
4. Ernakulam-MG Road (Ernakulam- Central City)
5. Ernakulam- Vyttila Bus Stand (Ernakulam- Commercial Area)
6. Kozhikode Palayam Bus Stand (Kozhikode- Commercial Area)
7. Kollam,Polaythodu – connected to CPCB server
8. Kannur,Mini Civil Station – connected to CPCB server

13.3 Ambient air quality stations:

Apart from the real time ambient air quality monitoring stations, the Board monitors the ambient air quality at prominent stations under the NAMP (National Ambient Air Quality Monitoring Programme) and SAMP (State Ambient Air Quality Monitoring Programme). New SAMP station was established at Moovattupuzha in Ernakulam district.

A. Ambient air quality stations under National Ambient Air Quality Programme

Sl. No.	Location	District	
1.	COSMO Politian Hospital, Pattom	Thiruvananthapuram	NAMP
2.	SMV Govt. Model High School over bridge	Thiruvananthapuram	NAMP
3.	Filatex, Veli	Thiruvananthapuram	NAMP
4.	Kerala State Pollution Control Board, District Office, Plamood, Thiruvananthapuram	Thiruvananthapuram	NAMP
5.	Krishna Leela Tower Kadapakkada Kollam	Kollam	NAMP

Sl. No.	Location	District	
6.	Chavra KMML Guest House,Chavara, Kollam	Kollam	NAMP
7.	Kerala State Pollution Control Board District Office Pathanamthitta	Pathanamthitta	NAMP
8.	Tiruvalla	Pathanamthitta	NAMP
9.	D C Mills Pvt Ltd Pathirapilly Alappuzha	Alappuzha	NAMP
10.	Kerala State Pollution Control Board District Office Thondankualgara, Alappuzha	Alappuzha	NAMP
11.	Kerala State Pollution Control Board V-Publishers Building Kottayam	Kottayam	NAMP
12.	MRF Ltd, Vadavathoor,Kottayam	Kottayam	NAMP
13.	Ernakulum (South Over Bridge)	Ernakulum	NAMP
14.	Ernakulum MG Road	Ernakulum	NAMP
15.	Kuttipadam	Ernakulam	NAMP
16.	Vytila FCI-OEN ConnectersErnakulam	Ernakulum	NAMP
17.	Irumbanam, Thripunithara	Ernakulum	NAMP
18.	Womens Apparel Park Industrial Area Kalamassery	Ernakulum	NAMP
19.	Travancore Kochin Chemical Udyogamandal	Ernakulum	NAMP
20.	Building No.EP.III-348 Methanam, North Eloor,	Ernakulum	NAMP
21.	Poonkunnam Thrissur	Thrissur	NAMP
22.	Peringadoor, Thrissur	Thrissur	NAMP
23.	SEPR Refractories India Pvt Ltd Kanchikode West Palakkad	Palakkad	NAMP
24.	Synthite Industries Ltd, Kakkenchery, Malappuram	Malappuram	NAMP
25.	Nallalam Diesel Power Project Nallalam Kozhikode	Kozhikode	NAMP
26.	Women and Children Hospital Complex Kottaparamb Kozhikode	Kozhikode	NAMP
27.	SulthanBatheryNearGramapanchayath Office Wayanad	Wayanad	NAMP
28.	Kalpetta, wayanad	Wayanad	NAMP

B. Ambient air quality stations under State Ambient Air Quality Programme

Sl. No.	Location	District	
1.	Kannur	Kannur	SAMP
2.	Mangattuparambu	Kannur	SAMP
3.	Kasargod	Kasargod	SAMP
4.	Kanjangad	Kasargod	SAMP
5.	Thodupuzha	Idukki	SAMP

Sl. No.	Location	District	
6.	BEML , Kanjikode	Palakkad	SAMP
7.	Moovattupuzha (Data from October Onwards)	Ernakulam	SAMP

Air quality index falls within acceptable levels except some parameters occasionally exceeded in certain stations. During the lockdown period all of the parameters were well within the satisfactory range. The results are available in the Board's website and the copies sent to concerned departments. Generally, air quality in the State is generally found good as per monitoring results.

13.4 Ambient air quality data map is available in the website

<https://keralapcb.glensserver.com/public/graph.html> is the link on which the data map can be accessed.

Monthly reports of NAMP and SAMP for pollutants measured upto January 2020 were published in KSPC's website, www.keralapcb.nic.in under the head 'News'.

The data of CAAQM stations are available in website, www.keralapcb.nic.in homepage – Online Continuous Real-time monitoring data and AQI data are uploaded on daily basis in KSPCB's website, www.keralapcb.nic.in under the head, 'News'.

13.5 Water and Air quality directory

Kerala State Pollution Control Board published Water and Air Quality Directory, 2018 on 5th June 2019.

13.6 Air quality seminar

Kerala State Pollution Control Board conducted the Air quality seminar on 5th June 2019.

13.7 Electric vehicle policy

Electric vehicle policy was developed for the State. The first charging station for electric vehicle is in operation in the Secretariat.

13.8 Proposal for strengthening of the air quality stations

The proposal submitted by the Kerala State Pollution Control Board to the Central Pollution Control Board on strengthening of the air quality stations is as follows:

**13.9 Draft format for status of CAAQMS / NAMP Monitoring station under SPCB's /PCC's
-reg.**

Sl. No.	Population as per census 2011	Name of the State	Number of Towns/cities	Name of Towns/cities	Manual ambient air quality monitoring stations		Continuous ambient air quality monitoring stations		Remarks
					Existing Stations	Required Stations	Existing Stations	Required Stations	
1.	1,00,000- <5,00,000	Kerala	5	Kozhikode	Commercial /Residential-2	1- Background	1-Commercial	1- Residential	Supply Order issued for setting up CAAQMS, one each at Kollam and Thrissur. Action initiated for setting up CAAQMS at Palakkad with financial support from industries. One CAAQMS will be installed in Alapuzha during 2019-20
				Kollam	Commercial /Residential-2	1- Background	Nil	1- Residential (Proposed 2019-20)	
				Trissur	Residential-1	1- Background 1- Residential / Commercial	Nil	1- Residential (Proposed 2019-20)	
				Alappuzha	Commercial /Residential-2	1- Background	Nil	1- Residential (Proposed 2019-20)	
				Palakad	Industrial-2	1- Background 2- Residential / Commercial	Nil	1- Residential (Proposed 2019-20)	
2.	5,00,000- <10,00,000	Kerala	2	Thiruvananthapuram	Residential /Commercial-3 Industrial-1	1- Background	1- Traffic	1- Residential (proposed) 1- Commercial	Supply Order Issued for setting Up one CAAQMS at Thiruvananthapuram with 50% fund from the CPCB under project setting up of CAAQMS in million plus cities and State and Capitals CAAQMS installed at Eloor, MG Road and Vytila
				Kochi	Residential-5 Industrial-3	1- Background	1-Traffic 1Commercial 1-Industrial	1- Residential	

14. Industrially Polluted clusters (OA 1038 of 2018)

The order dated 13.12.2018 in O.A.No. 1038 of 2018 by the Hon'ble NGT is based on the CEPI score of Greater Cochin Area done in 2009. The CEPI assessment was done in 2009 by the Central Pollution Control Board (CPCB) in collaboration with IIT Delhi as part of their comprehensive environmental assessment of 88 industrial clusters in the Country.

Out of these 88 industrial clusters, 32 industrial clusters having CEPI score in between 60 and 70 were categorized as severely polluted area (SPA). Further, 43 industrial clusters in 16 states having CEPI score of 70 & above were identified as Critically Polluted Area(CPA). Greater Kochi Area (GKA) was identified in Kerala. The CEPI score for the area as reported by Central Pollution Control Board was 75.08, and the GKA subsequently termed as CPA.

During 2011, CPCB again estimated CEPI score as per the monitoring data of 2011 with same criteria pollutants as considered by IIT Delhi and the score was 57.39 and the moratorium imposed for developmental activities in the Greater Kochi Area as CPA was lifted vide office memorandum No. J- 11013/5/2010-1A II (I) dated 23.05.2011 by Ministry of Environment and Forest.

After lifting the moratorium, monitoring was conducted in the year 2013 by CPCB but not published. The CEPI score using the third party monitoring data was 45.29 in the year 2013.

While CPCB had conducted monitoring in 2018, the Board also had engaged an accredited agency as third party for the monitoring and the score obtained was 44.68 and comes under the category of OPA (Other Polluted Area) and however action plan is being prepared.

15. Order dated 4-9-2018 in OA o. 173/2018 by Sudarsa Das Vs State of West Bengal and others

Not applicable

16. Total amount collected from erring industries on the basis of "Polluter Pays Principle" "Precautionary Principle and details of utilization of funds collected

15 Industries have been fined, INR 7.25 Crores have been collected.

Direction issued to Thrissur Corporation for environmental compensation of Rs. 4.5 Crore. Notice issued to Thiruvananthapuram Corporation for giving environmental compensation of 14.59 crore. Notice was also issued to Kochi Corporation, Municipalities namely Thrippunithura, Aluva, Angamaly, and Kalamassery and Maradu panchayath for taking steps to provide biomethanation plant for the food wastes generated.

Direction issued to the three hospitals and to DMO and Urban Directorate and Panchayath in Idukki in OA 585/2018.

S No	Company	Amount Collected (INR Crore)	Utilization of fund	Remarks
a)	Binani Zinc Ltd, Ernakulum	0.5	Drinking water supply to nearby residents Edyar area in Kadungalloor Grama Panchayath	As per the order of Supreme Court Monitoring Committee
b)	FACT Ltd., Ernakulum	1.25	Kuzhikandom cleaning	Kuzhikandom
c)	FACT Ltd., Ernakulum	0.35	Drinking water supply to nearby residents(Eloor Municipality)	As per the order of Supreme Court Monitoring Committee
d)	Hindustan Insecticide Limited, Ernakulum	1.24	Kuzhikandom cleaning	Kuzhikandom
e)	Hindustan Insecticide Limited, Ernakulum	0.35	Drinking water supply to nearby residents(Eloor Municipality)	As per the order of Supreme Court Monitoring Committee
f)	Indian Rare Earths Limited	1.25	Kuzhikandom cleaning	Kuzhikandom
g)	Indian Rare Earths Limited, Ernakulum	0.35	Drinking water supply to nearby residents(Eloor Municipality)	As per the order of Supreme Court Monitoring Committee
h)	Kerala Minerals and Rutilites Limited, Kollam	1	Remediation and/or distribution to affected persons either as per the direction of Tribunal or as per the decision of State Govt.	As per NGT order dated 31-8-2017 in Application No.142,290, 453 of 2013
i)	Marthoma Granites, Thodupuzha	0.258516	Protection of environment	Environment Protection Fund
j)	Merchem Limited, Ernakulum	0.0875	Drinking water supply to nearby residents(Eloor Municipality)	As per the order of Supreme Court Monitoring Committee
k)	New Hotel/Lodging House, Idukki	0.01	Environment protection in Idukki	Environment Protection Fund
l)	Organo fertilizers Ernakulum	0.025	Board's account	Forfeiting of bank guarantee
m)	Sree Sakthi Limited, Ernakulum	0.24	Removal of plastic waste in their premises	Forfeiting of bank guarantee
n)	Vijay Construction, Ernakulam	0.02	Board's account	Forfeiting of bank guarantee

17. Primary Effluent Treatment Plant as per order dated 19-2-2019 in O.A. No.593/2017

The report for the month up to December 2019 was submitted to Central Pollution Control Board's online web portal "E-Track". As per the reports up to December, 2019, 5166 units require ETP. Of these, 129 were inspected and 5146 units have provided functional ETP. 20 units were found to be operating without ETP. 5114 units complied with the effluent standards. Closure direction was issued to one unit. For the remaining 19 units, the Board has taken action for its compliance. ,

Total no. of STP in the state is 2777 (including 2Municipal STPs), of these 2766 STPs are complying with the standards. 11 STPs are found to be non-complying.

Due to outbreak of Covid-19, the details upto the previous month could not be updated. The same will updated at the earliest.

18. Orders dated 17-9-2019 and 22-4-2020 in O.A. No. 829/2019

The Hon'ble Tribunal directed on 7-9-2019 in O. A. 829/209 that coastal and marine pollution is to be included in the District Environment Plan by District Magistrate. The CPCB was directed to submit status report. As instructed by the CPCB, The Board has vide letter No. PCB/HO/EE3/OA 829/2019/3/2020 dated 2-3-2020 and vide letter No. PCB/HO/CPCB-MRM/2019 dated 3-1-2020 submitted report to the Central Pollution Control Board, a copy of which is enclosed.

The Hon'ble Tribunal has directed all SPCBs of coastal states to give relevant information to CPCB withi one month from today failing which defaulting states will liable to pay Rs. 10 lakhs per month till compliance.

District Environment Plans were received for all districts.

19. Order dated 26-9-2019 in OA 360/2018

The Department of Environment of all States may collect such District Environment Plans of their respective states and finalize the State Environment Plan covering the specific thematic area in Para. 7 including the information as contained in Para-8 and template of model by CPCB, The action for preparation of State's Environment Plan shall be monitored by the respective Chief Secretaries of the State.

District Environmental Plan was submitted by all districts. Action is being taken to prepare State Environment Plan.

20. Order dated 10-5-2019 in OA 325/2015

All the States are directed to review the existing framework of restoration of all the water bodies by preparing an appropriate action plan. Such action plan may be submitted within three months and a report furnished to the CPCB. The Chief Secretaries of all the State in the course of undertaking monitoring exercise in pursuance of order in OA 606/2018 may also include restoration of water bodies. 1st phase report submitted. Action initiated for 2nd phase including field monitoring.

21. Utilization of consent funds - Order dated 05-11-2019 in OA 639/2018

- There are total 433 employees out of which only 94 permanent employees working in the Kerala State Pollution Control Board. An amount of 3 Crore (approx) is incurred as monthly salary and other expenses.
- Notification was issued on 26-12-2015 for appointment by Public Service Commission. On 14-11-2019 the Kerala State Pollution Control Board rules 2019 was notified. The Kerala State Pollution Control Board State/Subordinate services rules 1999 to be considered and approved by the Kerala Public Service Commission and Government and after that the Board can make permanent appointment in the Board.
- The vacancies in the entry cadre have been filled up by appointing person on contract basis. Steps are being initiated to make appointment in the cadre of Assistant Environmental Engineer, Assistant Environmental Scientist on contract/deputation basis.
- Extra manpower (20 technical assistants) has been provided through PCB for monitoring the compliance for the model city/town/villages and for other remaining local bodies (additional 47 technical assistants).
- Kerala is the first State which has taken initiative for the implementation of Anti Microbial Resistance action plan. Kerala State Pollution Control Board is funding 2 projects namely (1) study on anti microbial resistance in waste water by College of Engineering, Thiruvananthapuram (2) Surveillance of anti microbial resistance in selected surface bodies of Trivandrum District by Department of Environmental Science, University of Kerala. Total cost of these project is Rs. 23,62,000/- and the same is met from the consent fund.
- For the Annual maintenance Contract of CAAQMS and display system at 2 places.
- For the setting up of 2 continuous ambient noise monitoring stations an amount of 15,00,000/- was sanctioned from non-plan fund. For the revamping of connectivity between control room and CCTV an amount of Rs. 7,16,314/- was also sanctioned under non-plan fund.
- Based on judgment in W.P (C) No. 9155 of 2016 an amount of Rs. 35,14,026/-has been sanctioned for the implementation of the project to install a model pollution control facility in an identified plywood industry

- The Board conducted a project, "Hydrochemistry" of Vembanad backwaters with special reference to pollution problems and management measures. 10% of the project amount is sanctioned from the non-plan fund.
- The Board is utilizing consent fund for the purchase/maintenance of equipments/consumables for the proper working of laboratory. An amount of Rs. 1,14,69,874/- has been sanctioned for the purchase of equipments/consumables for the proper working of laboratory.

Annexure.1

STATUS REPORT ON SOLID WASTE MANAGEMENT AS ON May 2020 (Details submitted by localbodies)

A. Corporation

A.1. Segregation and Collection									
Name of District		Thiruvanthapuram	Kollam	Ernakulam	Thrissur	Kozhikode	Kannur		
Name of Corporation		Thiruvanthapuram (Model city)	Kollam	Kochi	Thrissur (Model city)	Kozhikode (Model city)	Kannur		
Population (2011)		958000	397000	677000	317526	609000	356000		
No of Wards		100	55	74	55	75	55		
No of Household		2,72,820	88,332	1,67,935	86,604	1,26,100	68,059		
No of Establishment		18,882	9,825	18,706	15,250	26,893	11,887		
No of Household having segregation at source		Dry	2,18,150	52,899	1,13,306	18,000	82,500	43,210	
		Wet	2,18,150	52,899	1,13,307		22,550	43,210	
No of Establishment having segregation at source		Dry	16,723	4,800	13,665	18,000	22,550	28,824	
		Wet	16,723	4,800	13,665		17,463	28,824	
D2D Collection	Households	Number	Dry	52,726	52,899	1,50,730	20,150	83,638	43,210
			Wet	NIL	NIL	150730	716	50540	28824
		Percentage	Dry	19.4	59.9	89.8	23.3	66.4	63.5
			Wet			89.8	0.9	40.1	42.4
		Collection Frequency	Dry	WEEKLY ONCE	WEEKLY ONCE	Every 3 days	Once in month	Monthly	Monthly
			Wet	NIL	NIL	Daily	once in two days	Daily	Daily
	Establishments	Number	Dry	17,382	4,800	11,175	3,000	18,632	10,613
			Wet	17,382	NIL	11,175	2,500	9,292	7,517
		Percentage	Dry	92.1	48.9	59.8	19.7	69.3	89.3
			Wet	92.1		59.8	16.4	34.6	63.3
		Collection Frequency	Dry	DAILY	WEEKLY ONCE	Daily	once in two days	Twice in a week	Fortnightly
			Wet	WEEKLY ONCE	NIL	Every 3 days	daily	Daily	Daily
No of collectors		25 SERVICE PROVIDERS	124 (HKS)	1200	145	602	44		

A.1. Segregation and Collection							
Name of District		Thiruvanthapuram	Kollam	Ernakulam	Thrissur	Kozhikode	Kannur
Name of Corporation		Thiruvanthapuram (Model city)	Kollam	Kochi	Thrissur (Model city)	Kozhikode (Model city)	Kannur
No of vehicles used		54	2	84	22	21	7
No. having source level treatment of wet waste in operation	Household	11,0341	2,206	15,466	716	13,555	23,318
	Establishment	1,850	68	315	2,500	1,423	3,120
Percentage having source level treatment of wet waste in operation	Household	40.44	2.5	9	1	10.8	34.3
	Establishment	9.8	0.69	1.7	16.4	5.3	26.2
No. disposing to centralised system	Household	NIL	NIL	150,730		Nil	Nil
	Establishment	NIL	NIL	13,665	2000	8	Nil
Percentage having disposal to centralised system	Household	NIL	0	89.7			0
	Establishment	NIL	0	73	13.1		0
No. existing	MCF	54	7	3	8	2	2
	RRF	4	1	5	3	Nil	1
No. needed	MCF	55	275	71	15	75	25
	RRF	10	2	1	35	5	5
ULBs in which sweeping is carried out twice or more in public areas				NA	NA	Yes	
User fee		Rs.7/kg for poultry waste rs.5/kg for commercial waste plan 100- collection of nonbiodegradable from households plan 200-providing kitchen bin and inoculam to households	60-750	100-300	Rs. 50 for non bio degradable. Rs 350 for biodegradable. Commerical establishment depends on the quantity of waste		Collecting
Remarks							Nil

Annexure.1

A.2. Centralised System

Name of District	Thiruvananthapuram	Kollam	Ernakulam	Thrissur	Kozhikode	Kannur
Name of Corporation	Thiruvananthapuram corporation	Kollam Corpn.	Kochi Corpn	Thrissur corpn.	Kozhikode	Kannur
Quantity of Waste generated (TPD) based on population	399	165	326	153	254	148
Quantity of Waste generated (TPD) as reported by localbodies	353.58	112.45	326	152.5 TPD	300	15
Quantity of Waste collected (TPD)		10.5	308	103.12 TPD	98	15
Quantity of Waste treated (TPD)		10.5	211	103.12 TPD	95	15
Quantity of Waste processed in Composting Sites (TPD)			211	12 TPD	75	15
Quantity of Waste processed in biometanation (TPD)	NIL	7.75	NIL	2 TPD	65	0
Quantity of Waste processed in waste to energy plants (TPD)	NIL	NIL	NIL	NIL	0	0
Quantity of Waste processed in Landfill (TPD)	NIL	NIL	97	Nil	0	0
Existing capacity of Waste Processing Facilities: (TPD)		20	250	103 TPD	100	0
Existing capacity of Waste Disposal Facilities: (TPD)		nil	100	103 TPD	100	0
Planned Capacity of Waste Processing Facilities (TPD)		16	300	48.37 TPD	100	0
Planned Capacity of Waste Disposal Facilities (TPD)		nil	300	48.37 TPD	100	0
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)		6	18	1 year	1 Year	0
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)		6	18	1 year	8 Months	0
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:		1 (Kureepuzha)	1(Kochi M.Corp)	1	1 Njeliyan Paramba	1

A.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant.

Name of District	Thiruvanthapuram	Kollam	Ernakulam	Thrissur	Kozhikode	Kannur
Name of Corporation	Thiruvanthapuram	Kollam	Kochi	Thrissur	Kozhikode	Kannur
No of units supplied:	110,091	2,206	NIL	3,499	11,360	2,299
No of units working:	97,365	1,986	NIL	3,499	11,185	2,299
No of units not working:	12,726	220	NIL	nil	175	0
Reason for failure:	Improper usage by the beneficiaries	Due to improper usage	NA	nil		0
Total quantity of Waste treated through decentralised facilities (TPD) as reported by localbodies	88.9	14.5			0	10

A.3.1 Details of Decentralised Facilities as reported by Localbodies

Name of District	Thiruvanthapuram	Kollam	Ernakulam	Thrissur	Kozhikode	Kannur
Name of Corporation	Thiruvanthapuram	Kollam	Kochi	Thrissur	Kozhikode	Kannur
pipe compost	Total no of units supplied	87000	578	NIL	2272	1892
	No of units working	50000	462	NIL	2272	1682
	No of units not working	37000	116	NIL	-	210
	Quantity of waste treated using pipe composting facilities (TPD)	43.5	1	NIL		9.5
Kitchen bin	Total no of units supplied	19000(15833+ Old Bin)	0	NIL	Nil	102
	No of units working	19000(15833+ Old Bin)	0	NIL	Nil	NA
	No of units not working	Nil	0	NIL	Nil	NA
	Quantity of waste treated using kitchen bin facilities (TPD)		0	NIL	nil	NA
Biogas plant	Total no of units supplied	3982	1591	NIL	23	50

Annexure.1

Name of District		Thiruvanthapuram	Kollam	Ernakulam	Thrissur	Kozhikode	Kannur
Name of Corporation		Thiruvanthapuram	Kollam	Kochi	Thrissur	Kozhikode	Kannur
(Household level)	No of units working	3892	1273	NIL	23		40
	No of units not working	2.39	318	NIL	-		10
	Quantity of waste treated using biogas plant (TPD)		2.5	NIL			0
Biogas plant (Community level)	Total no of units supplied	23	13	NIL	nil		1
	No of units working	18	13	NIL	nil		1
	No of units not working	5	0	NIL	nil		0
	Quantity of waste treated using biogas plant (TPD)	18.4	5.6	NIL	nil		0.25
Aerobins (Community level)	Total no of units supplied	55	13	NIL	nil		NIL
	No of units working	53	13	NIL	nil		NA
	No of units not working	2	0	NIL	nil		NA
	Quantity of waste treated using aerobins (TPD)	12	3.9	NIL	nil		NA
biocomposter, biobin, pot bin	Total no of units supplied	Bio Bin 109	720	NIL	50		NIL
	No of units working	109	720	NIL	50		NA
	No of units not working	Nil	0	NIL	-		NA
	Quantity of waste treated using these units (TPD)	15	1.5	NIL			NA
Others	Total no of units supplied	109	0	NIL	4		1
	No of units working	109	0	NIL	4		1
	No of units not working	109	0	NIL	-		0
	Quantity of waste treated using these units (TPD)		0	NIL			0.25

B. Municipalities

B.1. Municipalities in Thiruvananthapuram

B.1.1. Segregation and Collection

Name of District		Thiruvananthapuram					
Name of Municipality		Attingal (Model Town)	Neyyattinkara	Nedumangad	Varkala		
Population (2011)		37648	70850	60161	40048		
No of Wards		31	44	39	33		
No of Household		13,891	19,696	16,169	11,485		
No of Establishment		974	1,940	1,600	1,120		
No of Household having segregation at source		Dry	6,731	17,531	5,850		
		Wet	2433		0		
No of Establishment having segregation at source		Dry	974	1145	980		
		Wet	974		81		
D2D Collection	Households	Number	Dry	6731	9454	1000	5850
			Wet	2433	0		0
		Percentage	Dry	48.5	48	6.2	51
			Wet	17.6	0	0	0
		Collection Frequency	Dry	monthly	Twice in a month	15 days	1/month
			Wet	daily	Nil	nil	0
	Establishments	Number	Dry	974	355	1000	980
			Wet	974	0	nil	80
		Percentage	Dry	100	18.3	62.5	87.5
			Wet	100	0		7.2
Collection Frequency		Dry	weekly twice	Once in a week	weekly	twice in a week	

Annexure.1

B.1.1. Segregation and Collection							
Name of District				Thiruvananthapuram			
Name of Municipality				Attingal (Model Town)	Neyyattinkara	Nedumangad	Varkala
			Wet	daily	Nil		daily
	No of collectors			43	88	22	18
	No of vehicles used			15 Push cart 2 LCV	2	2	3
No. having source level treatment of wet waste in operation	Household			412	14181	15000	1280
	Establishment		6(Community Level		213	1500	31
Percentage having source level treatment of wet waste in operation	Household			10	72		100
	Establishment				11		45
No. disposing to centralised system	Household			only one centralized plant	nil	200	0
	Establishment			only one centralized plant	nil	50	0
Percentage having disposal to centralised system	Household			90	0		0
	Establishment			90	0		0
No. existing	MCF			1	1	1	3
	RRF			1	0	1	1
No. needed	MCF			nil	3	1	2
	RRF			2	1	1	0
User fee				Rs 50-150 house hold/monthly Rs 300-2000 shop/monthly		60-1600	100 - Dry waste

Annexure.1

B.1.1. Segregation and Collection				
Name of District	Thiruvananthapuram			
Name of Municipality	Attingal (Model Town)	Neyyattinkara	Nedumangad	Varkala
Remarks	User fee various depending on the quantity of waste collected	User fee collections started	User fee charged as per the type of plastic collected from establishments and house holds	Wet waste - 3/Kg (As per Kg)

B.1.2. Centralised System

Name of District	Thiruvananthapuram			
Name of Corporation /Municipality /Panchayath	Attingal (Model Town)	Neyyattinkara	Nedumangad	Varkala
Quantity of Waste generated (TPD) based on population	17	30	25	17
Quantity of Waste generated (TPD)	17 TPD	24	3	8
Quantity of Waste collected (TPD)	16 TPD	3	1.5	4.8
Quantity of Waste treated (TPD)	16 TPD	2.25	1.5	4.8
Quantity of Waste processed in Composting Sites (TPD)	15	0	1	4.3
Quantity of Waste processed in biomethanation (TPD)	1.5	1	500 Kg	4.3
Quantity of Waste processed in waste to energy plants (TPD)		0	nil	0
Quantity of Waste processed in Landfill (TPD)		0	nil	0

Name of District	Thiruvananthapuram			
Name of Corporation /Municipality /Panchayath	Attingal (Model Town)	Neyyattinkara	Nedumangad	Varkala
Existing capacity of Waste Processing Facilities: (TPD)	16	1	1.5	5
Existing capacity of Waste Disposal Facilities: (TPD)	16	0.25	1.5	0
Planned Capacity of Waste Processing Facilities (TPD)	16	0.5	1.5	3
Planned Capacity of Waste Disposal Facilities (TPD)	16	0.5	1.5	0
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)	2007	3		5
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)	commissioned months	3	6 months	0
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:	1	NIL	nil	Nil

B.1.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant.

Name of District	Thiruvananthapuram			
Name of Municipality	Attingal (Model Town)	Neyyattinkara	Nedumangad	Varkala
No of units supplied:	410 house hold level 2 kitchen bio bin 6 community level bio gas plant	110	150 Biogas, 1548 Kitchen bin	
No of units working:	410 portable bio gas plant 2 kitchen bio bin	104	150 Biogas, 1548 Kitchen bin	

Name of District	Thiruvananthapuram			
	Attingal (Model Town)	Neyyattinkara	Nedumangad	Varkala
No of units not working:	2 bio gas plant	6	nil	
Reason for failure:	not proper maintain(O&M)	Inproper Handling	All are maintainig properly	
Total quantity of Waste treated through decentralised facilities (TPD) as reported by localbodies	1.7	1.5	0.074	0

B.1.3.1 Details of Decentralised Facilities as reported by Localbodies

Name of District	Name of Municipality	Thiruvanthapuram			
		Attingal (Model Town)	Neyyattinkara	Nedumangad	Varkala
pipe compost	Total no of units supplied	NIL	-	nil	
	No of units working	-	-	nil	
	No of units not working	-	-	nil	
	Quantity of waste treated using pipe composting facilities (TPD)		-	nil	
Kitchen bin	Total no of units supplied	NIL	-	2617	
	No of units working	-	-	2617	
	No of units not working	-	-	nil	
	Quantity of waste treated using kitchen bin facilities (TPD)	-	-	3 Kg.	
Biogas plant	Total no of units supplied	412	110	200	

Name of District		Thiruvanthapuram			
		Attingal (Model Town)	Neyyattinkara	Nedumangad	Varkala
Name of Municipality					
(Household level)	No of units working	407	104	163	
	No of units not working	5	6	37	
	Quantity of waste treated using biogas plant (TPD)	0.850 TPD	0.5	5 Kg. per day	
Biogas plant (Community level)	Total no of units supplied	412	NIL	37	
	No of units working	407	NIL	10	
	No of units not working	10	NIL	27	
	Quantity of waste treated using biogas plant (TPD)	0.850 TPO	NIL	66 Kg./day	
Aerobins (Community level)	Total no of units supplied	NIL	10		
	No of units working	-	10	nil	
	No of units not working	-	-		
	Quantity of waste treated using aerobins (TPD)	-	1		
biocomposter, biobin, pot bin	Total no of units supplied	NIL	-		
	No of units working	-	-		
	No of units not working	-	-		
	Quantity of waste treated using these units (TPD)	-	-		
Others	Total no of units supplied	NIL	-		

Name of District		Thiruvanthapuram			
Name of Municipality		Attingal (Model Town)	Neyyattinkara	Nedumangad	Varkala
	No of units working	-	-		
	No of units not working	-	-		
	Quantity of waste treated using these units (TPD)	-	-		

B.2. Municipalities in Kollam

B.2.1. Segregation and Collection

Name of District		Kollam					
Name of Municipality		Karunagapally	Paravur (South)	Punalur (Model Town)	Kottarakara		
Population (2011)		47483	36798	48648	31256		
No of Wards		35	32	35	29		
No of Household		14929	15069	13062	8393		
No of Establishment		1700	2570	1232	3774		
No of Household having segregation at source		Dry	4375	15069	3265.5 kg	5589	
		Wet	0	15069	4571.7 kg	0	
No of Establishment having segregation at source		Dry	350	2570	2525 kg	834	
		Wet	45		527 kg	0	
Collectio	Households	Number	Dry	4375	15069	12954	5589
			Wet	0	Nil	Nil	0
		Percentage	Dry	29.4	100	99.2	66.6

B.2.1. Segregation and Collection							
Name of District			Kollam				
Name of Municipality			Karunagapally	Paravur (South)	Punalur (Model Town)	Kottarakara	
	Collection Frequency	Wet	0			0	
		Dry	15 days	weekly	4 days	5589	
	Establishments	Number	Wet	0	nil	Nil	0
			Dry	350	2570	1230	756
		Percentage	Wet	0	nil	Nil	0
			Dry	20.6	100	99.9	20.1
		Collection Frequency	Wet	0			0
			Dry	15days	weekly	Daily	756
	No of collectors			35	32	127	58HKS
	No of vehicles used			3	1	3	1
	No. having source level treatment of wet waste in operation		Household	375		13062	5356
			Establishment	225		1232	745
	Percentage having source level treatment of wet waste in operation		Household	25		100%	0
			Establishment	22		100%	0
No. disposing to centralised system		Household	0		Nil	0	
		Establishment	0		Nil	0	
Percentage having disposal to centralised system		Household	0		Nil	0	
		Establishment	0		Nil	0	
No. existing		MCF	1		200	2	
		RRF	1		1	1	

Annexure.1

B.2.1. Segregation and Collection					
Name of District		Kollam			
Name of Municipality		Karunagapally	Paravur (South)	Punalur (Model Town)	Kottarakara
No. needed	MCF	1		0	29
	RRF	1		0	1
User fee		Rs 50/month/household		Each house 30 Shop 100 Rs fee	
Remarks		nil			Lack of suitable land for MCF

B.2.2. Centralised System

Name of District	Kollam		Kollam	Kollam
Name of Municipality	Karunagapally	South Paravur	Punalur (Model Town)	Kottarakara
Quantity of Waste generated (TPD) based on population	20	15	20	13
Quantity of Waste generated (TPD)	13	.250 TON (250 KG)	10.5	
Quantity of Waste collected (TPD)	7	.250 TON (250 KG)	10.5	
Quantity of Waste treated (TPD)	1	.250 TON (250 KG)	10.5	
Quantity of Waste processed in Composting Sites (TPD)	0	.250 TON	500 KG	
Quantity of Waste processed in biomethanation (TPD)	0	NIL	Nil	
Quantity of Waste processed in waste to energy plants (TPD)	0	NIL	Nil	
Quantity of Waste processed in Landfill (TPD)	0	NIL	Nil	

Existing capacity of Waste Processing Facilities: (TPD)	0.5	.250 TON	15 ton	
Existing capacity of Waste Disposal Facilities: (TPD)	1.5	.250 TON	10.5 ton	
Planned Capacity of Waste Processing Facilities (TPD)	Nil	NIL	Nil	
Planned Capacity of Waste Disposal Facilities (TPD)	0		Nil	
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)	0			
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)				
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:	nil		Nil	

B.2.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant.

Name of District	Kollam			
	Karunagapally	Paravur (South)	Punalur	Kottarakara
No of units supplied:	27 Biogas	75 biogas, 300 pipe compost	1250 Biogas, 5000 Pipe Compost, 6500 Compost pit	
No of units working:	22	biogas 20	1250 Biogas, 5000 Pipe Compost, 6500 Compost pit	

Annexure.1

No of units not working:	5	biogas-55, pipe compost 300	Nil	
Reason for failure:	lack of maintenance	Smell and worms	All are maintaining properly	
Total quantity of Waste treated through decentralised facilities (TPD) as reported by localbodies	0	0.6	16.77	

B.2.3.1 Details of Decentralised Facilities as reported by Localbodies

Name of District		Kollam			
Name of Municipality		Karunagapally	Paravur (South)	Punalur (Model Town)	Kottarakara
pipe compost	Total no of units supplied		300	5000	
	No of units working		0	5000	
	No of units not working		300	Nil	
	Quantity of waste treated using pipe composting facilities (TPD)		0	10 TPD	
Kitchen bin	Total no of units supplied		0		
	No of units working		0		
	No of units not working		0		
	Quantity of waste treated using kitchen bin facilities (TPD)		0		
Biogas plant	Total no of units supplied		75	250	

Name of District		Kollam			
		Karunagapally	Paravur (South)	Punalur (Model Town)	Kottarakara
Name of Municipality					
(Household level)	No of units working		15	250	
	No of units not working		60	Nil	
	Quantity of waste treated using biogas plant (TPD)		0.22	0.5 TPD	
Biogas plant (Community level)	Total no of units supplied		0		
	No of units working		0		
	No of units not working		0		
	Quantity of waste treated using biogas plant (TPD)		0		
Aerobins (Community level)	Total no of units supplied		4 units	27	
	No of units working		4 units	27	
	No of units not working		0	Nil	
	Quantity of waste treated using aerobins (TPD)		0.38 ton	0.27 TPD	
biocomposter, biobin, pot bin	Total no of units supplied		0		
	No of units working		0		
	No of units not working		0		
	Quantity of waste treated using these units (TPD)		0		
Others	Total no of units supplied		0	6000 (compost pit)	

Name of District		Kollam			
Name of Municipality		Karunagapally	Paravur (South)	Punalur (Model Town)	Kottarakara
	No of units working		0	6000	
	No of units not working		0	Nil	
	Quantity of waste treated using these units (TPD)		0	6 TPD	

B.3. Municipalities in Pathanamthitta

B.3.1. Segregation and Collection

Name of District		Pathanamthitta					
Name of Municipality		Adoor	Pathanamthitta	Thiruvalla	Pandalam		
Population (2011)		29171	38002	52883	41604		
No of Wards		28	32	39	33		
No of Household		7911	12253	21099	12440		
No of Establishment		1860	2450	6756	1234		
No of Household having segregation at source		Dry	0	750	21099	7464	
		Wet	0	350		957	
No of Establishment having segregation at source		Dry	65	150	6756	7464	
		Wet	0	75		0	
D2D Collection	Households	Number	Dry	0	300	21099	7464
			Wet	0	0	-	0
		Percentage	Dry	0	2.5	100	60

B.3.1. Segregation and Collection								
Name of District				Pathanamthitta				
Name of Municipality				Adoor	Pathanamthitta	Thiruvalla	Pandalam	
			Wet	0	0		0	
		Collection Frequency	Dry		weekly	once in a month	2 days per Week	
			Wet		0			
	Establishments	Number	Dry	65	150	6756		
			Wet	0	150			
		Percentage	Dry	3.5	6.2	100	0	
			Wet	0	6.2	0	0	
		Collection Frequency	Dry		daily	Weekly twice		
			Wet		daily			
	No of collectors				4	16+1 (1 agency)	55	
	No of vehicles used				1	2	3	
	No. having source level treatment of wet waste in operation			Household	1250 Pipe Compost, 250 Ring Compost	500	-	
				Establishment		15	1140	
	Percentage having source level treatment of wet waste in operation			Household	0	Nil		
Establishment				65	Nil	90%		
No. disposing to centralised system			Household		0			
			Establishment		0			
Percentage having disposal to centralised system			Household	0	0			
			Establishment	65	0			

B.3.1. Segregation and Collection					
Name of District		Pathanamthitta			
Name of Municipality		Adoor	Pathanamthitta	Thiruvalla	Pandalam
No. existing	MCF	1	3	1	
	RRF	0	1		
No. needed	MCF	4	59	5	
	RRF	0	4	1	
User fee		75000/-per month	House hold- Rs-60/- Per month Establishment- Asper quantity	House hold- Rs-60/- Per month Establishment- Asper quantity	
Remarks			Establishment waste collected through a pvt agency aproved by council		

B.3.2. Centralised System

Name of District	Pathanamthitta			
Name of Municipality	Adoor	Pathanamthitta	Thiruvalla	Pandalam
Quantity of Waste generated (TPD) based on population	12	16	22	17

Quantity of Waste generated (TPD)	10.96TPD			
Quantity of Waste collected (TPD)	10.96TPD			
Quantity of Waste treated (TPD)				
Quantity of Waste processed in Composting Sites (TPD)	0.8TPD			
Quantity of Waste processed in biomethanation (TPD)				
Quantity of Waste processed in waste to energy plants (TPD)	Nil			
Quantity of Waste processed in Landfill (TPD)	Nil			
Existing capacity of Waste Processing Facilities: (TPD)	10.96TPD			
Existing capacity of Waste Disposal Facilities: (TPD)	10.96TPD			
Planned Capacity of Waste Processing Facilities (TPD)	18Months			
Planned Capacity of Waste Disposal Facilities (TPD)	18Months			
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)	18Months			

Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)	18Months			
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:				

B.3.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant.

Name of District	Pathanamthitta			
	Adoor	Pathanamthitta	Thiruvalla	Pandalam
Name of Municipality				
No of units supplied:	1210, 8 Units, 9 Nos	Ring 350, Bio Bin 150, Bio Gas 250		
No of units working:	1010, 3 Unit, 9 Nos	700		
No of units not working:	200, 5 Unit, 9 Nos	50		
Reason for failure:	Mismanagement from beneficiaries, construction not completed	lack of Proper maintenance		
Total quantity of waste treated through decentralised facilities (TPD) as reported by localbodies				

B.3.3.1 Details of Decentralised Facilities as reported by Localbodies

Name of District		Pathanamthitta			
Name of Municipality		Adoor	Pathanamthitta	Thiruvalla	Pandalam
pipe compost	Total no of units supplied	1210		4000	0
	No of units working	1010		2360	0
	No of units not working	200		1640	0
	Quantity of waste treated using pipe composting facilities (TPD)			492 TPD	0
Kitchen bin	Total no of units supplied	NIL		Nil	0
	No of units working	NIL		Nil	0
	No of units not working	NIL		Nil	0
	Quantity of waste treated using kitchen bin facilities (TPD)	NIL		Nil	0
Biogas plant (Household level)	Total no of units supplied	NIL		300	40
	No of units working	NIL		170	40
	No of units not working	NIL		130	0
	Quantity of waste treated using biogas plant (TPD)	NIL		39 ton	0
Biogas plant (Community level)	Total no of units supplied	NIL		Nil	0
	No of units working	NIL		Nil	0
	No of units not working	NIL		Nil	0
	Quantity of waste treated using biogas plant (TPD)	NIL		Nil	0
Aerobins	Total no of units supplied	Thumboor muzhi model Aerobic			0

Name of District		Pathanamthitta			
Name of Municipality		Adoor	Pathanamthitta	Thiruvalla	Pandalam
(Community level)		Compost Unit			
	No of units working	6 Bins, 3 units		Nil	0
	No of units not working	NIL		Nil	0
	Quantity of waste treated using aerobins (TPD)	NIL		Nil	0
biocomposter, biobin, pot bin	Total no of units supplied	NIL		Nil	0
	No of units working	NIL		Nil	0
	No of units not working	NIL		Nil	0
	Quantity of waste treated using these units (TPD)	NIL		Nil	0
Others	Total no of units supplied	NIL		Nil	0
	No of units working	Ring compost-250		Nil	0
	No of units not working			Nil	0
	Quantity of waste treated using these units (TPD)			Nil	0

B.4. Municipalities in Alappuzha

B.4.1. Segregation and Collection

Name of District		Alappuzha					
Name of Municipality		Alappuzha	Chengannur	Cherthala	Kayamkulam	Mavelikara	Haripad
Population (2011)		174000	23456	45827	71376	26421	15588
No of Wards		52	27	35	44	28	29
No of Household		48000	9000	14913	17145	7184	9129
No of Establishment		9800	2000	2452	2250	1412	1423
No of Household having	Dry	45231	1234	1050	9300	6345	8000

B.4.1. Segregation and Collection									
Name of District			Alappuzha						
Name of Municipality			Alappuzha	Chengannur	Cherthala	Kayamkulam	Mavelikara	Haripad	
segregation at source		Wet	45231	0		0	1240	0	
No of Establishment having segregation at source		Dry	8054	678		1000	645	80	
		Wet	8054	234	232	0	340	0	
D2D Collection	Households	Number	Dry	45000	1000	11000	5400	4487	8000
			Wet	0	0	0	0	0	Nil
		Percentage	Dry	93.8	11.12	73.76	31	62.5	87.7
			Wet	0	0	0	0	0	
		Collection Frequency	Dry	MONTHLY	ONCE A MONTH	ONCE A MONTH	ONCE A MONTH	ONCE A MONTH	Monthly
			Wet	N A	0	0	Nil	ONCE A MONTH	----
	Establishments	Number	Dry	8054	500	128	1000	0	80
			Wet	6203		0	0	142	Nil
		Percentage	Dry	82.2	25	5.22	40	0	5.7
			Wet	63.3	0	0	0	10	
		Collection Frequency	Dry	WEEKELY		DAILY	ONCE A MONTH	0	Monthly
			Wet	DAILY		0	Nil	DAILY	---
	No of collectors			76	25	35	9	6	30
	No of vehicles used			6	1	1	2	2	1
No. having source level treatment of wet waste in operation		Household	17200	0	NIL	2500	22		
		Establishment	102		NIL	90	0		
Percentage having source level treatment of wet waste in operation		Household	35		0	20	22		
		Establishment	1		0	4	0		

B.4.1. Segregation and Collection							
Name of District		Alappuzha					
Name of Municipality		Alappuzha	Chengannur	Cherthala	Kayamkulam	Mavelikara	Haripad
No. disposing to centralised system	Household	0		NIL	80	0	
	Establishment	0		NIL	0	0	
Percentage having disposal to centralised system	Household	0		0	0.4	0	
	Establishment	0		0	0	0	
No. existing	MCF	23	1	1	0	1	
	RRF	3	0	1	1	1	
No. needed	MCF	15	1	1	1	1	
	RRF	5	1	1	1	1	
User fee		House hold -Rs 40 per month (dry waste)	House hold- Rs-50/- Per month Establishment- rs 100,200,300 as per category	NIL		30	
Remarks		People bringing waste to their nearby aerobic compost unit and no user fee is charged by the ULB		Need one more mcf & rrf for proper functioning			

B.4.2. Centralised System

Name of District	Alappuzha						
	Name of Corporation /Municipality /Panchayath	Alappuzha	Chengannur	Cherthala	Kayamkulam	Mavelikara	Haripad
Quantity of Waste generated (TPD) based on population		72	10	19	30	11	13
Quantity of Waste generated (TPD)		58/51.388/40		3			1.5
Quantity of Waste collected (TPD)		35/2/00/TPD		2			1
Quantity of Waste treated (TPD)				2			1
Quantity of Waste processed in Composting Sites (TPD)				0.3			1
Quantity of Waste processed in biomethanation (TPD)							Nil
Quantity of Waste processed in waste to energy plants (TPD)							Nil
Quantity of Waste processed in Landfill (TPD)							Nil
Existing capacity of Waste Processing Facilities: (TPD)				0.52			Nil
Existing capacity of Waste Disposal Facilities: (TPD)							1.5
Planned Capacity of Waste Processing Facilities (TPD)							Nil
Planned Capacity of Waste Disposal Facilities (TPD)							0.03
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)							..
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)							5
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:				0			0

B.4.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant.

Name of District	Alappuzha					
Name of Municipality	Alappuzha	Chengannur	Cherthala	Kayamkulam	Mavelikara	Haripad
No of units supplied:	17200		1050			72
No of units working:	16400		950			72
No of units not working:	800		100			0
Reason for failure:	Noproper handling		Not properly maintained			NA

B.4.3.1. Details of Decentralised Facilities as reported by Localbodies

Name of District		Alappuzha					
Name of Municipality		Alappuzha	Chengannur	Cherthala	Kayamkulam	Mavelikara	Haripad
pipe compost	Total no of units supplied			Nil	1920	0	Nil
	No of units working			Nil		0	Nil
	No of units not working			Nil		0	NA
	Quantity of waste treated using pipe composting facilities (TPD)			Nil		0	NA
Kitchen bin	Total no of units supplied			0		0	Nil

Name of District		Alappuzha					
Name of Municipality		Alappuzha	Chengannur	Cherthala	Kayamkulam	Mavelikara	Haripad
	No of units working			0		0	NA
	No of units not working			0		0	NA
	Quantity of waste treated using kitchen bin facilities (TPD)			0		0	NA
Biogas plant (Household level)	Total no of units supplied			389	364	817	72
	No of units working			39	364	242	72
	No of units not working			350	364	575	0
	Quantity of waste treated using biogas plant (TPD)			100 KG		112 Kg	350 Kg
Biogas plant (Community level)	Total no of units supplied			0	6	0	Nil
	No of units working			0	6	0	NA
	No of units not working			0	6	0	NA
	Quantity of waste treated using biogas plant (TPD)			0	6	0	NA
Aerobins (Community level)	Total no of units supplied			26	Nil	4	Nil
	No of units working			26		4	NA
	No of units not working			0		0	NA
	Quantity of waste treated using aerobins (TPD)			2 TON/ UNIT		126 Kg	NA
biocomposter,	Total no of units supplied			1750 UNIT		0	Nil

Name of District		Alappuzha					
Name of Municipality		Alappuzha	Chengannur	Cherthala	Kayamkulam	Mavelikara	Haripad
biobin, pot bin				BIOBIN			
	No of units working			0		0	NA
	No of units not working			0		0	NA
	Quantity of waste treated using these units (TPD)			0	Nil	0	NA
Others	Total no of units supplied			Nil	Nil	0	Nil
	No of units working			Nil		0	NA
	No of units not working			Nil		0	NA
	Quantity of waste treated using these units (TPD)			Nil	Nil		NA

B.5. Municipalities in Kottayam

B.5.1. Segregation and Collection

Name of District		Kottayam							
Name of Municipality		Changanassery	Ettumanoor	Erattupetta	Kottayam	Pala	Vaikom		
Population (2011)		127987	26423	29675	136812	123000	23234		
No of Wards		37	35	28	52	26	26		
No of Household		16606	110129	7686	48273	5280	7843		
No of Establishment		3000	1807	1282	6568	1900	1782		
No of Household having segregation at source		Dry	16000	10964	23	8	4500	0	
		Wet	16000	10964	11	24	250	0	
No of Establishment having segregation at source		Dry	2800	1801	6	14		0	
		Wet	2000		2	6		0	
D2D Collection	Households	Number	Dry	404	10964	4212	8	1815	0
			Wet			1866	24	0	0
		Percentage	Dry	2.5	10	54.9	0.1	34.4	0
			Wet	0	0	24.3	0.1	0	0
		Collection Frequency	Dry	monthly	monthly	Monthly	2 TIMES IN A MONTH	Weekly	0
			Wet		0	Monthly	0	Nil	0
	Establishments	Number	Dry	Nil	1027	22	14	94	0
			Wet	Nil	0	26	6	0	0
		Percentage	Dry		56.9	1.8	0.3	5	0
			Wet		0	2.1	0.1	0	0
		Collection Frequency	Dry	Nil	Monthly	daily	0	weekly	once in month
			Wet	Nil	0	daily	3 TON PER DAY	Nil	daily
No of collectors		Haritha Karma	56	62	104	14	64		

B.5.1. Segregation and Collection							
Name of District		Kottayam					
Name of Municipality		Changanassery	Ettumanoor	Erattupetta	Kottayam	Pala	Vaikom
		Sena					
No of vehicles used			1	2	13	2	1
No. having source level treatment of wet waste in operation	Household	2600	10964	5432	48273	5162	0
	Establishment	70	118		Not started	250	0
Percentage having source level treatment of wet waste in operation	Household	18%	100%	68		5162	0
	Establishment	2.2	100%			250	0
No. disposing to centralised system	Household	1200	Nil	0	0	1815	0
	Establishment	Nil	80	0	0	94	0
Percentage having disposal to centralised system	Household	8%	0			0	0
	Establishment	0	67%			0	0
No. existing	MCF	1	1	1	1	1	1
	RRF	1	1	1	1	0	0
No. needed	MCF	28	35	7	15		0
	RRF	28	1	1	15		0
User fee		100 Rs per houses	50 for HH 150 for Establishments		61 including cess	60, 120	0
Remarks						60(for houses) 120(establishments)	0

Annexure.1

B.5.2. Centralised System

Name of District	Kottayam					
Name of Municipality	Changanassery	Ettumanoor	Erattupetta	Kottayam	Pala	Vaikom
Quantity of Waste generated (TPD) based on population	54	11	13	57	52	10
Quantity of Waste generated (TPD)	15 Tone/day	5	6 ton/day	30 ton	4.2 ton	1.5
Quantity of Waste collected (TPD)	2 tone/day	4.5	4 ton/day	6 ton	4.2 ton	1.5
Quantity of Waste treated (TPD)	2 tone/day	4.5	2.5 ton/day	3 ton/day	4.2 ton	1
Quantity of Waste processed in Composting Sites (TPD)	2 tone	0.5	2.5 ton/day	yes	4.2 ton	0
Quantity of Waste processed in biomethanation (TPD)	Nil	0	nil	0	0	0
Quantity of Waste processed in waste to energy plants (TPD)	Nil	0	nil	0	0	0
Quantity of Waste processed in Landfill (TPD)	Nil	0	nil	0	0	0
Existing capacity of Waste Processing Facilities: (TPD)	2	4.5	24 unit aerobic bin	62 unit aerobic bin\0	pipe compost	0
Existing capacity of Waste Disposal Facilities: (TPD)	2 Tone/day	4.5	10 ton/day	0	0	0
Planned Capacity of Waste Processing Facilities (TPD)	9 TPD	10	0	0	0	0
Planned Capacity of Waste Disposal Facilities (TPD)	100 tone	10	0	0	0	0
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)	3 months	1	0	0	0	0

Name of District	Kottayam					
Name of Municipality	Changanassery	Ettumanoor	Erattupetta	Kottayam	Pala	Vaikom
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)	1 years	3	0	0	0	0
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:	one	NA		0	0	0

B.5.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant.

Name of District	Kottayam					
Name of Municipality	Changanassery	Ettumanoor	Erattupetta	Kottayam	Pala	Vaikom
No of units supplied:		6580		1479	5162	125
No of units working:		6548		1479	4500	65
No of units not working:		38			662	0
Reason for failure:	8800 Ring compost 1800 Biobin unit included in 2019- 20 project and is under process	Mishandling	750 biobin included in 2019-20 project and will supply from march 2020		Not properly manage.	

B.5.3.1. Details of Decentralised Facilities as reported by Localbodies

Name of District		Kottayam					
Name of Municipality		Changanassery	Ettumanoor	Erattupetta	Kottayam	Pala	Vaikom
pipe compost	Total no of units supplied	0		Nil	429	5162	Nil
	No of units working	0		Nil	429	4500	Nil
	No of units not working			Nil		662	Nil
	Quantity of waste treated using pipe composting facilities (TPD)			Nil	700kg	6750 kg.	Nil
Kitchen bin	Total no of units supplied			Nil	Nil		Nil
	No of units working			Nil	Nil		Nil
	No of units not working			Nil	Nil		Nil
	Quantity of waste treated using kitchen bin facilities (TPD)			Nil	Nil		Nil
Biogas plant (Household level)	Total no of units supplied	0		Nil	1320	1	135
	No of units working	0		Nil	1320	1	135
	No of units not working	0		Nil		..	0
	Quantity of waste treated using biogas plant (TPD)	-		Nil	980kg	5kg.	Nil
Biogas plant (Community level)	Total no of units supplied			Nil	62	1	Nil
	No of units working			Nil	52	1	Nil
	No of units not working			Nil	10	..	Nil
	Quantity of waste treated using biogas plant (TPD)			Nil	Nil		Nil
Aerobins	Total no of units supplied	36bins		28	Nil		18

Name of District		Kottayam					
Name of Municipality		Changanassery	Ettumanoor	Erattupetta	Kottayam	Pala	Vaikom
(Community level)	No of units working	36		28	Nil		0
	No of units not working	0		0	Nil		18
	Quantity of waste treated using aerobins (TPD)	2tons		300 Kg	Nil	50kg.	0
biocomposter, biobin, pot bin	Total no of units supplied	0		Nil	Nil		0
	No of units working	0		Nil	Nil		0
	No of units not working	0		Nil	Nil		0
	Quantity of waste treated using these units (TPD)	0		Nil	Nil		0
Others	Total no of units supplied	-		Nil	Nil		Nil
	No of units working	-		Nil	Nil		Nil
	No of units not working	-		Nil	Nil		Nil
	Quantity of waste treated using these units (TPD)	-		Nil	Nil		Nil

B.6. Municipalities in Idukki

B.6.1. Segregation and Collection					
Name of District			Idukki		
Name of Municipality			Thodupuzha	Kattapana	
Population (2011)			52045	42646	
No of Wards			35	34	
No of Household			12604	10419	
No of Establishment			3108	2500	
No of Household having segregation at source		Dry	10000	7815	
		Wet	10000	7815	
No of Establishment having segregation at source		Dry	2500	2000	
		Wet	2200	820	
D2D Collection	Households	Number	Dry	10000	7815
			Wet	0	4800
		Percentage	Dry	79.4	75.1
			Wet	0	46.1
		Collection Frequency	Dry	Weekly	Monthly
			Wet	Nil	nil
	Establishments	Number	Dry	2500	2000
			Wet	80	65
		Percentage	Dry	80.5	80
			Wet	2.6	2.6
Collection Frequency		Dry	Daily	Daily	
		Wet	Daily	Daily	

B.6.1. Segregation and Collection			
Name of District		Idukki	
Name of Municipality		Thodupuzha	Kattapana
	No of collectors	81	82
	No of vehicles used	3	2
No. having source level treatment of wet waste in operation	Household	10000	7815
	Establishment	2500	2000
Percentage having source level treatment of wet waste in operation	Household	80	80
	Establishment	80	80
No. disposing to centralised system	Household	0	0
	Establishment	0	0
Percentage having disposal to centralised system	Household	0	0
	Establishment	0	0
No. existing	MCF	2	1
	RRF	1	1
No. needed	MCF	4	2
	RRF	2	0
User fee		30	20
Remarks		0	

B.6.2. Centralised System

Name of District	Idukki	Idukki
Name of Municipality	Thodupuzha Municipality	Kattappa Municipality
Quantity of Waste generated (TPD) based on population	22	18
Quantity of Waste generated (TPD)	10	4.98
Quantity of Waste collected (TPD)	5.5	3.24
Quantity of Waste treated (TPD)	5	3.24
Quantity of Waste processed in Composting Sites (TPD)	0	3
Quantity of Waste processed in bimethanation (TPD)	0	0
Quantity of Waste processed in waste to energy plants (TPD)	1	0
Quantity of Waste processed in Landfill (TPD)	3	0
Existing capacity of Waste Processing Facilities: (TPD)	5	5
Existing capacity of Waste Disposal Facilities: (TPD)	4	4
Planned Capacity of Waste Processing Facilities (TPD)	10	10
Planned Capacity of Waste Disposal Facilities (TPD)	10	10
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)	18	12

Name of District	Idukki	Idukki
Name of Municipality	Thodupuzha Municipality	Kattappa Municipality
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)	18	12
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:	0	1

B.6.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant

Name of District	Idukki	
	Thodupuzha	Kattapana
No of units supplied:	1300	1325
No of units working:	1300	1325
No of units not working:	0	0
Reason for failure:	Nil	nil

B.6.3.1. Details of Decentralised Facilities as reported by Localbodies

Name of District		Idukki	
Name of Municipality		Thodupuzha	Thodupuzha
pipe compost	Total no of units supplied	69	
	No of units working	69	
	No of units not working	Nil	
	Quantity of waste treated using pipe composting facilities (TPD)	10 k g	
Kitchen bin	Total no of units supplied	69	
	No of units working	Nil	
	No of units not working	Nil	
	Quantity of waste treated using kitchen bin facilities (TPD)	Nil	
Biogas plant (Household level)	Total no of units supplied	928	
	No of units working	928	
	No of units not working	nil	
	Quantity of waste treated using biogas plant (TPD)	500 kg	
Biogas plant (Community level)	Total no of units supplied	2	
	No of units working	2	
	No of units not working	nil	
	Quantity of waste treated using biogas plant (TPD)	1000 k g	

Name of District		Idukki	
Name of Municipality		Thodupuzha	Thodupuzha
Aerobins (Community level)	Total no of units supplied	Nil	
	No of units working	Nil	
	No of units not working	Nil	
	Quantity of waste treated using aerobins (TPD)	0	
biocomposter, biobin, pot bin	Total no of units supplied	34	
	No of units working	34	
	No of units not working	34	
	Quantity of waste treated using these units (TPD)	9 k g	
Others	Total no of units supplied	nil	
	No of units working	nil	
	No of units not working	nil	
	Quantity of waste treated using these units (TPD)	nil	

B.7. Municipalities in Ernakulam

B.7.1. Segregation and Collection										
Name of District			Ernakulam							
Name of Municipality			Aluva	Angamaly	Eloor	Koothat tukulam	Kalamassery	Kothamangalam	Muvattupuzha	
Population (2011)			24110	33465	31468	17942	71038	114574	30397	
No of Wards			26	30	31	25	42	31	28	
No of Household			5641	8421	10307	4832	27924	12000	7414	
No of Establishment			2214	2500	1015	1072	3360	2950		
No of Household having segregation at source			Dry	2400	4500	10307	5	11800	1075	1800
			Wet	1673	4500	10307	5	11800	source level management	source level management
No of Establishment having segregation at source			Dry	520	3000	925	5	1345	600	200
			Wet	150	3000	155	195	1345	800	250
D2D Collection	Households	Number	Dry	2400	0	Harithakar masena	nil	11800	450	500
			Wet	1673	0	Source level management		11800	source level management	source level management
		Percentage	Dry	42.6	0			42.3	3.8	6.8
			Wet	29.7	0		0	42.3		
		Collection Frequency	Dry	monthly	0	Monthly		weekly	MONTHLY	monthly
			Wet	daily	0	not collected		alternate days	NOT COLLECTED	not collected
	Establishments	Number	Dry	520	0	925		1345	300	200
			Wet	150	25	155		1345	240	250

B.7.1. Segregation and Collection										
Name of District				Ernakulam						
Name of Municipality				Aluva	Angamaly	Eloor	Koothat tukulam	Kalamassery	Kothamangalam	Muvattupuzha
	Percentage	Dry	23.5	0	91.2	0	40.1	10.2	#DIV/0!	
		Wet	6.8	1	15.3	0	40.1	8.2		
	Collection Frequency	Dry	weekly	0	monthly		twice in a week	MONTHLY	monthly	
		Wet	daily	daily	not collected		daily	MONTHLY	monthly	
	No of collectors					81	0	19	2	49
	No of vehicles used					2	0	4	1	auto 17,tipper lorry 4
No. having source level treatment of wet waste in operation		Household	1673	3500	598	18	nil	1800	2000	
		Establishment	80	2500	30	12	130	collected by harithakarmasena	collected by haritha karma sena	
Percentage having source level treatment of wet waste in operation		Household	80	42	85	-	0	95	90	
		Establishment	80	80	80	-	4	95	90	
No. disposing to centralised system		Household	0	NIL	Nil	-	11800	1	1	
		Establishment	0	NIL	Nil	-	1345	1	1	
Percentage having disposal to centralised system		Household	0	NA	NA	-	40	100	100	
		Establishment	0	NA	NA	-	40	100	100	
No. existing		MCF	nil	NIL	1	Nil	1	1	1	

Annexure.1

B.7.1. Segregation and Collection								
Name of District		Ernakulam						
Name of Municipality		Aluva	Angamaly	Eloor	Koothattukulam	Kalamassery	Kothamangalam	Muvattupuzha
	RRF	1	NIL	0	Nil	1	1	0
No. needed	MCF	3	5	5	6	2	11	2
	RRF	0	1	1	1	2	0	1
User fee		50	Rs.50	50 Rs.	-	Rs.100/month /house, Rs.5 /kg for wet, Rs10/kg for dry waste for hotel and others	Rs. 50/house and Rs. 80 - 100/shops	50
Remarks					-			

B.7.3. Centralised System

Name of District	Ernakulam						
Name of Corporation /Municipality /Panchayath	Aluva	Angamaly	Eloor	Koothattukulam	Kalamassery	Kothamangalam	Muvattupuzha
Quantity of Waste generated (TPD) based on population	10	14	14	8	30	48	13
Quantity of Waste generated (TPD)	10	10	10	0.6	14	5	5
Quantity of Waste collected (TPD)	8	1	2		14	5	5
Quantity of Waste treated (TPD)	8	0	2		14	5	3

Annexure.1

Quantity of Waste processed in Composting Sites (TPD)	nil	nil	1		Nil	nil	3
Quantity of Waste processed in biomethanation (TPD)	nil	nil	1		Nil	nil	Nil
Quantity of Waste processed in waste to energy plants (TPD)	nil	nil	Nil		Nil	nil	Nil
Quantity of Waste processed in Landfill (TPD)	nil	nil	Nil		Nil	nil	Nil
Existing capacity of Waste Processing Facilities: (TPD)	nil	nil	15 TPD (5 Unit)		Nil	5	3
Existing capacity of Waste Disposal Facilities: (TPD)	nil	nil	15 TPD (5 Unit)		Nil	NA	Nil
Planned Capacity of Waste Processing Facilities (TPD)	nil	nil	NA		Na	nil	Nil
Planned Capacity of Waste Disposal Facilities (TPD)	nil	nil	Na		NA	6 months	Nil
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)	na	na	Na		NA	nil	Nil
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)	na	na	Na		NA	6 months	Nil
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:	nill	na	NA		NA	NA	Yes

B.7.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant

Name of District	Ernakulam						
Name of Municipality	Aluva	Angamaly	Eloor	Koothattukulam	Kalamassery	Kothamangalam	Muvattupuzha
No of units supplied:	53		598	Nil	Nil	204	1224
No of units working:	53	3000	326	Nil	Nil	204	1000
No of units not working:	0		272	Nil	Nil	204	224
Reason for failure:	na		Flood	Not established	Nil	nil	flood

B.7.3.1. Details of Decentralised Facilities as reported by Localbodies

Name of District	Ernakulam						
Name of Municipality	Aluva	Angamaly	Eloor	Koothattukulam	Kalamassery	Kothamangalam	Muvattupuzha
pipe compost	Total no of units supplied	43				nil	1175
	No of units working	43					
	No of units not working	NIL					
	Quantity of waste treated using pipe composting facilities (TPD)						
Kitchen bin	Total no of units supplied	10				10000	24
	No of units working	10				10000	
	No of units not working	NIL				0	
	Quantity of waste treated	NIL				0	2kg/day

Annexure.1

Name of District		Ernakulam						
Name of Municipality		Aluva	Angamaly	Eloor	Koothattukulam	Kalamassery	Kothamangalam	Muvattupuzha
	using kitchen bin facilities (TPD)							
Biogas plant (Household level)	Total no of units supplied	NIL					202	15
	No of units working	NIL					202	15
	No of units not working	NIL					0	0
	Quantity of waste treated using biogas plant (TPD)	NIL					nil	
Biogas plant (Community level)	Total no of units supplied	NIL					0	
	No of units working	NIL					0	
	No of units not working	NIL					0	
	Quantity of waste treated using biogas plant (TPD)	NIL					0	
Aerobins (Community level)	Total no of units supplied	NIL					0	50
	No of units working	NIL					0	
	No of units not working	NIL					0	
	Quantity of waste treated using aerobins (TPD)	NIL					0	
biocomposter, biobin, pot bin	Total no of units supplied	NIL					0	
	No of units working	NIL					0	
	No of units not working	NIL					0	

Name of District		Ernakulam						
Name of Municipality		Aluva	Angamaly	Eloor	Koothattukulam	Kalamassery	Kothamangalam	Muvattupuzha
	Quantity of waste treated using these units (TPD)	NIL					0	
Others	Total no of units supplied	NIL					0	
	No of units working	NIL					0	
	No of units not working	NIL					0	
	Quantity of waste treated using these units (TPD)	NIL					0	

B.7. Municipalities in Ernakulam

B.7.1. Segregation and Collection										
Name of District			Ernakulam							
Name of Municipality			North Paravur	Maradu	Perumbavoor	Piravam	Thrikkakkara	Thripunithura		
Population (2011)			31503	44704	28110	27229	77319	92522		
No of Wards			29	33	27	27	43	49		
No of Household			8964	53305	10495	8905	31230	29495		
No of Establishment			2500	1475	3364	1155	958	3400		
No of Household having segregation at source			Dry	6089		10388	8905	31230	25690	
			Wet	source level management		3364	NIL	31230	26730	
No of Establishment having segregation at source			Dry	1975		5860	1155	68	2920	
			Wet	200		0	0	0	2860	
Co	Households	Number	Dry	6089	6500	0	3621	31230	25690	

B.7.1. Segregation and Collection									
Name of District				Ernakulam					
Name of Municipality				North Paravur	Maradu	Perumbavoor	Piravam	Thrikkakkara	Thripunithura
			Wet	source level management	source level management	0	0	31230	26730
		Percentage	Dry	68	12.2	0	40.7	100	87.1
			Wet			0	0	100	90.7
		Collection Frequency	Dry	monthly	monthly	Twicw in a month	monthly	daily	Daily
	Wet		not collected	not collected	0	0	daily	Daily	
	Establishments	Number	Dry	1975	100	0	545	680	2920
			Wet	200	200	0	0	278	2860
		Percentage	Dry	79	6.8	0	47.2	71	85.9
			Wet	8	13.6	0	0	29.1	84.2
		Collection Frequency	Dry	monthly	monthly	0	daily	daily	Daily
Wet			not collected	not collected	0	0	daily	Daily	
No of collectors						185	66	12	64
No of vehicles used						5	0	1	2
No. having source level treatment of wet waste in operation			Household	1800	20	1671	8905	31	26730
			Establishment	collected by the municipality	not collected	96	32	0	2860
Percentage having source level treatment of wet waste in operation			Household	100	70	0	100%	0.50%	40%
			Establishment	100	80	0	100%	0	65%
No. disposing to centralised system			Household	29	1		3621	0	450
			Establishment	1	1		545	0	Nil
Percentage having disposal to centralised			Household	100	65		40%	nil	Nil

B.7.1. Segregation and Collection

Name of District		Ernakulam					
Name of Municipality		North Paravur	Maradu	Perumbavoor	Piravam	Thrikkakkara	Thripunithura
system	Establishment	100	70		47%	nil	Nil
No. existing	MCF	1	4	1	1	nil	1
	RRF	1	1	1	1	nil	Nil
No. needed	MCF	10	29	3	5	43	48
	RRF	3	1	1	2	1	49
User fee		50 per house	30 per house, 100 Establishment	Rs.30/- for houses and rupess 50/- for shops/month	Yes.	130 /- per house	3.50/kg
Remarks		in institution rs 100			Varies in commercial area . Rs. 50/- per month from Household		

B.7.2. Centralised System

Name of District	Ernakulam					
Name of Corporation /Municipality /Panchayath	North paravur	Maradu	Perumbavoor	Piravom	Thrikkakara	Tripunithura
Quantity of Waste generated (TPD) based on population	14	19	12	12	33	39

Name of District	Ernakulam					
Name of Corporation /Municipality /Panchayath	North paravur	Maradu	Perumbavoor	Piravom	Thrikkakara	Tripunithura
Quantity of Waste generated (TPD)	12.27	nil	10	1.54	5 TON	5 tonne
Quantity of Waste collected (TPD)	3.12	nil	3.2	0.4	4 TON	4.50 tonne
Quantity of Waste treated (TPD)	3.120/day	nil	2	0.4	Treated at Brahmapuram Plant	Composting at Brahmapuram Plant (Ownership Kochi Corporation)
Quantity of Waste processed in Composting Sites (TPD)	3.12	nil	2	0.8	NIL	Nil
Quantity of Waste processed in biomethanation (TPD)	na	nil	0	0	NIL	Nil
Quantity of Waste processed in waste to energy plants (TPD)	na	nil	0	0.34	NIL	Nil
Quantity of Waste processed in Landfill (TPD)	na	nil	1.2	0	NIL	NA
Existing capacity of Waste Processing Facilities: (TPD)	3.41	Nil	2	1 TPD	NIL	NA
Existing capacity of Waste Disposal Facilities: (TPD)	na	Nil	2	1 TPD	NIL	NA
Planned Capacity of Waste Processing Facilities (TPD)	3.41	Nil	2	2	3 TON	NA
Planned Capacity of Waste Disposal Facilities (TPD)	3.41		2	2	NA	NA
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)	na	Nil	6	12	NA	NA
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)	na	Nil	6	12	NA	NA

Name of District	Ernakulam					
Name of Corporation /Municipality /Panchayath	North paravur	Maradu	Perumbavoor	Piravom	Thrikkakara	Tripunithura
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:	yes	Na	NA	0	NA	NA

B.7.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant

Name of District	Ernakulam					
Name of /Municipality	North Paravur	Maradu	Perumbavoor	Piravam	Thrikkakkara	Thripunithura
No of units supplied:	1800	900			31	13741
No of units working:	1500	450	Biogas plant-140, Pot compost -895, Ring compost-616	1167	31 BIOGAS	13741
No of units not working:	300	450	21	NIL	0	Nil
Reason for failure:	flood	not working	Lack of Maintenance by beneficiaries		nil	Nil

B.7.3.1. Details of Decentralised Facilities as reported by Localbodies

Name of District		Ernakulam					
Name of Municipality		North paravur	Maradu	Perumbavoor	Piravom	Thrikkakara	Tripunithura
pipe compost	Total no of units supplied	1800		1654	874	0	9410
	No of units working	50		580	821	0	7620
	No of units not working	affected flood		1074	53	0	1790
	Quantity of waste treated using pipe composting facilities (TPD)	2kg		0.174	0.6 TPD	0	0
Kitchen bin	Total no of units supplied	nil		0	0	0	26
	No of units working	nil		0	0	0	8
	No of units not working	nil		0	0	0	18
	Quantity of waste treated using kitchen bin facilities (TPD)	nil		0	0	0	0.1
Biogas plant (Household level)	Total no of units supplied	20		161	159	31	1300
	No of units working	5		161	159	31	1300
	No of units not working	affected flood and repairing stage		0	0	0	0
	Quantity of waste treated using biogas plant (TPD)	4kg		0.08	0.34 TPD	0.002	1.00 Tonne
Biogas plant (Community level)	Total no of units supplied	0		1	0	0	3
	No of units working	0		1	0	0	3
	No of units not working	0		0	0	0	0

Name of District		Ernakulam					
Name of Municipality		North paravur	Maradu	Perumbavoor	Piravom	Thrikkakara	Tripunithura
	Quantity of waste treated using biogas plant (TPD)	0		0.5	0	0	1.10 Tonne
Aerobins (Community level)	Total no of units supplied	0		2	0	0	4
	No of units working	0		2	0	0	1
	No of units not working	0		0	0	0	3
	Quantity of waste treated using aerobins (TPD)	0		1	0	0	0.13
biocomposter, biobin, pot bin	Total no of units supplied	0		898	134	0	2497
	No of units working	0		898	134	0	1210
	No of units not working	0		0	0	0	1287
	Quantity of waste treated using these units (TPD)	0		0.5	0.2 TPD	0	0.74
Others	Total no of units supplied	0		650	0	0	0
	No of units working	0		650	0	0	0
	No of units not working	0		0	0	0	0
	Quantity of waste treated using these units (TPD)	0		0.325	0	0	0

B.8. Municipalities in Thrissur

B.8.1. Segregation and Collection

Name of District		Thrissur								
Name of Municipality		Chalakkudy	Chavakkad	Guruvayoor	Irinjalakuda	Kodungallur	Kunnamkulam (Model Town)	Vadakkanchery		
Population (2011)		49525	39098	70012	62532	94883	54071	15674		
No of Wards		36	32	43	41	44	37	41		
No of Household		14850	9947	18000	15933	19492	13156	17536		
No of Establishment		2682	1483	2683	2898	2846	3028	4844		
No of Household having segregation at source	Dry	14850		18000	7563	14896	13156	17536		
	Wet			18000	7563	14896		17536		
No of Establishment having segregation at source	Dry	1620		2683	2500	2846		4844		
	Wet			2683	150	2846		4844		
D2D Collection	Households	Number	Dry	14850	3600	4400	7563	14896	13156	6000
			Wet		NIL	880	1200	0	0	Nil
		Percentage	Dry	100	36.2	24.5	47.5	76.5	100	34.3
			Wet	0		4.9	7.6	0	0	
	Collection Frequency	Dry	14850	once in a month	monthly	monthly	weekly	monthly	1/month	
		Wet		nil	alternative days	alternative days	source reduction method	nil	Nil	
Establishments	Number	Dry	1620	756	2683	2500	1412	3028	4844	
		Wet	115	nil	193	150	0	148	100	
	Percentage	Dry	60.5	51	100	86.3	49.7	100	100	
		Wet	4.3		7.2	5.2	0	4.9	2.1	
	Collection Frequency	Dry	1620	once in a week	weekly	weekly		weekly	1/month	
		Wet	115	nil	daily	daily		Daily	All working	

Annexure.1

B.8.1. Segregation and Collection									
Name of District			Thrissur						
Name of Municipality			Chalakkudy	Chavakkad	Guruvayoor	Irinjalakuda	Kodungallur	Kunnamkulam (Model Town)	Vadakkanchery
									days
	No of collectors		54	31	58	130	84	6	40
	No of vehicles used		3	2	6	7	2	5	2
No. having source level treatment of wet waste in operation	Household	1	1082 Municipality is taken action to disribute 2600 kitchen bins and 500 Bio - gas plant to promote source level treatment of wet waste at house hold level. The project received technical sanction and its ready to implement with in two weeks	13000	4600	6200	13156	17536	
	Establishment	548	6	2400	1400	1350	13	4744	

Annexure.1

B.8.1. Segregation and Collection								
Name of District		Thrissur						
Name of Municipality		Chalakkudy	Chavakkad	Guruvayoor	Irinjalakuda	Kodungallur	Kunnamkulam (Model Town)	Vadakkanchery
Percentage having source level treatment of wet waste in operation	Household		11%	72	28.87	32%	0	100%
	Establishment		0.40%	89	48.31	47	135	97.90%
No. disposing to centralised system	Household	0	nil	600	7563	0	0	0
	Establishment	1620	nil	90	2500	0	50	100
Percentage having disposal to centralised system	Household		N.A	3.2	47.47	0		0
	Establishment		N.A	3.3	86.26	75%		2.1
No. existing	MCF	1	1	1	2	Temporary MCF	1	2
	RRF	1	1	1	1	under construction	1	1
No. needed	MCF	2	1	10	2	10	37	3
	RRF	1	1	2	1	3	1	1
User fee		30/household ,100/establishment	Rs.60/- per month/Home	dry waste household 50/month .wet waste 200/month.dry waste establishment 100/sack .wet waste 5/kg	Rs.60/- per month/Home	House 50/Rs /month establishments 100/month	House 60 Rs/month and establishments 100-200s / month	House 60Rs/month, Estsblishments 100-500 Rs/month
Remarks							Door to door collection Facility of dry waste provide	

Annexure.1

B.8.1. Segregation and Collection							
Name of District	Thrissur						
Name of Municipality	Chalakkudy	Chavakkad	Guruvayoor	Irinjalakuda	Kodungallur	Kunnamkulam (Model Town)	Vadakkanchery
						at 100%. But due to unwillingness of certain households. Full collection of dry waste could not be done.	

B.8.3. Centralised System

Name of District	Thrissur						
Name of Municipality	Chalakkudy	Chavakkad	Guruvayoor	Irinjalakuda	Kodungallur	Kunnamkulam	Vadakkanchery
Quantity of Waste generated (TPD) based on population	21	17	29	26	40	23	22.68
Quantity of Waste generated (TPD)	15	0.8 to 1 TPD	18	25.8	4.72 TPD	15	22.68
Quantity of Waste collected (TPD)	15	0.8 to 1 TPD	4	5.5	3TPD	3.197 TPD	2.5
Quantity of Waste treated (TPD)	15	0.5 to 0.8 TPD	4	1.5	Nil	3.197 TPD	2.5
Quantity of Waste processed in Composting Sites (TPD)	3	0.5 to 1 TPD	2.75	0	Nil	3.197 TPD	2
Quantity of Waste processed in biomethanation (TPD)	nil	Nil	0	0.6	Nil		2
Quantity of Waste processed in waste to energy plants (TPD)	nil	Nil	0	0	Nil		2

Name of District	Thrissur						
Name of Municipality	Chalakkudy	Chavakkad	Guruvayoor	Irinjalakuda	Kodungallur	Kunnamkulam	Vadakkanchery
Quantity of Waste processed in Landfill (TPD)	0.5	Nil	0	0.4	nil		0
Existing capacity of Waste Processing Facilities: (TPD)	6	0.5 to 1	4	0.6	10TPD	5 TPD-Dry waste	2TPD
Existing capacity of Waste Disposal Facilities: (TPD)	0.5	0.5 to 1 TPD	4	5	9TPD		2TPD
Planned Capacity of Waste Processing Facilities (TPD)	1	0.5 to 1	5	10	22TPD		2TPD
Planned Capacity of Waste Disposal Facilities (TPD)	0.5	12	5	5	5TPD		
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)	12	NA	2yrs	4	24 Months	NA	
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)	12	NA	2yrs	4	24 months	100%	
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:		1	1	1	1	0	

B.8.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant

Name of District	Thrissur						
Name of /Municipality	Chalakkudy	Chavakkad	Guruvayoor	Irinjalakuda	Kodungallur	Kunnamkulam	Vadakkanchery
No of units supplied:	2		bio gas 294,pot bin 500	4600	3450 PIPE COMPOST		219

Name of District	Thrissur						
Name of /Municipality	Chalakkudy	Chavakkad	Guruvayoor	Irinjalakuda	Kodungallur	Kunnamkulam	Vadakkanchery
No of units working:	2	1082	bio gas 290,pot bin 490	4590	2860	Biogas plant - 196, Biobin - 4226	217
No of units not working:		NA	bio gas 4,pot bin 10		590	Nil	2
Reason for failure:		NA	lack of awareness	mis handling	Mishanling	NA	technical error

B.8.3.1. Details of Decentralised Facilities as reported by Localbodies

Name of District	Thrissur						
Name of Municipality	Chalakkudy	Chavakkad	Guruvayoor	Irinjalakuda	Kodungallur	Kunnamkulam	Vadakkanchery
pipe compost	Total no of units supplied	0	0		2713	Nil	Nil
	No of units working	0	0		2511		
	No of units not working	0	0		220		
	Quantity of waste treated using pipe composting facilities (TPD)	0	0		6-7 tone		
Kitchen bin	Total no of units supplied	0	2600		nil	Nil	Nil
	No of units working	0	2600				
	No of units not working	0	0				
	Quantity of waste treated using kitchen bin	0	3.9 TPD				

Annexure.1

Name of District		Thrissur						
Name of Municipality		Chalakkudy	Chavakkad	Guruvayoor	Irinjalakuda	Kodungallur	Kunnamkulam	Vadakkanchery
	facilities (TPD)							
Biogas plant (Household level)	Total no of units supplied	0	100	294		412	196	219
	No of units working	0	95	290		378	196	219
	No of units not working	0	5	4		34		
	Quantity of waste treated using biogas plant (TPD)	0	0.38 TPD	290		1.9TDP		
Biogas plant (Community level)	Total no of units supplied	0	0	0		16	Nil	Nil
	No of units working	0	0	0		16	0	
	No of units not working	0	0	0		0	0	
	Quantity of waste treated using biogas plant (TPD)	0	0	0		1TPD	0	
Aerobins (Community level)	Total no of units supplied	0	TS obtained for 36 bins in 7 places and agreement executed with IRTC	3		NIL	3(school level)	Nil
	No of units working	0		0		NIL	3	
	No of units not working	0		3		NIL	0	
	Quantity of waste treated using aerobins (TPD)	0		3.5 TON		NIL		
biocomposter, biobin,	Total no of units supplied	0	0	500		NIL	4850	Nil
	No of units working	0	0	490			4835	
	No of units not working	0	0	10			15	

Name of District		Thrissur						
Name of Municipality		Chalakkudy	Chavakkad	Guruvayoor	Irinjalakuda	Kodungallur	Kunnamkulam	Vadakkanchery
pot bin	Quantity of waste treated using these units (TPD)	0	0	490				
Others	Total no of units supplied	0	0			NIL		Nil
	No of units working	0	0					
	No of units not working	0	0					
	Quantity of waste treated using these units (TPD)	0	0					

B.9. Municipalities in Palakkad

B.9.1. Segregation and Collection

Name of District		Palakkad								
Name of Corporation/Municipality/Panchayath		Cheruplassery	Chitttur-Thattamangalam	Mannarkadu	Ottapalam	Palakkad	Pattambi	Shornur		
Population (2011)		30730	33000	39463	53792	131000	28632	43533		
No of Wards		33	29	29	36	52		33		
No of Household		8892	10956	8718	12484	42124	5286	10407		
No of Establishment		1634	1210	1434	2030	7200	1600	1468		
No of Household having segregation at source		Dry	5320	5656	8718	7200	16850	0	10407	
		Wet	5320	1235	1434	0	2200	0	400	
No of Establishment having segregation at source		Dry	1260	140	8718	1020	761	0	1200	
		Wet	1260	112	Nil	0	nil	0	0	
Colle	Households	Number	Dry	5320	5656	One day/month	7200	16850	0	10407

B.9.1. Segregation and Collection

Name of District			Palakkad							
Name of Corporation/Municipality/Panchayath			Cheruplassery	Chitttur-Thattamangalam	Mannarkadu	Ottapalam	Palakkad	Pattambi	Shornur	
	Percentage	Wet	Nil	1235	0	0	2200	0	400	
		Dry	59.9	51.7		57.7	40.1	0	100	
		Wet		11.3	0	0	5.3	0	3.9	
		Dry	Monthly one	4 Time per month	one day/Month	twice in a month	Weekly once	0	Fortnight	
	Collection Frequency	Wet	Nil	14 Time per month	0	0	weekly Twice	0	Daily	
		Number	Dry	1260	140	1200	1020	761	0	1200
			Wet	Nil	1235	0	0	Nil	0	0
		Percentage	Dry	77.2	11.6	83.7	50.3	10.6	0	81.8
			Wet		102.1	0	0		0	0
		Collection Frequency	Dry	Daily/Weekly	4 Times per month	Weekly	twice in a month	Weekly Once	0	Once in a week
	Wet		Nil	25 Times per month	0	0	Nil	0	na	
	No of collectors			22 HKS	56 Nos	58	56	156	20	65
	No of vehicles used			2	5 Nos	Nil	2	52	1	2
	No. having source level treatment of wet waste in operation	Household		1230	1242	8565	5400	4650	0	2902
Establishment			46	NIL	1434	400	20	0	136	
Percentage having source level treatment of wet waste in operation	Household		9%	15%	55%		11%	0	0	
	Establishment		2.50%	NIL	20%		0.30%	0	0	
No. disposing to centralised system	Household		Nil	NIL	0	210	490	0	0	
	Establishment		Nil	NIL	0	60	Nil	0	0	

B.9.1. Segregation and Collection								
Name of District		Palakkad						
Name of Corporation/Municipality/Panchayath		Cheruplassery	Chitttur-Thattamangalam	Mannarkadu	Ottapalam	Palakkad	Pattambi	Shornur
Percentage having disposal to centralised system	Household	Nil	NIL	0		1.20%	0	0
	Establishment	Nil	NIL	0		0	0	0
No. existing	MCF	1 Temporory	7 Nos	1	1	7	1	1
	RRF	Under Constructio n	1 Nos	Under Constructi on	1	1	1	1
No. needed	MCF	6	9 Nos	4	12	18	1	0
	RRF	0	1 Nos	1	0	0	1	0
User fee		House hold 30establish ment 50	50/100/250	Household 25 to 30pm Establish ment 50/Week	40	House Hold Dry waste-100 Wet waste-150 Establish ment -300	ESTABLI SHMENT 10/DAY.5 /DAY	Househo ld 50/- pm Establish ment 150 to 300/- pm
Remarks			collected userfess in Rs.50 /- per house and Rs.100 / 250 per establishment				AMOUNT I	na

B.9.2. Centralised System

Name of District	Palakkad						
Name of Corporation /Municipality /Panchayath	Cheruplassery	Chitttur-Thattamangalam	Mannarkadu	Ottapalam	Palakkad	Pattambi	Shornur
Quantity of Waste generated (TPD) based on population	13	14	17	23	55	12	19
Quantity of Waste generated (TPD)		9.7 Ton	2.6	1.4ton	42	3TPD	1.5
Quantity of Waste collected (TPD)		3 Ton	2	0.980ton	18	500KG	1.5
Quantity of Waste treated (TPD)		2.85 Ton	2	0.980ton	15	50KG	1.5
Quantity of Waste processed in Composting Sites (TPD)		2.85 Ton	Nil	880 ton	8	NA	NIL
Quantity of Waste processed in biomethanation (TPD)			Nil	0	15	NA	NIL
Quantity of Waste processed in waste to energy plants (TPD)		NIL	Nil	0	nil	NA	NIL
Quantity of Waste processed in Landfill (TPD)		NIL	Nil	0	Nil	NA	NIL
Existing capacity of Waste Processing Facilities: (TPD)		4 Ton	2	1 ton	18	NA	3
Existing capacity of Waste Disposal Facilities: (TPD)		2.85 Ton	2	0	18	NA	3
Planned Capacity of Waste Processing Facilities (TPD)		2.85 Ton	2	1 ton	0.5 ton	NA	3
Planned Capacity of Waste Disposal Facilities (TPD)		2.85 Ton	2	NA	10 ton	NA	3
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)		NA	12 Months	1 MONTH	2 ton	NA	3

Name of District	Palakkad						
Name of Corporation /Municipality /Panchayath	Cheruplassery	Chitttur-Thattamangalam	Mannarkadu	Ottapalam	Palakkad	Pattambi	Shornur
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)		NA	12 Months	1 MONTH	24 Months	NA	3
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:		NA	NA	3	24 Month	NA	NA

B.9.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant

Name of District	Palakkad						
Name of Municipality	Cheruplassery	Chitttur-Thattamangalam	Mannarkadu	Ottapalam	Palakkad	Pattambi	Shornur
No of units supplied:		1537		4426	4550	1800	2902
No of units working:		998	55	4426	2650	0	2092
No of units not working:		539	Nil	0	1900	0	0
Reason for failure:		not avalabilty of inaculam and techical error	NA	NA	Foul Smell & Insects	0	na

B.9.3.1. Details of Decentralised Facilities as reported by Localbodies

Name of District		Palakkad						
Name of Municipality		Cheruplassery	Chittur-Thattamangalam	Mannarkadu	Ottapalam	Palakkad	Pattambi	Shornur
pipe compost	Total no of units supplied		NIL	40		2500	Nil	
	No of units working		NIL	40		2500	NIL	
	No of units not working		NIL	0		NIL	NIL	
	Quantity of waste treated using pipe composting facilities (TPD)		NIL	75 Kg.		3200	NIL	
Kitchen bin	Total no of units supplied		NIL	Nil		NIL	Nil	
	No of units working		NIL	N.A		NIL	NIL	
	No of units not working		NIL	N.A		NIL	NIL	
	Quantity of waste treated using kitchen bin facilities (TPD)		NIL	N.A		NIL	NIL	
Biogas plant (Household level)	Total no of units supplied		42	20		NIL	69	
	No of units working		42	20		NIL	NIL	
	No of units not working		NIL	0		NIL	NIL	
	Quantity of waste treated using biogas plant (TPD)		250	125 Kg		NIL	IM3 Capacity	
Biogas plant (Community level)	Total no of units supplied		NIL	Nil		1	Nil	
	No of units working		NIL	Nil		NIL	NIL	
	No of units not working		NIL	N.A		1	NIL	
	Quantity of waste treated using biogas plant (TPD)		NIL	N.A		500KG/DAY	NIL	

Annexure.1

Name of District		Palakkad						
Name of Municipality		Cheruplassery	Chitttur-Thattamangalam	Mannarkadu	Ottapalam	Palakkad	Pattambi	Shornur
Aerobins (Community level)	Total no of units supplied		NIL	Nil		NIL	Nil	
	No of units working		NIL			NIL	NIL	
	No of units not working		NIL			NIL	NIL	
	Quantity of waste treated using aerobins (TPD)		NIL			NIL	NIL	
biocomposter, biobin, pot bin	Total no of units supplied		NIL	315		NIL	Nil	
	No of units working		NIL			NIL	NIL	
	No of units not working		NIL			NIL	NIL	
	Quantity of waste treated using these units (TPD)		NIL	475 Kg./day		NIL	NIL	
Others	Total no of units supplied		Bucket-1300, Ring-395	Nil		RING COMPOST-60	NIL	
	No of units working		Bucket-1300, Ring-395			60	NIL	
	No of units not working					NIL	NIL	
	Quantity of waste treated using these units (TPD)					24Kg/day	NIL	

B.10. Municipalities in Malappuram

B.10.1. Segregation and Collection

Name of District			Malappuram						
Name of Municipality			Kondotty	Kottakkal	Malappuram	Manjeri	Nilambur	Parappanangadi	
Population (2011)			28794	44382	101000	97104	46366	35243	
No of Wards			40	32	40	50	33	45	
No of Household			11807	11080	18889	19386	13685	18256	
No of Establishment			1700	2020	3246	4809	1800	1155	
No of Household having segregation at source		Dry	600	9600	15112	9886	5135	8358	
		Wet	8000		0	2115	0	7250	
No of Establishment having segregation at source		Dry	1000	1500	876		1750	615	
		Wet	100		0			527	
D2D Collection	Households	Number	Dry	9400	1480	15112	180 Ton	0	8358
			Wet	590		0	NIL	0	7250
		Percentage	Dry	79.7	13.4	80.1		0	45.8
			Wet	5	0	0		0	39.8
		Collection Frequency	Dry	Quarterly		Once in a month	One time in Month	monthly	
			Wet	Daily		-		Nil	
	Establishments	Number	Dry	200	520	876	2100	Nil	615
			Wet	Nil		0		21	527
		Percentage	Dry	11.8	25.8	27	43.7		53.3
			Wet		0	0	0	1.2	45.7
		Collection Frequency	Dry	quarterly		Once in a week	Daily	weekly	
			Wet			-	NIL	Nil	
No of collectors			160	15	24	16	29	90	
No of vehicles used			1 Owned and 1 Hired	1	2	2	1	1	

B.10.1. Segregation and Collection							
Name of District		Malappuram					
Name of Municipality		Kondotty	Kottakkal	Malappuram	Manjeri	Nilambur	Parappanangadi
No. having source level treatment of wet waste in operation	Household	8000	Nil	17735		33	
	Establishment	100	Nil	876		Nil	40
Percentage having source level treatment of wet waste in operation	Household	67%		93			70
	Establishment	1%		27			
No. disposing to centralised system	Household			Nil	1	Nil	3750
	Establishment			75	1	Nil	337
Percentage having disposal to centralised system	Household	nil	Nil	Nil			20.54
	Establishment	nil	Nil	2.3			29.17
No. existing	MCF	1	1	3	3	Temporary	1
	RRF	nil	1	1	0	Nil	1
No. needed	MCF	2	30	4	2	3	4
	RRF	1	2	1	1	1	1
User fee		Yes, Collecting	House Hold- 50, Establishment - 100	HH- 30/- per month Estmnt- 50/- per week	300/-	60	Rs 30 (House) RS 100(Shop)
Remarks			User fee based on openlyQuantity of waste		The user free Charged in kg base		

B.10.2. Centralised System

Name of District	Malappuram					
Name of Municipality	Kondotty	Kottakkal	Malappuram	Manjeri	Nilambur	Parappanangadi
Quantity of Waste generated (TPD) based on population	12	18	43	41	20	15
Quantity of Waste generated (TPD)	0.12 TPD(non bio degradable)		3.23		3 1/2 TPD	2
Quantity of Waste collected (TPD)	0.12 TPD(non biodegradable)		2.2		2 TPD	1
Quantity of Waste treated (TPD)	0.12 TPD		2.2		1 1/2 TPD	1
Quantity of Waste processed in Composting Sites (TPD)	nil		Nil		1 1/2 TPD	
Quantity of Waste processed in biomethanation (TPD)	nil		Nil		Nil	
Quantity of Waste processed in waste to energy plants (TPD)	nil		Nil		Nil	
Quantity of Waste processed in Landfill (TPD)	nil		Nil		Nil	
Existing capacity of Waste Processing Facilities: (TPD)	0.12 TPD		Nil		1 TPD	1
Existing capacity of Waste Disposal Facilities: (TPD)	na		Nil		0.5 TPD	1
Planned Capacity of Waste Processing Facilities (TPD)	na		Nil		1	50
Planned Capacity of Waste Disposal Facilities (TPD)					1.5	3
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)	6 months				4	1 year
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)	6 months				4	2 year
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:	NA				0	Nil

B.10.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant

Name of District	Malappuram					
Name of Municipality	Kondotty	Kottakkal	Malappuram	Manjeri	Nilambur	Parappanangadi
No of units supplied:	Pipe Composting-600 Ring Compost-183 Biogas Plant-18	NIL	31BIOGAS			biogas - 13, kitchenbin-75
No of units working:	801		1061		33	kitchen bin -73
No of units not working	nil		Nil		NA	biogas 13
Reason for failure:	NA	NA			NA	

B.10.3.1. Details of Decentralised Facilities as reported by Localbodies

Name of District		Malappuram					
Name of Municipality		Kondotty	Kottakkal	Malappuram	Manjeri	Nilambur	Parappanangadi
pipe compost	Total no of units supplied	600			3792	321	
	No of units working	420			2844	135	
	No of units not working	180			948	186	
	Quantity of waste treated using pipe composting facilities (TPD)	125			2.8 ton	0.33	
Kitchen	Total no of units supplied	Nil			0	NIL	73

Annexure.1

Name of District		Malappuram					
Name of Municipality		Kondotty	Kottakkal	Malappuram	Manjeri	Nilambur	Parappanangadi
bin	No of units working	NA			0	NIL	73
	No of units not working	NA			0	NIL	0
	Quantity of waste treated using kitchen bin facilities (TPD)	NA			0		
Biogas plant (Household level)	Total no of units supplied	NA			0	104	13
	No of units working	18			0	71	13
	No of units not working	Nil			0	33	0
	Quantity of waste treated using biogas plant (TPD)	45 Kg/day			0	0.18	
Biogas plant (Community level)	Total no of units supplied	Nil			0	NIL	
	No of units working	Na			0	NIL	
	No of units not working	Na			0	NIL	
	Quantity of waste treated using biogas plant (TPD)	Na			0	NIL	
Aerobins (Community level)	Total no of units supplied	Na			0	NIL	
	No of units working	Na			0	NIL	
	No of units not working	Na			0	NIL	
	Quantity of waste treated using aerobins (TPD)	Na			0		
biocompos	Total no of units supplied	Nil			0	75	

Name of District		Malappuram					
Name of Municipality		Kondotty	Kottakkal	Malappuram	Manjeri	Nilambur	Parappanangadi
ter, biobin, pot bin	No of units working	Na			0	75	
	No of units not working	Na			0	NIL	
	Quantity of waste treated using these units (TPD)	Na			0	0.19	
Others	Total no of units supplied	123 Ring Compost			0	NIL	
	No of units working	123			0	NIL	Ongoing
	No of units not working	Nil			0	NIL	
	Quantity of waste treated using these units (TPD)	50 Kg/day			0	NIL	

B.10. Municipalities in Malappuram

B.3.1. Segregation and Collection

Name of District		Malappuram						
Name of Corporation/Municipality/Panchayath		Perinthalmanna	Ponnani	Thanoor	Thiroorangadi	Tirur	Valanchery	
Population (2011)		49723	90491	44973	56632	56058	35795	
No of Wards		34	51	44	39	38	33	
No of Household		16242	16394	15400	13146	12769	7651	
No of Establishment		3202	2540	1500	2000	8412	1224	
No of Household having segregation at source	Dry	6242	11475	8490	5500	12769	NA	
	Wet	0	11475	0	0	12769	NA	
No of Establishment having segregation at		Dry	1102	1778	150	500	8412	No

B.3.1. Segregation and Collection

Name of District		Malappuram							
Name of Corporation/Municipality/Panchayath		Perinthalmanna	Ponnani	Thanoor	Thiroorangadi	Tirur	Valanchery		
source		Wet	193	1778	0	0	8412	No	
D2D Collection	Households	Number	Dry	6242	11475	8490	5500	12769	
			Wet	0	0	0	0	0	
		Percentage	Dry	38.5	70	55.2	41.9	100	0
			Wet	0	0	0	0	0	0
	Collection Frequency	Dry	Monthly	monthly	once in month	once in every three months	twice in one month	Once in a month	
		Wet	Nil	Nil	0	Nil	0		
	Establishments	Number	Dry	1102	1778	150	500	8412	Nil
			Wet	193	0	0	0	0	Nil
		Percentage	Dry	34.5	70	10	25	100	
			Wet	6.1	0	0	0	0	
Collection Frequency	Dry	Daily	Twice/month	once in week	fortnightly	twice in one month	Nil		
	Wet	Daily	nil	0	Nil	0	Nil		
No of collectors			52	49	0	28	38	13	
No of vehicles used			6	1	1	1	2	Nil	
No. having source level treatment of wet waste in operation		Household	1310	13115	8000	1912	12769	20%	
		Establishment	32	1905	1000	10	8412	Nil	
Percentage having source level treatment of wet waste in operation		Household		80	52		100	Nil	
		Establishment		75	67		100	Nil	
No. disposing to centralised system		Household	Nil	Nil	0	Nil	nil	Nil	
		Establishment	Nil	2	0	Nil	nil	Nil	
Percentage having disposal to centralised		Household	0	0	0	Nil	0	Nil	

B.3.1. Segregation and Collection

Name of District		Malappuram					
Name of Corporation/Municipality/Panchayath		Perinthalmanna	Ponnani	Thanoor	Thiroorangadi	Tirur	Valanchery
system	Establishment	0	near to 0	0	Nil	0	Nil
No. existing	MCF	1	8	1	1	1	1
	RRF	1	1	1	0	1	Nil
No. needed	MCF	2	10	4	4	1	3
	RRF	0	0	1	1	15	1
User fee		50per House	50 per house	50 per house hold 100 per establishment	Rs 50/- per Household and Rs 100/- per establishment (for each 50kg bag)	Rs 50/- per house hold	Rs 50/- per house hold
Remarks							

B.10.2. Centralised System

Name of District	Malappuram					
Name of Municipality	Peinthalmanna	Ponnani	Thanoor	Thiroorangadi	Tirur	Valanchery
Quantity of Waste generated (TPD) based on population	21	38	19	24	24	15
Quantity of Waste generated (TPD)	10	6	12.38	17 TPD	8	6 ton per day
Quantity of Waste collected (TPD)	6	2	0.3	0.5	1	3
Quantity of Waste treated (TPD)	6	2	0	0	1	2.5
Quantity of Waste processed in Composting Sites (TPD)	6	2	0	0	0.75	0.3

Annexure.1

Quantity of Waste processed in biomethanation (TPD)	Nil	0	0	0	nil	NA
Quantity of Waste processed in waste to energy plants (TPD)	Nil	0	0	0	nil	NA
Quantity of Waste processed in Landfill (TPD)	Nil	0	0	0	0.25	NA
Existing capacity of Waste Processing Facilities: (TPD)	7	2	0	0	2	0.2
Existing capacity of Waste Disposal Facilities: (TPD)	Nil	2	0	0	0.25	Nil
Planned Capacity of Waste Processing Facilities (TPD)	11	6	0	0	2	Nil
Planned Capacity of Waste Disposal Facilities (TPD)	Nil	0	0	0	2	Nil
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)	3	6 months	12	12	6	On Processing
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)	3	0	12	6	6	Nil
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:	Nil	0	0	0	1	Nil

B.10.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant

Name of District	Malappuram					
Name of Corporation/Municipality/Panchayath	Peinthalmanna	Ponnani	Thanoor	Thiroorangadi	Tirur	Valanchery
No of units supplied:	472	1302		1912	468	230
No of units working:	0	1302	56	800	468	230
No of units not working	0	0	0	1112	.	
Reason for failure:	NA	NA	NA	improper handling	.	NA

B.10.3.1. Details of Decentralised Facilities as reported by Localbodies

Name of District		Malappuram					
Name of Municipality		Peinthalmanna	Ponnani	Thanoor	Thiroorangadi	Tirur	Valanchery
pipe compost	Total no of units supplied		364	Nil	1912	453	Nil
	No of units working		364	Nil	1850	230	Nil
	No of units not working		0	Nil	62	223	Nil
	Quantity of waste treated using pipe composting facilities (TPD)		0.546	Nil	2.86	0.21	Nil
Kitchen bin	Total no of units supplied		nil	Nil	NIL	2769	Nil
	No of units working		nil	Nil	NIL	1480	Nil
	No of units not working		nil	Nil	NIL	1289	Nil
	Quantity of waste treated using kitchen bin facilities (TPD)		nil	Nil	NIL	1.2	Nil
Biogas plant (Househol d level)	Total no of units supplied		22	Nil	NIL	468	28
	No of units working		22	Nil	NIL	462	28
	No of units not working		0	Nil	NIL	6	Nil
	Quantity of waste treated using biogas plant (TPD)		0.11	Nil	NIL	0.58	50 Kg/ day
Biogas plant (Communi ty level)	Total no of units supplied		nil	Nil	NIL	nil	Nil
	No of units working		nil	Nil	NIL		Nil
	No of units not working		nil	Nil	NIL		Nil

Annexure.1

Name of District		Malappuram					
Name of Municipality		Peinthalmanna	Ponnani	Thanoor	Thiroorangadi	Tirur	Valanchery
	Quantity of waste treated using biogas plant (TPD)		nil	Nil	NIL		Nil
Aerobins (Community level)	Total no of units supplied		1	Nil	NIL	nil	Nil
	No of units working		1	Nil	NIL		Nil
	No of units not working		0	Nil	NIL		Nil
	Quantity of waste treated using aerobins (TPD)		0.2	Nil	NIL		Nil
biocomposter, biobin, pot bin	Total no of units supplied		686	Nil	NIL		Nil
	No of units working		686	Nil	NIL		Nil
	No of units not working		0	Nil	NIL		Nil
	Quantity of waste treated using these units (TPD)		1	Nil	NIL		Nil
Others	Total no of units supplied		235(bucket compost)	67(Ring Compost)	NIL		Nil
	No of units working		235	67	NIL		Nil
	No of units not working		0	Nil	NIL		Nil
	Quantity of waste treated using these units (TPD)		0.35	0.134	NIL		Nil

B.11. Municipalities in Kozhikode

B.11.1. Segregation and Collection											
Name of District			Kozhikode								
Name of Corporation			Faroke	Koduvally	Koyilandy	Mukkam	Payyoli	Ramanattukara	Vadakara		
Population (2011)			32122	48678	71873	40670	23576	35937	75295		
No of Wards			38	36	44	33	36	31	47		
No of Household			14562	10623	17086	8134	13800	10123	18000		
No of Establishment			1750	1292	2860	2022	1400	1400	5938		
No of Household having segregation at source		Dry	6500	5300	10241	7315	6900	nil	16000		
		Wet	6500	310	12040	Nil	10400	Nil	nil		
No of Establishment having segregation at source		Dry	59	2520	1950	1836	840	Nil	4000		
		Wet	12	0	2100	Nil	1220	nil	nil		
D2D Collection	Households	Number	Dry	6500	-	10200	7315		Nil	16000	
			Wet	6500	-	NIL	nil		Nil	nil	
		Percentage	Dry	44.7		59.7	90	0		88.9	
			Wet	44.7				0			
		Collection Frequency	Dry	once in a month	per month	MONTHLY	monthly			nil	13500
			Wet	not collecting	-	NIL	nil			nil	nil
	Establishments	Number	Dry	59	-	225	1836		nil	5938	
			Wet	12	-	225	nil		nil	nil	
		Percentage	Dry	3.4		7.9	90.9	0		100	
			Wet	0.7		7.9		0			
		Collection Frequency	Dry	once in a week	-	DAILY	monthly			Nil	4000
			Wet	daily	-	DAILY	nil			Nil	nil
	No of collectors			18	72 (Haritha Karma Sena)	100	38		Nil	63	
	No of vehicles used			1	one (on contract)	1	1		Nil	3	

Annexure.1

B.11.1. Segregation and Collection								
Name of District		Kozhikode						
Name of Corporation		Faroke	Koduvally	Koyilandy	Mukkam	Payyoli	Ramanattukara	Vadakara
No. having source level treatment of wet waste in operation	Household	6500	-	4200	237		Nil	8890
	Establishment	8	-	8	11		Nil	600
Percentage having source level treatment of wet waste in operation	Household	44.7		24.6	3	0		49.4
	Establishment	0.5		0.3	0.6	0		10.2
No. disposing to centralised system	Household	0	0	0	nil		Nil	50unit
	Establishment	0	0	1050	nil		Nil	20unit
Percentage having disposal to centralised system	Household	0	0	0		0		
	Establishment	0	0	36.8		0		
No. existing	MCF	1	1	2	1		1	13
	RRF	under construction	0	1	nil		nil	2
No. needed	MCF	2	2	3	1		mini MCF need for 31 wards	34
	RRF	1	1	1	1		nil	1
User fee		Rs 30/month/house, Rs 50/week/shop	Rs.50/ house Rs.100/Establishment	Rs50/house-Rs.100/establishment and may vary as per weight	50		Rs50 for Housed and 100/- for shopes	50/month
Remarks		Only Nonbiodegradable waste is collecting by door to door collection	Only dry waste D2D collection. Wet waste at source level treatment. Daily 600					

Annexure.1

B.11.1. Segregation and Collection							
Name of District	Kozhikode						
Name of Corporation	Faroke	Koduvally	Koyilandy	Mukkam	Payyoli	Ramanattukara	Vadakara
		Kg wet waste collecting from Town street by 8 Sanitary workers.					

B.11.2. Centralised System

Name of District	Kozhikode						
Name of Municipality	Faroke	Koduvally	Koyilandy	Mukkam	Payyoli	Ramanattukara	Vadakara
Quantity of Waste generated (TPD) based on population	14	21	30	17	10	15	32
Quantity of Waste generated (TPD)	4	4.8	10			nil	19.93
Quantity of Waste collected (TPD)	0.5	0.6	2.5			nil	11.95
Quantity of Waste treated (TPD)	0.5	0.6	2.5			nil	11.95
Quantity of Waste processed in Composting Sites (TPD)	0.05	0.6	2			nil	Nil
Quantity of Waste processed in biomethanation (TPD)	0	-	0		nil	nil	Nil
Quantity of Waste processed in waste to energy plants (TPD)	0	-	0		nil	nil	Nil
Quantity of Waste processed in Landfill (TPD)	nill	-	0		nil	nil	0.95
Existing capacity of Waste Processing Facilities: (TPD)	0	-	2		nil	nil	nil
Existing capacity of Waste Disposal Facilities: (TPD)	0	- (2 Acre	2.5		nil	nil	2

Annexure.1

		land)					
Planned Capacity of Waste Processing Facilities (TPD)	0	-	3		nil	nil	5
Planned Capacity of Waste Disposal Facilities (TPD)	0	-	nil		nil	nil	5
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)	2020March	-	2020March		nil	nil	NIL
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)	2020 March	-	na		nil	nil	NIL
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:	Nil	Nil	nil		nil	nil	NIL

B.11.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant

Name of District	Kozhikode						
	Faroke	Koduvally	Koyilandy	Mukkam	Payyoli	Ramanattukara	Vadakara
No of units supplied:	4550		4100		0		8840
No of units working:	1550	-	4055			nil	5000
No of units not working:	3000 pipe compost	-				nil	3840

Name of District	Kozhikode						
Name of Corporation/Municipality/Panchayath	Faroke	Koduvally	Koyilandy	Mukkam	Payyoli	Ramanattukara	Vadakara
Reason for failure:	lack of awairness	-	improper maintanance			nil	improper maintanance

B.11.3.1. Details of Decentralised Facilities as reported by Localbodies

Name of District		Kozhikode						
Name of Municipality		Faroke	Koduvally	Koyilandy	Mukkam	Payyoli	Ramanattukara	Vadakara
pipe compost	Total no of units supplied	4500				750	Nil	3000
	No of units working	1500				100	Nil	520
	No of units not working	3000				650	Nil	2480
	Quantity of waste treated using pipe composting facilities (TPD)	1.5 tpd				Nil	Nil	1.25
Kitchen bin	Total no of units supplied					500	Nil	Nil
	No of units working					300	Nil	Nil
	No of units not working	no				200	Nil	Nil
	Quantity of waste treated using kitchen bin facilities (TPD)					Nil	Nil	Nil
Biogas	Total no of units supplied	50				Nil	Nil	100

Annexure.1

Name of District		Kozhikode						
Name of Municipality		Faroke	Koduvally	Koyilandy	Mukkam	Payyoli	Ramanattukara	Vadakara
plant (Househ old level)	No of units working	50				Nil	Nil	75
	No of units not working	0				Nil	Nil	25
	Quantity of waste treated using biogas plant (TPD)	75 kg				Nil	Nil	75
Biogas plant (Commu nity level)	Total no of units supplied					Nil	Nil	Nil
	No of units working					Nil	Nil	Nil
	No of units not working					Nil	Nil	Nil
	Quantity of waste treated using biogas plant (TPD)					Nil	Nil	Nil
Aerobins (Commu nity level)	Total no of units supplied					Nil	Nil	18
	No of units working	1				Nil	Nil	18
	No of units not working	50 kg/day				Nil	Nil	Nil
	Quantity of waste treated using aerobins (TPD)					Nil	Nil	2
biocomp oster, biobin, pot bin	Total no of units supplied	nil				Nil	Nil	49
	No of units working					Nil	Nil	49
	No of units not working					Nil	Nil	Nil
	Quantity of waste treated using these units (TPD)					Nil	Nil	1
Others	Total no of units supplied	nil				Nil	Nil	1065

Name of District		Kozhikode						
Name of Municipality		Faroke	Koduvally	Koyilandy	Mukkam	Payyoli	Ramanattukara	Vadakara
	No of units working					Nil	Nil	1020
	No of units not working					Nil	Nil	45
	Quantity of waste treated using these units (TPD)					Nil	Nil	2.5

B.12. Municipalities in Wayanad

B.12.1. Segregation and Collection						
Name of District			Wayanad			
Name of Municipality			Kalpetta	Mananthavady	Sulthanbathery	
Population (2011)			31580	34663	23333	
No of Wards			28	36	35	
No of Household			7519	12538	15889	
No of Establishment			2100	1724	2200	
No of Household having segregation at source			Dry	1998	4970	
			Wet	0	0	
No of Establishment having segregation at source			Dry	1710	812	
			Wet	0	0	
D2D Collection	Households	Number	Dry	1998	4970	waste to energy SWM plant under construction
			Wet	0	0	waste to energy SWM plant under construction
		Percentage	Dry	26.6	39.7	
			Wet	0	0	
		Collection Frequency	Dry	weekly	Once in a Month	waste to energy SWM plant under construction

B.12.1. Segregation and Collection						
Name of District				Wayanad		
Name of Municipality				Kalpetta	Mananthavady	Sulthanbathery
	Establishments	Number	Wet	0	0	Not still started
			Dry	1710	812	Not still started
		Percentage	Wet	0	0	Not still started
			Dry	81.5	47.1	
		Collection Frequency	Dry	daily	Once in a Month	Not still started
			Wet	0		Not still started
	No of collectors			32	26	23
	No of vehicles used			4	1	1
	No. having source level treatment of wet waste in operation		Household	nil	Nil	Nil
			Establishment	7	22	Nil
Percentage having source level treatment of wet waste in operation		Household				
		Establishment	0.4	1.3		
No. disposing to centralised system		Household	nil	nil	Nil	
		Establishment	nil	nil	Nil	
Percentage having disposal to centralised system		Household				
		Establishment				
No. existing		MCF	1	1	1	
		RRF	1	0	0	
No. needed		MCF	1	15	1	
		RRF	1	1	1	

B.12.1. Segregation and Collection			
Name of District	Wayanad		
Name of Municipality	Kalpetta	Mananthavady	Sulthanbathery
User fee	Rs 50 per month from household and Rs 100 to 2000 from establishments according to the quantity of waste	RS 50 to 250 FOR SHOPEES Rs. 30 for houses	waste to energy plant under construction
Remarks			

B.12.2. Centralised System

Name of District	Wayanad		
Name of Municipality	Kalpetta	Mananthavady	Sulthanbathery
Quantity of Waste generated (TPD) based on population	14	15	10
Quantity of Waste generated (TPD)	8tpd	0.5 ton	13.66
Quantity of Waste collected (TPD)	6tpd	0.5 ton	2.74
Quantity of Waste treated (TPD)	4tpd	0.5 ton	10.92
Quantity of Waste processed in Composting Sites (TPD)	0	NA	10.92
Quantity of Waste processed in biomethanation (TPD)	0		Nil
Quantity of Waste processed in waste to energy plants (TPD)	0	NA	Nil . Plant under construction

Annexure.1

Quantity of Waste processed in Landfill (TPD)	4tpd	NA	Nil
Existing capacity of Waste Processing Facilities: (TPD)	na	NA	
Existing capacity of Waste Disposal Facilities: (TPD)	3tpd	NA	
Planned Capacity of Waste Processing Facilities (TPD)	na	NA	5
Planned Capacity of Waste Disposal Facilities (TPD)	3tpd	NA	5
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)	NA	NA	6
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)	NA		6
Percentage of Urban Local Bodies (ULBs)/ Village Panchayats (VPs) Covered	80		20
Timeframe for covering all the ULBs/VPs (Months)	12 MONTHS		6
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:	NIL		Nil

B.12.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant

Name of District	Wayanad		
	Kalpetta	Mananthavady	Sulthanbathery
No of units supplied:		1061	Nil
No of units working:		0	Nil
No of units not working:		0	Nil

Name of District	Wayanad		
Name of Municipality	Kalpetta	Mananthavady	Sulthanbathery
Reason for failure:		Implementing Stage	Waste to energy plant under construction

B.12.3.1 Details of Decentralised Facilities as reported by Localbodies

Name of District		Wayanad		
Name of Municipality		Kalpetta	Kalpetta	Kalpetta
pipe compost	Total no of units supplied	Nil	NIL	NIL
	No of units working	Nil	NIL	NIL
	No of units not working	Nil	NIL	NIL
	Quantity of waste treated using pipe composting facilities (TPD)	Nil		NIL
Kitchen bin	Total no of units supplied	Nil	-	NIL
	No of units working	Nil	-	NIL
	No of units not working	Nil	-	NIL
	Quantity of waste treated using kitchen bin facilities (TPD)	Nil		NIL
Biogas plant (Household level)	Total no of units supplied	Nil	Project ongoing	NIL
	No of units working	Nil	Project ongoing	NIL
	No of units not working	Nil	Project ongoing	NIL
	Quantity of waste treated using biogas plant (TPD)	Nil		NIL

Name of District		Wayanad		
		Kalpetta	Kalpetta	Kalpetta
Name of Municipality				
Biogas plant (Community level)	Total no of units supplied			NIL
	No of units working			NIL
	No of units not working			NIL
	Quantity of waste treated using biogas plant (TPD)			NIL
Aerobins (Community level)	Total no of units supplied		NIL	NIL
	No of units working	Nil	NIL	NIL
	No of units not working	Nil	NIL	NIL
	Quantity of waste treated using aerobins (TPD)	Nil		NIL
biocomposter, biobin, pot bin	Total no of units supplied	Nil	Project ongoing	NIL
	No of units working	Nil	Project ongoing	NIL
	No of units not working	Nil	Project ongoing	NIL
	Quantity of waste treated using these units (TPD)	Nil		NIL
Others	Total no of units supplied	Nil	NIL	NIL
	No of units working	Nil	NIL	NIL
	No of units not working	Nil	NIL	NIL
	Quantity of waste treated using these units (TPD)	NIL		NIL

B.13. Municipalities in Kannur

B.13.1. Segregation and Collection

B.13.1. Segregation and Collection												
Name of District		Kannur										
Name of Municipality		Anthoor	Panoor	Koothuparambu	Iritty	Mattanur	Payyanur	Sreekantapuram	Thalassery	Thaliparambu		
Population (2011)		36290	17438	29619	40369	47078	72111	17630	92558	72465		
No of Wards		28	40	28	33	35	44	30	52	34		
No of Household		8460	14148	9015	8484	9796	17061	8627	24317	10300		
No of Establishment		944	1948	2200	1856	1783	3345	795	8256	4100		
No of Household having segregation at source		Dry	8460	7285	9015	8323		13600	8627	24317	9000	
		Wet	NIL	Nil	nil	NIL		0	795	0	Nil	
No of Establishment having segregation at source		Dry	ONCE A MONTH	1900	1980	1214		2300		6000	450	
		Wet	NIL	Nil	167	227				800	400	
D2D Collection	Households	Number	Dry	944	7285	9015	8323	8100	13600	8627	18000	9000
			Wet	NIL	Nil	nil	NIL	NIL	0	Nil	0	Nil
		Percentage	Dry	11.2	51.5	100	98.2	82.7	79.8	100	74.1	87.4
			Wet						0		0	
		Collection Frequency	Dry	ONCE A MONTH	once in month	once in month	monthly	MONTHLY	Monthly	Monthly	weekly	Monthly
			Wet	NIL	nil	nil	NA	NA	0	Nil	na	
	Establishments	Number	Dry		500	1980	1214	1650	2300	700	0	450
			Wet		nil	167	227	1400	0	Nil Source Reducion	0	400
		Percentage	Dry	0	25.7	90	65.5	92.6	68.8	88.1	0	11

Annexure.1

B.13.1. Segregation and Collection

Name of District		Kannur									
Name of Municipality		Anthoor	Panoor	Koothuparambu	Iritty	Mattanur	Payyanur	Sreekantapuram	Thalassery	Thaliparambu	
	ge	Wet	0		7.6	12.3	78.6	0		0	9.8
	Collecti on Frequen cy	Dry		weekly	daily	Weekly	DAILY	Weekly	100%	not collecting	Monthly
		Wet		nil	daily	DAILY	DAILY	0	Nil	not collecting	Daily, Weekly
	No of collectors		28	40	64	39	52	44	30	97	34
	No of vehicles used		1	1	2	1	1	4	1	1	4
No. having source level treatment of wet waste in operation	Househo ld	8460	Nil	3334	8484	5420	4835 unit	8627	18000	4800	
	Establish ment	944	Nil	72	147	560	1600	795	800	60	
Percentage having source level treatment of wet waste in operation	Househo ld	100		37	100	55.4		100	74.1	46.7	
	Establish ment	100		3.3	8	31.5	47.9	100	9.7	1.5	
No. disposing to centralised system	Househo ld	8460	nil	5000	NIL	NIL	Nil	Nil	nil	Nil	
	Establish ment	944	nil	2052	227	1100	1745	Nil	nil	Nil	
Percentage having disposal to centralised system	Househo ld	100		55.5							
	Establish ment	100		93.3	12.3	61.7	52.2				
No. existing	MCF	1	nil	1	1	1	1	1	1	1	
	RRF	1	nil	nil	NIL	2	1	0	nil	1	
No. needed	MCF	NIL	40	7(one for every four	33	NIL	5	1	3	1	

Annexure.1

B.13.1. Segregation and Collection

Name of District		Kannur								
Name of Municipality		Anthoor	Panoor	Koothuparambu ward)	Iritty	Mattanur	Payyanur	Sreekantapuram	Thalassery	Thaliparambu
	RRF	NIL	3	1	1	NIL	20	1	3	1
User fee		RS. 30 FOR HOUSES RS 50 FOR SHOPE S	Rs.30 for House Rs.50 for Shope	Rs 40 for every household per month	HOUSE 30 Establishment (Quantity based)	30 FOR PLASTIC FROM HOUSE		30 Rs from each registration house/Month	Rs 30 for each house	50Rs from Households 100 to 750 from Establishments
Remarks				Municipality has fixed a collection fee of Rs 40 per month for a house hold and Rs 100 from an establishment for plastic collection but people are reluctant to pay the amount regularly.				MCF the Kavumbai recycling unit temperarly close due to strike	existing MCF is insufficient to store plastic waste collected by Haritha karmasena	

B.13.2. Centralised System

Name of District	Kannur								
Name of Municipality	Anthoor	Panoor	Koothuparambu	Iritty	Mattanur	Payyanur	Sreekantapuram	Thalassery	Thaliparambu
Quantity of Waste generated (TPD) based on population	16	8	13	17	20	30	8	39	31
Quantity of Waste generated (TPD)			3.5	10		15 MT	3 MT	5T/D	15
Quantity of Waste collected (TPD)			2	2.5		6MT	1.5 MT	1T/D	5
Quantity of Waste treated (TPD)			1.5	2.25		6MT	1.5 MT	1T/D	5
Quantity of Waste processed in Composting Sites (TPD)			1	2		6 MT		1T/D	2
Quantity of Waste processed in biomethanation (TPD)			Nil	0			Nil	0	Nil
Quantity of Waste processed in waste to energy plants (TPD)			Nil	0			Nil	0	Nil
Quantity of Waste processed in Landfill (TPD)			Nil	0			Nil	0	Nil
Existing capacity of Waste Processing Facilities: (TPD)			1.5	4			0.5 MT	1T/D	5
Existing capacity of Waste Disposal Facilities: (TPD)			1.5	4				1T/D	5
Planned Capacity of Waste Processing Facilities (TPD)			2	5		2 years	Collected waste by Harithakarmasena	1T/D	10
Planned Capacity of Waste Disposal Facilities (TPD)			2	5			From Houses and dispose to	10	

Annexure.1

Name of District	Kannur								
Name of Municipality	Anthoor	Panoor	Koothuparambu	Iritty	Mattanur	Payyanur	Sreekantapuram	Thalassery	Thaliparambu
							MCF Unit		
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)			24 months	12				As per DPR	
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)			24 months	15				As per DPR	
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:			Nil	NA		“		NA	NA

B.13.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant

Name of District	Kannur								
Name of /Municipality	Anthoor	Panoor	Koothuparambu	Iritty	Mattanur	Payyanur	Sreekantapuram	Thalassery	Thaliparambu
No of units supplied:	33	1200 (Ring compost, KichenBin)		341 (Ring Compost)	5236			6661	4800
No of units working:	3471	1200	3014	341	5236	4835	NA	6661	4800
No of units not working:	NIL	0	320	0	NIL	Nil	NA	0	Nil

Annexure.1

Name of District	Kannur								
Name of /Municipality	Anthoor	Panoor	Koothuparambu	Iritty	Mattanur	Payyanur	Sreekantapuram	Thalassery	Thaliparambu
Reason for failure:	NIL	NA	Mismanagement of units and lack of awareness among the people.	NA	NA	NA	Lack of sufficient fund	na	NA

B.13.3.1. Details of Decentralised Facilities as reported by Localbodies

Name of District		Kannur								
Name of Municipality		Anthoor	Panoor	Koothuparambu	Iritty	Mattanur	Payyanur	Sreekantapuram	Thalassery	Thaliparambu
pipe compost	Total no of units supplied	NIL		2774			1750	Nil	5200	
	No of units working	NA		2651			1750	Nil	5200	
	No of units not working	NA		123			Nil	Nil	Nil	
	Quantity of waste treated using pipe composting facilities (TPD)	NA		1 TPD			Nil	Nil	0.5 - 1 Kg/day	
Kitchen bin	Total no of units supplied	NIL		0	NIL		Nil	Nil	Nil	
	No of units working	NIL		0	NIL		Nil	Nil	Nil	
	No of units not working	NIL		0	NIL		Nil	Nil	Nil	
	Quantity of waste treated using kitchen bin facilities (TPD)	NIL		Nil	NIL		645	Nil	Nil	

Annexure.1

Name of District		Kannur								
Name of Municipality		Anthoor	Panoor	Koothuparambu	Iritty	Mattanur	Payyanur	Sreekantapuram	Thalassery	Thaliparambu
Biogas plant (Household level)	Total no of units supplied	179		22			645	Nil	218	
	No of units working	179		22			-	Nil	218	
	No of units not working	0		0			-	Nil	Nil	
	Quantity of waste treated using biogas plant (TPD)			100 Kg			-	Nil	4 - 7.5 Kg/day	
Biogas plant (Community level)	Total no of units supplied	NIL		72			-	Nil	3	
	No of units working	NIL		65			-	Nil	Nil	
	No of units not working	NIL		7			-	Nil	3	
	Quantity of waste treated using biogas plant (TPD)	NIL		400 Kg			-	Nil	Nil	
Aerobins (Community level)	Total no of units supplied	NIL		0	NIL		-	Nil	1	
	No of units working	NIL		0	NIL		-	Nil	1	
	No of units not working	NIL		0	NIL		-	Nil	Nil	
	Quantity of waste treated using aerobins (TPD)	NIL		0	NIL		-	Nil	600 Kg/day	
biocomposter,	Total no of units supplied	NIL		538	NIL		-	Nil	Bin - 229 Pot - 115	

Annexure.1

Name of District		Kannur								
Name of Municipality		Anthoor	Panoor	Koothuparambu	Iritty	Mattanur	Payyanur	Sreekantapuram	Thalassery	Thaliparambu
biobin, pot bin	No of units working	NIL		538	NIL		-	Nil	Bin - 229 Pot - 115	
	No of units not working	NIL		0	NIL		-	Nil	Nil	
	Quantity of waste treated using these units (TPD)	NIL		5 TPD	NIL		-	Nil	1.5 to 2 Kg/day	
Others	Total no of units supplied	5186		0			2440	Ring Compost- 300	Ring Compost - 58	
	No of units working	5186		0			2440	300	58	
	No of units not working	0		0			-	0	Nil	
	Quantity of waste treated using these units (TPD)			0			-	0.5TPD	0.5 to 1 Kg/day	

B.14. Municipalities in Kasargod

B.14.1. Segregation and Collection						
Name of District			Kasaragod			
Name of Municipality			Kanhangad	Kasaragod	Nileshwaram	
Population (2011)			73536	131000	40802	
No of Wards			43	38	32	
No of Household			21000	14835	11921	
No of Establishment			3260	9930	1502	
No of Household having segregation at source			Dry	18000	12685	9517
			Wet		12685	
No of Establishment having segregation at source			Dry	18000	6218	1502
			Wet		6218	
D2D Collection	Households	Number	Dry	18000	12685	9517
			Wet		0	
		Percentage	Dry	85.8	85.6	79.9
			Wet	0	0	0
		Collection Frequency	Dry	Monthly	monthly	daily
			Wet		0	
	Establishments	Number	Dry	800	3150	901
			Wet	600	0	
		Percentage	Dry	24.6	31.8	60
			Wet	18.5	0	0
		Collection Frequency	Dry	Daily	weekly	daily
			Wet	Daily	0	

B.14.1. Segregation and Collection				
Name of District		Kasaragod		
Name of Municipality		Kanhangad	Kasaragod	Nileshwaram
	No of collectors	43	17	30
	No of vehicles used	3	3	2
No. having source level treatment of wet waste in operation	Household	18000	9654	193
	Establishment	300	368	38
Percentage having source level treatment of wet waste in operation	Household	85.8	65.1	1.7
	Establishment	9.3	3.8	2.6
No. disposing to centralised system	Household	NIL	nil	nil
	Establishment	3	8	nil
Percentage having disposal to centralised system	Household			
	Establishment	0.1	0.1	
No. existing	MCF	2	4	1
	RRF	1	1	1
No. needed	MCF	0	38	3
	RRF	0	2	Nil
User fee		Rs.50 from household Rs 200-10,000 from establishments	house hold 50, establishments 100	Approximately- 75000

Annexure.1

B.14.1. Segregation and Collection			
Name of District	Kasaragod		
Name of Municipality	Kanhangad	Kasaragod	Nileshwaram
Remarks			Household- Rs.30/m, Shops -small-50/m, Big-100/m

B.14.2. Centralised System

Name of District	Kasaragod		
Name of Municipality	Kanhangad	Kasaragod	Nileshwaram
Quantity of Waste generated (TPD) based on population	31	55	17
Quantity of Waste generated (TPD)	45	11 mt	
Quantity of Waste collected (TPD)	0.7	3mt	
Quantity of Waste treated (TPD)	0.5	3 mt	
Quantity of Waste processed in Composting Sites (TPD)	0.5	2.5	
Quantity of Waste processed in biomethanation (TPD)	NIL.	2.5	
Quantity of Waste processed in waste to energy plants (TPD)	NIL.	0	
Quantity of Waste processed in Landfill (TPD)	NIL.	0	
Existing capacity of Waste Processing Facilities: (TPD)	5	3	
Existing capacity of Waste Disposal Facilities: (TPD)		3	

Name of District	Kasaragod		
Name of Municipality	Kanhangad	Kasaragod	Nileshwaram
Planned Capacity of Waste Processing Facilities (TPD)		5	
Planned Capacity of Waste Disposal Facilities (TPD)		5	
Timeframe for installation of planned capacity of Waste Processing Facilities: (Months)			
Timeframe for installation of planned capacity of Waste Disposal Facilities: (Months)			
Number of Legacy waste dumpsites in the State/UTs and plan for their Remediation:	NA		

B.14.3. Decentralised units namely pipe compost, kitchen bin, bio composter, biobin, pot bin, biogas plant

Name of District	Kasaragod		
Name of Municipality	Kanhangad	Kasaragod	Nileshwaram
No of units supplied:	1300	768	2942
No of units working:	1300	768	2942
No of units not working:	NIL	0	nil
Reason for failure:	NA	na	na

B.14.3.1 Details of Decentralised Facilities as reported by Localbodies

Name of District	Kasaragod
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Annexure.1

Name of Municipality		Kanhangad	Kasaragod	Nileshwaram
pipe compost	Total no of units supplied	845	768	2840
	No of units working	845	768	2840
	No of units not working	0	0	--
	Quantity of waste treated using pipe composting facilities (TPD)	0.8	1.15 ton	2TPD
Kitchen bin	Total no of units supplied	0	Nil	0
	No of units working	0	Nil	-
	No of units not working	0	Nil	-
	Quantity of waste treated using kitchen bin facilities (TPD)	0	Nil	-
Biogas plant (Household level)	Total no of units supplied	156	Nil	64
	No of units working	156	Nil	64
	No of units not working	0	Nil	-
	Quantity of waste treated using biogas plant (TPD)	0.6	Nil	0.5TPD
Biogas plant (Community level)	Total no of units supplied	0	Nil	-
	No of units working	0	Nil	-
	No of units not working	0	Nil	-
	Quantity of waste treated using biogas plant (TPD)	0	Nil	-
Aerobins (Community level)	Total no of units supplied	5	Nil	
	No of units working	5	Nil	
	No of units not working	0	Nil	
	Quantity of waste treated using aerobins (TPD)	0.25	Nil	
biocomposter,	Total no of units supplied	0	Nil	

Annexure.1

Name of District		Kasaragod		
Name of Municipality		Kanhangad	Kasaragod	Nileshwaram
biobin, pot bin	No of units working	0	Nil	
	No of units not working	0	Nil	
	Quantity of waste treated using these units (TPD)	0	Nil	
Others	Total no of units supplied	21	Nil	172
	No of units working	21	Nil	172
	No of units not working	0	Nil	
	Quantity of waste treated using these units (TPD)	0.04	Nil	0.5TPD

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

2. 1. Panchayats in Thiruvananthapuram District

Sl. No	Panchayats in Thiruvananthapuram	No of wards	No of Household	% Household_D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishihment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
1	Amboori	13	5848	100	0	833	100	0	0	0	0	0						
2	Anadu	19	13635	35	0	2156	65	12	0	0	0	0	400kg/month	0	0	0	0	0
3	Anchuthengu	14	4906	0	0	10	0	0	15	0	0	0	200kg/month	0	0	0	0	0
4	Andoorkonam	18	9392	0	0	42	0	0	12	0	0	0	350kg/month	0	0	0	0	0
5	Aruvikkara	20	13207	100	0	217	35	100	0	0	0	0	325 KG/Month	150	0	0	0	0
6	Aryanad	18	7086	0	0	15	0	0	3	0	0	0	215 kg/month	0	0	0	0	0
7	Aryancode	16	8524	0	0	272	46	0	62	46	0	0		0	0	0	0	0
8	Athiyannoor	17	9389	0	0	45	0	0	0	0	0	0		0	0	0	0	0
9	Azhoor	18	6573	0	0	22	0	0	1	0	0	0	215 kg/month	0	0	0	0	0
10	Balaramapuram	20	10380	47	0	3345	88	0	0	0	0	0		0	0	0	0	0
11	Chemmaruthy	19	8238	97	0				0		0		300KG/MONTH	300KG/MONTH	0	0	0	0
12	Chenkai	21	12705	28	0	2900	149	7	0	0	0	0		0	0	0	0	0
13	Cherunniyoor	14	6935	100	0	4322	6	100	0	0	0	0	600KG/MONTH	500KG/MONTH	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Thiruvananthapuram	No of wards	No of Household	% Household_D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
14	Chirayinkeezhu	19	8284	0	0	1535	21	0	100	0	0	0	278.454	278.454	nil	nil	nil	nil
15	Edava	17	9573	100	0	420	85	2279	0	0	0	0	2000kg	2000kg	2000kg	200 kg	nil	nil
16	Elakamon	16	9888	100	0	1238	28	28	0	0	0	0	500 KG	500 KG	0	0	0	0
17	Kadaykkavoor	16	10347	0	0	1878	17	0	0	0	0	0	250kg	0	0	0	0	0
18	Kadinamkulam	23											0	0	0	0	0	0
19	Kallara	17	9179	0	0	180	20	0	0	0	0	0	200Kg	0	0	0	0	200Kg
20	Kallikkadu	13	4602	0	0	858	100	0	100	1	0	1	0	0	0	0	0	0
21	Kalliyoor	21	14357	0	0	12910	76	0	100	67	0	0	0	0	0	0	0	0
22	Kanjiramkulam	14	5250	0	0	330	0	0	0	0	0	0	0	0	0	0	0	0
23	Karakulam	23	21423	0	0	2956	100	42	0	0	0	0	0.1 TPD	0.05 TPD	0.05 TPD	0	0	0
24	Karavaram	18	9218	79	92	1984	57	79	0	0	0	0	300kg/month	150	0	0	0	0
25	Karodu	19	11490	100	0	2271	100	100	0	0	0	0	450kg/month	0	0	0	0	0
26	Karumkulam	18	6255	94	0	855	100	100	0	0	0	0	200kg/month	0	0	0	0	0
27	Kattakkada	21	11774	40	40	2384	40	40	0	0	0	0		0	0	0	0	0
28	Keezhvillam	20	7649	100	0	297	100	100	0	0	0	0	350KG /Month	0	NIL	NIL	NIL	NIL
29	Kilimanoor	15	6735	100	0	189	84	67	0	4	0	0	200kg/month	125	0	0	0	0
30	Kollayil	16	8947	100	0	568	57	52	0	0	0	0		0	0	0	0	0
31	Kottukal	19	13512	80	20	1671	3	85	0	0	0	0	450 KG	390 KG	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Thiruvananthapuram	No of wards	No of Household	% Household_D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
32	Kulathoor	20	10586	102	0	1121	16	82	0	0	0	0	400 kg/month	250	0	0	0	0
33	Kunnathukal	21	12981	90	2	2020	13	7	0	0	0	0	350kg/month	0	0	0	0	0
34	Kuttichal	14	6665	100	0	1601	0	100	0	0	0	0	225kg/month	0	0	0	0	0
35	Madavoor	15	5359	100	0	1108	22	100	0	0	0	0	400kg/month	200kg	200kg	0	0	0
36	Malayinkil	20	14338	100	0	2957	51	100	44	49			100kg	50kg	50kg	0	0	0
37	Manamboor	16	6587	100	0	2220	0	0	0	0	0	0	250kg/month	150kg/month	0	0	0	0
38	Mangalapuram	20	13451	37	1	3125	8	3	0	0	0	0			0	0	0	0
39	Manikkal	21	14232	100	0	2853	0	4	0	0	0	0			0	0	0	0
40	Maranaloor	21	14321	0	0	2409	0	0	0	0	0	0	400kg/month	0	0	0	0	0
41	Mudakkal	20	12843	0	0	1892	100	0	0	0	0	0	350KG/MONTH	0	0	0	0	0
42	Nagroor					300	13	0		7		0	450kg/month	100	0	0	0	0
43	Nanniyodu	18	10227	11	3	250	26	26	3	26	0	0		0	0	0	0	0
44	Navayikkulam	22	14365	6	2	2942	3	4	0	0	0	0	330kg/month	0	0	0	0	0
45	Nellanadu	16	4650	10	1	850	6	18	10	6	28	35	450kg/month	150	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Thiruvananthapuram	No of wards	No of Household	% Household_D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
46	Otoor	13	5841	5	2	1754	4	13	0	0	0	0		0	0	0	0	0
47	Ottasekharamangalam	14	6728	3	2	1375	4	15	0	0	0	0	500 kg/month	301 kg/month	0	0	0	0
48	Pallichal	23	16242	2	1	3911	2	5	0	0	0	0	600 Kg/Month	0	0	0	0	0
49	Palikkal	13	5782	21	0	1264	4	7	0	0	0	0		0	0	0	0	0
50	Panavoor	15	6912	0	0	1112	0	0	0	0	0	0	0	0	0	0	0	0
51	Pangode	19	7212	4	0	1422	3	6	0	0	0	0	200kg/month	0	0	0	0	0
52	Parassala	23	12800	27	0	2439	2	2	0	0	0	0	38097	26667	26667	0	0	
53	Pazhayakunnummal	17	14225	16	0	360	65	47	0	0	0	0		0	0	0	0	0
54	Peringammala	19	12097	0	0	8	0	0	0	0	0	0	500kg per month	380	0	0	0	0
55	Perunkadavila	16	8496	19	0	1124	4	0	0	0	0	0		0	0	0	0	0
56	Poovachal	23	15429	34	66	2403	100	100	38	0	0	0	8.72/0/5.7			0	0	
57	Poovar	15	5747	0	0	1247	0	0	79	0	0	0		0	0	0	0	0
58	Pothencode	18	11074	33	0	1204	29	0	36	0	0	29		0	0	0	0	0
59	Pulimath	19	8570	49	0	318	100	56	76	0	0	100	290kg/month	123	123	0	0	123
60	Pullambara	15	6798	0	0	278	0	0	0	0	0	0	250kg/month	0	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Thiruvananthapuram	No of wards	No of Household	% Household_D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
61	Thirupuram	14	5256	0	0	562	0	0	0	0	0	0		0	0	0	0	0
62	Tholikkodu	16	9405	1		1354	100	0	100	100	0	0	350 Kg/month	0	0	0	0	0
63	Uzhamalaykkal	15	8090	0	0	713	100	0	100	100	0	0	0	0	0	0	0	0
64	Vakkam	14	4738	19	1	260	86	15	1	2	0	0	400 kg/day	210 kg/day	0	nil	nil	nil
65	Vamanapuram	15	8098	0	0				0		0			0	0	0	0	0
66	Vellanad	18	11491	0	0				0		0			0	0	0	0	0
67	Vellarada	23	11990	29	0	1317	100	100	100	100	0	0	105 Kg/Month	0	0	0	0	0
68	Vembayam	0	0			0								0	0	0	0	0
69	Venganoor	20	0			0							425 Kg/Month	0	0	0	0	0
70	Vetoor	14	6536	11	0	834	41	7	11	2	0	0		0	0	0	0	0
71	Vilappil	20	14608	0	0	1737	57	0	0	0	0	0		0	0	0		0
72	Vilavoorkal	17	12560	100	0	1120	0	100	0	0	0	0		0	0	0	0	0
73	Vithura	17	10227	0	0	1724	100	0	0	0	0	0		0	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

2. 2. Panchayats in Kollam District

Sl. No	Panchayats in Kollam	No of wards	No of Household	% Household_D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
1	Adichanalloor	20				686	11	0		0		0		NA	NA	NA	na	NA
2	Alappad	16	5931	70	0	384	58	0	0	1	0	1	NA	NA	NA	na	NA	NA
3	Alayamon	14	8500	0	0	1177	0	0	0	0	0	0	0.2	0.1	0	0	0	0
4	Anchal	19											N	N	N		N	
5	Ariencavu	13	3244	65	0	232		0	0	1	0	1	0.1	0.1	0	0	0	0
6	Chadayamangalam	15	7661	80	0	1356	80	0	0	1	0	1				0	0	0
7	Chathannoor	18														0	0	0
8	Chavara	23				1400	60	0		2		2	0.3	0.2	0.2	0	0.1	0
9	Chirakkara	16				1300	0	0		0		0						
10	Chithara	23	15164	49	0	2250	4	0	3	1	0	1	NA	NA	NA	NA	NA	NA
11	Clappana	15	8552	83	0	1015	6	0	3	1	0	1	NA	NA	NA	NA	NA	NA
12	East Kallada	15	7234	0	0	8655	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA
13	Edamulackal	22	6200	0	0	1560	0	0	0	0	0	0	0	0	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kollam	No of wards	No of Household	% Household_D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishihment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
14	Elamadu	17	7728	55	0	85	71	0	1	36	0	36	0	0	0	0	0	0
15	Elampalloor	21	5753	79	0	25	624	0	10	44	0	44	0	0	0	0	0	0
16	Ezhukone	16	8569	0	0	1200	0	0	0	0	0	0						
17	Ittiva	21	12278	40	0	1780	20	0	1	3	0	3	3 ton	2.2ton	2.2ton	0	0	0
18	Kadakkal	19	1500	0	0				2		0							
19	Kalluvathukkal	23											150 kg /per month	125 kg /per month	125 kg /per month	0	0	0
20	Karavallor	16	8644	71	0	1470	69	0	1	1	0	1	200kg/permonth	200kg/permonth		0	0	0
21	Kareepra	18	6000	0	0				1		0							
22	Kottamkara	21	12978	65	0	552	109	0	1	0	1	0	500Kg / per month	350 Kg / Per month	350 Kg / Per month	0	0	0
23	Kulakkada	19	11253	0	0				1		0		4 ton	2.5 ton	2.5 ton	0	0	0
24	Kulasekharapuram	23	15978	78	0	3642	38	0	1	0	0	0	250 kg	330 kg	175 kg	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kollam	No of wards	No of Household	% Household_D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
													/per month	/per month	/per month			
25	Kulathoopuzha	20				1250	8	0		7		7	0.3	0.3	.0.2	0	0	0
26	Kummil	14	8210	56	0	211	51	0	1	5	0	5	0.2	0.1	0.1	0	0	0
27	Kundara	14	4561	72		220	25											
28	Kunnathoor	17	5512			nil			0		0		0			0	0	0
29	Mayyanad	23	15294	0	0				0		0							
30	Melila	15	1800	0	0				0		0		0			0	0	0
31	Munroethuruthu	13	115	0	0	115	0	0	0	0	0	0						
32	Mylom	20				300	1667	0		14		14	0	0	0	0	0	0
33	Mynagappally	22	150	0	0				0		0							
34	Nedumpana	23	17193	80	80	133	68	68	2	68	80	68	0	0	0	0	0	0
35	Neduvathoor	18	8521	41	0				32		0		0	0	0	0	0	0
36	Neendakara	13	5085	58	0	713	30	0	0	0	0	0	0	0	0	0	0	0
37	Nilamel	13	5626	0	0	85	0	0		0	0	0	150kg/	75	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kollam	No of wards	No of Household	% Household_D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishimt_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
													month	kg/month				
38	Oachira	17	8422	39	0	1025	36	0	0	0	0	0	210 kg/month	210 kg/month	210 kg/month	0	0	0
39	panayam	16	8771	0	0				0		0							
40	Panmana	23	16013	90	0	2449	0	21	0	0	0	0	150 kg /per month	125 kg /per month	125 kg /per month	0	0	0
41	Pathanapuram	19	3200	0	0				0		0							
42	Pattazhi	13	6208	0	0	0			0		0							
43	Pattazhi Vadakkekara	13	4147	0	0	0			0		0		0	0	0	0	0	0
44	Pavithreswaram	19	12977	0	0				0		0		60	60	0	0	0	0
45	Perayam	14	6450	0	0	250	0	0	0	0	0	0						
46	Perinad	20											5ton	30 ton	24 ton	4ton	0	0
47	Piravanthoor	21	3600	0	0				0		0							

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kollam	No of wards	No of Household	% Household_D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
48	Poothakkulam	18	9621	36	0				29		0		6 ton	3 ton	3 ton	0	0	0
49	Pooyappally	16				0							5 ton	1.5 ton	1.5 ton	0.5 ton	0	0
50	Poruvazhy	18	9581	47	0	1200	42	0	0	0	0	0			4 ton	0	0	0
51	Sasthamcotta	19	15243	0	0				0		0		4 ton	3 ton	2 ton	0	0	0
52	Sooranad North	18	9871		0	1935	0	0	0	0	0	0						
53	Sooranad South	16	8228	70	0	1120	63	0	0	0	0	0	4 ton	3 ton	2.5 ton	0	0	0
54	Thalavoor	20	7200	0	0				0		0							
55	Thazhava	22	11019	70	34	3256	50	30	2	6	0	6						
56	Thekkumbhagom	13	5600	0	0				0		0							
57	Thenmala	16	2320	0	0				0		0		NA	NA	NA	NA	NA	NA
58	Thevalakkara	23	8000	0	0				0		0		0	0	0	0	0	0
59	Thodiyoor	23	14237	72	0	2224	82	0	1	2	0	2	5.5 ton	3.5 ton	0	0	0	0
60	Thrikkaruva	16	12238	0	0	2005	86	0	1	1	0	1	4.9ton	1.8ton	0	0	0	0

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kollam	No of wards	No of Household	% Household_D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establsihment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
61	Thrikkovilvattom	23	21027	0	0	4460	0	0	0	0	0	0						
62	Ummannoor	20	2131	541	0	56	3986	0	0	0	0	0		na	na	na	NA	NA
63	Velinalloor	17	9010	82	0	2250	4	0	4	1	0	1	NA	NA	NA	NA	NA	NA
64	Veliyam	19	10513	61	0	1983	1	0	1	1	0	1	NA	NA	NA	NA	NA	NA
65	Vettikkavala	21	1850	0	460	805	0	0	3	0	0	0						
66	Vilakkudy	20	10897	30	0	3256	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA
67	West Kallada	14	5813	78	0	909	74	0	0	0	0	0	0	N.A	N.A	N.A	N.A	N.A
68	Yeroor	19	14321	1	0	615	1	1	0	1	0	1	0	0		0	0	0

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

2. 3. Panchayats in Pathanamthitta District

Sl. No	Panchayats in Pathanamthitta	No of wards	No of Household	% Household _D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment _D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
1	Anicaud	13	5067	0	6	0			0		0		200kg	200kg	0	0	0	0
2	Aranmula	18	9671	0	100	1697	0	100	0	0	0	0	2	2.5	2	0	0	0
3	Aruvappulam	15	6816	0	8	175	0	0	1	2	0	0	20	15	0	0	0	0
4	Ayroor	16	6548	0	55	835	0	77	0	0	0	0						
5	Chenneerkara	14	6515	0	0	0			0		0							
6	Cherukole	13	4398	0	0	521	0	0	0	0	0	0						
7	Chittar	13	5315	0	0	42	0	0	0	0	0	0						
8	Elanthur	13	4585	0	0	3980	0	0	0	0	0	0	310Kg	310Kg		0	0	0
9	Enadimangalam	15	7241	0	50	380		0	0	0	0	0	300 KG	100 kG	0	0	0	0
10	Erathu	17	9011	0	0	510	0	0	0	0	0	0						
11	Eraviperoor	17	8920	0	72	490		81	1	2	40	0	1200kg	122kg	0	0	0	0
12	Ezhamkulam	20	11555	0	74	2536	0	76	0	0	0	0	1400 kg	1400k g	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Pathanamthitta	No of wards	No of Household	% Household_D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
13	Ezhumattur	14	6807	0	100	1226	0	100	50	50	0	0	0.034	0.034	0.034	0	0	0
14	Kadampanad	17	9094	0	0	1497	0	0	0	0	0	0	320kg	320kg	0	0	0	0
15	Kadapra	15	8608	0	74	803	0	76	0	1	0	0						
16	Kalanjoor	20	12080	0	51	892	0	44	0	0	0	0	900	900	0	0	0	0
17	Kallooppara	14	6043	0	1	797	0	0	0	0	0	0	25	25	0	0	0	0
18	Kaviyoor	14	6450	0	1	260		97	0	0	100	100		16kg	0	0	0	0
19	Kodumon	18	8972			10495	0	0	0	1	0	0		2000 kg	720 kg	0	0	0
20	Koipuram	17	10486			2191			0	0	0	0	0.5	0.5	0.5	0.5	0.5	0
21	Konni	18	10028	3	50	1000		50	90	30	1	10	500	350	350	300	0	0
22	Kottanad	13	4919		50	31		0	0	0	0	0	55	55	0	0	0	0
23	Kottangal	13	5699	0	0	760	0	0	0	0	0	0						
24	KOZHANCHERRY	13	4133	2	12	2191	0	2	0	0	0	2	900 kg	210kg	210kg	160 kg	0	0
25	Kulanada	16	8229	0	100	420	0	100	0	100	100	100	0.033	0.033	0.033	10	10	0
26	Kunnanthanam	15	6854	0	52	401	0	70	0	0	0	0			0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Pathanamthitta	No of wards	No of Household	% Household_D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
													300kg	150kg				
27	Kuttoor	14	6958	0	0	1088	0	0	0	0	0	0						
28	Malayalapuzha	14	5733		69	930	0	51	69	100	0	1	1.63	0.224	0	1.43	0	0
29	Mallappally	14	6091		96	1370		100	0	0	0	0	350 ton	200 ton	0	0	0	0
30	Mallapuzhassery	13	4087	0	70	1054	0	3	2	1	0	0	4	0.05	0.01	0	0	0
31	Mezhuveli	13	5145	1	80	871		60	3	4	0	0	800Kg	700Kg	0	200kg	0	0
32	Mylapra	13	3600	0	0	446	0	12	0	12	3	1	540 kg	540 kg	Nil	Nil	Nil	Nil
33	Naranamoozhi	13	4851	2	91	51	0	102	60	102	2	2	650 kg	650 kg	Nil	Nil	Nil	Nil
34	Naranganam	14	5276	0		126			100	100	100	100	380 kg	380 kg	380	0	0	0
35	Nedumpuram	13	4595	0	77	230	0	44	98	87	0	0	450kg	450kg	450kg	0	0	0
36	Niranam	13	4477	2	92	316	0	68	73	82	0	0	412	412	412		0	0
37	Omaller	14	6448	4	90	350	0	229	90	72	0	0	950kg	5 (plastic only)	5	400kg	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Pathanamthitta	No of wards	No of Household	% Household _D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment _D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
38	Pallickal	23	14820	1	60	79		35	0	0	0	0	0.5	0.5	nil	nil	nil	nil
39	Pandalam Thekkekkara	14	7003	4	80	371	0	216	80	68	0	0						
40	Peringara	15	6700	0	0	320		0	0	0	0	0	65 kg	65 kg	0	0	0	0
41	Pramadom	19	11502	0	79	1236	0	205	0	0	0	0						
42	Puramattom	13	5049	0	52	232	0	78	1	2								
43	Ranni	13	6358	4	100	325	0	73	100	96	1	2	0.3	0.3	0.3	0.3	0.15	0
44	Ranni Angadi	13	5005	0	100	1400		32					200 kg	200 kg	200			
45	Ranni Pazhavangady	17	8229	0	100	420	0	100	0	100	100	100						
46	Ranni Perunad	15	7356		69	842	0	29	0	0	0	0	20kg	16kg	18kg			
47	Seethathode	13	5841	6	100	723	0	100	0	0	0	0	60kg	38kg	31kg	0	0	
48	Thannithode	13	4590	0	0	195	0	0	0	0	0	0						
49	Thottapuzhassery	13	5450	0	59	636	0	13	2	2	0	0	350kg/month	350kg/month	350Kg	0	0	0
50	Thumpamon	13	2887	0	100	267	0	100	52	0	0	0	.168 tpd	.168 tpd	Nil			

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Pathanamthitta	No of wards	No of Household	% Household _D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment _D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
51	Vadasserikkara	15	6854	0	0	401	0	129	0	2	0	0	450 kg	450 kg	450	0	0	0
52	Vallicode	15	7724		70	498	0	21	0	0	0	0	0	0	0	0	0	0
54	Vechoochira	15	5600	0	100	250	0	100	0	0	0	0						

2. 4. Panchayats in Alappuzha District

Sl. No	Panchayats in Alappuzha	No of wards	No of Household	% Household _D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment _D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
1	Ala	13	4670	0	0				0		0		NA	NA	NA	NA	NA	NA
2	Ambalapuzha North	18																
3	Ambalapuzha South	15	7323	0	0				2		0							
4	Arattupuzha																	

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Alappuzha	No of wards	No of Household	% Household _D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment _D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
5	Arookutty																	
6	Aroor																	
7	Aryad	18	9588	100	0	388	100	0	3	2	0	0						
8	Bharanikkavu	21	13239	46	0				0		0							
9	Budhanoor																	
10	Chambakulam	13	4900	0	0	122	0	0	0	0	0	0						
11	Chennampallipuram	17	9441	28	0	388	45	0	74	100	0	0						
12	Chennithala Thriperumthura																	
13	Cheppad	14	7400	0	0	252	0	0	0	0	0	0						
14	Cheriyamad																	
15	Cherthala south																	
16	Cheruthana	13	4600	0	0				0		0							
17	Chettikulangara	21	10832	0	0	1542	0	0	0	0	0	0						
18	Chingoli	13	5078	40	0	974	50	0	1	0	0	0						

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Alappuzha	No of wards	No of Household	% Household _D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment _D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
19	Chunakkara	15	7747	0	0	1240	0	0	0	0	0	0						
20	Devikulangara																	
21	Edathua																	
22	Ezhupunna																	
23	Kadakarappally	14	6302	0	0	388	0	0	0	0	0	0						
24	Kainakary	15	5335	50	37	10	0	0	37	0	0	0						
25	Kandalloor																	
26	Kanjikuzhy	18																
27	Karthikapally	13	4479	0	0				0		0							
28	Karuvatta	15	7216	0	0	1417	0	0	0	0	0	0						
29	Kavalam																	
30	Kodamthuruth																	
31	Krishnapuram																	
32	Kumarapuram	15																

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Alappuzha	No of wards	No of Household	% Household _D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment _D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
33	Kuthiathode	16	5400	97	6	372	0	0	0	0	0	0						
34	Mannanchery																	
35	Mannar	18																
36	Mararikulam North	18	8375	100	0	469	0	100	1	1664	2	0						
37	Mararikulam south	23	15938	95	0	2437	493	0	76	83	0	0						
38	Mavelikara Thamarakulam	17	8953	59	0	2883		5	0		0	0						
39	Mavelikara Thekkekara	19	11661	40		1653		9	0	0	0	0						
40	Muhamma																	
41	Mulakuzha																	
42	Muthukulam																	
43	Muttar	13	2884	0	0	239	0	0	0	0	0	0						
44	Nedumudy	15	5186	0	0	1578	0	0	1	32								
45	Neelamperoor	13	3841	100	0	460	0	0	0	0	0	0						
46	Nooranad	17	9328	70	0	469	88	0										

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Alappuzha	No of wards	No of Household	% Household _D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment _D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
47	Palamel	19	8546	89	0	502	0	0										
48	Pallippad	13	6029	7	0	573	2	0	0	0	0	0						
49	Panavally																	
50	Pandanad	13	3946	0	0	110	0	0	0	0	0	0						
51	Pathiyoor	19	11953		0	1249	0	0										
52	Pattanakkad																	
53	Perumbalam																	
54	Pulincunnu																	
55	Puliyoor																	
56	Punnapra north	17	8669	0	0	325	0	0	100	100	0	0						
57	Punnapra south	17	8560	0	0	346	0	0	0	0	0	0						
58	Purakkad																	
59	Ramankary																	
60	Thakazhy																	

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Alappuzha	No of wards	No of Household	% Household_D2D-Dry	% of Household-D2D-Wet	No of establishment	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste Collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
61	Thalavady																	
62	Thannermukkom																	
63	Thazhakkara	21	12128	50	0				3		0							
64	Thiruvanvandoor																	
65	Thrikkunnappuzha	17	7248	90	0	152	0	64	1	1	0	0						
66	Thuravoor																	
67	Thykattusery																	
68	Vallikunnam																	
69	Vayalar	16	5817	0	0				0		0							
70	Veeyapuram																	
71	Veliyanad																	
72	Venmony	15	7453			574	6	0	0	0	0	0						

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

2. 5. Panchayats in Kottayam District

Sl. No	Panchayats in Kottayam	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
1	Akalakunnam	15	5580	436	74	0	70	0	67	64	0	0	2160 kg	2160 kg	2160k g	40 kg	150 kg	0
2	Arpookara	16	6214	362	50	0	8	0	75	0	0	0	1200	0	0	1200	0	0
3	Athirampuzha	22	12380	2608	70	0	58	0	6	3	16	5	3 ton			500kg		nil
4	Ayarkunnam	20	10445	1102	69	49	609	424	3	4	0	0	1579 kg	1579 kg	1579 kg	35 kg	110 kg	NA
5	Aymanam	20	10522	1150	100	0	71	0	13	10	0	0	3230 kg	3230 kg	3230 kg	115 kg	0	0
6	Bharananganam																	
7	Chempu	15	6240	1444	73	0	49	0	13	4	0	0	2230	2230	2230	450 Kg	0	0
8	chirakkadavu	20	10986	3122	100	0	81	0	100	81	0	0	2000	2000	2000			
9	Elikulam	16	7790	370	34	0	69	0	30	69	0	0	225KG S	190KG S	35KGS	0	0	0
10	Erumely	23	16843	2362	3	0	15	0	17	11	0	0	250	200	58			
11	Kadanad	14	5717	1482	0	0	0	0	0	0	0	0						

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kottayam	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
12	Kadaplamattom	13	3317	198	100	0	100	0	100	100	0	0	100kg	75kg	75 kg	0	0	0
13	Kaduthuruthy	19	10336		55	0			25		0		3350	390	3350	0	350	0
14	Kallara (Vaikom)	13	3905	254	100	0	100	0	100	100	0	0	100	80	80			0
15	Kanakkary	15	7567	284	25	0	53	0	8	10	0	0	101kg	71kg	71kg	0	0	0
16	Kangazha	15	6383	117	0	0	0	0	0	0	0	0						
17	Kanjirappilly	23	12248	3000	29	0	17	0	29	17	0	0	6.1	66kg	0	0	0	0
18	Karoor	15	7119	35	32	0	14	0	100	100	0	0	0.25	0.25	0	0	0	0
19	Karukachal	16	8040	1093	0	0	0	0	0	0	0	0						
20	Kidangoor	15	6686	512	67	0	29	1	15	3	67	30	2	0	0	0	0	0
21	Kooroppada	17	8335	241		0		0	24	17	0	0	3	0	0	0	0	0
22	Koottickal	13	5363	739		0		0	0	0	93	42	3	0	0	2	0	0
23	Koruthodu	13	4803	475	71	71	25	25	14	100	0	0	40	28	0	0	0	0
24	Kozhuvanal	13	4103	256	0	0	0	0	2	1	0	0	2.8	0	0	1.2	0	0
25	Kumarakom	16	6472	8714	39	0	0	0	4	0	0	0	0	0	0	0	0	0

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kottayam	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
26	Kuravilangad	14	5831	1329	60	0	15	0	73	2	0	0	2	2	0	0	0	0
27	Kurichi	20	10600	348	42	0	29	0	1	2	0	0	3.1	0.2	0	0.1	0	0
28	Madappally	20																
29	Manarcad																	
30	Manimala	15	5430	50	6	0	60	0	0	30	0	0						
31	Manjoor	18	8210	1608	100	0	100	0	1	2	0	2	420	220	220	160	25	0
32	Marangattupilly	14	5264	1107	64	0	18	0	1	2	0	1						
33	Maravanthuruth	15	7499	243	13	0	35	0	1	3	0	0	25	0.7	0	0.02	0	0
34	Meenachil	13	4800	402	100	0	100	0	4	14	0	0						
35	Meenadom	13	4161	524	90	0	33	0	90	3	0	0	0.066	0.066	0	0	0	0
36	Melukavu	13	3700	69	84	0	257	0	0	19	0	0						
37	Moonnilavu	13	2975	160	100	0	100	0		100	0	0	90Kg	90Kg	90Kg	0	0	0
38	Mulakulam	17	7250	322	8	0	1	0	0	0	0	0						
39	Mundakayam	21	11901	700	3	0	100	0	89	100	0	0	0	0	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kottayam	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
40	Mutholy	13	5245	1718	62	0	27	0	0	0	0	0	0.2	0.1	0	0	0	0
41	Nedumkunnam	15	6922	1241	46		26	0	46	26	0	0	550 kg	550 kg	0	0	0	0
42	Neendoor	15	6902	702	9	0	100	0	43	90	0	0	2.1	0.1	0	0.1	0	0
43	Njeezhoor	14	4732	342	0	0	4	0	49	2	2	8						
44	Paippad	16	7766	1245	66	0	73	0	0	0	0	0						
45	Pallickathodu	13	5649	1472	50	0	24	0	4	0	0	0	1200 KG	1200 KG	0	0	0	1200 KG
46	Pampady	20	10700	2822	30	0	5	0	17	0	0	0						
47	Panachikad	23	12190	899	29	0	11	0	12	0	0	0			0	0	0	
48	Parathodu	19	11438	371	31	0	27	0	17	0	0	0						
49	Poonjar	13	3966	690	100	0	100	0	48	1	0	0	550					
50	Poonjar Thekkekkara	14	5353	1031	86	0	100	0	15	24	0	0	150	50	0	0	0	0
51	Puthuppally	18	7630	2510	0	0	0	0	0	0	0	0						
52	Ramapuram	18	9285	1152	11	0	18	0	5	13	0	0	350	75	0	0	0	0
53	T.V. Puram	14	6161	139	90	90	66	66	0	0	90	65	3.224	0	0	1.24		0

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kottayam	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
54	Teekoy	13	3626	424	70	0	35	0	0	0	0	0	0.643	0	0	0	0	0
55	Thalanadu	13	2230	73	43	0	27	0	0	18	0	0						
56	Thalappalam	13	3935	872	82	0	31	0	18	27	0	0	356	0	0	0	0	0
57	Thalayazham	15	4800	158	100	0	100	0	2	0	0	0	3.7 ton	3.7	0	0	0	0
58	Thalayolaparambu	15	8577	630	42	0	100	37	0	0	0	0	0.01	0	0	0.01	0	0
59	Thidanad	14	6372	766	58		10		15	2			5 Ton	5 Ton	0	0	0	0
60	Thiruvvarppu	18	8663	321	70		67		5	27			.5 Ton	.5 Ton	0	0	0	0
61	Thrikkodithanam	20	11273	1300	0	0	0	0	0	0	0	0						
62	Udayanapuram G.P	17																
63	Uzhavoor	13	5216	205	16	0	15	0	4	10	0	15	0.8	0.3	0.3	0	0	0
64	Vakathanam	20	10500	1400	0	0	0	0	0	0	0	0						
65	Vazhappally																	
66	Vazhoor	16	8384	517	100	0	100	0	15	14	0	0	0.5	0.3	0	0.25	0	0
67	Vechoor	13	5035	1092	17	0	1	0	0	0	0	0	0.4	0.2	0.2	0	0	0

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kottayam	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
68	Veliyanloor												0.7	0.3	0.3	0	0	0
69	Vellavoor	13	6265	918	20	0	7	0	3	0	0	0						
70	Velloor	16	6184	946	73	0	32	0	0	0	0	0						
71	Vijayapuram	19	10741	1129	85	0	5	0	4	0	85	0	0.2	0.2	0.2	0	0	0

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

2. 6. Panchayats in Idukki District

Sl. No	Panchayats in Idukki	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
1	Adimaly	21	10363	1140	81	0	76	1	72	7	0	1	20	2	2	2	0	0
2	Alakode	13	2662	64	31	31	34	34	0	0	0	0						
3	Arakulam	15	6445	182	24	24	20	20	0	0	0	0						
4	Ayyappancoil	13	4993	92	10	10	23	23	0	0	0	0	0	0	0			
5	Bisonvalley	13	3853	168	18	7	23	13	0	0	0	0	0	0	0	0	0	0
6	Chakkupallam	15	7120	407	0	0	0	0	0	0	0	0	2.5t	1t	500kg	0	0	0
7	Chinnakanal	13	4632	923	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Devikulam	18	7894	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Edamalakudy	13	764	19	0	0	0	0	0	0	0	0	0.01	0	0	0	0	0
10	Edavetty	13											0	0	0	0	0	0
11	Elappara	17	8160	950	0	0	0	0	6	0	0	0	0.1	0.1	0.1	0	0	0
12	Erattayar	14	4695	492	80	2	70	14	79	16	0	0	1	1	1	0	0	0
13	Idukki Kanjikuzhy	18	10560	320	0	0	0	0	29	0	0	0	0	0	0	0	0	0

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Idukki	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
14	Kamakshy	15	6234	450	0	0	0	0	80	72	0	0	1	1	1	0	0	0
15	Kanchiyar	16	6718	962	0	0	0	0	27	12	0	0	1.5	1.5	0	0	0	0
16	Kanthalloor	13	4680	0	0	0			0		0		0	0	0	0	0	0
17	Karimannoor	14	5064		0	0			0		0		0	0	0	0	0	0
18	Karimkunnam	13	4135	501	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Karunapuram	17	8107	1054	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	Kodikulam	13	3984	117	60	0	57	0	0	0	0	0	0	0	0	0	0	0
21	Kokkayar	13	4728		0	0			0		0		0	0	0	0	0	0
22	Konnathady	19	8730	650	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Kudayathoor	13	3456	163	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Kumaramangalam	13	4512	122	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0
25	Kumily	20	11850	2280	78	35	70	33	44	6	78	70	5	3.75	3.75	3.5	0	3.75
26	Manakkad	13	4739	138	25	0	62	0	0	0	0	0						
27	Mankulam	13	4589	632	0	0	0	0	93	18	0	0						

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Idukki	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
28	Marayoor	13	4659	791	0	0	0	0	0	0	0	0						
29	Mariyapuram	13	3592	15	0	0	0	0	0	0	0	0	1	1	1	0	0	0
30	Munnar	21	9107	3132	7	0	28	1	82	3	0	1						
31	Muttom	13	2563	2300	0	0	0	0	82	52	1	1					0	0
32	Nedumkandam												21	2	2	2	1	0
33	Pallivasal	14	5800	1200	0	0	0	0	93	98	0	0	0	0	0	0	0	0
34	Pampadumpara	16	6832	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	Peermade	17	9090	1425	100	0	100	0	100	100	0	0	5	4	4	4	0	0
36	Peruvanthanam	14	4242	1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	Purapuzha	13	3170	414	55	0	72	36	100	109	0	0						
38	Rajakad	13	3819	880	59	0	30	0	100	100	0	0	2	1	1	0	0	0
39	Rajakumary	13											6	1	1	1	0	0
40	Santhanpara	13	4845	170	38	38	65	65	0	0	0	0	2	1	1	0	0	0
41	Senapathy	13	4300	850	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Idukki	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
42	Udumbanchola	14	7607	248	0	0	0	0	60	343	0	0	1.5	1	1	0	0	1
43	Udumbannoor	16	6254	1115	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	Upputhara	18	8184	1211	0	0	0	0	134	110	0	0	0.1	0.1	0.1	0.1	0.1	0
45	Vandanmedu	18	7588	800	0	0	0	0	3	0	0	0	2	2	2	2	2	0
46	Vandiperiyar	23	13969	1011	0	0	0	0	50	59	0	0	0	0	0	0	0	0
47	Vannappuram	17	11001	1123	0	0	0	0	0	0	0	0	0.15	0.14	0.14	0.11		
48	Vathikudy	18	10194	1412	50	53	0	0	0	0	0	0						
49	Vattavada	13	2747	198	51	49	0	0	100	100	0	0						
50	Vazhathope	14	4500		0	0			0		0		0.4	0.3	0.3	0	0	0
51	Vellathooval	17	4818	274	93	93	100	80	93	80	93	80	0.2	0.1	0.1	0.1	0.1	0
52	Velliyamattom	15	6970	1093	75	0	85	0	83	79	0	0	0.1	0.1	0.1	0.1	0.1	0

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

2. 7. Panchayats in Ernakulam District

Sl. No	Panchayats in Ernakulam	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
1	Aikkaranadu	14	7889	1649	34	0			0	0	0	0	5.02	0.5	0.5	0	0	0
2	Alengadu	21	16317	0	0	0			0		0		4.12	0	0	0	0	0
3	Amballur	16	8454	1690	19	0	12	0	8	1	0	4	0.06	0.0012		0.00036	0.00012	0
4	Arakuzha	13	4965	189	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Asamannur	14	6329	150	8	0	0	0	8	400	0	0	0	0	0	0	0	0
6	Avoli	14	6404	1638	0	0	0	0	1	10	0	0	0	0	0	0	0	0
7	Ayavana	14	6621	568	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Ayyampuzha	13	5706	668	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Chellanam	21	10535	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	Chendamangalam	18	9665	1108	56	0	4	0	49	19	0	0						
11	Chengamanad	18	10566	468	100	0	64	0	95	75	0	0	6.99	6.99	6.99	0	0	0
12	Cheranallur	17	10832	568	74	0	67	0	74	67	0	67	3.7	3.7	3.7	0	0	0
13	Chittattukara	18	9583	412	16	0	0	0	99	58	0	0	4.5	3	1	0	0	1.5

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Ernakulam	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
14	Choornekkara	18	10805	1996	75	0	0	0	0	0	0	0	9 TDP	9TDP	9TDP	0		0
15	Chottanikkara	14	9097	480		0	88	0	95	88	3	88	4.3 TPD	4.3 TPD	4.3 TPD	0	0	0
16	Edakkattuvayal	14	6133	900	49	0	100	0	49	44	0	0	7 TPD	7 TPD	7 TPD	0	0	0
17	Edathala	21	17007	4154	59	0	91	0	22	45	0	0	3.5	0	0	0	0	0
18	Edavanakkadu	15	6346	954	75	0	100	0	0	0	0	0	6	3	3	0	0	0
19	Elamkunnappuzha	23	15479	1562	95	0	100	0	23	42	0	0	7	4	4	0	0	0
20	Elanji	13	5552	127	64	0	100	0	100	100	0	0						
21	Ezhikkara	14	6162	196	69	0	100	0	100	100	0	0	0	0	0	0	0	0
22	Kadamakkudi	13	4021	619	0	0	0	0	0	0	0	0						
23	Kadungalloor	21	16221	5505	0	0	0	0	0	0	0	0						
24	Kalady	17	9733	2512	82	0	0	0	12	4	0	0	7.06	1.6	0.9	0.5	0.5	0
25	Kalloorkadu	15	7511	320		0		0	2	6	0	0						
26	Kanjoor	13	4192	242	0	0	0	0	9	14	0	0	0	0	0	0	0	0
27	Karukutty	17	9699	2666	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Ernakulam	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
28	Karumaloor	20	11253	1215	0	0	0	0	1	2	0	0	0	0	0	0	0	0
29	Kavalangad	18	9880	1770	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Keerambara	13	4106	720	0	0	0	0	0	0	0	0	NOT ASSESSED	0	0	0	0	0
31	Keezhmadu	19	12788	716		0		0	7	21	0	0	No data available	0	0	0	0	0
32	Kizhakkambalam	19	9253	539	0	0	0	0	0	0	0	0						
33	Kottappadi	13	6172	685	0	0	0	0	100	100	0	0	0	0	0	0	0	0
34	Kottuvalli	22	14573	2105	50	0	0	0	86	1	0	0	0	0	0	0	0	0
35	Kumbalam	18	10129	1725	0	0	0	0	4	5	0	0	7.2	0	0	0	0	0
36	Kumbalangi	17	8719	1430	100	0	90	0	100	90	0	0	not estimated	not estimated	0	0	0	0
37	Kunnathunadu	18	12419	3940	23	0	0	0	4	0	0	0	0.5	0	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Ernakulam	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
38	Kunnukara	15	6500	250	54		60		46	40								
39	Kuttambuzha	17		220			0	0		0		0	0	0	0	0	0	0
40	Kuvappady	20	12123	0	10	0			3		0							
41	Kuzhupilli	13	3015	185	34	0	51	0	0	0	0	0						
42	Malayattoor - Neeleswaram	17	8386	971	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	Maneed	13	5048	219	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	Manjalloor	13	5253	1585	81	19	0	0			0	0				0	0	
45	Manjapra	13	3857	173	0	0	0	0	4	0	0	0	175KG	0	0	0	0	1000KG
46	Marady	19	10995	72	0	0	0	0	0	0	0	0	0.05	0.001	0.001	NIL	NIL	0.03
47	Mazhuvannur	14	6499	353	0	0	0	0	0	0	0	0	nil	nil	nil	0	nil	0
48	Mookkannur	13	5354	200	0	0	0	0	0	0	0	0	nil	nil	nil	0	0	0
49	Mudakkuzha	13	7386	700		0			0	0	0	0	100KG	0	0	0	0	0
50	Mulanthuruthi	16	7728	11	0	0	0	0	0	0								
51	Mulavukadu	16	7479	1105	0	0	0	0	0	0	0	0						

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Ernakulam	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
52	Narayambalam	19	12909	3522	37	0	10	0	0	0	0	0						
53	Nedumbassery	21	12271	0	0	0			0		0		24	0.5	0.5	0	0	0
54	Nellikuzhi	16	7801		0	0			0		0		0	0	0	0	0	0
55	Njarakkal	16	7957	1974	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	Okkal	16	4780	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	Paingottur	13	4500	135	76	0	100	0	0	0	0	0	0	0	0	0	0	0
58	Palakkuzha	13	5050	1517	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	Pallarimangalam	23	13549	1141	75	0	70	0	92	90	0	0						
60	Pallippuram	13	5411	64	83	0			12	39	0	0						
61	Pambakkuda	18	9860	3022		0		0	71	93	0	0	1	4.9				4.9
62	Parakadavu	22	11745	315	0	0	0	0	98	1587	0	0						
63	Payipra	13	6129	588	0	0	0	0	100	100	0	0						
64	Pindimana	14	7649	3107	34	0	6	0	100	100	0	0						
65	Poothrikka	13	6453	1814	12	0	8	0	12	0	0	0	2219 KG	2219 KG	1780 KG	0	0	0

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Ernakulam	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
66	Pothanikadu	13	3687	750	23	0	17	0	20	0	0	0	100kg/day	0	0	0	0	0
67	Puthenvelikkara	17	9932	436	0	0	0		0	0	0	0						
68	Ramamangalam	20	12715	1200	40	0	7		8	46	0	0	3TPD	3TPD	0	3tpd	0	0
69	Rayamangalam	16	6000	2000	25	20	3		14	2	0	0						
70	Sreemoola Nagaram	13	5769	250	0	0	0	0	0	0	0	0						
71	Thirumaradi	16	10332	460	11	0	54	0	0	0	0	0	0	0	0	0	0	0
72	Thiruvaniyoor	14	7572	1654					10	10	0	0	1 tpd	0	0	0	0	0
73	Thuravur	20	15375	365		0			0	0	0	0	THURAVOOR	175KG	0	0	0	0
74	Udayamperoor	20	10022	1586		0			0	0	0	0						
75	Vadakkekkara	17	9549	1789					4	11	0	0						
76	Vadavukodu-Puthankurisu	14	6174	1628	0	0	0	0	0	0	0	0						
77	Valakom	13	4201	440	0	0			95	0	0	0				0	0	0

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Ernakulam	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
78	Varappetti	13	6087	771	0	0			0	0	0	0	0.07	0.07	0	0	0	0
79	Varappuzha	16	9275	1858	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	Vazhakkulam	20	17202	788	0	0			0	0	0	0	1	1	0	0	0	0
81	Vengola	23	17853	850	0	0	0	0	78	71	0	0	3	0	0	0	0	0
82	Vengoor	15	5855	775	0	0			0	0	0	0	10	10	0	0		

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

2. 8. Panchayats in Thrissur District

Sl. No	Panchayats in Thrissur	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
1	Adat	18	8480	1154	0	0	17	0	0	0	0	0	2	3	3	0	0	0
2	Alagappanagar	17	9749	1917.0	0	0	0	0	15	8	0	0	2	0	0	0	0	0
3	Aloor	23	17500	1700	0	0	0	0	0	0	0	0				0	0	0
4	Annamanada	18	10499	2666	0	0	0	0	14	0	0	0						
5	Anthikad	15	6922	1160	0	0	0	0	7	0	0	0						
6	Arimpur	17	10495	69	0	0	0	0	19	0	0	0	3 ton	2 ton	nil	0	0	2
7	Athirappilly	13	3604	967	0	0	0	0	0	0	0	0						
8	Avanur																	
9	Avinisserry	14	6213	521	0	0	89	0	3	0	0	0	0	0	0	0	0	0
10	Chazhur	18	7956	7956	100	0	100	0	0	0	0	0	0	0	0	0	0	0
11	Chelakkara	22	13745	2921	23	0	3	0	0	0	0	0	0	0	0	0	0	0
12	Cherpu	21	11176	2156	72	0	0	0	1	0	0	0	not estimated	not estimated	not estimated	not estimated	not estimated	not estimated

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Thrissur	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
13	Choondal	18	10330	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Chowannur	13	5180	919	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Desamangalam	15	7119		0	0			0		0		0	0	0	0	0	0
16	Edathiruthy	18	8642	783	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Edavilangu	14	5373		100	0			0		0		0	0	0	0	0	0
18	Elavally	16	8513	1941	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Engandiyur	16	7781	1515	72	0	30	0	0	1	0	0	not estimated	not estimated	not estimated	not estimated	not estimated	not estimated
20	Eriyad	23	14585	2704	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Erumapetty	18	7420	3920	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Kadangode	18	8561	2696	0	0	0	0	0	0	0	0						
23	Kadappuram	16	6810	901	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Kadavallur	20																
25	Kadukutty																	

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Thrissur	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
26	Kaipamangalam	20	10800	960	50	0	5	0	0	0	0	0	0	0	0	0	0	0
27	Kaiparambu	18	8409	818	36	0	6	0	0	0	0	0	not estimated	0	0	0	0	0
28	Kandanassery	16	6584	1309	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Karalam	15	6845	825	0	0	21	0	0	0	0	0						
30	Kattakampal	16	8500	700	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	Kattoor	14	5595	1673	30	0	5	0	0	1	0	0						
32	Kodakara	19	10871	3016	29	0	0	0	0	17	0	0	9.6 tons	6.7 tons	6.7 tons	0.5 ton	0	0
33	Kodassery	20	11341		0	0			0		0		0	0	0	0	0	0
34	Kolazhy	17															0	0
35	Kondazhy	15	6764	972	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	Koratty	19	10989	610	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Thrissur	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
37	Kuzhur	14	6510	908	0	0	0	0	0	0	0	0	not estimated	0	0	0	0	0
38	Madakkathara	16	8860	1562	40	0	52	0	9	0	0	0	2.05 TON	2.05 TON	2.05 TON	0.25TON	1 TON	0
39	Mala	20	11856	4446	0	0	0	0	0	0	0	0						0
40	Manalur	19	9467	2312	100		100		100	100	90		9.86TON	9.86TON	9.86TON	05. TON	0	0
41	MATHILAKAM	17	7565	588	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	Mattathur	23	16245	2731	0	0	0	0	0	0	0	0						
43	Meloor	17	6888		0	0			0		0		200kg	0	200kg	0	0	0
44	Mulakunnathukavu	14	7053		0	0			0		0		Mulakunnathukavu	0	0	0	0	0
45	Mullassery	15	6753		67	0			0		0		0	0	0	0	0	0
46	Mullurkkara	60	5927	1383	36	0	4	0	0	0	0	0	0	0	0	0	0	0
47	Muriyad	17	9633	1180	100	1		100	0	0	0	0						

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Thrissur	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
48	Nadathara	17	10032	1658	100	0			100	50	100	50	2000Kg	2000Kg	2000Kg	1000Kg	500Kg	NA
49	Nattika	14	6373	2514	84	0	11	0	0	0	0	0	0	0	0	0	0	0
50	Nenmanikkara	15	6745	1815	22	0	8	1	0	0	0	0						
51	Orumanayur	13	3035	249	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA
52	Padiyoor	14	6333	902	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA
53	Pananchery	23	15443	3231	0	0	0	0	0	0	0	0						
54	Panjal	16	8250	1175	0	0	0	0	0	0	0	0						
55	Paralam	15	6085		6	0			0		0							
56	Parappukkara	18	9758	1789	90	0	31	0	0	31	0	0						
57	Pariyaram	15	5406	8916	0	0	0	0	0	0	0	0						
58	Pavaratty	15	6755	1775	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA
59	Pazhayannur	22	13680	516	45	45	90	87	0	0	0	0	Not estimated	Not estimated	Not estimated	NA	NA	

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Thrissur	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
60	Perinjanam	15	6883	650	100		100		100	100								
61	Poomangalam	13	4336		0	0			0		0		Not estimated	Not estimated	Not estimated	Not estimated	NA	NA
62	Porkulam	13	5471		0	0			0		0							
63	Poyya	15	7662		0	0			0		0							
64	Pudukad	15	7635	565	0	0	0	0	0	0	0	0	Not estimated	Not estimated	Not estimated	Not estimated	Not estimated	Not estimated
65	Punnayoorkulam	19	9516	2040	0	0	0	0	0	0	0	0	324	324	324	0	0	0
66	Punnayur	20	9972	2128	0	0	0	0	0	0	0	0	615	615	615	0	0	0
67	Puthenchira	15	16797	1107	0	0	0	0	0	0	0	0	115 ton	115	115	0	0	0
68	Puthur	23	13268	3186	9	0	2	0	0	0	0	0	55	10	0.1	0	0	0
69	Sreenarayanapuram	21	12471	2857	50	0	50	0	0	0	0	0				0	0	0
70	Talikulam	16	6306	10	29	0	100	0	0	0	0	0	50	30	30	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Thrissur	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
71	Thanniyam	18	9782	5000	51	0	100	0	0	0	0	0	20 ton	20	20	0	0	0
72	Thekkumkara	18											5TON/DAY	0	5/TON	0	0	0
73	Thiruvilwamala	17	NA	NA														
74	Tholur	13	4388	30	0	0	83	0	0	0	0	0			20	na	na	Na
75	Thrikkur	17	8552	1280		0	3	0	0	0	0	0	0	0	0	0	0	0
76	Vadakkekad	16	8320	980	0	0	5	0	0	0	0	0	0	0	0	na	na	Na
77	Valapad	20	10127	1767	4	0	0	0	1	1	0	0	not estimated	not estimated	not estimated	na	na	na
78	Vallachira	14	7320	670	0	0	0	0	0	0	0	0	not estimated	not estimated	not estimated	NA	NA	NA
79	Vallatholnagar	16	6378	1331	60	0	2	0	0	0	0	0	not estimated	not estimated	not estimated	na	na	na
80	Varandarappilly	22	13900	2601	0	0	0	0	5	0	0	0	not	not	not	na	na	na

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Thrissur	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
													estimated	estimated	estimated			
81	Varavoor	14	6322	911	0	0	0	0	0	0	0	0	not estimated	not estimated	not estimated	na	na	na
82	Vatanappally	18	7625	1236	8	0	2	0	0	0	0	0	not estimated	not estimated	not estimated	0	0	0
83	Vellangallur	21											not estimated	not estimated	not estimated	0	0	0
84	Velukkara	18	8960	1766	0	0	0	0	6	1	0	0						
85	Velur	17	8430	1439	0	0	0	0	0	0	0	0	not estimated	not estimated	not estimated	0	0	0
86	Venkitangu	17																

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

2.9. Panchayats in Palakkad District

Sl. No	Panchayats in Palakkad	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
1	Agali	21	12739	2615	75	0	96	4	94	2	0	98						
2	Akathehtara	17	9500	1892	45	0	2	0	48	2	0	0	3500 kg	2500 kg/month	0	0	0	0
3	Alanallur	23	15185	4290	82	0	0	0	17	6	82	0	2140. kg	1400. kg	1400. kg	0	0	0
4	Alathur	16																
5	Ambalappara	20	12928	1432	87	0	0	0	0	29	0	0	6 Ton	6 Ton	Transported to a private company	0	0	0
6	Anakkara	16	7066	1401	70	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Ananganadi	15											0	0	0	0	0	0
8	Ayilur	17	8227	1289	85	2	0	0	0	0	0	0	0	0	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Palakkad	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
9	Chalavara	15	6860	1048	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	Chalissery	15	6550	1200	100	0	100	100	15	8	0	0	100					
11	Elappully	22	11815	2016	70	64	60	47	0	0	0	0	1100 Kg	1000 Kg	850 Kg	0	0	0
12	Elavanchery												0.15	0.1	0	0	0	0
13	Erimayur	18	9482	889	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Eruthenpathy	14	5681	362	22	52	32	43	0	0	0	0	0.05	0.02	0.03	0	0	0
16	Kanjirappuzha	19	9944	1959	0	0	0	0	2	0	0	0						
17	Kannadi	15	8063	1100	50	0	11	0	0	0	0	0						
18	Kannambra	16	7950	650	73	0	100	0	0	0	0	0	0.10 tonne	0.05 tone	0.05 tone treatment plant is not available at kannambra.	0	0	0

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Palakkad	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
															waste is being transferred to Pazhayannur RRF			
19	Kappur	18	8902	1759	0	0	0	0	0	0	0	0	0.45	0	0	0	0	0
20	Karakurussi	16	7417	1490	0	0	100	0	100	2	0	0						
21	Karimba	17	8870	2049	70	0	97	0	0	0	0	0						
22	Karimpuzha	18	9835	268	64	64	100	4	0	2	0	0	0.5	0.5	0.5	0	0	0
23	Kavassery	17	8966	218	7	0	12	0	0	0	0	0						0
24	keralassery	13	4861	238	0	0	0	0	0	0	0	0	0.03	0.03	0.03	0	0	0
25	Kizhakkanchery	22	13196	2238	69	0	67	0	0	1	0	0	0.04	0.04	0.04	0	0	0
26	Kodumbu	15	8182	1323	85	84	90	90	28	4	0	0						

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Palakkad	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
27	Koduvayur	18	10181	465	0	0	0	0	5	75	0	0	1.05 tonne	1.05 tonne	1.05 tonne	205 kg	0	0
28	Kollenkode	18	7346	1345	0	0	157	240	0	0	0	0	1500	1200	1200	200	0	0
29	Kongad	18	9300	1684	100	0	48	0	54	42	100	42	500	500	500	0	0	0
30	Koppam	17	9915	3482	100	0	41	0	0	0	0	0	0.05	0.05	0.05	0	0	0
31	Kottayi	15	6993	1774	10	0	45	0	5	1	0	0	0.05	0.05	0.05	0	0	0.05
32	Kottoppadam	22	13171	2843	0	0	30	0	0	0	0	0	0.05	0.05	0.05	0	0	0.05
33	Kozhinjampara	18	9119	1735	0	0	0	0	0	0	0	0						
34	Kulukkallur	17	8572	1787	79	0	0	58	0	0	0	0	0	0	0	0	0	0
35	Kumaramputhur	18	8902	1852	81	0	0	60	0	0	0	0	0.05	0.05	0.05	0	0	0
36	Kuthannur	16	6896	824	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	Kuzhalmannam	17	8717	250	100	0	0	100	0	0	0	0	0	0	0	0	0	0
38	Lekkidi-Perur																	
39	Malampuzha	13																
40	Mankara	14	7125	1220	0	0	0	0	0	0	0	0						

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Palakkad	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
41	Mannur	14	5925	1300	48	0	19	0	0	0	0	0	0	0	0	0	0	0
42	Marutharoad	19	11926	2101	50	0	0	0	0	0	0	0						
43	Mathur	16	7924	676	73	0	100	0	0	0	0	0	0	0	0	0	0	0
44	Melarkode	16	7043	0	0	0			0		0		0	0	0	0	0	0
45	Mundur	18	9593	1819	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	Muthalamada	20	9704	2110	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Muthuthala	15	6945	175	100	0	100	0	18	42	0	0	539.25	323.55	323.55	200.15	100.5	25
48	Nagalassery	17	8507	590	100	0	100	0	45	25	0	0				0	0	
49	Nallepilly	19	8095	448	100	0	100	0	0	0	0	0	0	0	0	0	0	
50	Nellaya	19	10587	0	0	0			0		0							
51	Nelliampathy	13	950	97	100	0	100	0	0	0	0	0	0	0	0	0	0	0
52	Nemmara	20	11815	2449	97	0	5	0	7	2	0	0	180 KG	172 KG	172	0	0	0
53	Ongallur	22	12811	3161	99	0	5	0	0	0	0	0	0	0	0	0	0	0
54	Pallassena	16	8433	268	93	0	17	0	6	0	0	0	0	0	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Palakkad	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
55	Parali	20	10752	2069	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	Paruthur	16	6082	728	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	Pattanchery	16	8829	150	0	0	0	0	0	0	0	0	na	na	na	na	na	na
58	Pattithara	18	9467	1784	0	0	0	0	4	7	0	0	0	0	0	0	0	0
59	Perumatti	18	9900	380	53	0	67	0	0	0	0	0	0	0	0	0	0	0
60	Perungottukurissi	16	9539		0	0			0		0							
61	Peruvemba	14	5757	700	0	0	0	0	0	0	0	0	500 kg	50kg	0	0	0	0
62	Pirayiri	21	13282	1959	0	0	0	0	0	0	0	0	1400 Kg	0	0	0	0	0
63	Polpully	13	5289	690	0	0	0	0	0	0	0	0	500 kg	0	0	0	0	0
64	Pookotukavu	13	4561	489	0	0	54	0	0	0	0	0	NA	NA	NA	NA	NA	NA
65	Pudukkode	15	6294	6	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA
66	Pudunagaram	13	4248	875	12	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA
67	Puduppariyaram	21	12062	21	0	0	0	0	0	0	0	2381						
68	Pudur																	

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Palakkad	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
69	Pudusseri	23																
70	Sholayur	14	6926	275	0	0	0	0	0	0	0	0						
71	Sreekirshnapuram	14	5380	350	100		100		56				539.25	323.55	323.55	200.15	100.5	25
72	Thachampara	15	5502	868	0	0	0	0	0	0	0	0						
73	Thachanattukara	16	6085	170	100	0	0	0	0	0	0	0						
74	Tharur	16	7997	839	1	2	0	0	0	0	0	0	0	0	0	0	0	0
75	Thenkara	17	8347	1064	0	0	0	0	0	0	0	0	0	0	0	0	0	0
76	Thenkurussi	17	8348	820	72	0	56	0	0	0	0	0	0	0	0	0	0	0
77	Thirumittakkode	18	8300	450	0	0	0	0	0	0	0	0						
78	Thiruvegappura	18	8684	1585	0	0	0	0	0	0	0	0	0	0	0	0	0	0
79	Thrikkaderi	16	6698	279	0	0	0	0	0	0	0	0						
80	Thrithala	17	8429	424	0	0	0	0	0	0	0	0	8 tone	7 tone	7 tone	0	0	0
81	Vadakarappathy	17	9851	0	0	0			0		0		0	0	0	N	N	N
82	Vadakkanchery	20	10360	829	3	0	29	16	20	29	0	0	4 tone	2 tone	1 tone			

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Palakkad	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
83	Vadavannur	13	5074	980	0	0	0	0	0	0	0	0	vadavannur			n	n	n
84	Vallapuzha	16	8838	1547	0	0	0	0	0	0	0	0						
85	Vandazhi	19	10149	738	90	0	20	0	90	20	0	0	0	0	0	0	0	0
86	Vaniyamkulam	18	9836	815	0	0	0	0	23	74	0	0	5000kg	3000kg	3000	0	0	2000
87	Vellinezhi	13	5147	281	100	0	100	0	100	100	0	0	840	600	600	600	0	0
88	Vilayur	15	6953		0	0			92		0							

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

2.10. Panchayats in Malappuram District

Sl. No	Panchayats in Malappuram	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
1	A.R.Nagar	21																
2	Alamkodu	19	11127	200	0	0	0	0	0	0	0	0						
3	Aliparambu	21																
4	Amarambalam	19	7841	604	100	0	100	0	0	0	0	0	40-50 kg per day	40-50 kg per day	40-50 kg per day	40-50 kg per day	Nil	Nil
5	Anakkayam	23											50 kg.per day	50 kg.per day	50 kg.per day	50 kg.per day	Nil	Nil
6	Angadipuram	23																
7	Areekkode	18	8536	4718	0	0	0	0	13	18	0	0						
8	Athavanadu	22											30-50 KG PER DAY	30-50 KG PER DAY	NIL	NIL	NIL	NIL
9	Chaliyar	14	6361	267	100	0	100	0	12	82	0	2	25-50 KG PER	25-50 KG PER	25-50 KG PER	20-30 KG PER DAY	20-30 KG PER DAY	NIL

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Malappuram	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
													DAY	DAY	DAY			
10	Cheekkode												70-80 kg/day	30-40 Kg/day	30 kg/day	5 kg/day	10kg/day	nil
11	Chelambra	18	10601	1888	100	0	0	0	3	0	0	0	70-80 kg/day	30-40 kg/day	20-30 kg/day			
12	Cheriyamundam	18	6540	420	100	0	100	0	0	0	0	0	30-40KG per day	30-40KG per day	30-40KG per day	15-25KG per day	20-40KG per day	0
13	Cherukavu																	
14	Chokkadu	18	9213	254	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Chunkathara												70-120 kg per day	50 -90 kg per day	50-90 kg per day	50-90 per day	nil	nil
16	Edakkara	16	8675	486	73	0	55	0	9	45	0	1	50-60 kg per day	50-60 kg per day	50-60 kg per day	50-60 kg per day	50-60 kg per day	nil
17	Edappal	19	9438	3437	100	0	58	0	14	1	0	0	40 kg per day	40 kg per day	40 kg per day	40 kg per day	40 kg per day	NIL

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Malappuram	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
18	Edappatta																	
19	Edarikkode	16	6500	NIL									0	0	0	0	0	nil
20	Edavanna	22	11141	3978	92	0	75	0	18	6	0	0	50-70 kg per day	50-70 kg per day	50-70 kg per day	50-70 kg per day	50-70 kg per day	nil
21	Edayur	19	8706	1796	29	0	0	0	7	0			200kg	nil				
22	Elamkulam																	
23	Irimbiliyam	17																
24	Kaladi	16	7529	1964	24	0	15	0			0	3	130kg	110kg	nil	nil	nil	nil
25	Kalikavu	19											0	0	0	0	0	0
26	Kalpakanchery	19	9844	3364	0	0	0	0	0	0	0	0						
27	Kannamangalam																	
28	Karulai	15	5625	220	100	0	100	0	0	0	0	3	20-60 KG PER DAY	20-60 KG PER DAY	20-60 KG PER DAY	20-60 KG PER DAY	20-60 KG PER DAY	0
29	Karuvarekkund	21	9967	295	0	0	0	0					0	0	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Malappuram	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
30	Kavannoor	19	9586	346	0	0	0	0										
31	Keezhattur	19																
32	Keezhuparambu	14	6050	262	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	Kodoor	19	10290	229	0	0	0	0	8	0		0						
34	Koottilangadi	19	10058	3274	100	0	100	0	0	0	0	0	30-40 kg per day	30-40 kg per day	30-40 kg per day	30-40 kg per day	NIL	NIL
35	Kuruva																	
36	Kuttippuram																	
37	Kuzhimanna	18	9225	542					93	100						0		0
38	Makkaraparambu	13	5861	394	100	0	100	0	0	0	0	0	180-200Kg	180-200Kg	180-200Kg	180-200Kg	13.5Kg	Nil
39	Mambad	19	9850	220	0	0	0	0	8	0	0	0	0.3	0.3	0.3	0	0	0
40	Mangalam	20	7866	1620	100		22		61	46			20-25kgs per day	20-25kgs per day	20-25kgs per day	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Malappuram	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
41	Mankada	18	9845	200			110	0	91	110			0.1	0.1	0.1	0	0	0
42	Marakkara	20	7715	342					46	158			0.5	0.5	0.5	0.5	0	0
43	Maranchery	19	10699	2291	100	0	0	100	100	100	0	0	0.5	0.5	0.5	0.3	0	0
44	Melattur																	
45	Moonniyur																	
46	Moorkkanadu	19	8452	385	76	24	70	30	0	0	0	0	0.15T	0.15T	NIL	0.1 T	NIL	0.05T
47	Morayur	18	8745	313	60	0	100	0	1	8	60	100	0.15T			0.12T		
48	Muthedam	15	7145	204	100	24	100	0	24	0	0	0	15-30 KG PER DA	15-30 KG PER DAY	15-30 KG PER DAY	10-15 KG PER DAY	10-15 KG PER DAY	NIL
49	Muthuvallur																	
50	Nannambra	21	9100	3000	0	0	0	0	0	0	0	0	30kg per day	0	0	0	0	0
51	Nannamukku	17	6752	400	48	0	100	0	0	0	0	0	25kg perday	0	0	0	0	0
52	Niramaruthur	17	7969	1156	0	0	0	0	0	0	0	0	30kg		0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Malappuram	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
													per day					
53	Orakam	17	7995	256	11	0	14	0	0	0	0	0		75 kg per day	0	0	0	0
54	Othukkungal	20																
55	Ozhur	18	7996	252	0	0	0	0	0	0	0	0	20-25Kg/day	0	0	0	0	0
56	Pallikkal																	
57	Pandikkad	23		482			0	0		0		0						
58	Parappur	19	9574	1919	0	5	0	0	0	0	0	0	0	0	0	0	0	0
59	Perumanna Klari																	
60	Perumpadappu	18	8127	1647	4	2	33	8	2	8	0	0	0	0	0	0	0	0
61	Peruvallur	19	9124		4	0			0		0							
62	Ponmala	18	7237	1302	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	Ponmundam																	

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Malappuram	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
64	Porur	17	9076	672	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	Pothukallu	17	10427	726	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66	Pukkottur	19	8785	689	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67	Pulamanthol																	
68	Pulikkal	21	10949		5	0			0		0		15-30 kg/day	15-30kg/d ay	15-30kg/d ay	0	0	0
69	Pulpatta																	
70	Purathur	19	6959	1689	100	100	40	0	25	0	0	0	10-15 Kg /day	10-15 Kg /day	10-15 Kg /day	0	0	0
71	Puzhakkatteeri	17	9386	340	100	0	100	0	0	29	100	100	4	0	3.5	0	0	Nil
72	Thalakkadu												20kg/d ay	15kg/d ay	0	0	0	0
73	Thanalur																	
74	Thavannur	19	10047	800	100	0	100	0	64	40	0	0	0	0	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Malappuram	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
75	Thazhakkode	21	10080	6	100	0	83	0	64	83	0	0	1500kg	1350kg	0	0	0	0
76	Thenhippalam	17	9821		0	0			69		0		0	0	0	0	0	0
77	Thennala	17	7131	0	0	0			100		0							
78	Thirunavaya	23	13052		83	0			0		0		0	0	0	0	0	0
79	Thiruvali	16	7182	16	100	0	0	0	97	63	0	0	0	0	0	0	0	0
80	Thrikkalangodu																	
81	Thriprangode	21											30-50Kg per day					
82	Thuvloor	17	6500	220	100	0	100	0					0.35	0.35				
83	Urgantteeri																	
84	Valavannur	19	9139	2182	100	0	50	0	4	0	0	0	25-30 Kg/day	25-30 Kg/day	NA	5-8 Kg	NA	NA
85	Vallikkunnu	23																

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Malappuram	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
86	Vattakkulam	19																
87	Vazhakkad																	
88	Vazhayaur	17	9281	2216	100	0	100	0	100	100	0	0	0.18	0.15	0.14	0	0	0
89	Vazhikkadavu	23	14141	3111	0	0	0	0	0	0	0	0	16,000 KG	11,000 KG	8000KG	0	0	
90	Veliyankode																	
91	Vengara	23	10852		0	0			0		0		NA	NA	NA	NA	NA	NA
92	Vettathur												25,000 kg	20,000 kg	14,000 kg	1500kg	1500kg	NIL
93	Vettom	20	8313	1892	100		0	0	0	1	0	0						
94	Wandoor												NA	NA	NA	NA	NA	NA

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

2.11. Panchayats in Kozhikode District

Sl. No	Panchayats in Kozhikode	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
1	Arrikkulam	13	4409	1178	91	0	85	0	22	30	91	85	15 kg	15kg	15 kg	0		
2	Atholy	17	7193	1966	70	0	0	0	0	0	0	0	20KG	20KG	20KG	0		
3	Ayancheri	17	8354	2857	0	0	0	0			100	5	1 TON	1 TON	1 TON	0	0	0
4	Azhiyur	18	7900	561	63	0	80	0	100	100	0	0	800Kg/day	800Kg/day	800Kg/day	0	0	0
5	Balusseri	17	8779	1715	97	0	96	0	89	78	0	0	2	2	2	1	0	0
6	Chakkittappara	15	6916	1811	0	0	0	0	0	0	0	0	1	1	1	0	0	0
7	Changaroth	19	8750	624	100	0	92	16	86	92	0	0	25 Kg / day	25 Kg/day	25Kg/day	0	0	0
8	Chathamangalam	23	15068	3746	34	0	9	0	0	0	0	0	5 ton	5 ton	5 ton	Nil	Nil	Nil
9	Chekkiaid	15	6544	1823	4		1	0	0	0	0	0				0	0	0
10	Chellanur	21	12483	2250	0	0	0	0	0	0	0	0				0	0	0
11	Chemmanchery	20	11521	3090	7	0	0	0	0	0	0	0	1589	1389Q UINTA L	1389Q UINTA L	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kozhikode	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
12	Chengottukavu	17	6990	350	0	0	0	0	7	0	0	0	126	60	60		NIL	NIL
13	Cheruvannur	15	5481	1079	46	0	0	19	7	0	0	0	4T	4T	NIL	NIL	NIL	NIL
14	Chorode	21	10118	860		0	4	6	11	2	0	0	6	6	0	0	0	0
15	Edachery	17	7936	514	100	0	195	0	19	146	0	0	5 ton	5 ton	Nil	Nil	Nil	
16	Eramala	19	9407	2000	79	0	100	8	84	120	0	0	240 kg	240kg	0	240kg	0	0
17	Kadalundy	22	10742	2815	74	0	43	0	93	53			10 TONE	10 TONE	0	0	0	0
18	Kakkodi	21	12913	2472	100		42	0	50	8			0.25 TONE /DAY	0.25 TONE /DAY	0	0	0	0
19	Kakkur	15	5950	1141	76	0	61	7	0	0	0	0	120	120 KG	0	120KG	0	0
20	Karassery	18	9824	3007	69	0	100	7					0.1	0.1	0	0	0	0
21	Kattippara	15	5668	664	0	0	0	0		0	0	0	110kg	110	0	110kg	0	0
22	Kavilumpara	16	7466	1958	67	0	38	0	100	46	67	47	0.27 Ton/Da y	0.27 Ton/D ay	Nil	NIL	NIL	Nil
23	Kayakkody	16	6113	1320	79	0	47	0	100	100	0	0	350KG/	350KG	nil			

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kozhikode	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
													DAY	/DAY				
24	Kayanna	13	4430	624	78	0	100	0	100	100	0	0	85	85	nil			
25	Keezhariyur	13	4558	590	0	0	0	0	0	0			150KG/Day	150KG/Day	nil	0	0	0
26	Kizhakkoth	18	9183	3773	69	0	67	0	95	86								
27	Kodenchery	21	10848	865	58	0	0	0	67	87	0	0	160 KG	160 KG	Nil	Nil	Nil	Nil
28	Kodiyathoor	16	8351	2310	37	0	0	0	100	61	0	0	210kg	200kg	130kg	0	0	0
29	Koodaranhi	14	6900	518	55	1	52	0	1	0	0	0	300 kg/day	210 kg/day	0	0	30	0
30	Koorachund	13	5601	1369	40	0	0	0			0	0	350	300	0	0	0	0
31	Koothali	13	5737	412	18	0	0	0			0	0	200	150	0	0	0	0
32	Kottur	19	7830	1050	70	51	48	33	100	100	0	0						
33	Kunnamangalam	23	17474	5820	0	0	11	6	100	100	0	0	450 kg/day	425 kg/day	410 kg/day	0	0	0
34	Kunummal	13	5668	2124	100	0	100	0	100	100	0	0	160 Kg / Day	140 Kg / Day	140 Kg / Day	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kozhikode	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
35	Kuruvattur	18	11425	3015	0	0	303	48	80	48	0	0	400 Kg/Day	400 Kg/Day	400 Kg/Day	nil	0	0
36	Kuttiady	14	6083	4241	69		143	0	100	100	0	0	150 kg/Day	130 Kg/Day	130 Kg/Day	Nil	nil	0
37	Madavoor	17	7096	1383	100		29	0	15	1	0	0	300	250	250	0	0	0
38	Maniyur	21	12421	1412	35		445	0	5	1	0	0	2.5 ton/month	1 ton / month	nil	nil	nil	nil
39	Maruthonkara	14	6763	805	0	0	68	0	41	11	0	0	158K.G /Day	135K.G/Day	135 kg/Day	0	0	0
40	Mavoor	18	9027	1190		0	0	0			0	0	120 Kg / Day	100	95	0	0	0
41	Meppayur	17	7308	1840	89		100		89	100			0.2	0.18	0.18	0	0	0
42	Moodadi	18	8594	2284	100	0	100	0	92	100	0	0	138 T	138 T	138 T	5 T	0	0
43	Nadapuram	22	11000	1500	0	0	0	0					180 m3/month	180 m3/month	Nil	Nil	Nil	Nil
44	Naduvannor	16	7050	2090	80		80	0					8.50	2.50	Nil	Nil	Nil	Nil

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kozhikode	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
													ton	ton				
45	Nanminda	17	8780	1192	100		100		100	100			10.5 ton	8.5 ton	Nil	Nil	Nil	Nil
46	Narikkuni	15	6302	2909	0	0	217	0					112 ton	112ton	NIL	Nil	Nil	Nil
47	Narippatta	17	7609	1236	0		28	0					NOT MEASURED	NOT MEASURED	NOT MEASURED	NOT MEASURED	NOT MEASURED	NO
48	Nochad	17											Not measured	3412kg	3412 kg	NA	na	no
49	Olavanna	23	18531	6560	0	0	0	0					Not measured	Not measured	Not measured	Not measured	Not measured	nil
50	Ommassery	19	10612	3516	57		0	0					Not measured	5.3 TON	5.3 TON	nil	nil	nil
51	Onchiyam	17	6864	2236	103		18	0										
52	Panangad	20	8916	1969	65	0	75	0	0	0	0	0						
53	Perambra	19	9640	1450	0	0		0	52	34	0	0	not measur	5 ton	5ton	nil	nil	nil

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kozhikode	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
													ed					
54	Perumanna	18	11012	1012	80	0	0	0					0.79 ton	0.79 ton	0.79 ton	0	0	0
55	Peruvayal	22	15467	1310	100	0	100	0	100	100	0	0	5 ton	5 ton	5 ton	nil	nil	nil
56	Purameri	17	8206	1948	24	0	421	0	100	100	0	0	0.20/0.16 tpd	0	0	1/0	0	0
57	Puthuppady	21	14546	3254	0	0	0	0	0	0	0	0	5 ton	5 ton	nil	nil	nil	nil
58	Thalakuathur	17	8978	1520	75	0	0	0	75	2	0	0	4ton	4 ton	nil	nil	nil	nil
59	Thamarassery	19	9730	1432	84	0	84	84	0	0	0	0	0.74	0.74	0.74			0.74
60	Thikkodi	17	8561	1828	2	0	0	0	0	0	0	0	5 ton	5 ton	5 ton	Nil	Nil	Nil
61	Thiruvallur	20	8946	2339	100	0	3	0	0	0	0	0				n/a	n/a	nil
62	Thiruvambady	17	9493	2793	28	0	34	0	28	34	0	0	5.5	3.8	3.8	NA	NA	NA
63	Thurayur	13	3943	1158	100	0	100	0	0	0	0	0	0.2	0.18	0.18	0	0	0
64	Tuneri	15	7067	1377	0	0	0	0	1	0	93	65	747.51 61 M3	747.51 61 M3	747.51 61	NA	NA	NA
65	Ulliyeri	19	9958	2262			286		100	44	60		9.08	1.8	0	na	0	na

Annexure.1

Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kozhikode	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
66	Unnikulam	23	13779	3355	0	0	100	0	100	100	0	0	200 ton	200 ton	0	0	0	0
67	Valayam	14	4485	957	56	0	31	0	100	30	0	0	0.05	0.04	0.05	0	0	0
68	Vanimel	16	7340	2035	100		51		100	100	0	0	15 kg	15kg	15 kg	0	0	0
69	Velom	17	6754	2936	100	0	100	0	100	100	0	0	200	200	200	0	0	0
70	Villiappalli	19	9962	3493	0	0	0	0	0	0	0	0	35	35	35	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

2.12. Panchayats in Wayanad District

Sl. No	Panchayats in Wayanad	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
1	Ambalavayal	20	10291	4579	33	0	7		0	0	0	0	4tone	3 tone	3tone	Nil	Nil	
2	Edavaka	19	9519	744	89	0	40		0	0	0	0	4 tone	3 tone	2 tone	3 tone	nil	nil
3	Kaniyambetta	22	11791	2207	24	0	18		0	0	0	0	8 tone	6 tone	3 tone	3 tone	nil	nil
4	Kottathara	18	9979	540	69	0	100	0	100	100	0	0	NA	NA	NA	NA	NA	NA
5	Meenangadi	13	5293	622	0	0	0	0	100	100	0	0	2	1	1	2	1	0
6	Meppadi	19	8735	1000	100	0	100	0	100	100	0	0	NA	NA	NA	NA	NA	NA
7	Mullankolly	22	10616	813	100		100		36	70	0	0	1.2. tone	1.2. tone	0	0	0	0
8	Muppainadu	18	8756	652					0	0	0	0	3 tone	0	0	0	0	0
9	Muttill	16	6721	472	0	0			100	100	0	0	10 tonne	6 tonne	3 tonne	3 tonne	0	0
10	Nenmeni	19	10002	692	100	0	100	0	100	100	0	0	10 tone	7 tone	3 tones	0	0	0
11	Noolpuzha	23	14755	703	61	0	100	100	100	100			4 Tone	3 Tone	3 Tone	3 Tone	0	0
12	Padinharathara	17	9292	398	100	0	100	0	13	38			5	4.5	4.5	4.5	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Wayanad	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of Waste processed in Composting Sites (TPD)	Quantity of Waste processed in biomethanation (TPD)	Quantity of Waste processed in Landfill (TPD)
													TONE	TONE	TONE	TONE		
13	Panamaram	16	7244	347	83	83	69	0	83	0	0	0						
14	Poothadi	23	13782	400	100	0	46	0	0	0	0	0	0.06	0.05	0.05	0	0	0
15	Pozhuthana	13	5783	2004	38	0	2	0	100	100	0	0	2 tone	1 tone	1	1	0.5 tone	0.5 tone
16	Pulppalli	20	10437	3147	30	0	33	0	11	0	0	0	3	3	2	1	0	0
17	Thariode	13	3671	740	100	0	100	0	0	0			NA	NA	NA	NA	NA	NA
18	Thavinhal	22	10433	700	25	0	0	0	100	100			4	2	NIL	NIL	NIL	NIL
19	Thirunelly	17	8620	1405	25	0	0	0	0	0	0	0						
20	Thondernadu	15	7687	1320	42	0	30	0	0	0	0	0	2Tone	2Tone	Nil	Nil	Nil	Nil
21	Vellamunda	21	11620	1439		0	30	0	0	0	0	0	5.5	0	0	Nil	Nil	nil
22	Vengappalli	13	2730	195	69	0	100	0	0	0			1.5	1.5	0	0	0	0
23	Vythiri	14	6086	1582	100	0	100	0	100	100	100	100	50 kg	50 kg	50 kg	35 kg	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

2.13. Panchayats in Kannur District

Sl. No	Panchayats in Kannur	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of waste processed in Composting Sites (TPD)	Quantity of waste processed in biomethanation (TPD)	Quantity of waste processed in Landfill (TPD)
1	Alakode	21	8850	924	100	0	100	0	100	87	0	0	0.98	0.3	0.64	0.4	0.175	0
2	Anjarakkandi	15	6114	739	100	0	100	0	100	84	0	0	0.7	0.01(Plastic wastes)	0.01	0.1	0.1	0
3	Aralam	17	6887	412	100	0	100	0	4	4	0	0		0.4 TPD	0.4 TPD	0.25 TPD	0.02 TPD	0.15 TPD
4	Ayyankunnu	16	5146	405	100	0	100	0	100	25	0	0	0.8 TON	.5 TON	.5 TON	0.2	0.1	0.2
5	Azhikode	23	13930	3639	0	0	98	0	99	98			1 ton	800kg	800 kg	NA	NA	NA
6	Chapparappadavu																	
7	Chembilode	19	10117	996	100	0	100	0	100	25	0	0						
8	Chengalai	18	9684	1871	88	0	88	0	87	5	0	0	0.45	0.4	0.4	0.25	0.02	0.15
9	Cherukunnu	13	4549	526	92	0	37	0	98	23			.20 TPD	0	0	0	0	
10	Cherupuzha	19	9513	1417	100	0	0	0	99	8			.30 TPD	.30 TPD	0	0	0	0.15

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kannur	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of waste processed in Composting Sites (TPD)	Quantity of waste processed in biomethanation (TPD)	Quantity of waste processed in Landfill (TPD)
11	Cheruthazham	17	10828	5199	100	0	89	0	0	0	0	0						
12	Chirakkal	23	14173	5555	65	0	5	0	88	4			0.5	0.5	0	0	0	0
13	Chittariparamba	15	7161	1561	81	0	0	0	19	2	1	0	50 G/	51 G/	52 G/	0	0	0
14	Chokli	17	8328	2146	100	0	67	0	100	67	0	0						
15	Dharmadam	18	8664	1443	100	0	100	0	100	100	0	0	10 TON	10 TON	10 TON	0	0	0
16	Eramam-Kuttoor	17	9617	1786	89	0	81	0	88	84	0	0						
17	Eranholi	16	7795	364	96	0	100	0	100	27	0	0	5.62 TONS/ YEAR	5.62 TONS/ YEAR		0	0	0
18	Eruvessi	14	5650	258	120	0	100	0	100	39	0	0						
19	Ezhom	14	5782	2306	0	0	0	0	0	0	0	0						
20	Irikkoor	13	3369	200	0	0	0	0	0	0	0	0						
21	Kadamboor	13	5845	1772	75	0	43	0	65	18	0	0	2 ton per month	2 ton per month	2 ton per month	0	0	0
22	Kadannapally-	15	8210	510	62	0	78	0	43	84	0	0	0.15	0.1				

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kannur	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of waste processed in Composting Sites (TPD)	Quantity of waste processed in biomethanation (TPD)	Quantity of waste processed in Landfill (TPD)
	Panapuzha																	
23	Kadirur	18	9273	1801	60	0	58	0	66	49	0	0	3 ton per month	3 ton per month	3 ton per month	0	0	0
24	Kalliasseri	18	9976	585	100	0	100	0	72	95			0.27	0.27	0.27	0.27	0	0
25	Kanichar	13	5675	270	100	0	100	0	90	93			0.15	0.1	0.1	0.15	0.15	0
26	Kankol-Alappadamba	14	5775	506	73	0	81	0	100	81	0	0	0.05	0.05	0.05	0.23	166.6	
27	Kannapuram	14	6241	2214	71	0	53	0	71	50	0	0	0.3 ton	0.3	0	0	0	0
28	Karivloor-Perlam	14	6390	712	100	0			100	100			50KG	50KG	50KG	1 TON	0	0
29	Kelakam	13	4484	503	0	0			100	100			35KG PER DAY	35KG PER DAY	35KG PER DAY	NIL	NIL	NIL
30	Keezhallur	14	6540	836	79	0	87		40	9		0						
31	Kolacheri	14	7669	545	100		100		100	100			1.5 ton	1.2 ton	1.2 ton	-	-	-
32	Kolayad	14	4855	329	95		100		100	100			0.015	0.01	NA	NA	Na	NA
33	Koodali	18	12021	625	100	0	100	0	100	100	0	0						

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kannur	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of waste processed in Composting Sites (TPD)	Quantity of waste processed in biomethanation (TPD)	Quantity of waste processed in Landfill (TPD)
34	Kottayam	14	4703	1648	98	99	97	79	99	79	74	0	0.03 ton plastic per day	0.03 TON	0.03	4800kg	3600kg	1200 kg
35	Kottiyoor	14	5100	338	53	0			98	18			0	0	0	0	0	0
36	Kunhimangalam	14	6752	1735	69	0	100	0	0	0	0	0	0	0	0	0	0	0
37	Kunnothparamba	21	11474		0	0			0		0							
38	Kurumathoor	17	10904	574	100	0	100	0	88	87	0	0						
39	Kuttiattur	16	8168	436	55	18	100	0	18	0	0	0	0	0	0	0	0	0
40	Madayi	20	7218	3520	3	2	9	6	0	0	0	0	0	0	0	0	0	0
41	Malapattam	13	2607	145	75	0	52	0	0	0	0	0	0	0	0	0	0	0
42	Maloor												0	0	0		0	0
43	Mangattidom	19	11035	600	99	0	75	0	91	100	0	0	0	0	0	0	0	0
44	Mattool	17											0	0	0	0	0	0
45	Mayyil	18	9406	708	86	86	92	92	49	59	0	0	0	0	0	0	0	0
46	Mokeri	14	5676	409	100	0	100	0	93	73	0	0	0	0	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kannur	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of waste processed in Composting Sites (TPD)	Quantity of waste processed in biomethanation (TPD)	Quantity of waste processed in Landfill (TPD)
47	Munderi																	
48	Muzhakkunnu												plastic	1500 kg	0	0	0	
49	Muzhappilangad	15	6248	1497	51	0	52	0	16	0	0	0	0	0	0	0	0	0
50	Naduvil	19																
51	Narath	17	7793	3017	0	0	0	0	0	0	0	0						
52	New Mahi																	
53	Padiyoor	15	5400	240	100	100	75	33	72	75		33	1.5	1.2	1.2	1.2	0	0
54	Panniannur																	
55	Pappinisseri	20	10120	450	72	0	0	0	0	0	0	0						
56	Pariyaram	18	11073	720	98	0	53	0	81	17	0	0	0.06	0.06		0.06	0.06	0.06
57	Pattiam	18	8980	609	21	0	56	0	45	100	0	0	1	0.75		0.5	0	0.3
58	Pattuvam	13	3936	227	89	0	88	0	0	0	0	0	Below 1 ton per day	Y				
59	Payam	18	7234	530	83	0	79	0	83	79	0	0						

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kannur	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of waste processed in Composting Sites (TPD)	Quantity of waste processed in biomethanation (TPD)	Quantity of waste processed in Landfill (TPD)
60	Payyavoor	16	5498	2214	75	0	75	0	80	75	0	0						
61	Peralasseri	18	9173	465	0	0	0	0	0	0	0	0						
62	Peravoor	16	6800	550	67	0	82	0	0	0	0	0	180 kg	630 kg	180 kg	nil	nil	nil
63	Peringome-Vayakkara	16	9937	95	0	0	0	0	0	0	0	0			200kg	0	0	0
64	Pinarayi	19	10796	645	65	0	100	0	75	50	0	0						
65	Ramanthali	15	9302	503	60	0	13	0	25	32	0	0						
66	Thillankeri	13	4455	814	90	2	88	0	95	96	0	0	30kg per day	330kg	30kg	Nil	Nil	Nil
67	Thrippangottoor	18																
68	Udayagiri	15	6202	247	98	0	100	0	100	100	0	0	30 kg per day	30 kg per day	30 kg per day	Nil	Nil	Nil
69	Ulikkal	20	11602	1006	100	0	100	0	68	60	0	0	35 kg per day	35 kg per day	35 kg per day	Nil	Nil	Nil
70	Valapattanam	13	2225	1575	175	0	100	0	100	100	0	0	750kg	600 kg	nil	150 kg	0	0
71	Vengad	21																

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

2.14. Panchayats in Kasargod District

Sl. No	Panchayats in Kasargod	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of waste processed in Composting Sites (TPD)	Quantity of waste processed in biomethanation (TPD)	Quantity of waste processed in Landfill (TPD)
1	Ajanur	23	15573	5719	87	0	31	0	16	5	0	0						
2	Badiadka	19																
3	Balal	16																
4	Bedadka	17	7368	538	100	0	100	0	24	0	0	0	2523	ഇല്ല ഉറവിട ത്തിൽ സംസ്ക രിക്കുന്നു.	ഇല്ല			
5	Belloor	13	3424	325	27	0	100	0	0	0	0	0	625	0	0			
6	Chemnad	23	15169	436	0	0	0	0	8	0	0	0		0	0	0	0	0
7	Chengla	23	17983	5800	0	0	0	0	0	0	0	0	0	0	0			
8	Cheruvathur	17	7206	1510	0	0	0	0	0	0	0	0						
9	Delampady	16	5274	46	89	0	89	0	0	7	0	0	nil	nil	nil	nil	nil	nil
10	East Eleri	16	7975	362	0	0	0	0	2	1	0	0	nil	nil	nil	nil	nil	nil
11	Enmakaje	17																
12	Kallar	14	7013	432	0	0	0	0	60	83	0	0	700	0	0	0	0	0

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kasargod	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of waste processed in Composting Sites (TPD)	Quantity of waste processed in biomethanation (TPD)	Quantity of waste processed in Landfill (TPD)
													Kg/day					
13	Karadka	15	4947	388	0	0	0	0	0	0	0	0	100kg	0	0	0	0	0
14	Kodom Belur	19	8163	2230	0	0	0	0	0	0	0	0						
15	Kayyur Cheemeni	16	9356		0	0			0		0							
16	Kinanoor Karinthalam	17	9648	620	44	0	0	0	0	0	0	0						
17	Kumbdaje																	
18	Kumbala	23	13000		0	0			0		0							
19	Kuttikol	16	7468	1457	0	0	0	0	0	0	0	0	0					
20	Madhur	20	13393	418	68	0	52	0	0	0	0	0	1	0.2	0	0	0	0
21	Madikai	15	6419	320	100		0	0	100	100	0	0						
22	Mangalpady	23	15635	702	55	0	0	0	0	0	0	0						
23	Manjeshwar																	
24	Meenja	15	6971	318	0	0	0	0	0	0	0	0		0	0	0	0	0
25	Mogral Puthur	15	6768	305	0	0	0	0	0	0	0	0						

Annexure.1
Status of waste management in Panchayat as on 2020 (As reported by localbodies)

Sl. No	Panchayats in Kasargod	No of wards	No of Household	No of Establishment	% Household_D2D-Dry	% of Household-D2D-Wet	%establishment-D2D-Dry	% establishment_D2D-Wet	% of houses in which source level treatment	% of establishment in which source level treatment	% disposing to centralised system	% disposing to centralised system	Quantity of Waste generated (TPD)	Quantity of Waste collected (TPD)	Quantity of Waste treated (TPD)	Quantity of waste processed in Composting Sites (TPD)	Quantity of waste processed in biomethanation (TPD)	Quantity of waste processed in Landfill (TPD)
26	Muliyar	15																
27	Padne	15																
28	Paivalike	19	5700	260	0	0	0	0	0	0	0	0	0.5	0.2	0.3	0.2	0	0
29	Pallikkare	22	14828	3970	78	78	51	8	78	8			1.5 tone	source treatment	1.15 tone			na
30	Panathady															0	0	0
31	Pilicode												700 kg					
32	Pullur Periya	17	10442	2859	97	0	17	0	4	0	0	0						
33	Puthige																	
34	Trikaripur	21	11614		0	0			0		0		1000 kg	700 kg				
35	Udma	21	11284		0	0			0		0							
36	Valiyaparamba	13																
37	Vorkady	16	6834	200	89	0	40	0	1	3	0	0	0.16	0.1	0	0	0	0
38	West Eleri	18	6974	286	0	0	0	0	0	0								

Annexure 2



General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
E-mail: ms.kspcb@gov.in FAX: 0471 - 2318134, 2318152 web: www.keralapcb.nic.in

KERALASTATE POLLUTION CONTROL BOARD

കേരളസംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram - 695 004
പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

PCB/HO/RULES/SWM-TVM-CORPN /2018

Date: 25/09/2019

Regd. with A/D

NOTICE UNDER SECTION 5 OF THE ENVIRONMENTAL PROTECTION ACT, 1986

Sub: Levying of Environmental Compensation for non compliance of SWM Rule 2016

- Ref: 1.The Hon'ble NGT order OA no. 606/2018 dated 16/01/2019 & 25/04/2019
2.This office notice no.PCB/HO/EE4/NGT/SWM DIRECTIONS TO LB/2019dated 17/04/2019
3.Letter no. H15/64522/13 dated 06/06/2019
4.Annual Report dated 14/06/2019
5.Letter no.PCB/TVM-DO/TMC-1245/2019 dated 21/08/2019
6.Letter no.PCB/TVM-DO/TMC-1245/2019 dated 23/09/2019

WHEREAS the Central Government notified the Environmental (Protection) Act, 1986 for the protection and improvement of environment and for matters connected therewith;

WHEREAS as per Section 3, 6, and 25 of the Environment (Protection) Act, 1986, the Central Government re-notified the Solid Wastes Management Rules, 2016 (herein after referred as SWM Rules) vide notification S.O. 1357(E) dated 8-4-2016;

WHEREAS as per Rule 22 (1) of the SWM Rules, suitable sites for setting up solid waste processing facilities are to be identified;

WHEREAS as per Rule 22(3) of the SWM Rules, suitable sites for setting up solid waste processing facility and sanitary landfill facilities are to be procured;

WHEREAS as per Rule 22 (5) of the SWM Rules, door to door collection of segregated waste and its transportation in covered vehicles to processing or disposing facility shall be ensured by 8-4-2018;

WHEREAS as per Rule 22 (7) of the SWM Rules, solid waste processing facilities for the complete quantity of waste generated from the local body @ 0.4 to 0.5 kg/person/day, shall be set up by 8-4-2018;

WHEREAS facilities with the technologies specified in CPHEEO manual and SWM Rules are to be in place for the effective treatment and disposal of the solid waste generated in the local body;

WHEREAS as per Rule 22 (6) of the SWM Rules, separate storage, collection and transportation of construction and demolition waste shall be provided by 8-4-2018;

Annexure 2

WHEREAS as per Rule 22(11) of the SWM Rules, bio-remediation or capping of old and abandoned dump site shall be ensured;

WHEREAS repeated instructions were issued vide the communications read above, for the compliance of the SWM Rules;

WHEREAS the following information was submitted by you vide the Annual Report read 4th above;

No. of Households						
No. of non-residential premises	2,72,820					
Quantity of Solid waste generated	383 TPD					
Quantity of Solid waste collected as per Annual Report	175 TPD					
Quantity of Solid waste processed as per Annual Report	175 TPD					
Quantity of Solid waste processed in Household level. (Report on performance of the processing facilities is not submitted)	<table style="border: none;"> <tr> <td style="border: none;">Biogas plant- 1749</td> <td rowspan="4" style="border: none; vertical-align: middle;">} ≈ 20.2 TPD</td> </tr> <tr> <td style="border: none;">Kitchen bin – 7000</td> </tr> <tr> <td style="border: none;">Pipe compost- 87000</td> </tr> <tr> <td style="border: none;">Biocomposter-15833</td> </tr> </table>	Biogas plant- 1749	} ≈ 20.2 TPD	Kitchen bin – 7000	Pipe compost- 87000	Biocomposter-15833
Biogas plant- 1749	} ≈ 20.2 TPD					
Kitchen bin – 7000						
Pipe compost- 87000						
Biocomposter-15833						

WHEREAS it is noted that you are not processing 187.8 TPD of waste generated;

WHEREAS it is noted that you have not identified the land for the solid waste processing facility and sanitary landfill;

WHEREAS the Hon'ble National Green Tribunal, Principal Bench, New Delhi in the order dated 22/11/2018 in O.A. No. 353/2016 clarified that apart from prosecution, the statutory authorities under the Environment (Protection) Act, 1986, the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974, must, in exercise of their incidental powers, prescribed scale of compensation to be collected from the polluters on the "Polluter Pay's Principle". Such scale which may be laid down at various levels, having regard to the local condition or as per direction in the hierarchy of the authorities. In various other application also, the Hon'ble NGT passed similar orders, for instance, in the Order dated 20/11/2018 in O.A No. 117/2014, 499/2014 and 102/2014 the Hon'ble NGT noted as; "Needless to say that statutory authorities under the Environment (Protection) Act, 1986, Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974 are entitled to assess and recover damages as "Pollution Pays Principle" in exercise of incidental powers to protect environment".

WHEREAS notice was issued to you vide the notice read Ref 2nd above as you have not complied with above provision;

WHEREAS you have failed to establish alternate modern treatment plant upon closure of the solid waste treatment facility at Vilapilsala in 2012

WHEREAS you have stopped door-to-door collection of biodegradable organic waste, on closure of the solid waste treatment facility at Vilapilsala;

WHEREAS you provided in some households in the Corporation, various devices for composting of organic waste known as 'pipe compost', 'kitchen bin', 'pot compost' and '3-pot compost';

Annexure 2

WHEREAS you have used promotion of various source level treatment schemes as convenient method of denying households, slums and informal settlements, commercial and other non-residential premises, door-to-door collection of organic waste in violation of Rule 15(b);

WHEREAS the KSPCB District office has found that a number of composting devices have malfunctioned causing unhygienic conditions because of worm, fly and rodent nuisance in violation of Rule 15(t), leaving the waste generators to depend on private services to remove the waste from their premises;

WHEREAS you have not published ward-wise list of concessionaires providing waste service;

WHEREAS you have failed to provide public information on door-to-door waste collection on the official web site of Corporation of Thiruvananthapuram and on the 'Smart Trivandrum' mobile application with waste management services;

WHEREAS the private services operating in the city have not obtained registration from the Board for treatment facilities for the disposal of wastes collected;

WHEREAS you have failed to implement mandatory GPS in collection and transportation vehicles in cities with population above 5 lakh along with the publication of route map, as directed by Hon'ble NGT order dated 17-5-2019 in OA 606-2018(PB-I);

WHEREAS in violation of Rule 15(c), you have failed to establish a system for integration of informal waste pickers into the system of waste management;

WHEREAS in violation of Rule 15(n), you have not provided satisfactory sweeping of streets causing build-up of litter in numerous locations;

WHEREAS in violation of Rule 15(w), you have failed to establish sanitary landfill facility;

WHEREAS in violation of Rule 15(x), you have allocated funds to discretionary welfare schemes without meeting the requirement of funds for obligatory functions under Solid Waste Management rules such as procurement of land for solid waste treatment plant and sanitary landfill, setting up solid waste treatment plant, procurement of vehicles for solid waste collection and making provision for daily door-to-door collection and sweeping of roads in public and commercial areas twice daily and residential roads daily;

WHEREAS you have failed to submit to the Board, Annual Report before 31 May 2019, in violation of Rule 15(zb);

WHEREAS the KSPCB District office has found that pipe compost system has been supplied to most of the people with no technical guidance on how to use this system. The defects namely lack of technical knowledge, unpleasant odour generation from the pipe the compost pipe, nuisance from rodents, fly and worms, difficulty of disposal of greasy and oily foods pointed out by beneficiaries has resulted in widespread failure;

WHEREAS for kitchen bin it was reported that out of 116 beneficiaries contacted of which 46 are using kitchen bins, 53 are not using the system and 17 people are not even supplied with the system. The defects pointed out by beneficiaries are lack of technical knowledge, unpleasant odour generation, fly and worm nuisance;

WHEREAS for biogas the KSPCB District office has reported that 9 beneficiaries informed that the facility is working properly and one informed that the facility is not working properly after monsoon season;

Annexure 2

WHEREAS KSPCB District office reported in community level decentralized systems, highly skilled operators are to be engaged for the proper maintenance and operation of the facility;

WHEREAS the Corporation has not provided details regarding quantity of municipal solid waste treated from non residential sources;

WHEREAS you have continued to promote failed household treatment schemes such as pipe compost and kitchen bin as a cover to avoid obligatory functions in SWM 2016 that incur political costs, such as procuring land and establishing a modern solid waste treatment plant and sanitary landfill;

WHEREAS the rank of 365 out of 425 cities in 2019 Swachh Survekshan conducted by Ministry of Housing and Urban Affairs, Government of India is indicative of the poor quality of waste management service you have provided in the city and failure to implement a modern waste treatment facility;

WHEREAS the KSPCB District office reported that the facilities provided by the Corporation do not seem to cater the quantity of waste expected to be generated from Corporation;

WHEREAS the Board is constrained to assess the Environmental Compensation from 22/11/2018 to 31/07/2019 (Days = 252) as follows;

City	Thiruvananthapuram
Population (2011)	958,000
Class	Million –plus City
Waste Generation (kg. per person per day)	0.4
Waste Generation (TPD)	383.00
Waste Disposal as per Rules (TPD) as per Annual Report	195.2
Waste Management Capacity Gap (TPD)	187.8
Calculated EC (capital cost component) in Lakhs. Rs.	450.72
Minimum and Maximum values of EC (Capital Cost Component) recommended by the Committee (Lakhs Rs.)	Min. 500 Max. 5000
Final EC (capital cost component) in Lakhs. Rs.	500
Calculated EC (O&M Component) in Lakhs. Rs./Day	3.756
Minimum and Maximum values of EC (O&M Cost Component) recommended by the Committee (Lakhs Rs./Day)	Min. 0.5 Max. 5.0
Final EC (O&M Component) in Lakhs. Rs./Day	3.756
Final EC (O&M Component) in Lakhs	946.512
Calculated Environmental Externality (Lakhs Rs. Per Day)	0.009
Minimum and Maximum value of Environmental Externality recommended by the Committee (LakhsRs.per day)	Min. 0.05 Max. 0.10
Final Environmental Externality (LakhsRs. per day)	0.05
Final Environmental Externality in Lakhs	12.6

WHEREAS an amount of Rs.1459.112 Lakhs (Rupees Fourteen Crore Fifty Nine Lakh Eleven Thousand Two Hundred) is assessed as environmental compensation from 22/11/2018 to 31/07/2019 (Capital cost component (Rs.500 Lakhs) + O&M Component (Rs. 946.512 Lakhs) + Environmental Externality (Rs.12.6 Lakhs));

Annexure 2

WHEREAS continued failure to comply with SWM 2016 shall incur Environmental Compensation at rates that are multiples of the rates assessed above;

Now therefore, in exercise of the powers vested under Section 5 of the Environment Protection Act, 1986, you are directed to show cause within 15 days why the Board shall not recover Environmental Compensation of Rs 1459.112 Lakhs (Rupees Fourteen Crore Fifty Nine Lakh Eleven Thousand Two Hundred) from 22/11/2018 to 31/07/2019 against you for the non compliance of Rule 22(1), 22(3)22(5), 22(6), 22(7) and 22(11) of the SWM Rules, 2016.

Ajit Kandas
CHAIRMAN

To

The Secretary,
Thiruvananthapuram Corporation

Copy to:

The Chairman
State Level Monitoring Committee

The Additional Chief Secretary
Local Self Government Department

The District Collector, Thiruvananthapuram

The Director, Urban Directorate

The Chief Environmental Engineer, Regional Office, Thiruvananthapuram

The Environmental Engineer, District Office, Thiruvananthapuram

1784
15/10/19

~~344~~
14/10/19



THIRUVANANTHAPURAM MUNICIPAL CORPORATION

Date : 14-10-2019

No. C7/183/19

From,

Secretary

To,

The Chairman
Kerala State Pollution Control Board
Thiruvananthapuram

Sir,

Sub : Reply to the show cause notice reg:

Ref : PCB/HO/RULES/SWM-TVMCORPN/2018 Dt. 25-09-2019, published in
your website

I am hereby furnishing the reply to the show cause referred above for further
necessary action.

Yours faithfully,

Secretary 14/10/19
SECRETARY
Thiruvananthapuram Municipal Corporation



SEE 2/
EE

MS/CE/
SEE 2/EE 1

M. discuss
At
14/10/2019

CHAIRMAN

Discussed

14/10/19

5/19/2019
Abull 2

Response to the Notice under Section 5 of the Environmental Protection Act, 1986

Ref: PCB/HO/RULES/SWM-TVM CORPN/2018 Dt. 25/09/2019 Published in the PCB website

Summary:

The reply to the notice dated 25th September published in your website, furnished by Thiruvananthapuram Municipal Corporation. TMC made a presentation of status of SWM on 26th September 2019 before the committee constituted by NGT and submitted updated report. Kerala State Pollution Control Board didn't consider the report or heard TMC and published the notice which was already prepared.

Out of 40 paragraphs in the notice including charges against Thiruvananthapuram Municipal Corporation only 5 are valid though they are very minor in nature. They are Para 8, 21, 22, 23 and 29. Para 8 is on setting up of construction and demolition waste management yard, 21, 22 and 23 regarding publishing the information in the official website and 29 is about non filing of annual report on time. Out of 38 charges on noncompliance 3 items repeats 4 times each and one item get repeated 3 times and 3 items repeat twice. The rest are not valid arguments and do not fall under noncompliance of Solid Waste Management Rules 2016.

The responses to each charges are given below;

Para 3. Whereas as per Rule 22(1) of the SWM Rules, suitable sites for setting up solid waste processing facilities are to be identified;

Para 4. Whereas as per Rule 22(3) of the SWM Rules suitable sites for setting up solid waste processing facility and sanitary landfill facilities are to be procured.

Para 13 Whereas it is noted that you have not identified the land for the solid waste processing facility and sanitary landfill

Para 27 Whereas in violation of Rule 15(w) you have failed to establish sanitary landfill facility

Response: It is not practical to find land for centralized solid waste management in the city. Hence Thiruvananthapuram Municipal Corporation have set up decentralized solid waste management systems at 44 locations and set up resource recovery centre. The DPR approved by the State Government TMC is setting up additional 154 decentralized solid waste management systems. TMC have already requested to District Collector to identify land for landfill. TMC have already identified land for Construction and Demolition Waste and the paper work is in progress.

Please refer Rule 11(j) under Duty of the Secretary-in-charge, Urban Development. "Facilitate establishment of common regional sanitary landfill for a group of cities and towns falling within a distance of 50 km (or more) from the regional facility on a cost sharing basis and ensure professional management of such sanitary landfills

Annexure 3

Para 5. Whereas As per Rule 22(5) of the SWM Rules door to door collection of segregated waste and its transportation in covered vehicles to processing or disposing facility shall be ensured by 8-4-2018.

Response: Please refer Rule 4(6) "All resident welfare and market associations shall, within one year from the date of notification of these rules and in partnership with the local body ensure segregation of waste at source by the generators as prescribed in these rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorised recyclers. The bio degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body." And

Please refer Rule 15 (q) "transport segregated bio-degradable waste to the processing facilities like compost plant, bio-methanation plant or any such facility. Preference shall be given for on site processing of such waste;" And

Please refer Rule 15 (t) "Involve communities in waste management and promotion of home composting, biogas generation, decentralized processing of waste at community level subject to control of odour and maintenance of hygienic conditions around the facility." And

Please refer Rule 15 (v) "facilitate construction, operation and maintenance of solid waste processing facilities and associated infrastructure on their own or with private sector participation or through any agency for optimum utilisation of various components of solid waste adoption suitable technology including the following technologies and adhering to the guidelines issued by the Ministry of Urban Development from time to time and standards prescribed by the Central Pollution Control Board. Preference shall be given to decentralized processing to minimize transportation cost and environmental impacts such as

A) Bio-methanation, microbial composting, vermi composting, anaerobic digestion or any other appropriate processing for bio-stabilisation of biodegradable wastes;" And

Please refer Rule 15 (ZG) (v) "Practice home composting, vermi-composting, biogas generation or community level composting;"

TMC adheres to the above rules and follows door to door collection of segregated non bio degradable discards only for household sector and segregated door to door

Annexure 3

collection of wet and dry waste for commercial sector through engaging accredited service providers.

Para 6 Whereas as per Rule 22(7) of the SWM Rules, solid waste processing facilities for the complete quantity of waste generated from the local body @0.4 to 0.5 kg/person/day shall be set up by 8-4-2018

Para 37 Whereas the KPSCB District office reported that the facilities provided by the Corporation do not seem to cater the quantity of waste expected to be generated from Corporation.

Response: TMC as a local self Government reserves the right to prioritize on course of actions, strategies, selection of technologies, processes etc, while agreeing to the time frame provided by Solid Waste Management Rules 2016. Total quantity of waste generated in TMC is 353TPD. Of which 152.31 TPD of bio degradable waste and 54.2 TPD non bio degradable waste are managed with the assistance and facilitation of TMC. 52.79 TPD of bio degradable waste is managed by the producers with the supervision of TMC. 39.23TPD of bio degradables are managed at homestead in the rural and semi urban zones of the City which do not comes to the streets. About 39.51TPD of recyclable discards such as paper, metals and high value plastics are skimmed by the scrap dealers. Altogether about 338.04 TPD is managed. Sanitary waste which forms about 14.96 TPD is left un managed. For which TMC is establishing 25 cluster facilities across the city. TMC is expanding its facilities to 154 sites to increase to access to scientific solid waste management.

Para 7 Whereas Facilities with the technologies specified in CPHEEO manual and SWM Rules are to be in place for the effective treatment and disposal of the solid waste generated in the local body

Response: TMC follows the technical guidelines and standards approved by Kerala Suchitwa Mission, who in turn abide by the CPHEEO manual.

Para 8 Whereas As per Rule 22(6) pf the SWM Rules, separate storage, collection and transportation of construction and demolition waste shall be provided by 8-4-2018.

Response: TMC as a local self Government reserves the right to prioritize on course of actions, strategies, selection of technologies, processes etc, while agreeing to the time frame provided by Solid Waste Management Rules 2016. TMC has identified land for managing C&D Waste and is setting up a window in Smart Trivandrum mobile Application for sale of C&D waste.

Annexure 3

Para 9 Whereas as per Rule 22(11) of the SWM Rules, Bio remediation or capping of old and abandoned dump site shall be ensured.

Response: Please refer Rule 22(11). "Bio remediation or capping of old and abandoned dump sites – 5 years." Which means TMC have time upto 7th March 2021 to complete this component.

Para 10 Whereas Repeated instructions were issued vide the communications read above for the compliance of SWM Rules

Response: TMC was selected as one of the model cities under NGT vide order issued (SWM Rules 2016 vide GO(Rt)No.45/2019/ENVt dt. 31. May 2019) and the target date fixed in 24th October.

TMC was under the impression that the time limit to ensure compliance to law is 31st March 2021 and Local Self Governments have the right to re schedule the components based on local challenges and scenarios. It is unfortunate and unfair to demand compliance in the middle of the timeline holding responsible for past schedules.

TMC have filed responses to all the communications by the KSPCB.

Para 11 Whereas the following information was submitted by you vide the annual report read 4th above

Para 12 Whereas it is noted that you are not processing 187.8 TPD of waste generated.

Response: The figures in the annual report are now updated. Total quantity of waste generated in TMC is 353TPD. Of which 152.31 TPD of bio degradable waste and 54.2 TPD non bio degradable waste are managed with the assistance and facilitation of TMC. 52.79 TPD of bio degradable waste is managed by the producers with the supervision of TMC. 39.23TPD of bio degradables are managed at homestead in the rural and semi urban zones of the City which do not comes to the streets. About 39.51TPD of recyclable discards such as paper, metals and high value plastics are skimmed by the scrap dealers. Altogether about 338.04 TPD is managed. Sanitary waste which forms about **14.96 TPD** is left un managed. For which TMC is establishing 25 cluster facilities across the city. TMC is expanding its facilities to 154 sites to increase to access to scientific solid waste management.

The untreated waste at this point of time is 14.96 TPD only.

Annexure 3

Para 15 Whereas notice was issued to you vide the notice read Ref 2nd above as you have not complied with above provisions

Para 16 Whereas you have Failed to establish alternate modern treatment plant upon closure of the solid waste treatment facility at Vilappilsala in 2012

Para 17 Whereas You have stopped door to door collection of bio degradable organic waste on closure of the solid waste treatment facility at Vilappilsala

Para 18 Whereas You provided in some households in the Corporation, various devices for composting of organic waste known as pipe compost, kitchen bin, pot compost and 3 pot compost

Response: TMC as a local self Government reserves the right to prioritize on course of actions, strategies, selection of technologies, processes etc, while agreeing to the time frame provided by Solid Waste Management Rules 2016. Total quantity of waste generated in TMC is 353TPD. Of which 152.31 TPD of bio degradable waste and 54.2 TPD non bio degradable waste are managed with the assistance and facilitation of TMC. 52.79 TPD of bio degradable waste is managed by the producers with the supervision of TMC. 39.23TPD of bio degradables are managed at homestead in the rural and semi urban zones of the City which do not comes to the streets. About 39.51TPD of recyclable discards such as paper, metals and high value plastics are skimmed by the scrap dealers. Altogether about 338.04 TPD is managed. The existing capacity of infrastructure and systems created by TMC is more than that of Vilappilsala where only 100TPD of bio degradable waste was managed and there was no provision to manage non bio degradable waste. The methods and technologies used by TMC under its current decentralized solid waste management programme is more scientific and safer than that of Vilappilsala project and is approved by the State Government. Sanitary waste which forms about 14.96 TPD is left un managed. For which TMC is establishing 25 cluster facilities across the city. TMC is expanding its facilities to 154 sites to increase to access to scientific solid waste management.

TMC stopped door to door collection of bio degradable waste from households as part of a strategy to promote home composting and source level treatment methods such as pipe compost, kitchen bin and 3 pot composting with the technical sanction of Kerala Suchitwa Mission which is in compliance with the Rules.

Please refer Rule 15 (t) "Involve communities in waste management and promotion of home composting, biogas generation, decentralized processing of waste at community level subject to control of odour and maintenance of hygienic conditions around the facility." And

Please refer Rule 15 (v) "facilitate construction, operation and maintenance of solid waste processing facilities and associated infrastructure on their own or with private sector participation or through any agency for optimum utilisation of various

Annexure 3

components of solid waste adoption suitable technology including the following technologies and adhering to the guidelines issued by the Ministry of Urban Development from time to time and standards prescribed by the Central Pollution Control Board. Preference shall be given to decentralized processing to minimize transportation cost and environmental impacts such as

B) Bio-methanation, microbial composting, vermi composting, anaerobic digestion or any other appropriate processing for bio-stabilisation of biodegradable wastes;" And

Please refer Rule 15 (ZG (v) "Practice home composting, vermi-composting, biogas generation or community level composting;"

TMC adheres to the above rules and follows door to door collection of segregated non bio degradable discards only for household sector and segregated door to door collection of wet and dry waste for commercial sector through engaging accredited service providers.

Para 19 Whereas You have used promotion of various source level treatment schemes as convenient method of denying households, slums and informal settlements, commercial and other non-residential premises, door to door collection of organic waste in violation of Rule 15(b)

Response: Rule 15(b) reads as " arrange for door to door collection of segregated solid waste from all households including slums and informal settlements, commercial, institutional and other non residential premises. From multi-storage buildings, large commercial complexes, malls, housing complexes, etc., this may be collected from the entry gate or any other designated location"

TMC have implemented user fee as provided by Rule 15(f) which reads as "prescribe from time to time user fee as deemed appropriate and collect the fee from the waste generators on its own or through authorised agency;"

TMC provides for door to door collection of segregated solid waste on a daily basis commercial, institutional, large commercial complexes, malls and other non residential premises. TMC provides for door to door collection of non bio degradable discards for households, including slums and informal settlements and housing complexes.

TMC also provides free drop off facilities for bio degradable waste as well as non bio degradable waste for slums, informal settlements, households etc., who cannot afford paying user fee for door to door collection.

Please refer Rule 4(6) "All resident welfare and market associations shall, within one year from the date of notification of these rules and in partnership with the local

Annexure 3

body ensure segregation of waste at source by the generators as prescribed in these rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorised recyclers. The bio degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.”

Please refer Rule 15 (q) “transport segregated bio-degradable waste to the processing facilities like compost plant, bio-methanation plant or any such facility. Preference shall be given for on site processing of such waste;” And

Please refer Rule 15 (t) “Involve communities in waste management and promotion of home composting, biogas generation, decentralized processing of waste at community level subject to control of odour and maintenance of hygienic conditions around the facility.” And

Please refer Rule 15 (v) “facilitate construction, operation and maintenance of solid waste processing facilities and associated infrastructure on their own or with private sector participation or through any agency for optimum utilisation of various components of solid waste adoption suitable technology including the following technologies and adhering to the guidelines issued by the Ministry of Urban Development from time to time and standards prescribed by the Central Pollution Control Board. Preference shall be given to decentralized processing to minimize transportation cost and environmental impacts such as

C) Bio-methanation, microbial composting, vermi composting, anaerobic digestion or any other appropriate processing for bio-stabilisation of biodegradable wastes;” And

Please refer Rule 15 (ZG) (v) “Practice home composting, vermi-composting, biogas generation or community level composting;”

The Rules quoted above reiterates the options of decentralized and source level solid waste management in cities. Hence it is in compliance with the MSW Rules

Annexure 3

Para 20 Whereas the KSPCB District office has found that a number of composting devices have malfunctioned causing unhygienic conditions because of worm, fly and rodent nuisance in violation of Rule 15(t), leaving the waste generators to depend on private services to remove the waste from their premises;

Para 30 Whereas The KSPCB district office has found that pipe compost system has been supplied to most of the people with no technical guidance on how to use this system. The defects namely, lack of technical knowledge, unpleasant odour generation from the pipe the compost pipe, nuisance from rodents, fly and works difficulty of disposal of greasy and oily foods pointed out by beneficiaries has resulted in widespread failure

Para 31 Whereas for Kitchen bin it was reported that out of 116 beneficiaries contacted for which 46 are using kitchen bins, 53 are not using the system and 17 people are not even supplied with the system. The defects pointed out by beneficiaries are lack of technical knowledge, unpleasant odour generation, fly and work nuisance.

Response: Composting is a biological process to decompose bio degradable discards and larvae of black soldier flies, earth worms are part of the process. No composting process in the world is free from an odour and decomposing creatures except in lab experiments. Hence the observation is baseless. Malfunctioning is an evidence of people trying to operate composting at home. It is just a management issue and not non compliance. TMC has provided door to door technical training and distributed printed manuals to households. TMC distributed Aerobic bio composters (Kitchen bins) for those who signed up for paid technical support to approved service providers. It is not clear whether the KSPCB district office gathered this information through telephone call or site visits. It seems there is a communication gap between the interviewer and interviewee. TMC is already taking initiatives to troubleshoot such issues through providing door to door technical support.

Annexure 3

Para 21 Whereas you have not published ward-wise list of concessionaires providing waste service.

Para 22 Whereas You have failed to provide public information on door to door waste collection on the official website of Corporation of Thiruvannathpauram and on the Smart Trivandrum Mobile application with waste management services.

Response: TMC identifies and empanels service providers and get it approved through the City Council. The service providers are allocated to each zone based on their capacity and the information is directly passed on to the beneficiaries through door to door campaign. For the time being TMC haven't given option for residents to choose their service provider, but TMC assigns a service provider for them. The information is passed on to people through resident welfare associations, health inspector offices and door to door campaigns. TMC will be publishing the list of service providers for better clarity, within 15 days from October 1st 2019.

TMC is working on additional mobile application and portal as part of expanding the door to door services in the city. Please visit <http://greentrivandrum.in/> which will integrated to SmartTrivandrum mobile application and official website of the City within 15 days from October 1st 2019.

Para 23 Whereas the private services operating in the city have not obtained registration from the Board for treatment facilities for the disposal of wastes collected

Response: There are two kinds of approved service providers operating in the city. One set is exclusively for households and another set is exclusively for bulk waste generators. The service providers for households do not collect bio degradable waste. They collect non bio degradable waste and hands it over to MRFs/MCFs owned and operated by TMC. The service providers for bulk waste generators are collecting segregated bio degradable waste and non bio degradable waste. The bio degradable waste are used as feed for piggeries which have valid consent to operate from KSPCB and TNPCB and licence from the Local Self Government. These piggeries comes under animal husbandry and not under waste disposal. Moreover the daily intake of waste is well below 5TPD for each service provider hence they do not fall under the category of facilities for waste disposal to get registration from KSPCB. A part of the bio degradable waste is used as input for farm composting in rubber plantations by the farmers. Composting for agriculture activity in less than 5 TPD in a given point do not require consent of operate from KSPCB.

We invite KSPCB district office to verify the documents submitted by these service providers which is available with TMC.

Annexure 3

Para 24 Whereas you have failed to implement mandatory GPS in collection and transportation vehicles in cities with population above 5 lakh along with the publication of route map, as directed by Hon'ble NGT

Response: TMC have already completed the process of GPS enabling for septage transportation vehicles – 19 trucks - and created a system for online monitoring. TMC already ordered to all service providers who transport waste from TMC to set up GPS and the process is going on. TMC will complete the process within 30 days from 1st October 2019.

Para 25 Whereas in violation of Rule 15(c), you have failed to establish a system for integration of informal waste pickers into the system of waste management

Response: The Rule 15(c) is not a mandatory but optional since presence of waste pickers change from place to place. TMC follows the guidelines by Haritha Kerala Mission under Department of Local Self Government who have laid down the priorities for selecting service providers for waste collection and management. The order of priority provided by HKM is waste pickers, Kudumbasree units, NGOs, social enterprises and Private agencies. Waste pickers are very hard to find in TMC area since the informal network of scrap cum recycling traders are very strong. They operate independently to skim through high value materials from residential and non residential sources and is paying for materials they collect. Only low value materials are left which is managed by MRFs and MCFs of TMC. But TMC have engaged large scale recyclers to haul segregated non bio degradable discards for recycling. We invite KSPCB district office to verify the contract documents available with TMC.

Para 26 Whereas in violation of Rule 15(n) you have not provided satisfactory sweeping of streets causing build up of litter in numerous locations.

Response: On the basis of human activities TMC has prioritized areas for sweeping. Across 25 health circles in the city, all Markets are cleaned twice a day, major roads and bylanes in the heart of the city is swept on a daily basis, in some places twice and some places it is once. The Rural zones are cleaned up monthly. But at times of heavy people traffic due to mega events in the city, TMC provides for additional sweeping and clean up. TMC ensures clean streets and is expanding the area under daily sweeping.

Annexure 3

Para 28 Whereas In violation of Rule 15(x) you have allocated funds to discretionary welfare schemes without meeting the requirement of funds for obligatory functions under SWM Rules such as procurement of land for solid waste treatment plant and sanitary landfill, procurement of vehicles for solid waste collection and making provision for daily door to door collection and sweeping of roads in public and commercial areas twice daily and residential roads daily.

Response: TMC maintains the ratio of fund allocation for solid and liquid waste management as mandated by State Government. TMC already approved and allocated Rs.5 Crore to procure land for setting up sanitary landfill. A Detailed Project Report for expansion of solid waste management services worth Rs.51.3792 Crores of which about Rs.16 Crore is the share of TMC awaits approval of State Government. TMC budgetd 4.5 Crore for year 2019-20. We invite KSPCB district office to verify the approved budgets of TMC. The list of vehicles used for Solid and Liquid Waste Management is given below.

#	Type of Vehicle	Total Number	Remarks
1	Covered Tipper Lorry (5 Ton)	35	Used for transportation of Dry waste from MRFs to RRCs
2	Open Tipper Lorry (5 Ton)	6	
3	Mini Lorry and Pick up Van	4	
	Pick up Autorickshaw	25	
4	Tractor	2	In use
5	JCB Excavators	7	
6	Compactor	2	Not in use since no centralized solid waste management systems
7	Tanker – Sucking vehicles	9	
8	Road Sweeping Machine	1	Not in use
9	Sheep foot compactor	1	

Para 29 Whereas you have failed to submit to the Board Annual Report before 31 May 2019

Response: TMC submitted the Annual report on 14th June 2019. TMC will ensure timely filing of annual report in the future.

Annexure 3

Para 32 Whereas For biogas the KSPCB district office has reported that 9 beneficiaries informed that the facility is working properly and one informed that the facility is not working properly after monsoon season

Response: Out of 10 biogas plants 9 are working shows the success of source level management of organic waste and TMC is happy about it.

Para 33 Whereas District office reported in community level decentralized systems, highly skilled operators are to be engaged for the proper maintenance and operation of the facility

Response: Neither the MSW Rules 2016, nor the CPHEEO manual provides for any specific criterion for operator of a composting facility. Kerala Suchitwa Mission too hasn't given any standard regarding the qualification of the operator. TMC is appointing operators after training them with the help of resource persons accredited by Kerala Suchitwa Mission. Health Inspectors and Junior Health Inspectors along with Green Army volunteers have been trained on operation of different types of composting equipments. So far TMC have not met with any issue of malfunctioning of compost units. TMC is taking efforts to improvise the process and programmes are on to update and upgrade the capacity of workers.

Annexure 3

Para 34 Whereas the Corporation has not provided details regarding quantity of municipal solid waste treated from non residential sources

Response: Please find sector wise data on waste generation in TMC in the table below.

Sources of Waste	TPD	%
Waste from Households (TPD)	173.19	49.0
Commercial Establishments	30.18	8.5
Community Halls	1.8	0.5
Hotels	8.08	2.3
Lodgings	0.78	0.2
Restaurants	12.04	3.4
Markets	19.62	5.5
Slaughterhouses	2.5	0.7
Schools and Institutions	3.5	1.0
Street Sweeping	71.1	20.1
Religious institutions	0.6	0.2
Museum and Zoo	3	0.8
Domestic Bulk Waste Generators	9.72	2.7
Construction and Demolition Waste	2.5	0.7
Sanitary Waste	14.97	4.2
Total Waste Generated in TMC	353.58	100.0

Para 35 Whereas You have continued to promote failed household treatment schemes such as pipe compost and kitchen bin as a cover to avoid obligatory functions in SWM 2016 that incur political costs such as procuring land and establishing a modern solid waste treatment plant and sanitary landfill

Response: Kerala Suchitwa Mission is the competent agency authorized by State Government of Kerala to list technologies, set standards and operating parameters. KSM haven't reported that pipe compost and kitchen bins are failed technology. No Government agency in Kerala or in India have reported so far.

Annexure 3

Para 36 Whereas The rank of 365 out of 425 cities in 2019 Swachh Survekshan conducted by Ministry of Housing and Urban Affairs, Government of India is indicative of the poor quality of waste management service you have provided in the city and failure to implement a modern waste treatment facility

Response: The ranking of cities by Swachh Survekshan with a standard questionnaire is already being challenged at National level by cities and competent environmental organizations such as Centre for Science and Environment. The ranking process have no flexibility to record decentralized solid waste management systems, institutional mechanisms and hence it cannot compare cities following different methods for solid waste management. At the same time Thiruvananthapuram have been qualified to be in the list of Zero Waste Cities at the international level and the forum of Cities that Segregates by Centre for Science and Environment. Thiruvananthapuram has been a model for many cities including metro city like Chennai to opt for decentralized solid waste management.

Para 14 Whereas the Hon'ble National Green Tribunal, Principal Bench, New Delhi in the order dated 22/11/2018 in O.A. No. 353/2016 clarified that apart from prosecution, the statutory authorities under the Environment (Protection) Act, 1986, the Air(Prevention and control of pollution) Act 1974, must in exercise of their incidental powers, prescribed scale of compensation to be collected from the polluters on the "Polluter Pay's Principle" Such scale which may be laid down at various levels, having regard to the local condition or as per direction in the hierarchy of the authorities. In various other application also, the Hon'ble NGT passed similar orders, for instance, in the order dated 20/11/2018 in O.A.No. 117/2014, 499/2014 and 102/2014 the Hon'ble NGT noted as; "Needless to say that statutory authorities under the Environment (Protection) Act 1986, Air (Prevention and Control of Pollution) Act 1974 are entitled to assess and recover damage as "Pollution Pays Principle" in exercise of incidental powers to protect environment".

Para 38 Whereas The Board is constrained to assess the Environmental Compensation from 22/11/2018 to 31/07/2019 (Days = 252) as follows

Para 39 Whereas An amount of Rs.1459.112 lakhs (Rupees Fourteen Crore Fifty Nine Lakh Eleven Thousand Two hundred) is assessed as environmental compensation from 22/11/2018 to 31/07/2019 (Capital cost component (Rs.500 Lakhs)+O&M Component (Rs 946.512 Lakhs)+Environmental Externality (Rs. 12.6 Lakhs))

Para 40 Whereas continued failure to comply with SWM 2016 shall incur Environmental Compensation at rates that are multiples of the rates assessed above.

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Response: The existing infrastructure and its capacity is given below which proves that the allegations raised in this notice is untrue.

Infrastructure	Units	Capacity (TPD)
Kitchen Bins	19000	19.00
Bio Bins	109	2.72
Biogas Plants	3982	3.98
Pipe Compost units	87000	87.00
Organic Waste Converters	2	0.50
Aerobic Bins	383	11.49
Mobile Composting Units	154	4.62
Community Biogas Plants	23	23.00
Dry Waste Collection Bins	2	0.20
Dry leaves Collection bins	3	0.30
Material Recovery Facilities	44	44.00
Resource Recovery Centre	2	10.00
Facilities in Private Sector (Rendering Plants, Farms, Piggeries)	19	150.00
Total		356.8

The calculation is unrealistic and flawed. Primarily the figures used for calculation of waste management is not updated, despite of providing updated information to KSPCB. Environmental compensation is levied for environmental damage or pollution. As per the calculation of KSPCB, there should be about 97,000 Metric Tonnes of waste lying in the city unmanaged to create environmental damage. We request to provide physical proof of 97,000 metric tonnes of untreated waste in the city damaging the environment.

Please refer Environment Protection Act 1986 Sec 15. "Penalty for contravention of the provisions of the act and the rules, orders and directions - (1) Whoever fails to comply with or contravenes any of the provisions of this Act, or the rules made or orders or directions issued thereunder, shall, in respect of each such failure or contravention, be punishable with imprisonment for a term which may extend to five years with fine which may extend to one lakh rupees, or with both, and in case the failure or contravention continues, with additional fine which may extend to five thousand rupees for every day during which such failure or contravention continues after the conviction for the first such failure or contravention. (2) If the failure or contravention referred to in sub-section (1) continues beyond a period of one year after the date of conviction, the offender shall be punishable with imprisonment for a term which may extend to seven years."

It is unfortunate to see such a notice from KSPCB an agency supposed to be a technical and scientific organization to assess environmental impact.

Annexure 3

We request to the Government of Kerala to consider the following facts to avoid such unrealistic and impractical monitoring of implementation of Solid Waste Management Rules 2016 in the future.

- 8 Apr 2016 Solid Waste Management Rules 2016 came into force and provided a timetable for compliance which is 5 years (7 March 2021) from date of notification.
- June 2018: TMC has prepared a Detailed Project Report for improving and expanding the solid waste management system with the support of Central Government in the month of June 2018.
- 29 June 2018: It was submitted for approval before the State Level Empowerment Committee on 29th June 2018. Which was discarded by the SLEC on the ground of State Government's proposal for a Waste 2 Energy project for TMC and adjoining municipalities.
- 30 Oct 2018: TMC appealed to the SLEC to get permission to continue decentralized solid waste management since the Waste2Energy project may take time and the city do not have space to store waste for 2-3 years needed for the W2E project.
- 30 Oct 2018: The DPR was approved in the meeting of SLEC on 30th October 2018 without any alterations.
- 14 Dec 2018: The DPR was formally approved and signed by Chief Secretary and Principal Secretary.
- 6 Months: It took 6 months to get a DPR approved. But neither the FUND nor the G.O. to activate the DPR reached TMC till date.
- 31 May 2019: Thiruvananthapuram Municipal Corporation (TMC) was listed in the model cities from Kerala to complete compliance of SWM Rules 2016 vide GO(Rt)No.45/2019/ENVt dt. 31. May 2019
- 24 Oct 2019: The last date for compliance was set as 24th October 2019. This left TMC with just 5 months time frame. This is un realistic time frame since TMC have already lost 4 months to two floods, (Being only Municipal Corporation not affected by floods, had to engage in relief support and clean ups in impacted area as per the directions from the Government) 1 month to election code of conduct and 6 months for DPR approval. Together TMC is 1 year behind the schedule.

Annexure 3

Hence we request the Government of Kerala to extend the time for completion of compliance of MSW Rules to 31 October 2020 which is well within the prescribed time in the MSW Rules compensate for the lost period.

Based on the above mentioned facts and circumstances it is requested to accept the reply and drop further proceedings,

14/10/19
Secretary

Thiruvananthapuram Municipal Corporation

SECRETARY
Thiruvananthapuram Municipal Corporation



WP(C) No.32870/2019(G)

PETITIONER

CORPORATION OF THIRUVANANTHAPURAM
REPRESENTED BY ITS SECRETARY, CORPORATION BUILDINGS, PALAYAM,
VIKAS BHAVAN, M.G.ROAD, THIRUVANANTHAPURAM-695033.

RESPONDENTS

1. THE KERALA STATE POLLUTION CONTROL BOARD,
REPRESENTED BY ITS CHAIRMAN, THIRUVANANTHAPURAM-695001.
2. THE CHAIRMAN,
KERALA STATE POLLUTION CONTROL BOARD, THIRUVANANTHAPURAM-695001.

Writ Petition (civil) praying inter alia that in the circumstances stated in the affidavit filed along with the WP(C) the High Court be pleased to stay the operation and implementation of Exhibits-P1 and P3 notices including all coercive steps, issued by the second respondent pending disposal of the above Writ Petition.

This petition coming on for admission upon perusing the petition and the affidavit filed in support of WP(C) and upon hearing the arguments of SRI. N.NANDAKUMARA MENON (SENIOR ADVOCATE) along with M/S. P.K.MANOJKUMAR (STANDING COUNSEL), ALICE THOMAS & SMITHA S.PILLAI, Advocates for the petitioner, the court passed the following:-

O R D E R

The learned Standing Counsel for the respondents will obtain instructions in this matter and file counter pleadings, if so advised within a period of one month.

List this case for further consideration on 20-01-2020 until which time all further action pursuant to Ext.P3 will stand deferred.

04-12-2019

Sd/- DEVAN RAMACHANDRAN, JUDGE

/true copy/


ASSISTANT REGISTRAR

EXHIBIT P1 - THE PHOTOSTAT COPY OF THE NOTICE NO.PCB/HO/EE4/NGT/SWM DIRECTIONS TO LB/2019 DATED 17.4.2019 ISSUED BY THE CHAIRMAN, KERALA STATE POLLUTION CONTROL BOARD, TVM-4.

EXHIBIT P3 - THE PHOTOSTAT COPY OF THE NOTICE NO.PCB/HO/RULES/SWM-TVM CORPN/2018 DATED 25.9.2019 ISSUED BY THE CHAIRMAN, KERALA STATE POLLUTION CONTROL BOARD, TVM-4.

mls

Annexure 5



☎ : General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
E-mail: ms.kspcb@gov.in FAX: 0471 - 2318134, 2318152 web: www.keralapcb.nic.in

KERALA STATE POLLUTION CONTROL BOARD

കേരളസംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram – 695 004

പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

PCB/HO/RULES/SWM - Thrissur/2018

Date: 21 /10/2019

Regd. with A/D

DIRECTION UNDER SECTION 5 OF THE ENVIRONMENTAL PROTECTION ACT, 1986

Sub: Issue of notice for the noncompliance of the Solid Waste Management Rules, 2016

- Ref:
1. The Hon'ble NGT order OA no. 606/2018 dated 16/01/2019 and 25/04/2019
 2. Letter no. PCB/HO/SEE2/RMC- Meeting/2018 dated 09/10/2018, 22/10/2018 and 24/10/2018
 3. This office notice of even no. PCB/HO/EE4/NGT/SWM DIRECTIONS TO LB/2019 dated 17/04/2019
 4. This office notice of even no. PCB/HO/EE4/AG/2019 dated 09/05/2019
 5. Letter no. PH4/5475/09 dated 24/06/2019
 6. Letter no. PH4/5475/09 dated 31/05/2019
 7. Annual Report send by email dated 02/07/2019
 8. Email on 14/08/2019
 9. This office notice of even no. PCB/HO/RULES/SWM - Thrissur/2018 dated 14/08/2019
 10. Letter no. PH4/28606/16 dated 27/08/2019
 11. Letter no PCB/TSR/MSW/3/2002 dated 14/10/2019

WHEREAS the Central Government notified the Environmental (Protection) Act, 1986 for the protection and improvement of environment and for matters connected therewith;

WHEREAS as per Section 3, 6, and 25 of the Environment (Protection) Act, 1986, the Central Government re-notified the Solid Wastes Management Rules, 2016 (herein after referred as SWM Rules) vide notification S.O. 1357(E) dated 8-4-2016;

WHEREAS as per Rule 22 (1) of the SWM Rules, suitable sites for setting up solid waste processing facilities are to be identified;

WHEREAS as per Rule 22(3) of the SWM Rules, suitable sites for setting up solid waste processing facility and sanitary landfill facilities are to be procured;

WHEREAS as per Rule 22 (5) of the SWM Rules, door to door collection of segregated waste and its transportation in covered vehicles to processing or disposing facility shall be ensured by 8-4-2018;

Annexure 5

WHEREAS as per Rule 22 (7) of the SWM Rules, solid waste processing facilities for the complete quantity of waste generated from the local body @ 0.4 to 0.5 kg/person/day, shall be set up by 8-4-2018;

WHEREAS facilities with the technologies specified in CPHEEO manual and SWM Rules are to be in place for the effective treatment and disposal of the solid waste generated in the local body;

WHEREAS as per Rule 22 (6) of the SWM Rules, separate storage, collection and transportation of construction and demolition waste shall be provided by 8-4-2018;

WHEREAS as per Rule 22(11) of the SWM Rules, bio-remediation or capping of old and abandoned dump site shall be ensured;

WHEREAS repeated instructions were issued vide the communications read above, for the compliance of the SWM Rules;

WHEREAS the following information was submitted by you vide the Annual Report read 7th above;

No. of Households	86604
No. of non-residential premises	15250
Quantity of Solid waste generated	177 TPD
Quantity of Solid waste collected	37 TPD
Quantity of Solid waste processed (Community level)	37 TPD
Quantity of Solid waste processed in Household level	Biogas plant- 632 Compost pits- 20,118 } \approx 60 TPD

WHEREAS it is noted that you are not processing 80 TPD of waste generated;

WHEREAS it is noted that you have not identified the land for the solid waste processing facility and sanitary landfill;

WHEREAS the Hon'ble National Green Tribunal, Principal Bench, New Delhi in the order dated 22/11/2018 in O.A. No. 353/2016 clarified that apart from prosecution, the statutory authorities under the Environment (Protection) Act, 1986, the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974, must, in exercise of their incidental powers, prescribed scale of compensation to be collected from the polluters on the "Polluter Pay's Principle". Such scale which may be laid down at various levels, having regard to the local condition or as per direction in the hierarchy of the authorities. In various other application also, the Hon'ble NGT passed similar orders, for instance, in the Order dated 20/11/2018 in O.A No. 117/2014, 499/2014 and 102/2014 the Hon'ble NGT noted as; "Needless to say that statutory authorities under the Environment (Protection) Act, 1986, Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974 are entitled to assess and recover damages as "Polluter Pay's Principle" in exercise of incidental powers to protect environment".

Annexure 5

WHEREAS notice was issued to you as you have not complied with above provision;

WHEREAS Environmental Engineer, District Office, reported that the solid waste management measures reported by you are inadequate to cater to the quantity of waste expected from Thrissur Corporation.

WHEREAS the Board is constrained to assess the Environmental Compensation from 22/11/2018 to 31/07/2019 (Days = 252) as follows;

City	Thrissur
Population (2011)	317,526
Class	Class-I Town
Waste Generation (kg. per person per day) as per Annual Report	0.55
Waste Generation (TPD) as per Annual Report	177.00
Waste Disposal as per Rules (TPD) as per Annual Report	97.00
Waste Management Capacity Gap (TPD)	80.00
Calculated EC (capital cost component) in Lakhs. Rs.	192.00
Minimum and Maximum values of EC (Capital Cost Component) recommended by the Committee (Lakhs Rs.)	Min. 100 Max. 1000
Final EC (capital cost component) in Lakhs. Rs.	192.00
Calculated EC (O&M Component) in Lakhs. Rs./Day	1.60
Minimum and Maximum values of EC (O&M Cost Component) recommended by the Committee (Lakhs Rs./Day)	Min. 0.1 Max. 1.0
Final EC (O&M Component) in Lakhs. Rs./Day	1.00
Final EC (O&M Component) in Lakhs	252
Calculated Environmental Externality (Lakhs Rs. Per Day)	0.00
Minimum and Maximum value of Environmental Externality recommended by the Committee (Lakhs Rs.per day)	Min. 0.05 Max. 0.10
Final Environmental Externality (Lakhs Rs. per day)	0.05
Final Environmental Externality in Lakhs	12.6

WHEREAS an amount of Rs.456.6 Lakhs (Four Crore Fifty Six Lakh Sixty Thousand) is assessed as environmental compensation from 22/11/2018 to 31/07/2019 (Capital cost component (Rs.192 Lakhs) + O&M Component (Rs.252 Lakhs) + Environmental Externality (Rs.12.6 Lakhs));

WHEREAS continued failure to comply with SWM 2016 shall incur Environmental Compensation at rates that are multiples of the rates assessed above;

WHEREAS notice was issued to you vide this office notice cited 9th above to show cause why the Environmental Compensation of Rs 456.6 Lakhs (Four Crore Fifty Six Lakh Sixty Thousand) shall not be recovered from you for the non compliance of Rule 22(1), 22(3) 22(5), 22(6), 22(7) and 22(11) of the SWM Rules, 2016;

WHEREAS as per order dated 25/04/2019 in OA.No 606/2018, the time line for compliance of environmental statutes will be elapsed on 24/10/2019;

Annexure 5

WHEREAS in the said letter, while quantifying the waste generated, the quantity of non bio-degradable waste from market is not included in 1(b) in page 4;

WHEREAS you have vide reply no. PH4/28606/16 dated 27/08/2019 reported that the present dumpsite of Corporation is converted to stadium and steps are taken to identify the new space for solid waste processing plant as per Rule 22(1);

WHEREAS it is noted that you are converting the land acquired for waste management to stadium which is against Rule 22(1) and 22(3);

WHEREAS you have yet to comply with 22(5), 22(6) and 22(7) of the Solid Waste Management Rules, 2016;

WHEREAS NGT order dated 17/07/2019 in OA. No. 519/2019 directed to ensure allocation of funds for processing of legacy waste dumpsites and the remediation work is to be commenced from 01/11/2019 and preferably within 6 month to be completed;

WHEREAS you have yet to report the action taken for the compliance of above matter;

WHEREAS the Environmental Engineer, District Office, Thrissur, based on their inspection on 17/07/2019, reported that the procedure adopted for closure of the dump yard is not in compliance with the Rule 15(zj) and Schedule 1(j) of the SWM Rules, 2016;

WHEREAS the reply submitted by you is not satisfactory;

WHEREAS the KSPCB District office, Thrissur has found that the Corporation has provided facilities to 14 T of biodegradable waste against the 99.12 T of biodegradable waste generated as mentioned in your reply under ref.11;

WHEREAS though you have claimed to have waste treatment facility for treating 63.87T at source and this is far from reality and the disposal method through piggery farm and agricultural activities cannot be taken in account, as the same is not authorized;

WHEREAS the KSPCB, District Office inspected 10 houses each from 31 wards and found that non-biodegradable waste is collected from 107 houses and biodegradable wastes from 10 houses from a total of 310 houses;

WHEREAS the Corporation has not reported the mode of treatment and disposal of non-biodegradable wastes;

WHEREAS the wastes generated in flats, educational institutions, industrial establishments are disposed in incinerator without having satisfactory air pollution control system and disposal measures for burnt residues;

WHEREAS the Corporation has not submitted a detailed plan for the treatment and disposal of remaining wastes;

WHEREAS though the instruction was given to Corporation authorities for doing bio mining as per statutory rules in Laloor dumping sites, you are continuing the construction activities for the stadium in the said area against the Board's directions and you are not complying with the Board's direction and has not given reply to the Board's directions on bio mining;

ANDWHEREAS it is noted that you have not complied with the Solid Waste Management Rules, 2016;

Annexure 5

NOW THEREFORE, in exercise of the powers vested under Section 5 of the Environment Protection Act, 1986, you are directed to remit the Environmental Compensation of Rs 456.6 Lakhs (Four Crore Fifty Six Lakh Sixty Thousand) from 22/11/2018 to 31/07/2019 against you for the non compliance of Rule 22(1), 22(3) 22(5), 22(6), 22(7) and 22(11) of the SWM Rules, 2016 within 15 days of receipt of this direction failing which further legal action shall be initiated against you.



CHAIRMAN

To

The Secretary,
Thrissur Corporation

Copy to:

The Chairman
State Level Monitoring Committee

The Additional Chief Secretary
Local Self Government Department

The District Collector, Thrissur

The Director, Urban Directorate

The Chief Environmental Engineer, Regional Office, Ernakulam

The Environmental Engineer, District Office, Thrissur

Annexure 6

IN THE HIGH COURT OF KERALA AT ERNAKULAM

PRESENT

THE HONOURABLE MR. JUSTICE DEVAN RAMACHANDRAN

TUESDAY, THE 26TH DAY OF NOVEMBER 2019 / 5TH AGRAHAYANA, 1941

WP(C).No.30789 OF 2019(W)

PETITIONER/S:

THRISSUR CORPORATION,
REP. BY ITS SECRETARY, THRISSUR.

BY ADV. SRI.SANTHOSH P.PODUVAL

RESPONDENT/S:

- 1 KERALA STATE POLLUTION CONTROL BOARD,
PATTOM P.O., THIRUVANANTHAPURAM-695004,
REP. BY ITS MEMBER SECRETARY.
- 2 THE CHAIRMAN, KERALA STATE POLLUTION
CONTROL BOARD, PATTOM P.O.,
THIRUVANANTHAPURAM- 695004.
- 3 THE ENVIRONMENTAL ENGINEER,
KERALA STATE POLLUTION CONTROL BOARD,
DISTRICT OFFICE, THRISSUR- 680001.
- 4 DIRECTORATE OF URBAN AFFAIRS,
OFFICE OF THE DIRECTORATE OF URBAN AFFAIRS,
SWARAJ BHAVAN, 1ST FLOOR, NANTHANCODE,
THIRUVANANTHAPURAM- 695033.
- 5 EXECUTIVE DIRECTOR, SUCHITHWA MISSION,
LOCAL SELF GOVERNMENT DEPARTMENT,
GOVERNMENT OF KERALA, THIRUVANANTHAPURAM- 695001.
- 6 STATE OF KERALA, REP. BY CHIEF SECRETARY TO
LOCAL SELF GOVERNMENT DEPARTMENT,
THIRUVANANTHAPURAM- 695001.

BY ADVS.
GP K.J.MANURAJ;
SC FOR PCB T.NAVEEN

THIS WRIT PETITION (CIVIL) HAVING COME UP FOR ADMISSION ON
26.11.2019, THE COURT ON THE SAME DAY DELIVERED THE FOLLOWING:



WPC 30789/19

JUDGMENT

The Thrissur Corporation, represented through its Secretary, has filed this Writ Petition impugning Ext.P1 directions issued by the Kerala State Pollution Control Board under Section 5 of the Environmental Protection Act (herein after referred to as 'the Act' for short), as per which, they have been directed to pay an amount of Rs.456.6 lakhs, allegedly for non-compliance of various provisions of the Solid Waste Management Rules, 2016, within a period of 15 days from the receipt of the said order.

2. The petitioner has challenged the afore Order on various grounds, but primarily on the ground that they were not heard before the same was issued nor even given an opportunity of placing their objections before the Pollution Control Board. They thus pray that Ext.P1 be set aside.

WPC 30789/19

3. In response, Sri.T.Naveen, learned Standing Counsel for the Pollution Control Board, submits that, as is evidenced from Ext.P1, the said order has been issued under Section 5 of the Act, against which the petitioner-Corporation has a statutory right of appeal to the National Green Tribunal under Section 5A of the said Act. He says that going by the National Green Tribunal Act (NGT Act for short), such an appellate remedy is expressly provided under Section 16(g) thereof and that the Corporation must do so within a period not later than 90 days from the date on which they receive the order. He adds that going by the said Section of the NGT Act, the period for appeal is 30 days, but that the Tribunal may, if it is satisfied that an appellant was prevented by sufficient cause in filing an appeal within the said period, allow it to be filed within a further period of 60 days. He,

Annexure 6

WPC 30789/19

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therefore, prays that this Writ Petition be dismissed finding it to be not maintainable, since the petitioner has an efficacious statutory remedy and that they may be asked to approach the NGT as per the afore provisions without any delay. He then submits that the original application, namely O.A.No.606/2018, under the aegis of which the Pollution Control Board has issued Ext.P1, is still pending before the NGT and that the Corporation can also, if they are so advised, implead themselves therein and seek apposite orders. He thus prays that this Writ Petition be dismissed.

4. When I hear Sri.T.Naveen on the afore lines, I find substantial force in his contentions since, it is obvious from a combined reading of the Environmental Protection Act and the NGT Act, that the petitioner-Corporation certainly has an


Annexure 6

WPC 30789/19

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efficacious alternative statutory remedy against Ext.P1, which can be invoked based on factual circumstances and germane materials and documents. It is needless to say that while this Court acts under Article 226 of the Constitution of India, I am proscribed from entering into these areas on account of the well-recognised inhibitions of jurisdiction of this Court in dealing with factual circumstances.

5. That said, I am persuaded to accept the contentions of Sri.T.Naveen also for the reason that the further pendency of this Writ Petition on the files of this Court will finally rob the petitioner of their statutory right to approach the NGT within the prescribed time frames; and I am, therefore, certain that it will be justified and prudent for this Court to repel this Writ Petition at this stage so as to enable the petitioner to approach the NGT



WPC 30789/19

.6

appropriately.

Resultantly, I close this Writ Petition without granting any of the reliefs sought for, but leaving liberty to the petitioner to approach the NGT appropriately, either by filing a statutory appeal or by impleading themselves in the Original Application or by doing both.

Needless to say, until such time as the statutory period for filing an appeal, as fixed under Section 16 of the NGT Act expires, (the interim order granted by this Court will continue to be in operation; and consequentially, all further action being pursued by the Pollution Control Board, based on Ext.P1, shall stand interdicted) so as to enable the Corporation to approach the NGT without the threat of imminent action.

Sd/-

DEVAN RAMACHANDRAN

JUDGE

RR

WPC 30789/19

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APPENDIX

PETITIONER'S/S EXHIBITS:

- EXHIBIT P1 TRUE COPY OF DIRECTION ISSUED BY THE 2ND RESPONDENT DATED 21.10.2019.
- EXHIBIT P2 TRUE COPY OF ORDER DATED 22.11.2018 IN O.A.353/16 OF NATIONAL GREEN TRIBUNAL OF PRINCIPAL BENCH, NEW DELHI.
- EXHIBIT P3 TRUE COPY OF NOTICE DATED 14.08.2019 ISSUED BY THE 2ND RESPONDENT.
- EXHIBIT P4 TRUE COPY OF REPLY DATED 27.08.2019 ISSUED BY THE PETITIONER TO THE 2ND RESPONDENT.
- EXHIBIT P5 TRUE COPY OF ORDER DATED 08.04.2019 IN O.A.606/18 OF THE NATIONAL GREEN TRIBUNAL OF PRINCIPAL BENCH, NEW DELHI.
- EXHIBIT P6 TRUE COPY OF LETTER DATED 26.08.2019 ISSUED BY THE 2ND RESPONDENT.
- EXHIBIT P7 TRUE COPY OF LETTER DATED 24.07.2019 ISSUED BY THE 2ND RESPONDENT TO THE PETITIONER ALONG WITH THE EXTRACT OF THE REPORT SUBMITTED BEFORE THE NATIONAL GREEN TRIBUNAL.
- EXHIBIT P8 TRUE COPY OF MINUTES OF THE MEETING HELD ON 27.06.2018 AT THE BEHEST OF THE MINISTER FOR SPORTS AND YOUTH AFFAIRS.
- EXHIBIT P9 TRUE COPY OF LETTER DATED 12.11.19 ISSUED BY THE 2ND RESPONDENT.

TRUE COPY
Meefuz
Secretary



**HIGH COURT OF KERALA
AT ERNAKULAM**

**Year and Number of Suit or
other Proceedings** : WP(C) 30789 / 2019

Name of Applicant/Advocate : T.NAVEEN

Application Number : A 3047/2020

Application Date : 15-01-2020

Date of Calling for Stamp : 16-01-2020

Date of Production of Stamp : 16-01-2020

Date When copy was Ready : 16-01-2020

**Date Notified for appearance to
receive the copy** : 24-01-2020

Date when copy was delivered : 17.1.2020

K. S. S. S.
Examiner

Annexure 7

IN THE HIGH COURT OF KERALA AT ERNAKULAM

Present:

THE HONOURABLE MR. JUSTICE SHAJI P. CHALY

&

THE HONOURABLE MR. JUSTICE T.V. ANILKUMAR

Tuesday, the 24th day of December 2019/3rd Pousha, 1941

WA No.2572/2019

Against Judgment dated 26-11-2019 in WP(C) No.30789/2019 of this Court.

APPELLANT/PETITIONER

THRISSUR CORPORATION
REP BY ITS SECRETARY, THRISSUR

BY ADV.SANTHOSH P.PODUVAL

RESPONDENTS/RESPONDENTS

KERALA STATE POLLUTION CONTROL BOARD,
PATTOM P.O., THIRUVANANTHAPURAM-695 004, REP BY ITS MEMBER SECRETARY
THE CHAIRMAN,
KERALA STATE POLLUTION CONTROL BOARD, PATTOM P.O., THIRUVANANTHAPURAM-
695 004
THE ENVIRONMENTAL ENGINEER,
KERALA STATE POLLUTION CONTROL BOARD, DISTRICT OFFICE, THRISSUR-680 001
DIRECTORATE OF URBAN AFFAIRS,
OFFICE OF THE DIRECTORATE OF URBAN AFFAIRS, SWARAJ BHAVAN, 1ST FLOOR,
NANTHANCODE, THIRUVANANTHAPURAM-695 033
EXECUTIVE DIRECTOR,
SUCHITHWA MISSION, LOCAL SELF GOVERNMENT DEPARTMENT, GOVERNMENT OF
KERALA, THIRUVANANTHAPURAM-695 001
STATE OF KERALA,
REP BY CHIEF SECRETARY TO LOCAL SELF GOVERNMENT DEPARTMENT,
THIRUVANANTHAPURAM-695 001

ADV.T.NAVEEN, STANDING COUNSEL, POLLUTION CONTROL BOARD FOR R1-R3.
GOVERNMENT PLEADER FOR R4-R6

Prayer for interim relief in the Writ Appeal stating that in the
circumstances stated in the appeal memorandum the High Court be pleased to
suspend all actions on the basis of Exhibit P1 direction issued by the 2nd
respondent until disposal of the writ Appeal.

This writ Appeal coming on for admission on 24.12.2019 upon perusing
the appeal memorandum, the court on the same day passed the following:-

(P.10)

Annexure 7

SHAJI P.CHALY, J.
&
T.V.ANILKUMAR, J.

W.A. No.2572 of 2019

Dated this the 24th day of December, 2019

ORDER

Shaji P.Chaly, J.

Learned standing counsel as well as the learned Government Pleader takes notice for the respective respondents and seeks time to file counter affidavit.

In the meanwhile, the operation of Ext.P1 order passed by the Kerala State Pollution Control Board dated 21.10.2019 will stand stayed on condition that the appellant corporation executes a bond in favour of the Kerala State Pollution Control Board and that in the event of dismissal of the writ appeal, the amount as sought for in Ext.P1 would be paid to the Kerala State Pollution Control Board. This order will be operative for a period of three weeks.

Post the writ appeal after vacation.

Sd/- SHAJI P.CHALY, JUDGE

Sd/- T.V.ANILKUMAR, JUDGE

vps

/true copy/

K81/-----
ASSISTANT REGISTRAR

W.A.No.2572/2019

EXHIBIT P1 - TRUE COPY OF DIRECTION ISSUED BY THE 2ND RESPONDENT DATED
21.10.2019.

☎ General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
E-mail: ms.kspcb@gov.in FAX: 0471 - 2318134, 2318152 web: www.keralapcb.nic.in



KERALASTATE POLLUTION CONTROL BOARD

കേരളസംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram – 695 004

പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

PCB/HO/SEE2/KOCHI CORPN/2019

Date: 11/12/2019

Regd. with A/D

NOTICE UNDER SECTION 5 OF THE ENVIRONMENTAL PROTECTION ACT, 1986

Sub: Non-compliance of Solid Waste Management Rules, 2016.

- Ref:
1. The Hon'ble NGT order dated 16/01/2019 in OA no. 606/2018.
 2. The Hon'ble NGT order dated 22/11/2018 in O.A. No. 353/2016.
 3. The Hon'ble NGT order dated 20/11/2018 in O.A No. 117/2014, 499/2014 and 102/2014.
 4. Letter No. PCB/HO/SEE2/RMC- Meeting/2018 dated 09/10/2018, 22/10/2018 and 24/10/2018.
 5. This office notice of even No.PCB/HO/EE4/NGT/SWM DIRECTIONS TO LB/2019 dated 17/04/2019.
 6. Minutes of the 4th meeting of the State Level Monitoring Committee.
 7. This office notice of even No.PCB/HO/EE4/AG/2019 dated 09/05/2019.
 8. Letter No. MOE2/10948/2017 dated 27/05/2019.
 9. Letter No. MOE2/10948/2017 NGT/Vol.II dated 19-07-2019.
 10. Annual Report No.PCB/HO/SWM/AR/18/2019 dated 23/07/2019.
 11. This office letter No. PCB/HO/RULES/SWM-ERNAKULAM/2018 dated 13-02-2019.
 12. This office letter No. PCB/HO/RULES/SWM-ERNAKULAM/2018 dated 04-04-2019.
 13. Minutes of the second and fifth meeting of the State Level Monitoring Committee constituted by the Hon'ble NGT on 15-3-2019 and 14-6-2019.
 14. Inspection conducted on 16/10/2019 by SLMC Chairman
 15. Letter no. PCB/RO/EKM/GEN-221/19 dated 18/10/2019
 16. This office notice No. PCB/HO/RULES/SWM-ERNAKULAM/2018 dated 12-10-2019
 17. Your office letter No. MOE2/10948/2017 dated 25/07/2019 received on 06-11-2019

WHEREAS the Central Government notified the Environmental (Protection) Act, 1986 for the protection and improvement of environment and for matters connected therewith;

WHEREAS as per Section 3, 6, and 25 of the Environment (Protection) Act, 1986, the Central Government re-notified the Solid Wastes Management Rules, 2016 (herein after referred as SWM Rules) vide notification S.O. 1357(E) dated 8-4-2016;

WHEREAS as per Rule 22 (1) of the SWM Rules, suitable sites for setting up solid waste processing facilities are to be identified;

WHEREAS as per Rule 22(3) of the SWM Rules, suitable sites for setting up solid waste processing facility and sanitary landfill facilities are to be procured;

Annexure 8

WHEREAS as per Rule 22 (5) of the SWM Rules, door to door collection of segregated waste and its transportation in covered vehicles to processing or disposing facility shall be ensured by 8-4-2019;

WHEREAS as per Rule 22 (7) of the SWM Rules, solid waste processing facilities for the complete quantity of waste generated from the local body at 0.4 to 0.5 kg/person/day, shall be set up by 8-4-2019;

WHEREAS facilities with the technologies specified in CPHEEO manual and SWM Rules are to be in place for the effective treatment and disposal of the solid waste generated in the local body;

WHEREAS as per Rule 22 (6) of the SWM Rules, separate storage, collection and transportation of construction and demolition waste shall be provided;

WHEREAS as per Rule 22(11) of the SWM Rules, bio-remediation or capping of old and abandoned dump site shall be ensured;

WHEREAS repeated instructions were issued vide the communications read above, for the compliance of the SWM Rules;

WHEREAS during the second meeting of the State Level Monitoring Committee constituted by the Hon'ble NGT on 15/03/2019, the resolutions were made to conduct bio mining of legacy waste part by part; keep ESCROW amount for handling emergency situation; provide adequate cover, leachate collection tank and log book for waste transporting vehicles and allow waste transportation only by those vehicles by Health Supervisor; engage Ex-service armed security at the segregation in the dump yard; to make the roads, NH Bypass, Sahodaran Ayyappan Road and Banerjee Road as Zero Waste road; to insist door to door collection and prohibit the deposition of waste on roads and other public places and insist for segregation of waste before disposal; ban the plastic carry bags below the prescribed limit and to proceed against violators under the law of penalization; to give adequate protective equipment namely gumboots, gloves, masks etc., proceed against the violators disposing sewage, septage and chicken waste in the water resources; apartments, hospitals, hospitals which are not operating their sewage treatment plants and to evolve methods for the effective disposal of plastics and not to dispose plastic by burning;

WHEREAS Chairman SLMC during their 4th meeting on 08/05/19 directed to submit specific and detailed time bound action plan to the Kerala State Pollution Control Board, to adopt mechanized system for the disposal of legacy waste, to implement heavy fining/ surveillance cameras/ strict squad to prevent waste dumping on roads, to insist on segregation of wastes at source, to transport vehicles with adequate cover, leachate collection tank and logbook, to provide adequate personal protective equipments to workers and they should be compelled to wear the same, to prohibit deposit of wastes on roads and other public places, to deploy haritha karma sena for door to door collection, to report on the action taken shall be submitted to the SLMC.

WHEREAS during the fifth meeting of the State Level Monitoring Committee on 14/06/2019, noticed with distress that a good number of directions issued are yet to be complied with and therefore expressed displeasure over the same and it was again directed to issue directions by the Corporation to the bulk generators to take steps to channelize their own wastes as the same is

Annexure 8

homogenous and clean, channelization can be done easily; to submit the details of wards, in which segregation is complete; segregated plastic waste for shredding is to be stored in areas attached to the zonal office of the Corporation; and to submit action plan in each ward for solid waste management, projects to be implemented and to improve the existing water management facility, existing material collection facility and resource recovery facility; to publish the information on waste management in the website; to take legal action against open burning of non-biodegradable waste and dumping of waste in water bodies; to take steps to establish MCFs in all wards and RRF at least in six wards; issue identity card to all workers engaged in waste management and to prepare action plan for developing a business model for effective treatment of waste;

WHEREAS the Hon'ble National Green Tribunal, Principal Bench, New Delhi in the order dated 22/11/2018 in O.A. No. 353/2016 clarified that apart from prosecution, the statutory authorities under the Environment (Protection) Act, 1986, the Air (Prevention and Control of Pollution) Act, 1981 and the Water (*Prevention and Control of Pollution*) Act, 1974, must, in exercise of their incidental powers, prescribed scale of compensation to be collected from the polluters on the "Polluter Pay's Principle". Such scale which may be laid down at various levels, having regard to the local condition or as per direction in the hierarchy of the authorities. In various other application also, the Hon'ble NGT passed similar orders, for instance, in the Order dated 20/11/2018 in O.A No. 117/2014, 499/2014 and 102/2014 the Hon'ble NGT noted as; "Needless to say that statutory authorities under the Environment (Protection) Act, 1986, Air (Prevention and Control of Pollution) Act, 1981 and the Water (*Prevention and Control of Pollution*) Act, 1974 are entitled to assess and recover damages as "Polluter Pay's Principle" in exercise of incidental powers to protect environment".

WHEREAS it is noted that you have not fully complied with the above directions of Hon'ble SLMC, Solid Waste Management Rules and also not obtained authorization under SWM Rules, 2016;

WHEREAS the SLMC Chairman along with the Chief Environmental Engineer, Regional Office, Ernakulam inspected solid waste dumping yard of Kochi Corporation at Brahmapuram on 16/10/2019 for verifying the updated status on SWM facilities provided by the Kochi Corporation and to report to the Hon'ble NGT before the hearing proposed to be conducted on O.A 514 of 2019 and O.A 533-535 of 2018;

WHEREAS it was reported by the Chief Environmental Engineer, Regional office Ernakulam vide letter No. PCB/RO-EKM/GEN-221/19 dated 18/10/2019 that no action was taken to install proper Effluent Treatment facilities at the site and the ETP installed just before the Regional Monitoring Committee (NGT) visit and is now in a dilapidated condition, all the windrow sheds also are in a dilapidated condition and the drain provided are found to be blocked with thick slurry flowing from these windrow compost yard and the primary bio degradable dumping area, it was noticed during inspection that the quantity of manure called "City compost" seems to be marginal compared to the daily waste collected at the plant, manure was analysed for its fertilizer

Annexure 8

value and found that the same is not meeting the standard stipulated in Solid Waste Management Rules, 2016;

WHEREAS Chief Environmental Engineer reported that the windrow composting plant at Brahmapuram is not working properly and the food wastes taken to the plant are not treated properly;

WHEREAS it is noted that you have not reported the action plan for providing biomethanation plant so far;

WHEREAS it is noted that you have not identified the land for managing Construction and Demolition waste and sanitary landfill;

WHEREAS you have not provided effluent treatment plant for the leachate generated so far and thereby carrying it into the Kadambrayar which is a polluted stretches identified by Hon'ble NGT;

WHEREAS notice was issued to you to take steps to provide biomethanation plant for the food wastes generated within Kochi Corporation and to report compliance of all above directions;

WHEREAS the reply vide letter no. MOE2/10948/2017 dated 25/07/2019, the action to be taken in providing of biomethanation plant was not reported;

WHEREAS the Kochi Corporation has commenced with a project for establishment of a waste to energy plant for disposal of solid waste and Corporation has in place a collection system of waste and provided vehicles, but the leachate treatment facility is not provided;

WHEREAS as per Hon'ble NGT order O.A 585/2018 dated 23/09/2019, if the rules are violated, the Pollution Control Board can independently proceed against local bodies who are not complying with the rules including institution of prosecution of those person who are not complying with the same and assessment of damage caused to the Environment;

WHEREAS any delay in implementation of Waste-to-Energy plant, legacy waste biomining, biomethanation plant shall be viewed as failure to comply with SWM -2016 and directions of Hon'ble SLMC and the Board and shall incur Environmental Compensation assessed as per formula developed for municipal bodies.

WHEREAS in pursuant to Hon'ble National Green Tribunal, in the CPCB matter of O.A.593 of 2017, CPCB has developed a Methodology for Assessing Environmental compensation;

WHEREAS the Board is constrained to assess the Environmental Compensation from 22/11/2018 to 30/11/2019 (Days = 374) for not providing leachate treatment plant for the treatment of leachate generated;

$$\begin{aligned} EC &= PI \times N \times R \times S \times LF \\ &= 80 \times 374 \times 250 \times 1.5 \times 1 \\ &= \text{Rs. } 1,12,20,000 \end{aligned}$$

PI is pollution index of industrial sector and R is factor in Rupees and suggested to consider as 250 in case on violation, S is the factor of scale of operation, LF is the location factor based on population of city/town;

Annexure 8

WHEREAS an amount of Rs. 112.2 Lakhs (Rupees One Crore Twelve Lakh Twenty Thousand) is assessed as environmental compensation from 22/11/2018 to 30/11/2019,

AND WHEREAS continued failure to comply with SWM Rules shall incur Environmental Compensation at rates that are multiples of the rates assessed above;

NOW THEREFORE, in exercise of the powers vested under Section 5 of the Environment Protection Act, 1986, you are directed to show cause within 15 days why the Board shall not recover Environmental Compensation of Rs 1,12,20,000 (Rupees One Crore Twelve Lakh Twenty Thousand) from 22/11/2018 to 30/11/2019 against you for not taking steps to provide leachate treatment plant and biomethanation plant and the non-compliance of Rule 22 of the SWM Rules, 2016.

Ajit Handas

CHAIRMAN

To

The Secretary,
Kochi Corporation

Copy to:

1. The Chairman
State Level Monitoring Committee.
2. The Additional Chief Secretary
Local Self Government Department.
3. The District Collector, Ernakulam.
4. The Director, Urban Directorate.
5. The Chief Environmental Engineer, Regional Office, Ernakulam.
6. The Environmental Engineer, District Office, Ernakulam.

☎ General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
E-mail: ms.kspcb@gov.in FAX: 0471 - 2318134, 2318152 web: www.keralapcb.nic.in



KERALASTATE POLLUTION CONTROL BOARD

കേരളസംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram – 695 004

പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

PCB/HO/SEE2/SLMC - KALAMASSERY/2019

Date: 04 /12/2019

Regd. with A/D

NOTICE UNDER SECTION 5 OF THE ENVIRONMENTAL PROTECTION ACT, 1986

Sub: Noncompliance of Solid Waste Management Rules, 2016.

- Ref:
1. The Hon'ble NGT order dated 16/01/2019 in OA No. 606/2018.
 2. The Hon'ble NGT order dated 22/11/2018 in O.A. No. 353/2016.
 3. The Hon'ble NGT order dated 20/11/2018 in O.A No. 117/2014, 499/2014 and 102/2014.
 4. This office letter No. PCB/HO/RULES/SWM-ERNAKULAM/2018 dated 13-02-2019.
 5. This office letter No. PCB/HO/RULES/SWM-ERNAKULAM/2018 dated 04-04-2019.
 6. Your office letter No. H-17192/18 dated 09-04-2019.-
 7. Letter No. PCB/HO/SEE2/RMC- Meeting/2018 dated 09/10/2018, 22/10/2018 and 24/10/2018.
 8. Annual Report No.PCB/HO/SWM/AR/18/2019 dated 23/07/2019.
 9. Minutes of the 4th meeting of the State Level Monitoring Committee on 08-05-2019.
 10. Report on Environmental Compensation in case of failure of preventing the pollutants being discharged in water bodies and failure to implement waste management rules.
 11. This office letter No.PCB/RO-EKM/GEN-227/19 dated 01-08-2019.
 12. This office letter No. PCB/HO/SEE 2/SLMC- KALAMASSERY/2019
 13. Your office letter No. H-18267/15 dated 31-10-2019.

WHEREAS the Central Government notified the Environmental (Protection) Act, 1986 for the protection and improvement of environment and for matters connected therewith;

WHEREAS as per Section 3, 6, and 25 of the Environment (Protection) Act, 1986, the Central Government re-notified the Solid Wastes Management Rules, 2016 (herein after referred as SWM Rules) vide notification S.O. 1357(E) dated 8-4-2016;

WHEREAS as per Rule 22 (1) of the SWM Rules, suitable sites for setting up solid waste processing facilities are to be identified;

WHEREAS as per Rule 22 (3) of the SWM Rules, suitable sites for setting up solid waste processing facility and sanitary landfill facilities are to be procured;

Annexure 9

WHEREAS as per Rule 22 (5) of the SWM Rules, door to door collection of segregated waste and its transportation in covered vehicles to processing or disposing facility shall be ensured by 8-4-2019;

WHEREAS as per Rule 22 (7) of the SWM Rules, solid waste processing facilities for the complete quantity of waste generated from the local body at 0.4 to 0.5 kg/person/day, shall be set up by 8-4-2019;

WHEREAS facilities with the technologies specified in CPHEEO manual and SWM Rules are to be in place for the effective treatment and disposal of the solid waste generated in the local body;

WHEREAS as per Rule 22 (6) of the SWM Rules, separate storage, collection and transportation of construction and demolition waste shall be provided;

WHEREAS as per Rule 22 (11) of the SWM Rules, bio-remediation or capping of old and abandoned dump site shall be ensured;

WHEREAS repeated instructions were issued vide the communications read above, for the compliance of the SWM Rules;

WHEREAS the Chairman, State Level Monitoring Committee during their 4th meeting on 08-05-19 observed that even after repeated directions regarding waste management from the Kerala State Pollution Control Board, the Kalamassery Municipality has not taken any earnest step to implement those directions, not provided adequate leachate treatment facility, no proper segregation of waste is being carried out and the waste water from the Kalamassery Market, sewage from Kalamassery Township, leachate from the waste dumping yard etc., reaches Periyar causing severe pollution in Periyar.

WHEREAS Chairman SLMC directed to submit specific and detailed time bound action plan to the Kerala State Pollution Control Board, to adopt mechanized system for the disposal of legacy waste, to implement heavy fining/ surveillance cameras/ strict squad to prevent waste dumping on roads, to insist on segregation of wastes at source, to transport vehicles with adequate cover, leachate collection tank and logbook, to provide adequate personal protective equipments to workers and they should be compelled to wear the same, to prohibit deposit of wastes on roads and other public places, to deploy Haritha karma sena for door to door collection, to report on the action taken shall be submitted to the SLMC.

WHEREAS the Chief Environmental Engineer, Regional Office, Ernakulam vide letter dated 05/07/2019, reported that the dumping yard is exclusively used for dry waste collected from Kalamassery Municipal limit, enclosures are not provided to store plastic waste and there is every chance of heavy leachate flow due to rain to Thoombunkal thodu which inturn reach Periyar river, they have provided a shredder, but they neither have sufficient capacity to shred entire plastic waste collected nor transferring to safer places, due to the open dumping of plastic and other waste materials in an about 2.5 acres there are chance of leachate flow to Thoombunkal thodu ultimately reach river Periyar which is already identified by the CPCB as a polluted river stretch;

WHEREAS the Hon'ble National Green Tribunal, Principal Bench, New Delhi in the order dated 22/11/2018 in O.A. No. 353/2016 clarified that apart from prosecution, the statutory

authorities under the Environment (Protection) Act, 1986, the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974, must, in exercise of their incidental powers, prescribed scale of compensation to be collected from the polluters on the "Polluter Pay's Principle". Such scale which may be laid down at various levels, having regard to the local condition or as per direction in the hierarchy of the authorities. In various other application also, the Hon'ble NGT passed similar orders, for instance, in the Order dated 20/11/2018 in O.A No. 117/2014, 499/2014 and 102/2014 the Hon'ble NGT noted as; "Needless to say that statutory authorities under the Environment (Protection) Act, 1986, Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974 are entitled to assess and recover damages as "Polluter Pay's Principle" in exercise of incidental powers to protect environment".

WHEREAS the Chief Environmental Engineer, Regional office Ernakulam vide letter No. PCB/RO-EKM/GEN-227/19 dated 01-08-2019 informed that on receiving a complaint on 23-07-2019 from local public and media personnel against a fire outbreak occurred in the Kalamassery plastic dumpsite and during inspection it was noted that the temporary office shed provided was destroyed due to fire and recommended strict actions against the municipality for noncompliance;

WHEREAS it is noted that you have not fully complied with the above directions and not obtained authorization under SWM Rules, 2016.

WHEREAS it is noted that no treatment facility has been provided for the treatment of biodegradable waste generated in your jurisdiction and wastes were still seen accumulated on the road sides and on land and you have not fully complied with SWM Rules;

WHEREAS notice was issued to you to take steps to provide biomethanation plant for the food wastes generated within Kalamassery Municipality and to report compliance of all above directions;

WHEREAS you have vide in your reply dated 31-10-2019, the action to be taken in providing of biomethanation plant was not reported and you are still transporting waste to Brahmapuram plant which is already working in violation of the solid waste Management Rules, 2016;

WHEREAS you are still considering the dumping yard as Solid Waste processing plant which is in violation of the solid waste Management Rules, 2016;

WHEREAS you are dumping Construction and Demolition waste in the dumping yard which is in violation of Construction and Demolition Waste Rules, 2016 and 22(6) of SWM Rules 2016;

WHEREAS you are not having proper facility for storing plastic waste, which is in violation of Plastic Waste Management Rules, 2016;

WHEREAS the Chief Environmental Engineer, Regional Office, Ernakulam vide letter dated 23/09/2019 informed that there is no change in the status of dumping yard so far;

WHEREAS it is observed that you are not complying with the solid waste Management Rules, Plastic Waste Management Rules, Construction and Demolition Waste Rule, 2016;

Annexure 9

WHEREAS as per Hon'ble NGT order O.A. 585/2018 dated 23-09-2019, if the rules are violated, Pollution Control Board can independently proceed against the local bodies who are not complying with the rules including institution of prosecution of those persons who are not complying with the same and assessment of damage caused to the Environment;

WHEREAS based on the methodology for assessing Environmental Compensation as per Hon'ble NGT O.A. 593/2017 dated 19-02-2019 and 28-08-2019 an amount of Rs. 247.92 Lakhs (Rupees Two crore fourty seven lakhs ninety two thousand) is calculated for a period from 22-11-2018 to 31-10-2019 (344 days);

Town	Kalamassery
Population (2011)	70,776
Class	Class II
Waste Generation (Kg. Per person per day)	0.3
Waste Generation (TPD)	21.23
Waste disposal as per Rules (TPD) (assumed as 10% of waste generation for calculation)	2.12
Waste Management capacity Gap (TPD)	19.11
Calculated EC (capital cost component) in Lakhs Rs.	45.86
Minimum and Maximum values of EC (Capital cost component) recommended by the committee (lakhs Rs.)	Min. 100 Max 1000
Final EC (capital cost component) in lakhs Rs.	100
Calculated EC (O&M component) in lakhs Rs. /Day	0.38
Minimum and Maximum values of EC (O&M cost component) recommended by the committee (lakhs Rs./Day)	Min. 0.1 Max. 1.0
Final EC (O&M component) in lakhs Rs./Day	0.38
Final EC (O&M Component) in Lakhs	130.72
Calculated Environmental Externality (lakhs Rs. / Day)	0
Minimum and Maximum values of Environmental Externality recommended by the committee (lakhs Rs./Day)	Min. 0.05 Max. 0.10
Period of Violation	22/11/2018 to 31/10/2019
Number of Days of Violation	344

Annexure 9

Final Environmental Externality (Rs. Lakh Per day)	0.05
Final Environmental Externality in Lakhs	17.2
EC to be collected (from 22-11-2018 to 31-10-2019 [344 days])	247.92

WHEREAS an amount of Rs. 247.92 Lakhs (Rupees Two crore fourty seven lakhs ninety two thousand) is assessed as environmental compensation from 22/11/2018 to 31/10/2019 (Capital cost component (Rs.100 Lakhs) + O&M Component (Rs. 130.72 Lakhs) + Environmental Externality (Rs. 17.2 Lakhs));

AND WHEREAS continued failure to comply with SWM 2016 shall incur Environmental compensation at rates that are multiples of the rates assessed above.

NOW THEREFORE, in exercise of the powers vested under section 5 of the Environment Protection Act, 1986, read with government of India notification S.O. 327 (E) dated 10-4-2001 you are directed to show cause within 15 days as to why the Board shall not recover Environmental compensation of Rs. 247.92 Lakhs (Rupees Two crore fourty seven lakhs ninety two thousand) calculated for a period from 22/11/2018 to 31/10/2019 against you for not taking steps to provide biomethanation plant and the non-compliance of Rule 22 of the SWM Rules, 2016.


CHAIRMAN

To

The Secretary,
Kalamassery Municipality

Copy to:

1. The Chairman
State Level Monitoring Committee.
2. The Additional Chief Secretary
Local Self Government Department.
3. The District Collector, Ernakulam.
4. The Director, Urban Directorate.
5. The Chief Environmental Engineer, Regional Office, Ernakulam.
6. The Environmental Engineer, District Office, Ernakulam.



GOVERNMENT OF KERALA

Abstract

Environment Department- Non natural fibre alternatives to banned Single use plastic items- Entrusting State Pollution Control Board for testing and notifying alternative materials - Orders issued

ENVIRONMENT (B) DEPARTMENT

G.O.(Rt)No.128/2019/ENVT Dated,Thiruvananthapuram, 31/12/2019

Read 1 G.O(Ms)7/2019/Envt dt 17.12.2019

2 G.O(Ms) 6/2019/Envt dt 27.11.2019

ORDER

As per Government Order read as 2nd paper above, State Government have imposed a complete ban on the manufacture, storage, transport and sale of single -use plastic items in the State w.e.f 1.1.2020 , further modified and clarified the matter as per the Government Order read as 1st paper above. In furtherance to the decision of Government to ban single-use plastic items, there have been huge demand for alternative materials that can replace single use plastic. Many parties have also approached State Government with the claim to have discovered alternatives for the banned plastic, that are compostable as well as bio-degradable.

2. Government have examined the matter in detail. The veracity of the alternative materials have to be lab tested and verified before the material is brought to the market. Hence Government are pleased to entrust Kerala State Pollution Control Board for testing and notifying alternative materials that can substitute the banned single-use plastic items. Testing the suitability of the alternatives for single-use plastic items shall be done with the assistance of CSIR- National Institute for Interdisciplinary Science & Technology, Thiruvananthapuram.

(By order of the Governor)
VALSA.V
ADDITIONAL SECRETARY

To:

The Director, National Institute for Interdisciplinary Science and
Technology , Council of Scientific and Industrial Research,
Thiruvananthapuram
The Chairman, Kerala State Pollution Control Board
The Director, Department of Environment & Climate Change
The Director, Department of Urban affairs
The Director, Panchayath Department
All District Collectors
The Executive Director, Suchitwa Mission
The Managing Director, Clean Kerala Company ltd

Copy to :

ACS, Local Self Government Department
PA to Principal Secretary, Environment Department

Forwarded /By order

Section Officer

2433
 7/2/20



GOVERNMENT OF KERALA

Abstract

Environment Department- Ban of the use of Compostable carry bags-Alternative materials that can be used as a substitute for the banned single use plastic items - - Orders issued

ENVIRONMENT(B) DEPARTMENT

G.O.(Ms)No.2/2020/ENVT Dated,Thiruvananthapuram, 27/01/2020

Read 1 Press release dt 6.1.2020 of the Director, Department of Environment & Climate change

2 G.O(MS) No 7/2019/Env dt 17.12.2019

3 G.O (MS) No.6/2019/Env dt 27.11.2019

ORDER

Vide orders read as 2., 3. above, Govt have imposed a ban on the manufacture, storage, transport and sale of single use plastic items in the State of Kerala w.e.f 1.1.2020 and anyone found to be violating the Government Order will be fined up to Rs 50000/- and cancellation of license.

After the issuance of the above Orders, State Government received numerous representations about the use of carry bags and requesting to provide/list out alternative materials that can be used as a substitute for the banned single use plastic items. State Government had in GO cited 3. above, ordered that compostable materials having the specified standard can be used as a substitute for the banned plastic items. However it is noticed that fake compostable products resembling the original in texture and tint, and difficult to distinguish at first look, are flooding the markets negating the impact of the plastic ban and defeating the very intention of Government of ridding the State and water bodies of single use plastic.

State Government have examined the whole matter in detail. Cloth and paper carry bags had been used till recently in the State to buy goods and groceries. These serve as reasonable substitutes for the banned plastic carry bags. A number of micro and small scale units have now started production and supply of such plastic free carry bags. The public response to the ban has been overwhelming and they have started carrying their own bags to the market. Government therefore issued clarification vide reference 1. cited.

Government hereby issue the order further clarifying the banned items. It is recommended to use the following alternative non-plastic /eco-friendly materials as a substitute for the banned single use plastic items.

Annexure 10

A	Both branded and Non branded compostable alternatives/substitutes also banned	Recommended non-plastic substitutes
	1. Carry bags irrespective of thickness, made of plastic	Cloth, paper bags
	2. Sheets made of plastic, for single-use spread on tables in function venues, spread on plates while serving food.	Paper spread
	3. Plates, cups and decorative materials made of styrofoam or Thermocol	Glass, ceramic, steel, cups, plates, paper and plant-based decorations
	4. Single-use utensils like cups, plates, dishes, spoons, forks, straw, stirrer, made of plastic	Glass, ceramic, steel, wooden cups, plates, dishes, spoons, forks, straw, stirrer
	5. Non-woven bags, plastic flags, plastic bunting	Cloth , paper bags, flags, bunting
	6. Plastic packets for packing fruits and vegetables	Paper and cloth bags
	7. Plastic drinking water pouches	Banned, no substitute
	8. PET/PETE drinking water bottles less than 500 ml	Banned, no substitute
B	Banned items for which compostable substitutes can be used	Recommended Compostable substitute
	1. Plastic-coated paper cups, plastic-coated paper plates, plastic-coated paper bowls, plastic-coated paper bags	Paper cups with PLA-coating, certified by CPCB and IS: 17088 compliant.
	2. Garbage Bags, including for hospital use, made of plastic	Compostable plastic garbage bags, certified by CPCB and IS: 17088 compliant

Annexure 10

Compostable materials should also adhere to the following guidelines -

1. The compostable plastic products shall have approval from Central Pollution Control Board (CPCB) and the certificate issued by CPCB shall be valid at the time of manufacture/sale/stocking/marketing of the product/s.
2. The compostable plastic materials shall bear details of the company that manufacture, agency that market, the material specification, date of manufacture, batch number, CPCB approval details with license number and validity etc, in the form of QR code.
3. The product shall bear the title 'this is a purely compostable plastic product' written in both English and Malayalam.
4. The product shall dissolve in Dichloromethane (Methylene dichloride) and this shall be indicated in the packaging bag/cover/sheet material, as a preliminary test for identification. This shall be printed on the product as ' This product dissolve in Dichloromethane (Methylene dichloride).

(By order of the Governor)
DR. USHA TITUS
PRINCIPAL SECRETARY

To:

1. The Secretary, Ministry of Environment and Climate Change, Govt of India
2. All the District Collectors
3. All the Department Heads
4. All Heads of Public Sector Units /Autonomous bodies

Annexure 10

5. The Secretary to Governor, Raj Bhavan, Thiruvananthapuram
6. The Secretary, Legislative Assembly, Thiruvananthapuram
(By order of the Governor)
7. The Secretary, Kerala Public Service Commission
8. The Registrar, Kerala Administrative Tribunal (including covering letter)
9. The Registrar, Kerala High Court, Ernakulam
10. The Registrar, Kerala Lokayuktha, Thiruvananthapuram
11. The Member Secretary, State Planning Board, Pattom, Thiruvananthapuram
12. The Secretary, State Information Commission, Thiruvananthapuram
13. The Registrar, Kerala/Calicut/CUSAT/Kannur/Mahatma Gandhi Universities
14. The Registrar, Kerala Agriculture University, Mannuthy, Thrissur
15. The Registrar, Sree Sankaracharya Sanskrit University, Kalady P.O, Ernakulam
16. The Registrar, Kerala University of Health and Allied Science, Thrissur
680596
17. The Registrar, Kerala Veterinary & Animal Husbandry Science University,

Pookode, Wayanad

18. The Registrar, Kerala University of Fisheries and Ocean Studies, Panangadi, Kochi
19. The Member Secretary, Central Pollution Control Board
20. The Member Secretary, State Pollution Control Board
21. The Managing Director, Clean Kerala Company
22. Executive Director, Suchitwa Mission
23. CIPET (Institute of Plastic Technology), Kochi
24. Kerala Plastic Manufacturers Association
25. All Depts in Government Secretariat (to give direction to all institutions under their control)
26. General Administration (SC) Department
27. Stock File/Office Copy (Envt.B2/198/2018-Envt)

Copy to:-

1. Private Secretary to Chief Minister
2. Private Secretary to Chief Secretary
3. PA to Principal Secretary

Forwarded /By order


Section Officer

Annexure 12
**PROPOSAL FOR IMPLEMENTATION OF RULE 17(1) OF THE SOLID WASTE
MANAGEMENT RULES, 2016 BY PRODUCERS, BRAND OWNERS,
MANUFACTURERS AND IMPORTERS**

Background

Solid Wastes Management Rules, 2016 in Rule 17(1) states that all manufacturers of disposable products such as tin, glass, plastics packaging etc or brand owners who introduce such products in the market shall provide necessary financial assistance to local authorities for establishment of waste management system. Rule 17(2) states that all such brand owners who sell or market their product in such packaging material which are non-biodegradable shall put in place a system to collect back packaging waste generated due to their production. Though four years was over, there is no compliance of these rules by the brand owners, producers, manufacturers and importers. Majority brand owners are not taking back waste packaging from Kerala and some brand owners have made some arrangements through PROs, the information on quantity of packaging taken back have not been furnished to Kerala State Pollution Control Board. Hence the Kerala State Pollution Control Board is unable to furnish the said details to Hon'ble National Green Tribunal and to Central Pollution Control Board through statutory annual reports under Solid Waste Management Rules, 2016 and Plastic Waste Management rules, 2016

As per Solid Waste Management Rules, 2016, scientific collection, transport, treatment and disposal of solid waste is to be implemented in the State. But there is failure in the implementation especially of door- to-door collection mechanism due to paucity of funds for giving wages to waste collectors. Door-to- door collection can be implemented by local authorities and village panchayaths census towns and urban agglomeration effectively by giving wages to waste collectors through user fee as well as EPR fund.

Objectives

The financial assistance by brand owners/producers/manufacturers/importers can be remitted in the EPR fund and this fund can be utilized for meeting to the extent possible cost of door-to-door collection.

Annexure 12

4) Estimation of quantity of disposable product / packaging manufactured in or introduced into Kerala

Product name	Product HSN code	Prod. packaging Size		Number of units	Disposable product or packaging materials per unit					
					Metal	Plastic	Compo stable Plastic	Glass	Paper	Large box
					g	g	g	g	g	litre
Shampoo	33051090	250	ml	200,000	0	15	0	0	0	0
		100	ml	500,000	0	11	0	0	0	0
Detergent	34029011	1	kg	1,000,000	0	3	0	0	20	0
		2	kg	150,000	0	4	0	0	30	0
Toothpaste	33061020	100	g	1,200,000	10	2	0	0	10	0
		250	g	150,000	15	2	0	0	15	0
Split air-conditioner	84151010	1	TR	28,000	0	100	0	0	0	100
				Total (kg or m3)	14250	12100	0	0	38750	2800

Payment to Local Bodies carrying out Household Door-to-door collection (Rule 15.b)

	Freq	Reimbursement of costs
Wet & Dry waste	6 d/week	per house per month ₹ 60
Wet & Dry waste	4 d/week	per house per month ₹ 40
Dry waste only	1 d/week	per house per month ₹ 16
Dry waste only	2 d/month	per house per month ₹ 8
Dry waste only	1 d/month	per house per month ₹ 4

Expected income and expenditure from EPR Fund

EPR covered waste	200 g/house/d
	6 kg/house/month
EPR rate	10 /kg
EPR amount collected	60 /house/month

Annexure 12

- 5) The amount to be remitted is based on the quantity of packaging proposed to be introduced in the State of Kerala in a year. A self-affidavit is to be given in advance regarding the quantity of products, and packaging. The deviation exceeding the declared quantity in the affidavit by 25% shall be reported by the applicant by the end of that financial year. If any deviation observed thereafter from the self-declaration given is observed, the registration stands cancelled.
- 6) At least 1% of the application will be counter checked with GST department for ensuring the correctness of information provided through self-affidavit by the manufacturer/producer/brand owner/importer.
- 7) For branded items, brand owners are to remit fee based on the quantity of packaging entered into the State. For non-branded items, manufacturer/importer/producer are to remit the fee.
- 8) The responsibility of the manufacturer/producer/brandowner/importer will be over by remitting fee in the EPR fund. With regard to disposable/plastic products and packaging also, the responsibility of the manufacturer/producer/brand owner/importer as per the Plastic Waste Management Rules is discharged by payment of EPR fee. The responsibility of collection, treatment and disposal shall entirely lie with the local body.
- 9) The EPR fee will be collected through online application. The format of online application and EPR registration form are attached as Format 1 and 2. The fund will be maintained by the Pollution Control Board.
- 10) The sharing of EPR fund is based on the successful providing of door- to- door collection by the local authority. The success is examined based on the statutory annual reports submitted by the local bodies under the Solid Waste Management Rules, 2016 and Plastic Waste Management Rules, 2016 and also based on the field verification by the Kerala State Pollution Control Board.

Annexure 12

- 11) The list of unsuccessful local bodies will be transferred to the Director, Urban Affairs Directorate and to the Director, Panchaayth Directorate for not giving theEPR share to them.
- 12) The amount will be transferred to the Director, Urban Affairs Directorate and to the Director, Panchayath Directorate for transferring fund to the successful local bodies.
- 13) 5% of the fund will be set apart as operation charges of Kerala State Pollution Control Board namely creation and maintenance of online application for EPR fund, auditing, and salary for staff deployed for implementation, monitoring and enforcement of SWM and PWM 2016.
- 14)The details regarding the applications received, EPR registration given, amount collected, amount transferred to local bodies, status of door-to door collection, status of waste management by local bodies etc., will be displayed on EPR online portal.

Annexure -13

Details of Sewage Treatment Plants which is planned to set up in 14 districts under the AMRUT Scheme

Sl. No.	Districts	Capacity	Cost (Rs. in Crores)
Decentralized Plants in various Hospitals:-			
1	Alappuzha	240	3.45
2	Thrissur	360	3.52
3	Palakkad	270	2.88
4	Kozhikkode	3000	14.12
Stand Alone Septage Treatment Plants:-			
5	Kollam	3000	12.66
6	Thrissur	100	3.50
7	Palakkad	100	3.41
8	Kannur	100	3.41
9	Guruvayur	150	4.50
Decentralized STPs in various districts:-			
10	Kochi, Ernakulam	--	44.56
11	Kannur	--	46.81
12	Palakkad	--	26.05
13	Thrissur	--	53.40
14	Sewerage System Zone A, Kozhikkode		106.69
	TOTAL (for 14 Projects)		328.96

AMRIT PROJECTS IN KERALA

Sl. No.	Plant	Place	Capacity (MLD)	Status of the project
1.	STP	General Hospital, Alappuzha	0.240	Obtained technical sanction for DPR, Tendering stage
2.	STP	District Hospital, Palakkad	0.270	Obtained technical sanction for DPR, Tendering stage
3.	STP	General Hospital, Trissur	0.350	Obtained technical sanction for DPR, Tendering stage
4.	STP	Medical College, Calicut	1	Obtained technical sanction for DPR, Tendering stage
5.	STP	Medical College, Calicut	2	Obtained technical sanction for DPR, Tendering stage
6.	STP	Kannur Corporation	Yet to be finalised	DPR preparation stage
7.	STP	Palakkad Municipality	0.8	DPR preparation stage
8.	STP	Trissur Corporation	5	DPR preparation stage
9.	STP	Kozhikode Corporation	13	DPR preparation stage
10.	STP	Kochi Corporation Ward 15	1.4	DPR submitted for technical sanction
11.	STP	Kochi Corporation Ward 16	1.1	DPR submitted for technical sanction
12.	STP	Kochi Corporation Ward 17	1.4	DPR submitted for technical sanction
13.	FSTP	Andamukkam, Kollam Corporation	0.1	Obtained technical sanction for DPR, Tendering stage
14.	FSTP	Vasoorichira, Kollam Corporation	0.1	Obtained technical sanction for DPR, Tendering stage
15.	FSTP	KarikkuzhiEla, Kollam Corporation	0.1	Obtained technical sanction for DPR, Tendering stage
16.	FSTP	Ramavaram, Trissur Corporation	0.1	Obtained technical sanction for DPR, Tendering stage
17.	FSTP	Yakkara, Palakkad Municipality	0.1	Obtained technical sanction for DPR, Tendering stage
18.	FSTP	Chelora, Kannur Corporation	0.1	Obtained technical sanction for DPR, Tendering stage
19.	FSTP	GuruvayurMunicipality	0.1	Obtained technical sanction for DPR, Tendering stage